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THE ROLE OF FOREST RESOURCES IN THE DEVELOPMENT OF A NON-EGALITARIAN FISHER-GATHERER-HUNTER SOCIETY IN SOUTHWEST FLORIDA

A Dissertation in

Anthropology and Human Dimensions of Natural Resources and the Environment

by

Jennifer M. Haney

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The dissertation of Jennifer M. Haney was reviewed and approved* by the following:

Lee A. Newsom
Professor of Anthropology, Flagler College, St. Augustine, FL
Associate Professor Emeritus of Anthropology
Dissertation Advisor
Co-Chair of Committee

George Milner
Professor of Anthropology
Co-Chair of Committee

Douglas Bird
Associate Professor of Anthropology

Sarah McClure
Associate Professor of Anthropology

Alan Graefe
Professor of Recreation, Park, Tourism Management –RPTM

Karen J. Walker
Assistant Scientist
South Florida Archaeology & Ethnography
Florida Museum of Natural History – Anthropology Division
Special Member

Mary K. Shenk
Associate Professor of Anthropology, Demography Faculty Associate, Population Research Institute Faculty Affiliate, Center for Human Ecology
Director of Graduate Studies

*Signatures are on file in the Graduate School

ABSTRACT

The Calusa have anthropological significance as a group of sedentary, fisher-gatherer-hunters that historically developed a socially and politically complex society in Southwest Florida. Much of the anthropological theory related to the development of socially complex societies is predicated on the differential access to and control over resources. Coincident with this theory of differential access to resources is the ability to access or control non-kin labor in order to increase or intensify production of subsistence resources and/or non-subsistence goods/services. The productivity of the local maritime environment in Southwest Florida was one key factor in the socio-political developmental process; however, these maritime resources are now known to have varied spatially and temporally. The necessity of adapting to and coping with this variation in resource availability and productivity likely played a role in the development of technological advances and socio-political networks among the Calusa.

The strategies employed by the Calusa predecessors, who ultimately manifested in this historically complex society, are less well documented. This dissertation examines one potentially limiting but renewable resource, fuelwood. With limited fuel alternatives, wood would have been the primary source of fuel in the largely circumscribed, estuarine environments of Southwest Florida. Trends in archaeological wood taxa as well as functional and ecological wood anatomy were used to investigate the influence of human extraction and natural disturbances on the fuelwood supplies. Modern mangrove forest surveys were also conducted in the project area to create a comparative data set of mangrove forest structure and composition.

Although not all temporal periods were equally represented in the examined charcoal assemblage, the temporal span of the sample was approximately 900 BC – AD 1500 from nine archaeological sites. Hypothesis testing focused on four broad topics including the characteristics

of the fuelwood assemblage, the impact of severe hurricanes on fuelwood resources, the extent of harvesting pressure, and differential access to non-coastal fuelwoods. Despite the availability of a number of superior fuelwoods, prehistoric groups in southwestern Florida used predominantly two types of fuelwood – hard pine and black mangrove. On average, six to eight wood types were identified within each temporal period at each site examined. Deposits with higher numbers of wood taxa were identified as historically mixed/disturbed or likely hurricane-related deposits. Importantly, there did not appear to be a linear relationship to changes in the diameter size classes that would have indicated the overharvesting of fuelwood resources through time. Finally, differences in the frequencies of wood taxa between two midden-mound complexes at the Pineland Site Complex during the Caloosahatchee IV period (AD 1350 – 1500) suggested that one group had differential access and use of pine at the site.

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Chapter 1

Introduction of the Problem

This research provides new data on fuelwood use (archaeological charcoal) and on the role that this critical resource played in the lifeways of the prehistoric inhabitants of the Caloosahatchee region, the predecessors of the Calusa. In South Florida, fuel resources were limited to wood and wood resources would have been affected by human extraction, natural disturbances, and climate change. Therefore within this coastal environment, the extraction of wood resources would likely have been under increasing pressure as prehistoric populations grew and coalesced.

This research focuses on four broad sets of questions including:

- What types and forms of wood were used as fuel;
- Can episodes of severe hurricanes be identified from the patterns of fuelwood use;
- What were the effects of human harvesting on the fuelwood supply; and
- Did any groups have differential access to fuelwood resources?

The suites of hypotheses are addressed using data generated from modern forest surveys combined with archaeological wood charcoal. Standard charcoal analysis (i.e., the identification of taxon to the lowest possible taxonomic level) techniques are supplemented by the recording of functional and ecological wood anatomy variation, growth increments widths, and diameter size classes. Previous charcoal analysis suggested that fuelwood use (i.e., the selection of fuelwood taxa) shifted through time among a few key taxa (Newsom and Scarry 2013; Scarry and Newsom 1992). The current research significantly expands the number of charcoal samples analyzed,

focusing largely on midden contexts (i.e., deposits made from the long-term, repeated dumping of refuse). This intensive analysis of archaeological charcoal from sites within the Calusa heartland is used to investigate not only the characteristics of the fuelwood supply but the influence that environmental perturbations had on the availability of fuelwood and the role that humans exerted over the local forest resources.

The Calusa were a strongly hierarchical society at contact having a paramount chief, subordinate chiefs, nobles, warriors, and commoners. The Calusa capital was located at Mound Key but larger administrative towns were also present. Wealth was accumulated and redistributed. Sophisticated political alliances were maintained, sometimes involving marriage ties (Marquardt 1986; 1987). The Calusa occupied a largely anthropogenic landscape that included sites with large midden-mounds and canals (Thompson 2014; Thompson et al. 2016). In short, at contact, the Calusa manifestation may be described as a dense, sedentary, complex (i.e., highly stratified), fisher-gatherer-hunter (FGH) chiefdom, where some groups had institutional rights and privileges denied to others – including the alienation of labor and resources/products (Marquardt 1986, 1987, 1988; Marquardt and Walker 2013a). Given that the Calusa were a chiefdom before the arrival of the Spanish in 1513 (Marquardt 2014:14), key questions arise – at what point did the Calusa become rigidly hierarchical and what strategies were used to wrest control of labor and resources away from the commoners?

Hypothesis Testing

Hypothesis 1: Given the environment of South Florida, two forest ecosystems were likely to have provided the bulk of the woody taxa for fuel, including pine woodlands and mangrove forests. Since southern hard pines are known to naturally shed their lower limbs, it was expected that most of the pine fuelwood would be in the form of branch wood. Florida is located at the

northern limits of the ecological range of mangroves and at this latitude, the mangroves are shrubby in habit with multiple stems. It was therefore expected that most of the mangrove fuelwood would be in the form of smaller diameter, stem wood. It was further expected that the mangrove fuelwood diameters would reflect the distribution of size classes documented within modern, local mangrove forests.

Hypothesis 2: Natural and recurring disturbances are known to effect coastal forests, the effect that hurricanes had on these forests in conjunction with human extractive pressure, however, was unknown. Hurricane-related mortality in coastal forests increases with tree size and proximity to the eyewall (Milbrandt et al. 2006). Therefore it was expected that when the eyewall of a severe hurricane made landfall near a community, the storm would have a marked effect on the fuelwood resources. The need to clean up woody debris, including lower quality fuelwoods, after a storm and the increased availability and use of standing dead snags (i.e., larger diameter tree trunks) was expected in the wake of major storm landfalls. As such, if a severe hurricane made landfall near a settlement, then it was expected that use of lower quality fuelwood, such as palm, would increase and that the charcoal assemblage would include larger diameter specimens.

Hypothesis 3: If local human populations were increasing through time, then fuelwood extraction would also have increased, perhaps stressing the available resource supply. Ongoing research (Dobbertin 2005) suggests that trees under stress will prioritize foliage development and the growth of roots, buds, and storage tissues before stem growth (i.e., wood development). If fuelwood taxa were experiencing increasing levels of stress, then it was expected that overall growth would slow or decrease. Further, as extraction pressure increased, the taxa would have experienced shorter intervals between harvesting events and it was therefore expected that fuelwood diameters would decrease linearly through time.

Hypothesis 4: As mentioned above, the timing at which the historic Calusa became a stratified society is not currently known. Almost certainly the Calusa ancestors had a chiefdom-

level society by approximately AD 1200. At this time, individuals were differentiated based on status and prestige (i.e., they are distinguished by burial in mounds). However, institutionalized mechanisms which alienate labor and products/resources would have been required before the society became stratified. Since fuelwood was a critical resource which could have been controlled through access to territory or control of labor, patterns of fuelwood use were examined to determine if types of fuelwood differed between groups. Since the villages were located along the coastlines, harvesting pine from the interior would have required more investment in travel time and labor. As such, if a group had greater access to pine fuelwood, then it was expected that the frequency of pine would be greater in middens associated with that group. Because testing this hypothesis required patterns of intra-site variability, it could only be tested at the Pineland Site Complex, where contemporary midden deposits from spatially discrete site areas were available.

Chapter Synopses

Chapter 2 provides a detailed discussion of the theoretical background used to frame discussions and formulate hypotheses central to this dissertation. The overarching theoretical framework of Historical Ecology is reviewed, highlighting the strengths of the research program in relation to the study of human-environmental relations. As the name implies, ecological concepts figure prominently and so several key concepts are reviewed to clarify their meaning and usage. Next, the historical development of critical anthropological theories is summarized with emphasis on hunter-gatherers and social organizations. Next, relevant resource-centered theories, such as Human Behavioral Ecology, are reviewed. Finally, theoretical aspects of using fuelwood data sets are also outlined.

Chapter 3 presents an overview of the regional climate and local environmental characteristics. The unusual physiography and biogeography of the Florida peninsula influences the climate and weather patterns and ultimately the ecology of the region. In particular, discussion focuses on the factors that affect the availability and distribution of plant resources, including the various types of disturbance regimes. Given the patchy nature of resource distribution in and around the Calusa heartland (i.e., Charlotte Harbor, Pine Island Sound, San Carlos Bay, and Estero Bay [see below]), the chapter concludes with a detailed environmental description of each estuary/bay defined within the project area.

Chapter 4 builds on the previous theoretical and environmental backgrounds to produce a cultural synthesis of archaeological and historical data as they are currently understood for the Calusa and their ancestors. The bulk of the discussion centers on the chronology established through the targeted excavation program of William Marquardt and Karen Jo Walker (both at the Florida Museum of Natural History) at the Pineland Site Complex – the largest archaeological collection used in this analysis. Whenever possible, the discussion includes details of contemporary archaeological sites to provide a regional-scale view of events. Finally, the historical Calusa are summarized from an anthropological viewpoint; the discussion of Calusa social and political structures draws heavily from early Spanish documents and historic accounts.

Chapter 5 characterizes the field and laboratory methods used during the data collection, processing, and analysis. A brief discussion of wood identification, including some of the nuances of ecological and functional wood anatomy (Baas and Miller 1985), is also presented to clarify terminology and to review the limitations of using fragmented material, specifically charcoal (i.e., completely combusted wood), for analysis. The specific models and variables employed during analysis are outlined and the various statistical methods are discussed.

In Chapter 6, results of the analysis are presented. I describe how the archaeological contexts, wood taxa, and modern forest data were combined to explore patterning and variability

within the fuelwood assemblage. Each context is discussed individually and then summarized by area or site to illustrate how these results are used to address the research questions formulated above. Finally, in Chapter 7 a synthesis of findings is presented. This review places the results of the hypothesis testing within the knowledge base of what is currently thought of the Calusa and highlights how the study of fuelwood residues (i.e., archaeological charcoal) has contributed to our understanding of not only the timing and development of Calusa social complexity but also the role played by resilient coastal forests in a sub-tropical environment.

Chapter 2

Theoretical Background

In recent decades, increasing public awareness of environmental issues (Marquardt 1994; van der Leeuw and Redman 2002; Walls 2014) has created an opportunity for archaeological research to engage with contemporary socio-ecological problems, showcasing its unique potential in documenting the long-term history of human-environmental relations (Messner and Stinchcomb 2014; Redman 2005; van der Leeuw and Redman 2002). Indeed, research focused on human-environmental relations is prominently featured in recent Grand Challenges set for the archaeological discipline by its own practitioners (Kintigh et al. 2014). As van der Leeuw and Redman (2002:598) note, archaeologists contribute a depth of experience and theoretical perspectives on social processes not found in many physical or biological disciplines and a long temporal scale not commonly found in other social sciences (see also Crumley 1994).

As the global scale and complexity of modern environmental change has been recognized across academic disciplines, one response has been to pursue collaborative and transdisciplinary work (Belsky 2002; Cote and Nightingale 2012; Ostrom 2009; Redman 2005). Although my research here focuses on the past socio-ecological system of a single geographic region, the overall research design was conceived within a broader, interdisciplinary, theoretical frame. As such, my research draws from and is influenced by theoretical perspectives originally developed within diverse disciplines aside from anthropology, including ecology, sociology, and forestry. The following sections will briefly review the key tenents of the theoretical perspective used here, important concepts, and how they may be combined to create a richer, more nuanced, understanding of a dynamic and complex socio-ecological system. The discussion will begin with

some broad overarching concepts from Historical Ecology and then will move on to discuss Anthropological theory and implications from perceiving fuelwood as a resource.

Historical Ecology

Historical Ecology (HE) was conceived as a theoretical perspective that could bridge the gap between biological, physical and social sciences, and history (Crumley 1994:2; Szabó 2015). Historical Ecology is particularly compatible with archaeological research because both value integrative and comparative analysis, deep time frames, variable spatial scales, culture as a complex whole, and dynamic change (Armstrong et al. 2017). Principally, the object of analysis is the landscape where HE seeks to define the interrelationships of human action and natural processes in the landscape (Crumley 1994, 2017). The landscape can be read much like a text where the results of non-human processes, human activity, and their interrelationships are physically recorded (Thompson 2013:4). The focus of the research is to understand these interrelationships and their impacts at different scales and at different times (Balée 1994:1; Thompson 2013).

Several tenets are explicitly articulated in the HE literature. There is an unambiguous belief that at least since the beginning of the Holocene, virtually the entire non-human environment (biotic and abiotic) has been affected, either directly or indirectly, by human activity (Balée 1998:14-24; Thompson 2013:8). The desirability or even predictability of that effect is not presumed (McClenachan et al. 2015). Another key assumption is that the system of interrelationships between humans and their environment must be understood as a totality (Balée 1998:14-24). The research must appreciate the entire socio-ecological system because its configuration (at the moment in question) has resulted from a particular sequence of historical events/choices and ecological selection pressures (Winterhalder 2009). Finally, humans are

acknowledged as primary drivers of ecological change, keystone species (Thompson 2013). Our cognitive abilities provide an avenue of selection (i.e., agency) that operates in addition to natural selection (Balée and Erickson 2006).

Past political, social, and economic attitudes influenced the intensity of resource use (e.g., Fitzhugh et al. 2018). In turn, the biology of available plant and animal resources, abiotic characteristics, and climate imposed their own sets of ecosystem relations and boundaries. Together, these relationships are case specific and subject to change as the dynamics of the socio-ecological system changed (Figure 2.1). At a broad level, these relationships occur within and across ecosystems as defined by ecologists. As currently defined, an ecosystem is "any unit that includes all of the organisms (the biotic community) in a given area interacting with the physical environment so that a flow of energy leads to clearly defined biotic structures and cycling of materials between living and nonliving components" (Odum and Barrett 2005:18). Since this definition does not define a particular scale, use of the term ecosystem is compatible with the holistic and multiscalar focus of HE.

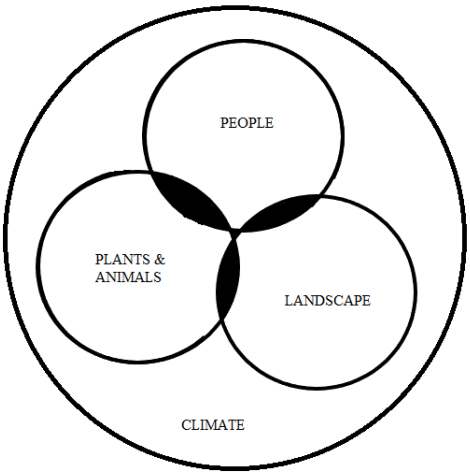

Figure 2.1. Socio-ecological system showing the relationships between social and natural systems (adapted from Messner and Stinchcomb 2014:260, Figure 13.1).

Anthropological Theory

Archaeologists seek to explain the fundamental relationships of human behavior from the patterns found in materials remains. Commonly, middle-range theories are employed to relate the material remains with the behaviors that produced them (Bettinger 1991; Binford 1962). When middle-range theories are employed, it is critical to understand not only the methods but also the history and development of the theories, their assumptions, and the terminology employed. Although a complete history of anthropological/archaeological thought is beyond the scope of this dissertation, several key components of theory are discussed below to provide a background for the analysis and discussion of conclusions found in the final chapter.

Hunters and Gatherers

A socio-political classification system often used in research to sub-divide Hunters and Gatherers (HG) groups is based on differential access to positions of leadership based on authority or prestige – termed egalitarian/non-egalitarian or immediate-return/delayed-return HGs (Kelly 1995, 2013; Woodburn 1980). In *Egalitarian* societies, there is equal access to positions of prestige and authority. Even though there may still be some differential access to material goods based on age, sex, or skill level, everyone has an equal opportunity to achieve a position of authority or prestige (Solway and Lee 1990). In other words, leadership positions are fluid, individualistic, and situational. Egalitarian societies are also characterized as possessing a strong ethic of sharing where generosity and reciprocity are valued (Boehm 1999; Hawkes 1992; Kelly 2013). Consequently, no surpluses are created and resources are consumed or used immediately. Hence, these groups are often referred to as *immediate-return* HGs.

Non-egalitarian, sometimes also termed *delayed-return*, societies do not have equal access to leadership positions (i.e., positions of authority, prestige, and status) (Kelly 1995; Price and Brown 1985). Further, there is differential access to resources, wealth, and the extraction of resources (Kelly 1995). Non-egalitarian HG groups may have inherited statuses, ownership over resources, or extraction rights. They typically live in larger, denser populations, are sedentary, and focus on the intensive extraction of a limited number of dietary resources (Brown 1985; Keeley 1988). The ability to call upon the labor of non-kin groups in order to increase productive activities for food storage is also a hallmark of these groups (Ames 1981, 1985, 1994, 2001; Hayden 1994; Testart et al. 1982). However, Woodburn (1980) does not cite food storage as the only factor to classify a group as delayed-return HG. He would include any action which establishes an obligation of debt that is to be repaid at a later date as delayed- return.

Aquatic Resources

Of the HG aspects mentioned above, a few more comments will be made concerning subsistence practices because those HG groups which use high quantities of aquatic resources (i.e., shell fish, fish, aquatic mammals, etc.) typically do not follow broad norms established through the study of terrestrial HG groups (Kelly 2013; Marquardt 1985; Pálsson 1991; Yesner et al. 1980). Yesner et al. (1980) was one of the first to propose that complex or non-egalitarian societies could develop from reliance of aquatic resources (i.e., without a reliance on agriculture). Maritime HG groups had more permanent settlements which supported higher population densities. Examining the ethnographic record, Pálsson (1991) found that there was a positive correlation between reduced group mobility, increased group size, increased social hierarchy, restrictions to resource access, and specialized technology associated with aquatic HG groups. Thus, HG groups who relied on aquatic resources faced different challenges and were under

different selective pressures than terrestrial HGs (Marquardt 1985). It is especially important to recognize these differences because, as briefly mentioned in the Introduction and elaborated below (and Chapter 4), Southwest Florida groups were FGH, which is they relied on an aquatic subsistence base for their livelihood (Hutchinson et al. 2016; Marquardt 2013, 2014; Thompson and Worth 2011; Thompson et al. 2018; Walker 1992).

Chiefdoms

A particular type of non-egalitarian, socio-political structure is the chiefdom. As originally defined a chiefdom was simply the regional integration of villages into a hierarchically organized society (Oberg 1955). The term *Chiefdom* is commonly used today in reference to hierarchically organized, multi-community polities with some degree of social ranking (i.e., ascribed status [Fried 1967]) and often, economic stratification (Earle 1989) (which conflicts with Service's [1971] famous definition of chiefdoms as redistributive societies). In other words, chiefdoms are typically characterized by two levels of community organization – the paramount chief and the village (or subordinate) chiefs. Peebles and Kus (1977) were the first to define the archaeological correlates of chiefdoms. They identified differential mortuary treatments, living in proximity to features associated with importance or being physical elevated (on mounds), and differential access to goods and resources as characteristics of archaeological chiefdoms. At a minimum then, some individuals have differential access (i.e., ascribed) to positions of status and authority but may also have differential access (i.e., stratified) to goods and labor. Stratified societies have infrastructural components, often defined as an institutional economy (or political economy *sensu* Earle 2002), which generate and channel wealth to support these institutions of power.

As Muller (1997) put it, chiefdoms are full of paradoxes and this contributes to their terminological woes. Chiefdoms are essentially a coalition of identical, self-sufficient household units but elites are present. Because this regional consolidation is often financed with staple surpluses or prestige goods, the paramount chief, subordinate chiefs, and the household units all have, to some degree, competing goals (D'Altroy and Earle 1985). Each wants the maximum benefit for the least effort and these relationships are under continual dispute and negotiation. In order to obtain surpluses and finance the consolidation of the communities into a hierarchy, the local chief must either persuade households to increase production or must attract new households or villages to increase overall production (Beck 2003). Tension is thus created by local chiefs competing for the loyalty (and production) of these households. Conversely, the households wish to exchange as little of their own production as possible for the goods/services supplied by the chief.

Traditionally, three broad categories of hypotheses have been put forward to explain the rise of chiefdoms and how chiefs (and/or elites) generate and maintain power (Brumfiel and Earle 1987). As mentioned above, elites may maneuver not for the benefit of the whole, but for their own benefit (the political model in Brumfiel and Earle [1987]). Perhaps key to this individualist model is the idea of mobilization, where surplus is obtained for the benefit of non-contributing members/elites either through wealth or staple finance (D'Altroy and Earle 1985; Earle 1977; Harris 1959). Under a system of staple finance, 'big men' would assume control over surplus staple goods through various mobilization strategies (D'Altroy and Earle 1985). In theories centered on the control and movement of staple goods, the focus is shifted away from Service's ideas of redistribution to identifying the mechanisms of mobilization that allowed individuals to enlist goods and services for the benefit of a non-producer group (Earle 1977).

Wealth finance has received far more attention and, at least in the New World, been found a better fit than staple finance. For example, Welch (1986) found that the Moundville data

best fit a prestige or wealth goods economy. Within a prestige goods economy, several strategies have been identified. Clark and Blake (1994) suggested that ‘aggrandizers’ would compete through the lending and receiving of social valuables (prestige items). Under this system, the accumulated debts would lead to a more permanent differential access to resources (i.e., patron-client system). Clark and Blake (1994) further argue that once these social debts become heritable, aggrandizers have concentrated power in the form of a chiefdom.

The last group of theories focuses on the advantages provided by centralized authority for the redistribution of goods or the organization of production (e.g., Gamble 1982). Alliance theory would add that establishing and maintaining relations with allies provides a similar functional advantage as a social safety net (Dalton 1977). Secondly, Carneiro (1981; 1988) proposed that chiefdoms were the result of circumscription, competition, and warfare. Under this theory, increasing competition for resources would lead to increased warfare and the group that had the best organizational efficiency and leader with the ability to make command decisions would prevail (i.e., chiefdoms).

Along these same lines, Feinman (1995) also put forward a typology to classify chiefly strategies for building and maintaining power. In a review of ethnographic cases, Feinman (1995:268) suggested two categories of group interactions and their implications. In a corporate-based chiefly strategy, power was maintained through collective ritual, public construction, and kinship affiliations; in a corporate mode, differential access to resources would be less pronounced (Feinman 1995). Conversely in a network mode, similar to the aggrandizer above, individuals use their social connections to accumulate individual prestige and wealth. These networks would be visible through the long-distance exchange of prestige items. When individuals use their social ties (i.e., networks) to accumulate wealth, they may engage in patron/client relationships or sponsor specialized production. Corporate strategies, on the other hand, entail more shared power arrangements that are often concerned with the control of staple

goods (e.g., the means of production). Feinman (1995:274) argued that stressors, such as changes in demography or climate/environment, would have different effects on social relations depending on the organizational strategy in place (i.e., corporate or network).

Human Behavioral Ecology

The central tenent of human behavioral ecology (HBE) is the study of how human behaviors contribute to an individual's (and group's) fitness in various environments and socio-political contexts (Bird and O'Connell 2006; Codding and Bird 2015; Kelly 2013; Winterhalder and Smith 2000). The models are explicitly reductionist, providing a means to examine behavior by explicitly defining goals, constraints, and alternative decision sets (Bird and O'Connell 2006; Codding and Bird 2015). Archaeological data, in contrast, are palimpsests of individual actions/decisions over time. These material remains only indirectly represent the behavior from which they result. Fortunately, ethnoarchaeological applications and experimental studies have served to bridge the gap between the single slice of time represented in HBE models and the lengthier temporal span of archaeological data (e.g., O'Connell 1995).

Archaeological applications of HBE models have been used to examine residential mobility patterns, foraging behavior, resource intensification, domestication, and costly signaling (Bird and O'Connell 2006; Codding and Bird 2015; Winterhalder and Smith 2000). These models have three common elements that include the evolutionary goal (usually assumed to be optimization), the currency (e.g., units of energy, protein, or time), constraints, and two alternatives (i.e., the decision set). Models are designed so that all but one of the constraints are held constant; the final constraint provides the independent variable used to predict the choice between the decision alternatives.

Optimal Foraging Theory

In HBE, optimal foraging models are used to address issues of resource selection, time allocation, and habitat movement (Winterhalder and Smith 2000). In particular, two of these models (prey choice and central place foraging) will be discussed here because their structures provide a framework in which to examine fuelwood selection and harvesting. The first, commonly called the prey choice or diet breadth model, was so named because it was originally designed to test HG prey choices while hunting. Although this research does not involve hunting, the selection of fuelwood can be successfully analyzed with the model because the structure of the choice involved is essentially the same (e.g., Marston 2009). For example, if a forager is out gathering and they come across a patch of pine trees, they have the option to stop and collect pine branches for fuelwood or continue on in hopes of another fuelwood resource.

Prey Choice Model

As discussed above, the prey choice model incorporates a goal, currency, constraints, and decision set in order to predict what resources will be taken upon encounter and what resources will not be collected given a particular environment and specific socio-political circumstance. Since evolutionary theory underlies these HBE models, the goal is always to maximize the overall return rate. The currency for a fuelwood resource might include the wood's density which is related to its value as a fuelwood. In general, denser woods burn longer and produce a steadier heat (per volume) and so if the wood is intended for general purpose heating/cooking, then wood density (see Wood Properties below for additional information) may act as a proxy for the value of the fuelwood (Panshin and de Zeeuw 1970:209, 215; Shelton and Shapiro 1976:22). Generally speaking then, the decision to collect a fuelwood is determined by the amount of energy gained

(i.e., units of density) relative to the time expended in searching for the resource and the energy expended to carry it back to the hearth.

Bird and O'Connell (2006) note that when the model fails to account for the predicted behavior either the underlying assumptions about the model are wrong or the model is in some way inappropriate for the particular behavior. When the model fails to account for the observed behavior, however, can also be enlightening (e.g., Bird et al. 2013) and suggests that other trade-offs or additional constraints were unaccounted for in the original model. Asouti and Austin (2005:8) suggest that the availability of dry, deadwood (i.e., wood condition) may be the most important factor influencing fuel selection when considering ease of collection and transport. Additionally, cultural beliefs and perceptions will influence fuel selection (Gelabert et al. 2011:380). Concepts of 'good fuels' may limit selection, just as taboos may prevent the use of some woods, despite good inherent wood properties. The division of household labor or scheduling of economic activities will also influence fuel decisions. Maxwell (2011:473) found that household life stages influenced fuelwood harvest; in other words, size and structure of the household influenced decisions on collection strategy and fuelwood selection.

Central Place Foraging

The central place foraging model assumes that groups will locate in an advantageous location and forage in a radial pattern out from the central location (i.e., a village or camp). In this model, travel costs are of prime concern, meaning that the costlier the travel, the more selective the resource acquisition. For maritime societies in the Caloosahatchee region, however, travel costs were greatly reduced by water transport; this benefit was enhanced by the fact that mangrove trees grow in water fringing the shoreline. Although inland resources would not have been as easily transported, mangroves could easily have been accessed from the water and

transported by canoe (Scarry and Newsom 1992). Fuelwood foraging, however, would likely have been conducted in conjunction, perhaps secondarily, with foraging for food or other items. If this were the case, as it likely was for sedentary groups, then transportation costs remain important as fuel may have been transported when/if space and labor remained after obtaining higher priority items.

Fuelwood as a Resource

Archaeological wood data (charred and uncharred) are a vastly underutilized resource for the understanding of past human behavior and its consequences. Theoretical models remain poorly developed, however, and so the full potential of the data have yet to be fully documented. As new methods of analysis are undertaken and modern ethnographic data collected, we refine the informative potential of the data. Three broad areas of application are reviewed here in order to make the assumptions of each explicit. These key areas of endeavor include environmental characterizations, wood selection and use, and resource management.

Environmental Characterizations

The association of wood charcoal and local environmental conditions is obvious. It is also generally recognized that morphological, taphonomic, and cultural processes affect the assemblage composition. While morphological and taphonomic processes may be controlled for or predicted through experimentation, the real Achilles' heel of most analyses is the effects of human behavior on assemblage composition. Environmental characterizations are, therefore, hampered by having charcoal assemblages which are *potentially* not representative of the local taxa abundance. Various approaches have been devised to mitigate these biasing effects. The

most conservative approach is to assume that charcoal recovered from a site grew within an 'accessible' distance of the site (Smart and Hoffman 1988:185; Wang et al. 2009). A second sub-set of approaches uses modern plant ecology data to bolster conclusions (Mithen et al. 2007; Tengberg 2002). Finally, a popular approach is to use multiple data sets, such as pollen, to corroborate the wood charcoal findings (Carrion Marco 2006; Scheel-Ybert 2002).

These approaches highlight some common problems and trends seen in the use of wood charcoal for environmental studies. All illustrate the significant influence that humans have had on the landscape and that this influence does not end at archaeological site boundaries. Further, they clearly demonstrate the need and value of examining multiple lines of evidence when dealing with such a complex topic. However, all must contend with taphonomic issues including differential preservation and differential charcoal yield by species.

Most recent research has moved away from examining the site in isolation and has broadened the scale of investigations to a regional perspective. A broader scale permits the use of multiple site assemblages and longer time scales. In many cases, modern plant ecology data are used as a model or foundation to which past environments are compared. Increasingly, modern ecological data are judiciously used and most authors either acknowledge the assumptions implicit in the analogy or make best efforts to justify the inference. Finally, some approaches are beginning to use off-site charcoal assemblages to refine and address impacts of past human behavior (e.g., Berger and Thiébault 2002).

Wood Selection and Use

Initial studies of wood selection and use drew on theories based in behavioral ecology. One of the early models borrowed is the Principle of Least Effort (PLE) (Shackleton and Prins 1992). This model is often an implicit component of functional interpretations. In this theory,

fuelwood is repeatedly collected at the shortest possible distance from its use-location; there is the assumption that collected wood proportions will approximate local forest community composition (i.e., selection is primarily based on available quantities regardless of quality or attitudes of appropriateness) (Pessin 2002; Shackleton and Prins 1992).

Shackleton and Prins (1992) argue that the PLE would be most appropriate where selectivity of wood, for various reasons, is low. Selectivity might be low in instances where diverse local woods are thought to be equally useful or in situations where wood choices are restricted in some manner (e.g., in a degraded environment where travel or transport costs were prohibitively high). Ethnographic and biologic work, however, suggest that these assumptions cannot be made uncritically. Labor is socially determined and may be organized around factors other than efficiency (Piqué and Barceló 2002).

Wood selection studies have also focused on testing the assumption of identified taxa (the Linnaean system) against other types of emic classification systems in the valuation of functional properties. These studies further challenge the PLE assumption that a functional explanation equates to an assemblage which represents local floristic abundance. An alternative emic classification has been proposed based on fuelwood size through an examination of pryotechnology. Since residential structures consisted of wooden houses, Dufraisse (2006) proposed that certain characteristics, such as diameter, humidity, or degree of decay, may have been more important than the taxonomic type of wood. His analysis suggests that characteristics other than wood species were governing fuelwood selection, especially fuelwood size. The assemblage was dominated by young tree branches (less than 15 cm in diameter) and the author suggested that the size of the fuel controlled the flame height, fire temperature, and projection of sparks. All three of these are particularly important considerations in wooden structures (Dufraisse 2006). The importance of this case study is that it underscores the idea that fuelwood selection can be based on function and yet, not be based on the wood taxa. It is important to

remember that the taxonomic nomenclature is a modern cultural construct and Dufraisse's work highlights the common pitfall of assuming some past importance (or existence) of such a classification in prehistoric societies (Théry-Parisot 2002:244).

A more traditional etic approach to classification was attempted by Marston (2009). His research identified the key variables underlying three forager behavior models (value, handling, and frequency of encounter) to rank potential resource choices. Marston (2009) emphasized the role of human decision making by adapting elements of three foraging models to investigate fuelwood selection. These models require the identification of particular variables including the foraging goal, a measure of value, potential constraints, and alternative strategies (Marston 2009:2193). The researcher assumed that the most valuable resources become 'top-ranked' and were the most sought after in acquisition strategies. Since not all of the variables involved could be accurately quantified, the author chose to establish "proxy measures of value" in order to test the model (Marston 2009:2194). Value was estimated based on assumptions regarding the particular taxon for fuelwood or construction, distance of transport was used as a measure of handling costs, and frequency of encounter based on modern vegetation to estimate environmental constraints. Marston created a ranked value system for each variable to test the model. In the end, he concluded that more distant woods were used because they were more abundant (Marston 2009). This was a fresh approach and its application may force an examination of the ways in which value and constraints are weighted during the selection process.

Inherent Wood Properties

Fuelwood selection may be based on several factors including inherent wood properties, desired characteristics (burning qualities), intended use, condition, or availability (Asouti and Austin 2005) (see also Gelabert et al. 2011; Maxwell 2011). When considering inherent wood

properties, the value of a fuelwood is largely determined by its density and moisture content (Panshin and de Zeeuw 1970:215). Specific gravity is a standardized index of wood density and is calculated as a ratio of oven-dry weight to volume (Tillman et al. 1981:30). Because the anatomical structures of wood vary (e.g., the percent of void spaces), the specific gravity standardizes the measure of density and allows a relative comparison of a wood's maximum moisture content and void volume, which affect its burning properties (Tillman et al. 1981). The higher the specific gravity (i.e., essentially the wood's density), the more energy is contained per unit of volume.

Many of the southwestern Florida, woody taxa have a high specific gravity (Scarry and Newsom 1992:390). The mangrove and associated taxa have high specific gravities: red mangrove (0.90-1.20), black mangrove (0.90), white mangrove (0.60), and buttonwood (1.00) (Scarry and Newsom:390, Table 17). An added benefit of mangrove wood is that some species will burn while still green/fresh and do not require any time to age or dry (Sciences 1980:52). A number of other local, woody taxa also have high specific gravities and include live oak (0.88) and hard pine (0.61-0.68) (Scarry and Newsom:390, Table 17). Although pine fuels have a lower density when compared with mangroves, pines remain a popular fuel source because the presence of resins create quick ignitions and smoke production (Scarry and Newsom 1992:389; Shelton and Shapiro 1976). As such, pine makes good kindling especially since pine limbs naturally abscise (often as a result of shade from the upper limbs). The smoky nature of pine may have also been used intentionally to drive away insects (Scarry and Newsom 1992:389). Similarly, the smoke of black mangrove is also reported to keep away insects (see for example Duke 1968 [cited in Pennacchio et al. 2010:53]) and will not impart added pine-resin flavors to food when used for cooking.

Resource Management and Intensification

Economic intensity plays an important role in determining a resource's adaptive capacity to the extraction. Subsistence level extraction is often limited in scope and scale by limitations such as cultural mechanisms, a lack of storage, or seasonal availability (e.g., Geertz 1972 and Rappaport 1967). Issues of management naturally lend themselves to the exploration of socio-political relations, especially in areas of denser populations where it is likely that multiple resources might require some type of management system.

The management of forest resources has been inferred from construction materials at Tikal. While a limited species selection was suggestive of social processes, it was the investigation of beam widths that provided the critical evidence. Lentz and Hockaday (2009) argue that the rebound in sapollia as a building material could only have been accomplished with socio-political control. Their hypothesis is further supported by pollen diagrams that show instability and change in the forest vegetation around the time logwood was introduced as a substitute building material. They further suggest that these reserves may have been administered by family lineages (Lentz and Hockaday 2009).

Similarly, overexploitation of forest resources was a hypothesis tested in the collapse of Cahokia, American Bottom, Illinois. Following the peak of population density at the site, evidence of increased diversification and intensification in wood acquisition began to appear in the archaeological record (Lopinot and Woods 1993). The authors suggested that based on population estimates, the deforestation may have encompassed an area as large as 10-15 km around the site. This proposed deforestation would have increased the chances of frequent and severe flooding from rapid run-off and erosion of the uplands, threatening agricultural crops.

Finally, morphological studies of cellular anatomy have led to the suggestion that pollarding may have a greater antiquity than previously imagined. Pollarding is the selective

pruning of small branches and is known to be common in times of scarcity (i.e., winters or draught conditions) to create fuelwood or animal fodder (Thiébault 2006). Two independent studies conclude that trimming and pollarding produce diagnostic characteristics in the tree's cellular anatomy. While most Florida taxa cannot be pollarded, a similar management technique, coppicing, is possible with black mangrove and white mangrove (Milbrandt et al. 2006:983).

Chapter 3

Environmental Background

The following environmental background summarizes the most important variables relevant to the availability and distribution of local fuelwood resources. Florida's physiography is instrumental to understanding not only its climate but also its ecology. The bulk of the land mass is located between approximately 24° and 31° North latitude which is a factor in the amount of solar radiation (i.e., sunshine) that the state receives (Winsberg et al. 2003:8). Most of the state is a peninsula surrounded by the Gulf of Mexico and the Atlantic Ocean. The peninsular region consists largely of flat lowlands where the highest elevation is not quite 325 ft (99 m) above sea level (amsl) and the lengthy coast line provides numerous diverse features such as dunes, barrier islands, tidal rivers, swamps, and marshlands (Head and Marcus 1998). Surface water, including rivers and lakes, is largely supplied from base flow or spring flow that is derived from the large aquifer located beneath the sandy, central highlands (Myers 2000a:11-12). The character of South Florida is shaped by coastal features and the presence of Lake Okeechobee which provides fresh water to the nearby marshes and swamps of the Everglades and Big Cypress regions.

Climate

Florida's climate is commonly classified according to temperature and mean annual precipitation as humid, subtropical (Chen and Gerber 1990; Myers 2000a). Factors influencing climate include geo-physical features (e.g., latitude, land/water distribution), circulation systems, precipitation, vegetation, disturbance regimes (e.g., storms and fires), and various feedbacks. These influences operate at varying magnitudes over differing geographical and temporal scales.

Key components or the driving forces of climate change have been determined by comparing climate model simulations with historic climate records; these variables are reviewed below. System feedbacks further complicate the process and are important additional drivers of climate change.

Circulation Patterns

Oceanic and atmospheric circulation patterns influence climate changes and are highly interconnected to temperature and precipitation (Jansen et al. 2007; Kutzbach and Webb 1993; McGregor and Nieuwolt 1998). Their complexity limits discussion here to a brief overview but special attention will be given below to the El Niño-Southern Oscillation (ENSO) because this system has direct consequences for Florida precipitation (Henry et al. 1994).

Globally, numerous atmospheric circulation systems exist and a large portion of the energy necessary to initiate and maintain these systems originates in the tropics where evaporation is high and large amounts of latent heat warms the air (Head and Marcus 1998; McGregor and Nieuwolt 1998). Consequently, warm, moist air rises near the equator in the Intertropical Convergence Zone (ITCZ) until its density equalizes and then this air begins to move horizontally poleward (i.e., a Hadley Cell) (McGregor and Nieuwolt 1998). By the time this air current reaches approximately 30o North latitude, its temperature has cooled and a portion of the air mass begins to subside. In the vicinity of northern Florida, this subsiding air mass encounters the Azores-Bermuda high which effectively splits the descending current near the surface of the earth producing the Northeast Trade Winds and the Westerlies.

The trade winds and the Westerlies shift seasonally each year as a result of changing solar radiation and subsequent temperature changes. As a result, Florida's weather is influenced by which wind belt is closest. Cooler (i.e., winter) air from the continent is ameliorated by the

relatively warm waters of the Atlantic Ocean and the Gulf of Mexico surrounding the narrow peninsula. Alternatively, during warmer seasons, the winds arrive from the southeast and this maritime influence supplies ample moisture for summer precipitation.

A similar atmospheric system also occurs on a smaller scale in land-sea breezes. Because Florida is relatively flat, its land-sea breeze system is well developed (Winsberg et al. 2003). Since land both cools and heats more quickly than water, these winds shift daily on the peninsula. As the air over the land begins to heat up in the morning, it rises creating a pressure gradient that draws in adjacent, cooler air from the nearby gulf/ocean. In the evening, the system is reversed as cooler air over the land mass subsides and moves horizontally toward the water where warmer air is now rising. These land-sea breezes may penetrate up to 20 miles (32 km) into the interior (Winsberg et al. 2003:17). Ocean temperatures, then, have a stronger year-round influence on coastal regions. Interior temperatures, however, are largely only affected by the ocean temperatures seasonally. During the summer, the prevailing winds are from the southeast and the air sweeping in from over the water partially cools the interior by countering the latent heat being released by the land mass.

Temperatures across the peninsula are consequently relatively similar during the warm wet-season, however, dry-season temperatures vary from north to south by more than 10° F (7° C) (Head and Marcus 1998:58). Maximum temperatures are attained between June and August while the lowest temperatures are typically recorded between December and February (Henry et al. 1994). Today, Florida is one of the wettest southern states with most of the precipitation falling between May and August (Winsberg et al. 2003). Despite being one of the wettest states, the number of days or hours of precipitation do not differ from adjacent states. Florida precipitation differs in its intensity; heavy rains rather than more frequent rains produce the wet conditions (Winsberg et al. 2003). More than half of the state’s annual precipitation results from convectional storms which are caused by the differential heating of land and water and the

resulting atmospheric circulation (Myers 2000a:16). As might be expected, the mean annual precipitation varies with latitude. The mean annual precipitation in the panhandle and southern peninsula exceeds 1, 525 mm while the northern peninsula (approx. 1, 400 mm) and keys (approx. 1, 015 mm) are typically drier (Myers 2000a:16).

El Niño-Southern Oscillation

The El Niño-Southern Oscillation (ENSO) has been called the "…largest single source of inter-annual climatic variability on a global scale…" (Diaz and Markgraf 1992:1). El Niño is the regional manifestation of the larger Southern Oscillation (NWS 2018). The Southern Oscillation is a complex phenomenon that involves changes to oceanic and atmospheric circulation patterns and sea-surface temperatures (Henry et al. 1994:130).

ENSO has three phases: El Niño, normal, and La Nina (Diaz and Kiladis 1992). During the normal 'phase, sea surface temperatures (SST) along the Pacific equator are unusually cool for the tropical latitude. These cooler than expected temperatures are due to a strong oceanic upwelling tied to the trade winds (Diaz and Kiladis 1992:9). The cool SST stabilize the atmosphere (subsidence), hindering cloud formation and precipitation along the Pacific coast of South America (Glantz 2002). During El Niño years, the Pacific trade winds weaken, there is less upwelling of deeper oceanic currents, and SST rise. The increased heating and subsequent evaporation produces a more volatile atmosphere, increased convection, and precipitation (Diaz and Kiladis 1992:10). These systems typically develop in March-May and effects last at least a year.

South Florida precipitation increases during El Niño events, particularly in usually dry spring and winter seasons (Henry et al. 1994:131). Recent records suggest that the ENSO has a tendency to go from El Niño to La Nina before returning to normal conditions (Diaz and Kiladis

1992:11). During La Nina events, storm tracks are altered by the presence of cold water in the Pacific and the reduction in precipitation may result in droughts. This decrease in dry-season precipitation along with increased lightning strikes has been associated with more fires and larger burned areas, at least in the Everglades (Beckage et al. 2003). Conversely, during an El Niño phase, the increased dry-season rainfall and decreased lightning strikes is associated with fewer fires and consequently smaller burn areas (Beckage et al. 2003).

Storms

More thunderstorms occur in Florida than any other location in North America. These storms produce lightning, thunder, heavy rains, strong winds, and occasionally, water spouts, hail and tornadoes (Henry et al. 1994:141; Winsberg et al. 2003). Thunderstorm activity is highest in southwest Florida during July and August. Both the high number of lightning strikes experienced across the state and its concentration during the rainy season has contributed to the highly pyrogenic landscape. It has been estimated that each square mile (1.6 km) in southern Florida is struck by lightning approximately 25 times annually (Henry et al. 1994:152). Numerous major vegetation types are either fire-dependent or fire-maintained in the state and include flatwoods, dry prairies, freshwater marshes, high pinelands, scrub, and tropical pinelands (Myers 2000a:18). These vegetation types are covered in further detail below.

Hurricanes or tropical cyclones also occur in the region with some frequency. In fact, nearly 40 percent of all recorded U.S. landfalls have struck some portion of Florida. Eighty-five hurricanes were recorded in the state between 1886 and 1990 (Henry et al. 1994:169). Roughly three-to-four percent of these hurricanes ranked as a category 3 or higher (i.e., extensive, extreme, or catastrophic) on the Saffir-Simpson Hurricane Scale (Head and Marcus 1998:69). Hurricanes bring high winds, heavy rainfall, high tides, and tornadoes. Recorded wind speeds have been as

high as 174 knots (200 mph) and rainfall records range from 16 inches (40.6 cm) in a few hours to over 38 inches (96.5 cm) in a 24-hour period (Head and Marcus 1998:73). Given the relatively low and flat terrain, this high amount of precipitation usually results in severe flooding, especially in September when tides are also higher than usual. High tides and high winds can also result in storm surges or tidal waves. Studies suggest that more damage and loss of life result from these storm surges and tidal waves than from the high winds alone (Head and Marcus 1998). Further, flooding and storm surges carry sea water inland contaminating freshwater sources.

Fire Regime

Fire is a major element of the South Florida vegetation; fire depresses some plant taxa while benefitting others (Beckage et al. 2003; Hofstetter 1974; Lodge 2005; Myers 2000a; Wade et al. 1980). A fire regime is predictable and results from the feedback of multiple factors on the landscape. Fire releases and redistributes nutrients faster than normal decay. For some taxa, fire creates soil conditions suitable for germination and can set back succession by reducing competition (Abrahamson and Harnett 1990). Surface fires provide a selective effect, favoring fire-dependent plant communities (Odum and Barrett 2005).

In South Florida, five of the major vegetation types are fire-dependent including the flatwoods, freshwater marshes, high pinelands, scrub, and tropical pinelands (Myers 2000a). Some swamp forests and upland hardwood forests are influenced indirectly by periodic fires. These non-pyrophytic vegetation associations are more limited by edaphic factors but frequent fires in the adjacent fire-dependent vegetation also limits their expansion. Hofstetter (1974) names fire as the second biggest disturbance of mangroves behind hurricanes. Fires that occur during the wet-season (June – September) tend to be smaller and are less devastating on the landscape. Wet season fires generally deter hardwoods from marshes, set back shrubs, and break

down dead materials (Lodge 2005). Dry-season fires tend to produce larger fires or peat fires with extensive root damage. The influence of fire on the individual vegetation types relevant to this research is reviewed in more detail below.

Vegetation

The vegetation of Florida may broadly be divided based on hydrology into three plant communities including the uplands which are rarely inundated, the wetlands, and the aquatic communities (Myers 2000b). Preference here will be given to descriptions of the upland and wetland plant communities because these ecosystems produce the plants locally available for use as fuel. Upland communities consist of flatwoods, high pinelands, and hardwood hammocks while wetland communities consist of freshwater swamps, salt and freshwater marshes, and mangrove forests. In the discussions that follow, the terminology is consistent with descriptions as they have historically been used in Florida (Myers and Ewel 1990; Myers 2000b). As such, the term flatwood is used rather than pine savanna, hardwood hammock is preferred to the common description of mixed hardwood forest, and mangrove is more specifically used in place of the generic tidal or swamp forest.

Flatwoods

Pine flatwoods, or pine/palmetto flatwoods, are the most extensive forest ecosystem in Florida providing a matrix within which the other plant communities exist (Figure 3.1)

Figure 3.1. Pine flatwoods with an understory of saw palmetto (*Serenoa repens*) and wiregrass (*Aristida beyrichiana*). Photo by author at Pine Island Flatwoods Preserve.

(Abrahamson and Harnett 1990:103-10). The composition and structure of flatwoods vary with precipitation, soils, hydrology, topography, and disturbance regimes (Abrahamson and Harnett 1990:105). Classically, pine flatwoods are relatively open woodlands on flat topography with poorly-drained, sandy soils and frequent fires. Drier flatwoods contain more xeric and scrubby vegetation while examples of more mesic flatwoods include cabbage palm savannas and, where pines are sparse, palmetto prairies (Myers 2000b). Flatwoods are generally open-canopied forests that are dominated by a mixture of southern hard pines. Typically, the dominant tree taxa include *Pinus palustris* (longleaf pine), *P. elliottii* var. *elliottii* (typical slash pine), *P. serotina* (pond pine), and *P. elliottii* var. *densa* (south Florida slash pine) (Abrahamson and Harnett 1990:105). Longleaf pine is the dominant taxa in northern forests while slash pines are more numerous in southern flatwoods. The region near Pine Island Sound may represent a transitional zone (Figure 3.2), however, as Little (1978) depicts the natural range of longleaf pine as far south as the

Caloosahatchee River. The exact pine composition varies according to the ecological and fire tolerances/adaptations of each taxon (Abrahamson and Harnett 1990:112-131).

The flatwoods understory ranges from vast expanses of grasses (e.g., *Aristida beyrichiana* [wiregrass]) and forbs to dense thickets of scrubby palms or shrubs (Myers and Ewel 1990:103; Myers 2000b). Saw palmetto (*Serenoa repens*) is a low-growing palm that often occurs in dense stands while the shrubs principally include shrub oaks (e.g., *Quercus geminata, Q. myrtifolia, Q. chapmanii, Q. pumila*, and *Q. minima*), ericaceous shrubs (e.g., *Vaccinium* spp.), gallberry (*Ilex glabra*), or wax myrtle (*Morella cerifera*, syn. *Myrica*) (Abrahamson and Harnett 1990:105-115; Myers 2000b).

The frequency, severity, and season of fire (i.e., the fire regime) not only maintain the flatwoods by preventing hardwood encroachment but to a large extent determine which pine species are present and the abundance of either grasses or shrubs (Myers 200b; Whitney et al. 2010). Fire is an essential component of healthy pine flatwoods reproduction; fire returns leaf/needle litter nutrients to the soil and forms a mineral layer that is optimal for pine seed germination (Myers and Ewel 1990:129). Regions that typically experience fire in rapid succession, every couple of years, develop grass and herb-dominated understories. Conversely, flatwoods which rarely experience fire, on the order of several decades, permit the establishment of scrub oaks in their understory. Finally, flatwoods with fire regimes that fall between these two extremes typically develop, in variable abundance, an understory of saw palmetto, gallberry, or ericaceous shrubs (see for example Figure 3.1) (Myers 2000b).

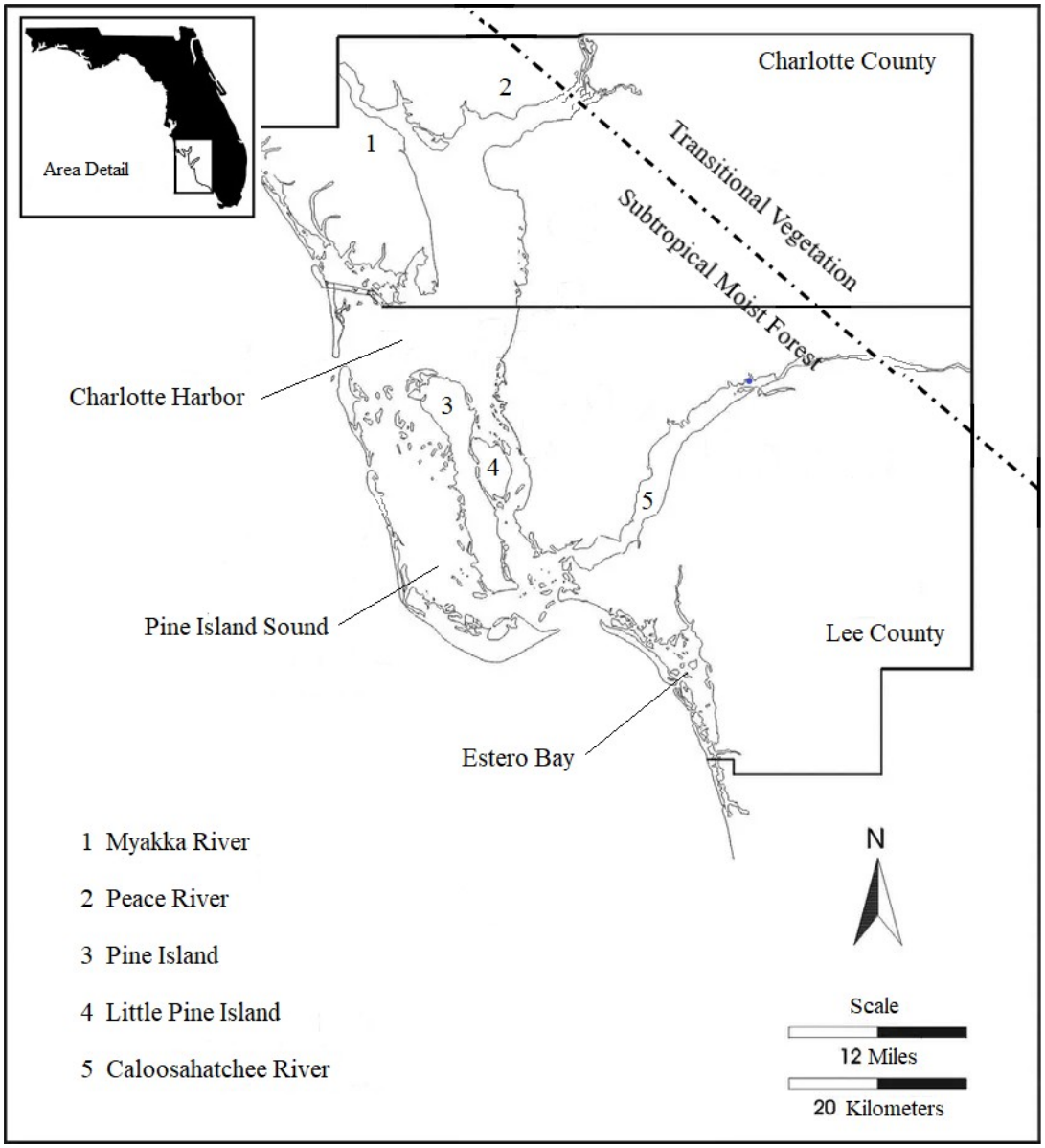

Figure 3.2. Map of the Caloosahatchee Region showing major landscape features. Dotted line depicting estimated boundary of transitional vegetation (mixed deciduous and evergreen taxa) and subtropical moist forests (adapted from Myers 2000b:15, Figure 2) (Base map adapted from Missimer 2001:23).

High Pinelands

High pinelands were once the most extensive plant community on the southern coastal plain; however, these areas were extensively logged during the late nineteenth and early twentieth centuries (Myers 2000b). Clear cut areas were often converted to agriculture but soils were quickly exhausted. The logging and agricultural activity both reduced the native seed bank and disrupted the normal fire regime preventing the re-establishment of the high pinelands vegetation. Today, these areas represent the final stages of old field succession (i.e., mixed pine and hardwood forests) (Myers 2000b:22-3).

As the name implies, the high pine savannas were once the dominant plant community of well-drained, rolling sandhills and ridges. High pinelands are typically dominated by open-canopied, longleaf pine (*Pinus palustris*) forests with a mixed grass-herbaceous understory. Frequency of fire determined if deciduous oaks might be present and if the oaks would be dominant, co-dominant, or a component of the understory. If the fire regime was infrequent, then the longleaf pines would lose their dominance to other pine and hardwood species (Myers 2000b).

Hardwood Hammocks

Hardwood forests typically occur on scattered rises which are locally referred to as hammocks (i.e., areas of slightly higher elevation) within the pine flatwoods matrix (Platt and Schwartz 1990:112-3). Given the pyrogenic nature of the surrounding pinelands, the hardwood hammocks have been limited in extent and frequently occur in areas that offer some protection from fire, such as bottomlands, lakeshores, or ravines/swales (Myers 2000b). Hardwood hammocks are classified according to two gradients, latitude and moisture. In Florida, hardwood

dominance shifts from deciduous to semi-deciduous to evergreen taxa with decreasing latitude (Myers 2000b). Deciduous species dominate the northern regions including the panhandle and upper-peninsula region where temperatures may fall below freezing. Semi-deciduous species increase in dominance with decreasing latitude and finally, evergreen taxa are dominant near the southern reaches of the peninsula.

Species composition also declines with latitude in these hammocks. At the northern reaches of the peninsula, more than 60 woody taxa occur in hammocks, however, as latitude decreases so does the species composition of these hardwood forests. In southern Florida, the hammock canopy primarily consists of live oak (*Quercus virginiana*), water oak (*Q. nigra*), laurel oak (*Q. laurifolia*), and cabbage palm (*Sabal palmetto*) (Figure 3.3). Hydric hammocks may also include red maple (*Acer rubrum*) and Carolina ash (*Fraxinus caroliniana*) (Myers 2000b:24-5). South-central hammocks dominated by deciduous taxa may also possess an evergreen woody-shrub layer whose species composition forms the dominant canopy in the southern-most, tropical hardwood-hammocks.

Tropical hammocks, similar to deciduous hardwood hammocks, occur as discrete concentrations within larger vegetation communities on the southern peninsula. They are also commonly found on calcareous rock outcrops and shell middens (Myers 2000b). Several typically deciduous species are commonly found in tropical hammocks located north of Monroe and Miami-Dade Counties and include live oak, hackberry (*Celtis laevigata*), and red mulberry (*Morus rubra*). At the extreme southern tip of the state, the tropical hammocks are composed exclusively of evergreen species. Commonly, this tropical canopy is dominated by wild tamarind (*Lysiloma latisiliquum*), gumbo limbo (*Bursera simaruba*), false mastic (*Sideroxylon foetidissimum*), white bully (*Sideroxylon salicifolium*), mahogany (*Swietenia mahagoni*), and strangler fig (*Ficus aurea*) (Myers 2000b:25). The Caloosahatchee area is located in an area of

transition between the mixed deciduous/evergreen and purely tropical hardwood hammocks (see Figure 3.2).

Figure 3.3. Hardwood hammock located on the far side of the Pine Island Canal remnant at Pineland consisting of live oak (*Quercus virginiana*) and cabbage palm (*Sabal palmetto*). Photo by author at Pineland, Pine Island.

Mangroves

Mangroves are salt-tolerant species that dominate tidal swamp forests (Figure 3.4). The principle mangrove taxa are facultative halophytes, meaning salt water is not required but trees can function equally well under saline conditions. Salt water, therefore, is not a requirement of mangrove taxa but greatly aids in reducing potential competition from other freshwater or terrestrial plants. The development and structure of mangrove ecosystems are limited by temperature, hydrology, substrate, and wave energy (Odum and McIvor 1990:521-2). Although individual mangrove species grow along the coasts as far north as 30° N latitude along the Atlantic coast and along the coastlines bordering the Gulf, mangrove forest ecosystems are

largely restricted to the lower latitudes. In southwestern Florida, winter temperatures are mild and the gentle slope of the continental shelf largely prevents high energy waves from reaching the coast, providing an ideal environment for the growth of mangroves (Myers and Ewel 1990:429, 522). Despite the largely favorable conditions, however, Florida remains at the northern extent of their ecological range and so most mangrove taxa exhibit a shrubby habit (i.e., multi-stemmed) that is stunted in height when compared with South American mangroves (Tomlinson 1986:57).

Figure 3.4. Mangrove forest along the shores of a shell midden including red mangrove (*Rhizophora mangle*) and black mangrove (*Avicennia germinans*). Photo by author at Mound Key, Estero Bay.

Mangrove forests are considered botanically species-impoverished when compared with other tropical forests (Alongi 2002). Circum-Caribbean, mangrove species are limited to just three woody taxa. Red mangrove (*Rhizophora mangle*) occurs commonly at the intertidal zone. Black mangrove (*Avicennia germinans*) has the greatest temperature and salt tolerance of these three mangrove species and as a result, has the widest geographic range or distribution along North and South American coasts (Tomlinson 1986). White mangrove (*Laguncularia racemosa*)

is a pioneering species and establishes quickly following a disturbance (Tomlinson 1986:220). A number of species are considered to be mangrove associates because they occur frequently in and around mangrove swamps but they lack the morphological and biological features of true mangroves. Buttonwood (*Conocarpus erectus*) is one such associate that is closely related to white mangrove; they are in the same plant family. Buttonwood is tolerant of highly saline environments and dry soils. Many sources describe an idealized model of mangrove forest structure and composition (e.g., red mangrove is open water adjacent while black mangrove occupies the landward edge), however, the positions of the various mangrove taxa relative to the intertidal zone is highly dependent on local circumstances (i.e., species establishment is largely the result of the propagules' ability to penetrate beyond the tidal zone) (Odum and McIvor 1990).

Mangrove forests are a critical habitat for many animal species. Some estimates suggest that nearly 90 percent of all local marine animal life is in some way directly or indirectly dependent upon mangrove habitats (Adeel and Pomeroy 2002). Off-shore mangroves are key rookeries for many bird species (Hogarth 2007). They also provide large amounts of organic material and nutrients for trophic food webs and juvenile fisheries (Adeel and Pomeroy 2002). Economists have estimated the monetary value of mangroves as second only to estuaries and seagrass beds in aquatic ecosystems. In other words, their economic value in terms of fisheries is greater than their value from extractable raw materials (i.e., wood) (Alongi 2002).

Periodically, mangroves experience local and transient mortality due to occasional winter freezes and tropical storms or hurricanes (Tomlinson 1980). In fact, mangroves act as a buffer along hurricane-prone shorelines absorbing some of the storm's initial impact and reducing flooding. A number of studies have documented hurricane-related damage, mortality, and post-storm recruitment on Florida mangroves (e.g., Baldwin et al. 1995, Doyle et al. 2009, and Proffitt et al. 2006). The severity of hurricane impacts increases with proximity to the eyewall and decreases with distance inland from the coast (Doyle et al. 2009; Milbrandt et al. 2006). Most

damage is the result of high winds and as such, large trees typically experience higher rates of mortality (Doyle et al. 2009; Milbrandt et al. 2006). Doyle and colleagues (2009) also noted that trees with diameters less than 5 cm experienced only minimal mortality (less than 10% died) in the Everglades after Hurricane Andrew (a category 5 hurricane). Several studies documented differences in post-hurricane recovery/recruitment between red mangroves and black/white mangroves. Because black and white mangroves both resprout epicormically, these taxa may be less susceptible to hurricane mortality (Baldwin et al. 1995). Since red mangroves lose the ability to resprout epicormically with age, most red mangrove recruitment must be undertaken from propagules/seedlings (Baldwin et al. 1995; but see also Milbrandt et al. 2006). All three mangrove species have water-borne propagules, thus the community is readily reestablished after local elimination, from seed sources in the Caribbean and Gulf basins.

Freshwater Swamps

Freshwater swamps are wetlands with a dominant canopy of trees or shrubs (Myers 2000b). Swamps may be associated with river systems, consist of strands (i.e., intermediate between flowing and stillwater), or have essentially stillwaters in a basin or depression. Freshwater swamps evidence a great deal of diversity and this is reflected in the many names locally applied to swamps (e.g., heads, galls, domes, bogs, bays, strands, and hammocks) (Ewel 1990). Often, these swamps are intermingled with adjacent vegetation communities. For example, the Big Cypress Swamp includes uplands, hydric hammocks, mesic flatwoods, bay swamps, shrub bogs, and the classic cypress swamp (Figure 3.5) (Ewel 1990:282-3). The key environmental factors that influence this ecological diversity include the hydroperiod, fire regime, organic accumulation, and water source/quality.

Figure 3.5. Freshwater swamp with bald-cypress (*Taxodium distichum*). Photo by author at Corkscrew Swamp Sanctuary, Naples, Florida.

While over 100 species of woody plants commonly occur in Florida's freshwater swamps, the dominant species include bald-cypress (*Taxodium distichum*), black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), laurel oak (*Quercus laurifolia*), sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), and loblolly bay (*Gordonia lasianthus*). Other common species include pond pine (*Pinus serotina*), red cedar (*Juniperus silicicola*), needle palm (*Rhapidophyllum hystrix*), overcup oak (*Quercus lyrata*), ericaceous shrubs, and bamboo-vine (*Smilax laurifolia*). Swamps with fluctuating water levels are usually dominated by cypress which is the most flood-tolerant of Florida's tree species when mature (Ewel 1990:290). Since cypress is a slow grower, the faster-growing, flood-tolerant hardwoods can easily out-compete the cypress without frequent fires to increase the mortality of encroaching hardwoods.

Project Area: The Calusa Heartland

The project area is the region of southwestern Florida historically known to have been the heartland of the Calusa. The Calusa inhabited the coastal region in and around Charlotte Harbor (including Gasparilla Sound), Pine Island Sound, San Carlos Bay, and Estero Bay (see Figure 3.2) (Marquardt and Walker 2012). Ecologically, this region is composed of a mosaic of inland, near shore, and estuarine resources. The region is dominated by a number of separate but interconnected estuaries. The northern estuary complex is composed of Charlotte Harbor, Pine Island Sound, and San Carlos Bay; the southernmost estuary is Estero Bay. Although these ecosystems have broad similarities, variability also exists both within each complex and between the northern and southern extremes.

Charlotte Harbor, Pine Island Sound, and San Carlos Bay

Three rivers supply an influx of freshwater to these northern estuaries (see Figure 3.2). The Myakka and Peace Rivers enter the harbor and northern Pine Island Sound from the north; while the Caloosahatchee River empties into San Carlos Bay and southern Pine Island Sound from the east. Charlotte Harbor, Pine Island Sound, and San Carlos Bay are enclosed by barrier islands and their passes limit the entry of gulf waters into the estuaries. Although numerous smaller islands exist within these estuaries, the two largest islands are Pine Island and Little Pine Island.

Pine Island is situated such that it forms a bottleneck, partially restricting the freshwater inputs of the rivers into the sound. Today, water depths within Charlotte Harbor range from 4-6 m between Boca Grande Pass and Matlacha Pass (northern region) and within Pine Island Sound the depths range from 1-1.5 m (Patton 2013:554). Proximity to Gulf passes, shallow waters, and

limited freshwater inputs creates a high salinity environment in much of Pine Island Sound. Current salinity levels are often near oceanic levels (Culter et al. 2007; Patino 2014) but salinity is affected by precipitation or drought, and changes in sea level (Walker 2013:37).

These estuaries are spatially heterogeneous containing numerous microenvironments including seagrass meadows, oyster bars, and mangrove ecosystems. Seagrass meadows can create low-energy habitats in dynamic regions with high energy and instability (Zieman 1982:15). Pine Island Sound contains extensive seagrass meadows that provide living space, protection, and often food for many aquatic species; these are highly productive habitats. Species commonly found within these aquatic meadows include lightning whelks, pear whelks, horse conchs, fighting conchs, and crown conchs (Zieman 1982:4, 46-50). Many larger (i.e., game) fish spawn in the seagrass meadows but move into the mangroves as juveniles (Zieman 1982:75).

Distinctive molluscan communities are located according to variations in salinity, temperature, energy level, and substrate characteristics (Zieman 1982:41). However, their modern population numbers and, to some extent, spatial distributions are imperfect representations of their prehistoric population levels and distributions. Walker (1992:268) estimates that historic alterations to the local landscape (i.e., construction, dredging, and pollution) have reduced the acreages of seagrass meadows and oyster reefs significantly, resulting in reductions of scallops, oyster, and other molluscan (especially gastropods) populations.

Mangrove forests fringe the estuarine coastlines and streams within the region. The mangrove ecosystems are also highly productive, providing a source of food and additional shelter for aquatic species. The fauna found within mangrove ecosystems vary according to gradients similar to that of seagrass meadows (briefly discussed above). Mangroves in low energy, backwater-environments typically contain only a few fish species in abundance while more dynamic locations along streams and near littoral areas tend to contain a greater variety of species. For example, during the rainy season, fish commonly found in the freshwater streams

and rivers may move out into the estuary and conversely, during drier periods, marine predators might move in from the gulf waters (Walker 1992:270). The mangrove prop roots also provide a substrate for an array of molluscs (Figure 3.6).

Figure 3.6. Red mangrove prop-roots showing attached mollusks at low tide. Photo by author modern canal with access to Jug Creek, north end of Pine Island, Florida.

Northern Archaeological Sites

Eight archaeological sites are included in the present study from within the northern estuary system. Big Mound Key (8CH10) and Cash Mound (8CH38) are the northern most sites and are located on the northern side of the harbor (Cape Haze Aquatic Preserve) just inside the barrier islands. The area today is composed of mangroves, seagrass meadows, salt marshes, oyster communities, and other tidal zones (FDEP 2018a). Four of the sites are either on Pine Island or located on an island just offshore of Pine Island, including Calusa Island (8LL45), Pineland (8LL33, 8LL37, and 8LL1612), Josslyn Island (8LL32), and Galt Island (8LL27), in

Pine Island Sound. Pine Island provides extensive mangrove resources and inland forest resources with seagrass meadows just offshore. The offshore islands also have extensive mangrove resources; however, since Josslyn Island is larger, it also offers a variety of inland vegetation resources. The final two sites located within Pine Island Sound are Useppa Island (8LL51) and Buck Key (8LL722). Both of these latter two sites are located closer to the barrier islands on the western edge of the sound. Useppa Island is located near the northern end of the sound and Buck Key is located at the southern end of the estuary. Useppa Island is large enough that it also offered inland forest resources in addition to the fringing mangrove forests; Buck Key was formerly a barrier island and offered some diversity of vegetation aside from the mangrove fringe.

Estero Bay

The Estero Bay estuary is also formed by the presence of barrier islands which restrict the free-flow of freshwater into the Gulf. Although the hydrology is somewhat different from the northern estuaries, the fuelwood resources available in Estero Bay are similar to those of Pine Island Sound. Estero Bay receives a much smaller freshwater input, being fed by several, smaller perennial streams and intermittent creeks. Many of these are blackwater streams sourced from rain-fed, interior wetlands and consequently the water contains high levels of tannins and organic matter. The largest source of freshwater input is the Estero River which empties just north of Mound Key. Overall, the salinity gradient generally grades from low to high in a north-south direction within the estuary because the bulk of the freshwater inputs are located around the northern end of the estuary (Byrne and Gabaldon 2007). In fact, Big Carlos Pass (i.e., the pass located southwest of Mound Key and near the mid-point of the estuary – the dominant passage into Estero Bay) has a positive discharge of water during the wet-season but a negative discharge

during the dry-season. The discharge of the remaining extant passes does not fluctuate seasonally. Given the shallow nature of the estuary and its comparatively low freshwater input, this ecosystem is strongly affected by precipitation and evaporation.

This southern estuary system is dominated by hundreds of smaller mangrove islands, many of which have no dry-land, but seagrass meadows, salt marshes, oyster communities, and tidal flats are also present (FDEP 2018b). Despite the similarity of fuelwood availability, the animal species density and biomass in Estero estuary does (presently) differ both spatially and temporally (Tolley et al. 2005; Tolley et al. 2006). In general, the diversity of mollusks and oyster-reef dependent decapods and fishes was lower in the Estero estuary than near the Caloosahatchee River (Tolley et al. 2005). Tolley and colleagues (2005) also noted that modern oyster density was statistically, significantly greater in Estero Bay than to the north near the Caloosahatchee River. Thus understandably, the shell middens at Mound Key do contain significantly more oyster remains than do those of Pineland to the north.

Southern Archaeological Sites

Only one archaeological site from Estero Bay has been included in the present study, Mound Key (8LL2). The site of Mound Key consists of a large island (51 ha) located within the bay (Thompson et al. 2016). Since the key is largely anthropogenic, it is difficult to reconstruct the type(s) of vegetation that might have grown and been available on the island. Certainly mangroves would have at least partially ringed the island exterior unless actively removed by the inhabitants. Given the present vegetation and the ecological ranges of the southern Florida plant communities, tropical hardwoods are the most likely suspects for island colonization. Trees which provided useful/edible fruits, or fruits eaten by birds, would have had their seeds discarded or deposited in scat on the island providing a natural seed bank. Examples of these hardwood

species include cocoplum (*Chrysobalanus icaco*), wild grape (*Vitis* spp.), sea grape (*Coccoloba uvifera*), hog plum (*Ximenia americana*), and false mastic (*Sideroxylon foetidissimum*) (Newsom and Scarry 2013:255).

Chapter 4

Archaeological and Historical Background

A brief regional chronology based on archaeological data and ethnohistoric documentary evidence (e.g., Fontaneda 1944 [1575], Hann 1991, and Solis de Merás 1964 [1570]) is presented below. Combining the archaeological data (stratigraphy, radiocarbon dates, pottery, and faunal assemblages) with detailed climatic data, Marquardt and Walker (2013b) were able to produce a fine-grained chronology, largely from excavations at the Pineland Site Complex (see Archaeological Site Descriptions below for further detail). Much of the regional chronology is available in 50-year increments; a scale rarely equaled in archaeological research.

Florida Prehistory

Some of the earliest, well preserved archaeological assemblages in North American occur in Florida. At the beginning of the Holocene, Florida was inhabited by small groups of nomadic hunter-gathers. While lower sea levels exposed more land surface on the peninsula, a lack of surface water (rivers and streams) meant that most of the land was fairly inhospitable (Milanich 1994:31-33). Consequently, Paleoindian sites, such as Page/Ladson, Harney Flats, Warm Mineral Spring, and Little Salt Spring, have been found at deep springs and other permanent water sources (Milanich 1994:44-45). The latter two sites are located a short distance north of the Calusa heartland, in Sarasota County. Although the environment would undergo numerous local and regional changes associated with long-term and short-term variability in sea level and climate, by approximately 3000 BC, Florida's climatic and the various terrestrial and aquatic environments had approached essentially modern conditions (Milanich 1994:85).

Southwest Florida

Middle (5000 – 2000 BC) and Late Archaic (2000 – 1200 BC)

Middle Archaic shell middens are present in northern Florida, near Tampa Bay, Useppa Island in Pine Island Sound, and Horr's Island farther to the south (Milanich 1994:76, 84; Saunders and Russo 2011:47). More numerous environmental zones and resources were exploited during Middle Archaic times (Milanich 1994:34). Consequently, special purpose sites are more numerous but larger habitation sites have also been recorded. These larger camp sites were occupied for longer periods of time and have been interpreted as central base camps (Milanich 1994:75). As population density increased, aquatic resources played an increasingly important role in subsistence (Milanich 1994:85). The abundance and reliability of aquatic resources likely further contributed to sedentary populations (Milanich 1994:102-103; Russo 1991).

Previous trends continue into the Late Archaic period (2000 – 1200 BC). The stability of the modern environment facilitated an increase in population and the development of regionally specific cultures (Milanich 1994). Around 2,000 BC, pottery appears in the Archaic assemblage. Although the presence of pottery signals a technological change in food processing, agriculture was not adopted in Southwest Florida. In many locations, these Late Archaic lifeways existed into the Colonial period (Milanich 1994:85).

Terminal Archaic (1200 BC – 500 BC)

Within the study area, Terminal Archaic deposits are known from middens on Useppa Island, Calusa Island, and Galt Island (Haney et al. 2016; Marquardt 1992a, 2001) (Figure 4.1). Limited excavations restrict our characterization of the local period; much of what is known

comes from Useppa Island. At Useppa, two middens are known to date from this period (ca. 1290 – 340 BC [Marquardt 1992a:5]). Although the shell middens are dominated by oyster shells, bony fishes provided the bulk of the subsistence biomass, at least at Useppa (Quitmyer and Massaro 1999). Seasonality indicators suggest that at least occupations at Useppa Island occurred during the spring and summer months (Marquardt 1999a; Quitmyer and Massaro 1999). Although a full analysis of the faunal remains from Calusa Island has not been undertaken, preliminary data support the dietary patterns from the Terminal Archaic middens at Useppa Island (Haney et al. 2016). The Calusa Island deposits, discussed in more detail below, date from approximately 900 – 540 BC (see Appendix A; radiocarbon dates completed by Haney et al. 2016).

During the Terminal Archaic, as noted above, native populations continued to grow resulting in increased population densities, though the extent of the density was likely still relatively low. Archaic peoples are best characterized as egalitarian groups living in small bands. Often population estimates are based on recorded site densities; however, much development prior to survey has likely destroyed many sites in the region (Marquardt 1986). Coastal groups were increasingly sedentary. By this time, pottery was in widespread use and provides additional evidence that groups were increasingly sedentary (Thompson and Worth 2011).

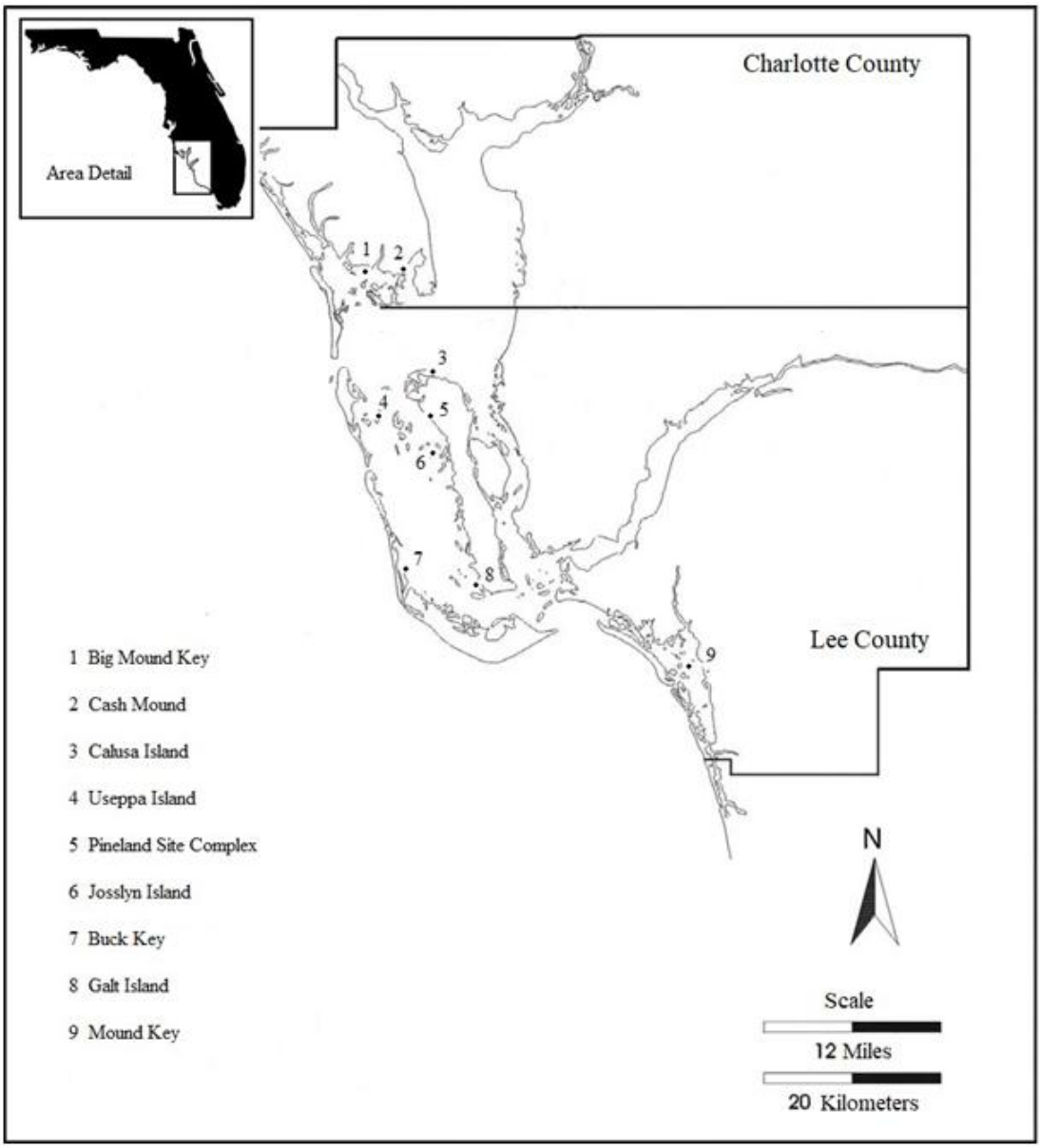

Figure 4.1. Map of the Caloosahatchee Region showing archaeological sites used in the current study (Base map adapted from Missimer 2001:23).

Caloosahatchee I (500 BC – AD 500)

Following the Terminal Archaic period, regional groups within Florida become archaeologically distinguishable by their material remains. In Southwest Florida, Caloosahatchee is the name that archaeologists have applied to the prehistoric people that lived around the Caloosahatchee River and along the southwestern coasts beginning approximately 500 BC (see Figure 4.1) (Marquardt 2001; Milanich 1994:319). The Caloosahatchee I period is separated from the Terminal Archaic by the appearance/dominance of thick, sand-tempered pottery, plain pottery but settlement and subsistence patterns continue as before (Marquardt 1999b, 2001). Within the study area, early Caloosahatchee I (500 BC – 1 AD) deposits have been documented at an increasing number of sites and include Burgess Island, Cabbage Key, Josslyn Island, Cash Mound, Galt Island, and Useppa Island, as well as others (Marquardt 1999b, 2001). Big Mound Key may also contain Caloosahatchee I deposits based on recovered pottery types (i.e., Weeden Island) but none of the documented deposits have yet yielded such early radiocarbon dates (Luer 2007; see also Caloosahatchee IIB below).

Most of what we know of this period in southwestern Florida comes from excavations at Pineland, though many data were also obtained from Useppa Island. Pineland was initially occupied around AD 50. These apparently original inhabitants deposited their middens along the shoreline and subsequent occupations followed shoreline changes as sea levels fluctuated for the next several hundred years; the later portion of an overall warm climate episode known as the Roman Warm Period. These earliest Pineland middens have been located in the Northwest and South Pasture areas, Citrus Ridge, and Surf Clam Ridge (Figures 4.2 and 4.3). The relative positioning of middens to the paleo-shorelines and ridge geomorphology suggests that the site's inhabitants during this interval may have further modified the environment by cutting a gap in the

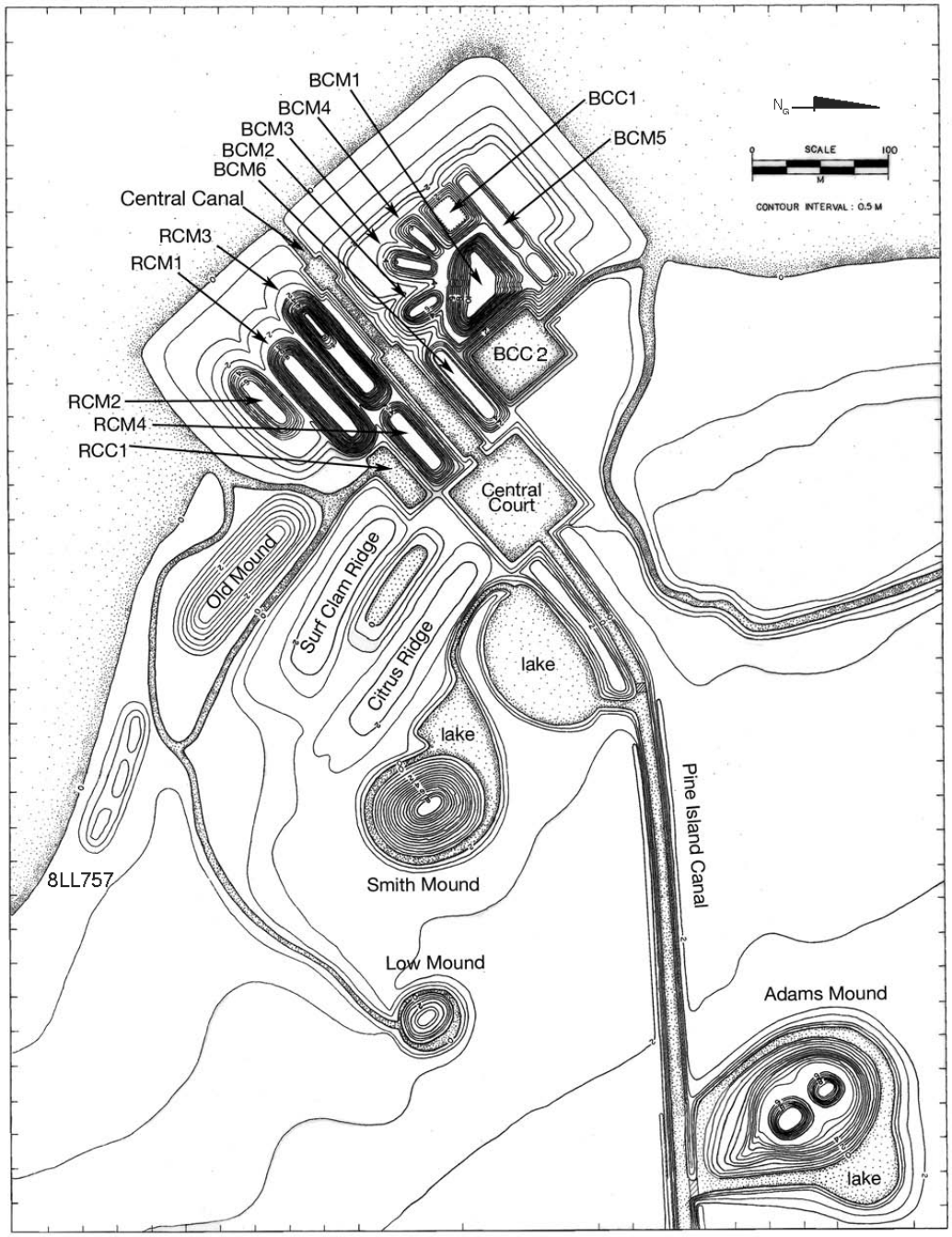

Figure 4.2. Hypothesized Pineland Site Complex (ca. AD 1700) topographic reconstruction showing areas discussed in the text. Reproduced with permission (Marquardt and Walker 2013b:845, Figure 17).

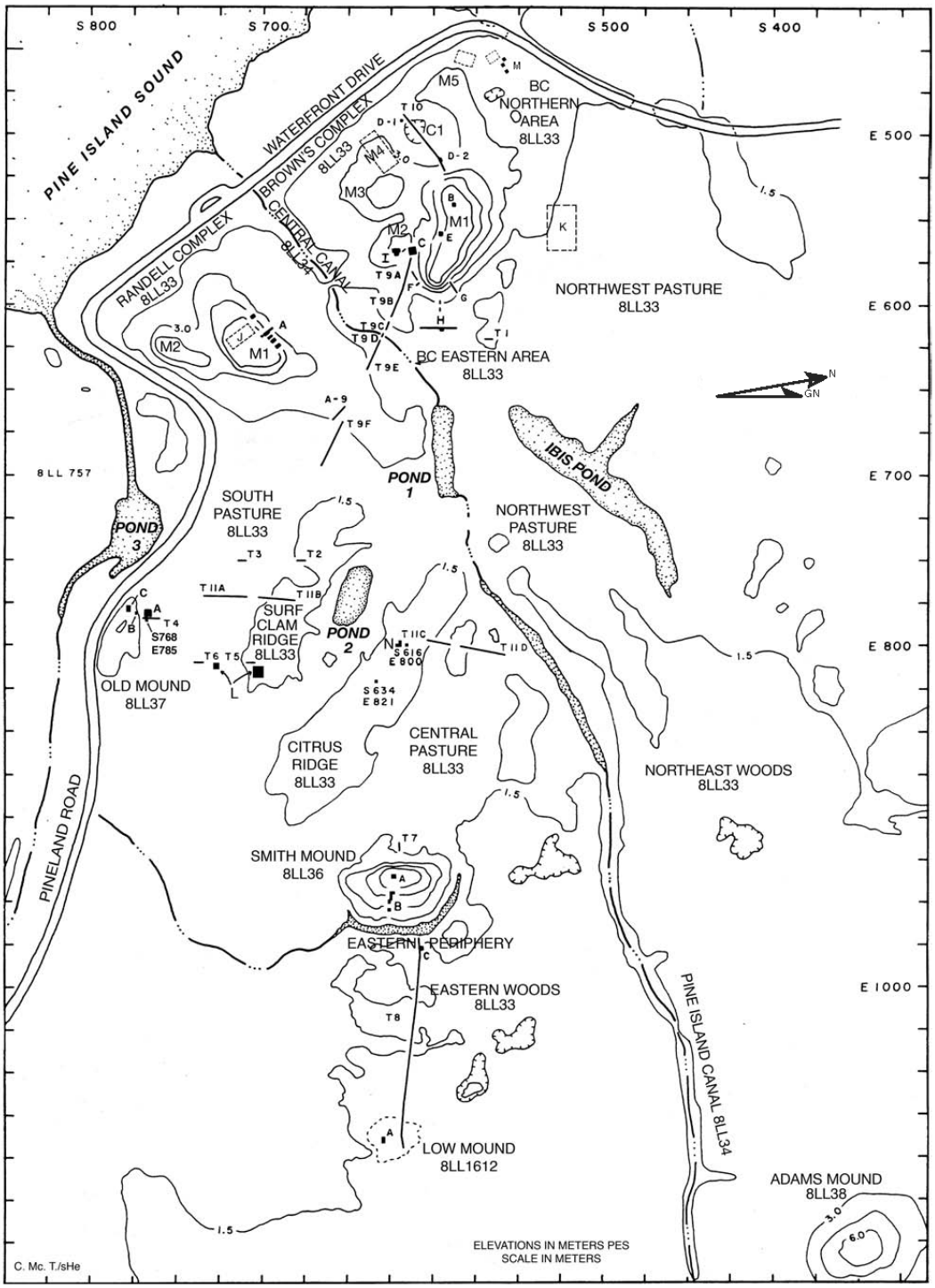

Figure 4.3. Locations of sites areas and excavations at the Pineland Site Complex. Reproduced with permission (Marquardt and Walker 2013b:799, Figure 1).

adjacent shoreline mangrove forests, presumably to facilitate access to the water and breezes (Marquardt and Walker 2013b:809-811). Similar settlement patterns are also present at Useppa Island where Caloosahatchee I middens have been documented on sandy dune-ridge landforms situated along the island coast (see Milanich et al. [1984] cited in Marquardt 1999b:86).

Clearing the mangrove forest would have allowed ease of access to the water but also allowed exposed sands to dry (especially during lowered water levels in between intra-episode sea level peaks) and be blown onto existing oyster middens near the shoreline (Marquardt and Walker 2013b:810; Walker et al. 1995:212). Faunal evidence suggests that during the latter half of the Caloosahatchee I period, Pineland was occupied year round (Quitmyer 2013) and much of the previously documented fuelwood at this time consisted of mangrove species, especially black and red mangrove (Newsom and Scarry 2013), further supporting the shoreline clearing hypothesis.

It seems likely that throughout the period, inhabitants continued to maintain an open beach front at Pineland (i.e., clearing any encroaching mangroves to leave a gap in the mangrove forest/wetlands). Occupations shifted landward or seaward periodically as the waters of the sound rose or fell over the course of several hundred years. Overall, Pineland's inhabitants were able to maintain a relatively consistent diet by exploiting oyster bars, sea grass beds, mangrove wetlands, schools of fish, and fish from deeper inshore waters. Terrestrial habitats were also exploited but mammals, birds, and reptiles (e.g., turtles) contributed far fewer calories to the diet (Marquardt and Walker 2013b:811).

For the Caloosahatchee I-late period, at least three locally distinct periods of sea level transgression have been discerned from the archaeological record at Pineland (Marquardt and Walker 2013b:821-826). One of the local intra-episode, sea level peaks occurred circa AD 300 and the transgression may have been rather abrupt. Evidence at Pineland suggests that midden accumulation occurred quickly at this time on intertidal sands (at Old Mound) rather than higher,

dry land. As the sea level rose, so would have the fresh water table and archaeological evidence further suggests that an influx of fresh water (either from artesian wells, heavy summer rains, or both) lowered the salinity in the waters near Pineland. As the shoreline area became inundated, the occupants moved to higher ground. At least one-high intensity hurricane (ca. AD 300 – 350) has been documented for this period of sea level transgression. The storm was so severe that deposits were likely washed from the barrier islands onto the site of Pineland itself – through the gap in the mangrove forest.

In sum, the Caloosahatchee I-late period may be described as an environmentally dynamic period of warmer/cooler and wetter/drier subperiods associated with long-term and short-term changes in sea level. Local inhabitants subsequently shifted their occupations landward/seaward following these environmental changes. Although these changes affected water levels and the salinity of the sound, residents were able to maintain an overall diet focused on fish and shellfish. Pineland residents at this time likely lived in small groups as before which were focused on the nuclear family. Following this line of reasoning, they are thought to have lived in small circular structures documented through remote sensing (Thompson et al. 2014).

Caloosahatchee IIA (AD 500 – 800)

This period in marked by the appearance of Belle Glade pottery into the coastal region. Sites with temporally affiliated Caloosahatchee IIA deposits include Useppa Island, Galt Island, Josslyn Island, Pineland and Mound Key. The Caloosahatchee IIA period coincides with the cooler, Vandal Minimum, so droughts, freezes, and lower sea levels variously impacted resources in the local environment (Marquardt and Walker 2013b:879). Although similar to the Caloosahatchee I period in that the entire period may be characterized by short-term sub-episodes of cooling-warming trends associated with marine regressions and transgressions, overall sea

levels were much lower than the preceding period. Following a sea level transgression peak at approximately AD 500, sea levels dropped, the climate cooled, and the shoreline receded. Faunal assemblages present some striking differences when compared with those of the Caloosahatchee I period. There are dramatic decreases in fish remains and increases in numbers of whelks and crown conchs in the IIA middens (Marquardt and Walker 2013b:827). Walker argues that the increased presence of crown conchs was not a shift in dietary preferences but likely related to environmental changes (Marquardt and Walker 2013b: 822; Walker 1992:285). With the regression of sea levels, oyster bars located in shallower waters would have been exposed, stressing the oysters. Since the adult crown conchs are predators of oysters, conchs would have benefitted from the weakened state of the oysters and their populations would increase. Further, migratory duck remains are also found in high numbers within these middens suggesting that unusually cold winter temperatures had forced the ducks farther south than typical. Given the already stressed nature of the oysters, cooler winters would have only exacerbated the problem. These cooler periods might also have caused higher than usual mortality among other species within the now shallower sea grasses, where juvenile crown conchs feed on the detritus (Marquardt and Walker 2013b:829). Fuelwood patterns also shifted; the use of red mangrove decreased while the use of pine increased (Marquardt and Walker 2013b:878).

Finally, as in previous periods, the IIA inhabitants of Pineland appear to have shifted their center of occupation seaward but this time, northeastward into the areas today known as the Randell and Brown's Complexes (see Figure 4.2). Structural remains/deposits have been archaeologically documented that date to this period, however, excavations have not been expansive enough to determine their size or shape. This residential distribution though appears to be the first time that the occupation at Pineland was divided into two areas or clusters. The two areas were physically divided by either a natural stream bed or possibly the earliest portions of what later become the Pine Island Canal (Marquardt and Walker 2013b:833). Much of the

material that forms the midden-mounds currently designated as the Randell and Brown's Complexes was deposited over the course of the IIA period. There is also evidence of long-distance trade during this period (Marquardt and Walker 2013b:827).

Caloosahatchee IIB (AD 800 – 1200)

Although excavations have not yielded contexts dated to the early portion of the Caloosahachee IIB period from Pineland, such temporal deposits do exist at other sites, including Buck Key, Big Mound Key, Useppa Island, Galt Island, and Josslyn Island (see Figure 4.1). The third, and most severe, of the sea level regressions of the Vandal Minimum/IIA period may have resulted in the temporary abandonment of Pineland during the first century of the IIB period (Marquardt and Walker 2013b:836). With a diminished fishery, residents may have sought to occupy sites with easier access to deeper waters.

Much of the area surrounding Pine Island is very shallow; depths within the sound are typically not much more than 4 ft (1.2 m) with most areas less than 3 ft (0.9 m) deep (Marquardt 2014:7). A significant regression would have exposed much of the shallow sea grass beds in the sound and likely also have affected mangrove community structure and composition. Pineland's residents may have moved to one of the western islands; Useppa Island, for example, has midden that dates within this Pineland hiatus (approximately AD 800 – 1000) (Marquardt and Walker 2013b:836). Evidence at Useppa Island suggests that during this period diets shifted to a more fully marine base focused on a few fish and the littoral environments of the barrier islands (Marquardt and Walker 2013b:836).

By approximately AD 900 – 1100, the climate had ameliorated and Pineland was again inhabited. Faunal assemblages show an increased diversity compared with previous IIA assemblages suggesting that water levels had substantially risen by AD 900 – 950. Another brief

hiatus at Pineland may have occurred approximately AD 1100 – 1150 but this has not been extensively documented. At any rate, the faunal resources appear to have recovered during the latter half of the IIB period. At Pineland, the formalization of the settlement pattern realignment – from paralleling shorelines to a perpendicular arrangement – in concert with the central canal, watercourts, and mound burial (Smith Mound) was complete by this initial re-occupation phase (Marquardt and Walker 2012:41). It should also be noted that the geography of the sound was not static but shifted with major hurricanes. Buck Key, previously a barrier island, is by this time located within the sound and occupied. Beach ridge evidence from the barrier islands further suggest that alterations continued as passes to the gulf opened/closed with significant storms (Stapor et al. 1991).

Caloosahatchee III (AD 1200-1350)

The beginning of the Caloosahatchee III correlates with the beginning of the Little Ice Age that brought cooler temperatures and lowered sea levels overall. Caloosahatchee III period deposits are known from excavations as Pineland, Galt Island, Mound Key, Cash Mound, Josslyn Island, and Buck Key. Pineland excavations have documented portions of structure floors or activity areas on the midden-mounds. Marquardt and Walker (2013b:842) note that while radiocarbon dates suggest at least two possible episodes of purposeful mound building late in the period, the pottery assemblage suggests that the mounds continued to accrete more slowly throughout the period. One such floor found within Brown's Complex Mound 2 contained non-local pottery from the Central Gulf Coast and materials such as galena and quartz indicating long-distance trade(Marquardt and Walker 2013b:840). Charcoal data obtained from building/structure interior or activity area and midden contexts during the III period suggested that pine and black mangrove continued to be major components of the fuelwood assemblage. A small amount of red

mangrove was also burned, and for the first time, live oak was used significantly (Marquardt and Walker 2013b: 840). These fuelwood trends continued into the Caloosahatchee IV period.

Caloosahatchee IV (AD 1350 – 1500)

Caloosahatchee IV deposits are known from Pineland, Galt Island, Mound Key, and Buck Key while pottery collections at Big Mound Key suggest that IV deposits are likely present. Following an initial sea level trangression at the beginning of the Caloosahatchee III period, sea levels are thought to have generally declined and remained lower than previous higher levels. Although generally lower sea levels (and thus a depression in the inland water table) may have reduced travel to the interior and encouraged contact along the coast, long distance and regional exchange continued (Marquardt and Walker 2012:43). As seen in the Caloosahatchee III deposits, radiocarbon dates and pottery assemblages recovered from the IV deposits conflict (Marquardt and Walker 2013b:843) and may suggest purposeful mound-building activities.

Marquardt and Walker (2013b:842-843) note interesting differences between the faunal remains documented during this period and faunal remains from the earlier cool IIA period of lowered sea levels. For example, they note that no migratory duck remains were documented from the IV samples (compared with IIA assemblages). Subtle changes in fuelwood dominance with less black mangrove and more pine and live oak – both generally representative of interior environments – may suggest drier conditions, if not diminished numbers or even local extirpation of the mangrove community due to human extraction pressure.

Caloosahatchee V (AD 1500-1710)

Unfortunately, excavations to date have not located any intact deposits at Pineland that post-date AD 1500. Analysis of historic accounts suggests that Pineland was a chiefly administrative center, in fact, the second largest town in Calusa territory (Marquardt and Walker 2013b:843; Worth 2013:769). The site of Pineland is now identified as the proto-historic location of Tampa mentioned by Spanish shipwreck survivors, early map makers, and explorers. Further, Pineland was likely attacked by the Spanish in 1614 as retaliation for the Calusa's raiding of Spanish settlements to the north (Worth 2013:773). By approximately AD 1710, Pineland was likely abandoned as most of the Calusa had either perished from European diseases or been killed/captured by slave traders (Worth 2013:780-781).

The Calusa

Much of what is known of Calusa social organization and interactions comes from Spanish ethnohistoric documents written in the sixteenth century. One particularly valuable source is Fonteneda (1944 [1575]), a shipwrecked Spaniard who spent more than 15 years among the Calusa and had learned their language. At contact, the Calusa were a stratified society (i.e., they had institutionalized inequality). The Calsua territory possessed a two-tiered settlement system, the largest villages with sand and midden mounds, plazas, canals, watercourts, and distant tributary villages (Hann 2003:164; Marquardt and Walker 2013b:843). Elites appear to have been exempt from labor or daily productive activities; these nobles were able to generate surplus by other means and to restrict access to controlled materials and produce (Marquardt 1992c:123). At least the principal elites clearly had differential and hereditary access to prestige, authority, and wealth finance institutions.

Labor Relations

Although the Calusa had ‘monumental construction’, current research suggests that many of these structures were not built through elite direction/control. Even though they created artificial land by filling and mounding their refuse at the edge of shallow estuarine waters, these accumulations occurred over extremely long periods of time and intentionality is difficult to discern. Only two possible episodes of intentional midden-mound building (see Caloosahatchee III and IV discussions above) have been documented at Pineland in addition to the sand burial mound (Smith Mound). The bulk of the midden mounds appear to have accumulated very slowly, perhaps with daily refuse disposal. The water features at Pineland, however, are another matter. These water canals and courts are illustrated on Figure 4.2 and clearly represent a sizeable labor investment. In its final configuration, the Pineland Site Complex was composed of numerous artificial water features and a 4 km (2.5 mi) canal that connected the eastern and western shores of Pine Island (Marquardt and Walker 2013b:848). The inhabitants of Pineland oriented or modified the landscape such that midden-mounds or groups of midden-mounds were separated by water courses. Although not deep, these water courses (altered natural drainages and artificial channels) facilitated canoe travel and perhaps, delimited and segregated areas of the site. Given the diversity of these building projects, the organization of labor likely varied from single clans/lineages (house mounds) to multi-lineage/village level labor groups (canals).

Political Constructs among the Calusa

Although their economic focus remained on fishing, gathering, and hunting with perhaps some low-level gardening, their socio-political development was atypical of classic hunter-gatherer groups and more closely resembled a stratified chiefdom (Kelly 1995; Marquardt 2014).

At contact, their territory included a hierarchical settlement system with at least two tiers of villages, the largest with sand and shell mounds, plazas, canals, and distant tributary villages (Hann 2003:164; Marquardt and Walker 2013b:848). Elites appear to have been exempt from labor or daily productive activities; these nobles and ruling classes were able to generate surplus and restrict access to materials and produce (Marquardt 1992c:123). At contact, South Florida was a fairly circumscribed environment with all available land divided into territories by local groups (Milanich 1994).

Currently, the time at which characteristics developed is disputed (Marquardt 2014:6). Widmer (1988) argued that the complexity demonstrated at contact developed early, between AD 500 – 800, based on interplay of demography and the environment (i.e. local carrying capacity). Widmer (1988) follows an environmental circumscription theory to argue that population densities would have necessitated group cooperation producing increased social complexity. On the other hand, Marquardt (2014:15-16) has argued that the chiefly power, function, and privileges extant at contact could have been a result of early contact with European shipwreck survivors or an impact of Spanish goods washing up on shore (see also Hann 2003:167). Thus, some of the Calusa socio-political institutions extant at contact may have developed in a short-time just prior to documented contact.

Inequality among the Calusa

Spanish accounts clearly document the existence of social classes including elites and commoners (i.e., a stratified society) (Hann 2003:164; Fontaneda 1944 [1575]). Elites mentioned in early documents include the paramount leader, chief commander (military commander), head shaman, local village chiefs, nobles, and military specialists. At least the chiefs clearly had differential and hereditary access to prestige, authority, and wealth finance institutions (Hann

1991:237). It remains unclear if the nobles had direct access to wealth generating institutions or if they were solely at the chief's discretion. It seems plausible that the chief may have redistributed prestige goods to clan or lineage heads that may, in turn, have redistributed the items to their kin. Certainly, the paramount chiefs established patron-client relations with subservient chiefs through the gifting of prestige goods and/or marriage ties (Hann 2003:164-176; Marquardt 2014:2; Marquardt and Walker 2012:29), lending weight to the suggestion that elites generally were involved in network strategies to obtain wealth/prestige.

A good illustration of the chief's differential access to prestige items comes from the salvage of European shipwrecks. When European items were salvaged from shipwrecks within the Calusa domain, the paramount chief had primary authority to claim and distribute the items (Hann 2003:164-176; Fontaneda 1944 [1575]). The presence of European goods in contact era burials further indicates that these goods were moving along some form of gift/exchange network. The paramount chief also possessed differential access to the means of production. He extracted tribute from conquered territories in the form of staple goods, such as deer hides (Hann 2003:30). The circulation of staple or utilitarian items is not well documented in the historic sources. Staple items often have a low archaeological visibility making it difficult to trace the movement of staple goods in the archaeological record.

Archaeologically, we know that marine shell was widely traded from Florida into the Southeast and Midwest (Muller 1997; Griffin 1967). Although the source of these shells is not precisely known, the Calusa ancestors and other prehistoric Florida cultures likely participated or benefited from this long-distance trade in exotic materials. Standardization of gastropod shell-tool production as early as AD 800 – 1200 at Pineland suggests that the Caloosahatchee were participating in a high volume of trade or exchange in prestige goods or raw materials (Marquardt and Walker 2012:41-42). Marine shells may have been exchanged for northern materials, such as

shell-tempered pottery, quartz, and galena, which have been recovered from Florida excavations (Marquardt and Walker 2012:48-51).

Domestic Economy

We know that generally the Calusa were fisher-collectors who likely had or tended small house-gardens (based on archaeological evidence of pepper and papaya seeds [(Newsom and Scarry 2013)]. We do not know how they may have organized their labor but changes in residence patterns are suggestive of changes to domestic/household labor organization. We know that some groups were sedentary as early as the Middle Archaic. By approximately 2800 BC, residents at Horr's Island, a site located on the coast near Marco Island, were living in small, round houses made of poles and thatch (Marquardt 2001:160-161). At contact, reports describe Calos, the Calusa capital, as consisting of 16 houses on small hills (mounds), each sheltering several dozen people (Hann 1991:41-42; Thompson et al. 2014). The paramount chief's house could reportedly accommodate 2,000 standing persons (Marquardt 2001:165); this structure is not likely to be the chief's actual residence but more likely a council house. Marquardt (2001:165) estimates that if such a structure were round, it would have a diameter of 28 meters. The Apalachee had a similar sized council house, measuring 36 meters (Marquardt 2001:165).

Although the exact sizes of the residential structures at Calos (i.e., Mound Key) have not been documented through archaeological excavations, we can speculate on residential patterns based on work conducted at Pineland where similar residential patterns/structures undoubtedly also existed (Thompson et al. 2014). Limited excavations at Pineland have documented post mold patterns presumably associated with residential structures but because of the limited extent of these excavations, no entire structure has yet been fully documented. In an attempt to fill this knowledge gap, researchers have used several geophysical techniques (resistance survey and

ground penetrating radar) to examine some of the large open areas at Pineland (Thompson et al. 2014).

Combining the available excavation and geophysical data from Pineland, a picture of shifting residential patterns emerges. Some of the earliest structures identified in the geophysical data include relatively small-diameter (ca. 3.5 m), round structures on Surf Clam Ridge (Thompson et al. 2014). By approximately the late Caloosahatchee I period (ca. AD 450 – 500), residents at Pineland appear to have shifted towards larger co-resident structures estimated at 23 m in length and 10 m in width (Thompson et al. 2014; see also Worth 2007).

Following a hiatus (AD 800 – 900) at the site, residents return and dramatically reorganize the midden-mound architecture and, presumably, their residential configuration atop these features. Rather than paralleling the shoreline, as in the past, the midden-mounds are located perpendicular to the shoreline and are bisected by a Central Canal. Excavations have encountered additional structural remains dated to the Caloosahatchee III period (AD 1200 – 1350) and although speculative, the redeposition of midden from earlier deposits to the accreting midden-mounds during the Caloosahatchee III and IV periods suggests that construction was ongoing at the site late in its occupation. Thompson and colleagues (2018:29) have speculated that changes in labor relations began when households shifted from nuclear to corporate as a solution to environmentally induced changes in resource availabilities. When resource productivity rebounded, any surplus labor was allocated to additional production or large-scale public works (e.g., canals) after ca. AD 800.

Again, we do not know how a change in residence pattern would have affected the division and organization of labor but we can speculate based on modern analogies and obtuse historic references. Modern hunter-gatherer groups tend to live in nuclear family dwellings but perform work at the supra-household level. Commonly, there is a sexual division of labor (classically) with the women collecting and the men hunting. The Calusa women were also likely

responsible for plant harvesting because when the Spanish suggest to the Calusa men that they should grow maize, the men respond negatively.

It is possible that changes in the organization of labor changed at this time for only some tasks – specifically, those tasks that required larger labor forces or labor investment in tools to efficiently accomplish. Many domestic activities, such as plant collection, may have continued as before. Tasks that required the use of nets or canoes as bulk transporters may have shifted at this time to an extended kin organization with kin groups sharing the construction, maintenance, and use of these (high-labor investment) tools. The standardization of whelk shell-tool production may have occurred at Pineland as early as AD 800 – 1200 (Marquardt and Walker 2012:41-42), strengthening an argument for changes in the organization of labor prior to AD 800.

Institutional Economy

The institutional economy of the Calusa may be sub-divided into four sub-areas including social organization, political organization, regional exchange/tribute, and warfare. As briefly mentioned earlier, historic accounts document the stratified nature of Calusa society (Fontaneda 1944 [1575]). Following Ames (2008:489), we can surmise that having a group of non- producing elites meant that inequalities were strong and pervasive. Social classes included elites and commoners and social distinctions were reinforced with sumptuary laws restricting diet. Fontaneda (1944[1575]:12) notes that ‘sea-wolves’ were only eaten by the elites.

By definition, in stratified societies individuals have unequal access to the means of production and status/authority positions (Ames 2008:489). It is possible that the concept of resource or land ownership was taking shape as elites extracted a surplus from the common populace. In this theory, the means of production may have been more literal with access to subsistence resources limited or controlled by elites. Equally plausible, however, is that some

esoteric knowledge required for good harvests or prosperity was controlled by the elites and/or chiefs. Following a similar line of thought from the Mississippian Southeast (i.e., Southeastern Ceremonial Cult [SECC] ideology; see also Kelly 2012), Marquardt (in Hann 1991:xvii) suggests that if chiefly authority was underwritten by ideological or spiritual knowledge that the introduction of European goods would have adversely impacted the chief's control. Subordinate chiefs may have attempted to circumvent the paramount's authority by controlling the new prestige goods and the ideology they represented. The paramount would have then been forced to reassert his power by taking control of the European goods and exchange through military force; thus, reasserting control over the ideology these European goods represented. Marquardt (in Hann 1991:xvii) argues that as the paramount's authority escalated to meet the challenge presented by European shipwreck salvage, the Calusa may have shifted from a chiefdom to a weak tribute-based state (Marquardt 2001:167; Marquardt 2014:15).

The elite control of spiritual or esoteric knowledge fits well with Feinman's (1995:268) idea that one leadership strategy of elites will involve a shift from corporate to network mechanisms of wealth accumulation. In the network strategy, the success of elite control is dependent on interactions with other elites (Kelly 2012). Feinman (1995:274) further suggests stressors, such as population pressure or environmental changes, may have influenced changes. Indeed, we see dynamic environmental changes in sea level rise/falls and temperature fluctuations associated with the Vandal Minimum (AD 500 – 800) and the onset of the Little Ice Age at approximately AD 1200. Some of these fluctuations affected the abundance of dietary resources at Pineland, harvested species shifted as environmental stressors differentially affected the resources (deFrance and Walker 2013:316; Marquardt and Walker 2013b:878).

Regional Exchange and Tribute

The earliest evidence of regional contact/exchange comes from pottery distributions. While some would argue that pots are not people, for my purposes, the pots are moving directly or indirectly into the Calusa heartland. Contact with neighboring regions was visible after AD 500 in the form of extra-local pottery sherds (Cordell 2013:503). These early contacts were with the Okeechobee region located east of the Calusa heartland, likely facilitated by the Caloosahatchee River. An increase in contact has been inferred after AD 650 from increasing quantities of non-local pottery. Further Cordell (2013:499) notes that approximately AD 650 – 800, there is a diversification of vessel forms. Since no changes have been detected in the diet, changes to the vessel assemblage may signal social changes related to signaling, perhaps during feasting.

After AD 800, inter-regional contact increased to the north with evidence of Weeden Island-related pottery at Pineland (Cordell 2013:504). Later evidence (AD 1350 – 1513) suggests that exchange could have involved cultures as far north as the panhandle (e.g., Fort Walton region) (Cordell 2013:504). A minority ware, Glades Tooled, may also indicate some level of contact with southern groups (e.g., Ten Thousand Islands region and Everglades region).

Some authors have suggested that exchange shifted to tribute approximately AD 1000 and highlight the importance of the canal and water transport (Hann 2003:166). Much of this interpretation may be heavily influenced by the assumption that canal building is an elite monumental construction but if the canal system is much earlier, then the initiation of tribute by the Calusa remains an enigma. Certainly by contact, the Calusa were extracting tribute in the form of food stuffs, woven mats, deer hides, and feathers (Marquardt 2001:168; Hann 2003:30). Tributary regions included the Ais (on the Atlantic coast) and possibly also the Jeaga, Guacata, Mayajuaco, and Mayaca based on the redistribution of European prestige goods (Fontenada 1944

[1575]:20). Fontenada also created a list of chiefs known to him in four regions of Florida. According to Fontendata (Worth 1995:342), the Calusa had at least 36 towns or chiefs subject to their rule. It is not clear where these tributary towns were located but they may have been within the regions previously designated as allies of the Calusa (from above, the Ais, Jeaga, Guacata, Mayajuaco, and Mayaca).

Although water transport was a great advantage to the Calusa, lowered water levels during the Little Ice Age (ca. AD 1200) may have limited navigation along canals. Consequently, maritime travel may have been largely restricted to coastal environments or major rivers (i.e., rivers deep enough to sustain travel in spite of a lowered water table). This scenario may explain the Calusa focus at contact on south Florida – those regions that border the Caloosahatchee River.

Warfare

While Marquardt (2001:168) doubts that the level of warfare at contact had much antiquity, the presence of war-related institutions argues for a greater antiquity to endemic warfare. Institutions include the permanent presence of the chief commander (military commander), non-producer military specialists, and hostages. Endemic warfare is often downplayed because the classic evidence has not been found archaeologically. For example, towns were not fortified and skeletal evidence of trauma is lacking. However, few skeletons have been excavated. In short, we know little about prehistoric warfare in southwestern Florida but we do know that at contact, a substantial fighting force was assembled to greet the Spanish (Marquardt 2014:14).

Discussion

Even though the Calusa were a fisher-gatherer-hunter society, their socio-political organization may be classified as a chiefdom; they had a hierarchical settlement system, a hereditary leader, and social stratification. Further, Calusa kings were identified differently from chiefs (caciques) in the historic documents, implying that the Spanish too had perceived differences between the extent of Calusa leader's authority and authority of local town chiefs (Hann 2003:164). The Calusa did not have a standing army, as such, with forts and barracks but the leaders had the power and authority to assemblage a fighting force of 80 large canoes overnight – nearly a standing army.

In an examination of power-generating/maintenance strategies, both elite alliances and wealth finance appear to have been employed. The king solidified alliances through marriages and the supply of prestige goods (client-patron relations). In fact, elites were able to mobilize surplus for their own benefit – elites were a non-producing class.

Little is known overall concerning the Calusa political-economy. Most of what we know comes from ethnohistoric accounts. Further, determining the source of extra-local materials would also clarify regional contacts and relationships. We know that some marine shells were moving north and that some exotic items, such as galena and pottery were moving into the Calusa domain. We do not know to what extent these non-local materials were controlled by the king and/or other elites.

Archaeological Site Descriptions

The Pineland Site Complex

The Pineland Site Complex (see Figures 4.1, 4.2, and 4.3) lies on the northwestern shore of Pine Island, on the eastern edge of Pine Island Sound in Lee County. In its final configuration (see Figure 4.2), the Pineland Site Complex was composed of several mounds, artificial water features, and a 4 km (2.5 mi) canal that connected the eastern and western shores of Pine Island (Marquardt and Walker 2013b:848). Although some short-term episodes of intentional mound building have been documented, most of the mounds appear to have resulted from long-term refuse deposition alternating with episodes of activity and/or house-floor surfaces. Torrence (2013:169) speculated that living on the elevated middens was perhaps initially an attempt to avoid flood waters and tidal events. The final layout of Pineland was reconstructed using modern topographic features, descriptions and sketch maps by Frank H. Cushing (who first investigated the site in 1897), landowner oral histories, and archaeological research. Based on all of this information, it appears that the later inhabitants of Pineland oriented or modified the landscape such that mounds or groups of mounds were separated by water-course courses (i.e., canals and watercourts). Although not deep, these water ways (altered natural drainages and artificial channels) delimited and segregated particular areas of the site, the reasons and social meaning for which remain unexplained.

Pine Island Sound is bounded and protected by Pine Island to the east and several barrier islands to the west, including Cayo Costa, North Captiva, Captiva, and Sanibel Islands (see Figure 4.1). Freshwater and particularly marine aquatic resources would have been readily obtained from riparian/marsh and shallow marine environments in the site’s immediate area, all

accessible on foot or by water craft. This would also apply to the accessibility of the mangroves and other coastal or near-shore forest associations.

Salinity in the sound is affected by changes in sea level and influxes of fresh water from the Myakka, Peace, and Caloosahatchee Rivers (see Figure 3.2). For example, during periods of drought or high sea levels, the salt gradient shifts closer to the mainland and salt levels may be unusually high even far up river from the bay. Conversely, during periods of low sea level or high precipitation, the salt gradient can shifts seaward resulting in less saline estuarine waters (Walker 2013:37).

Changes to the salinity gradient may have profound effects on local aquatic and wetland plants and animals. Likewise, other common natural disturbance pulses, including hurricanes, droughts, and fire, have long exerted a strong and shaping influence on the native biota; tsunamis triggered by tectonic activity in the Circum-Caribbean basin are another, though infrequent source of disruption to Gulf coastal plant communities and wildlife (ten Brink et al. 2006).

Jossyln Island (8LL32)

Josslyn Island currently belongs to the State of Florida and is managed as part of the Charlotte Harbor State Reserve (see Figure 4.1) (Marquardt 1992b:14). The archaeological site encompasses approximately 3.0 ha (6.7 ac) and is geologically the oldest portion of the island. The archaeological deposits accumulated atop natural shoals/sediments so at least initially, the island would not have been ringed by mangroves. Currently, the island measures nearly 20 ha (49 ac) with an extensive mangrove fringe. The site consists of 5 midden-mounds, 2 flat platforms, and several canals or channels at the base of the mounds. Given the relatively low nature of the surrounding areas, Marquardt (1984:11) speculated that the mounds may have been built from material excavated from the midden. His supposition remains to be tested, however, both accreted

and purposely, constructed midden-mounds are known to occur in the region. Elevations at the site reach just over 6 m (19 ft) (Marquardt 1984:11).

Excavations to date have largely been conducted in or around disturbed areas of the site but the stratified deposits of Operation A established a time frame for occupation(s) at the site (Marquardt 1992b:15-25). The earliest dated occupations (at the modern water level) were deposited in the early Caloosahatchee I period (500 BC – AD 500). Uppermost deposits date to the thirteenth century in the Caloosahatchee III period. Botanical and faunal analyses have indicated that occupations at Josslyn Island were likely year round. A complete chronological sequence has not been established at the site as only a small amount of investigation has occurred.

Cash Mound (8CH38)

The Cash Mound shell midden is located on the end of a small peninsula off Cape Haze on the northern side of the harbor, near Turtle Bay (see Figure 4.1). Currently, the midden measures approximately 200 m by 125 m and has an elevation over 6 m (Marquardt 1992b:29). Much of the site was destroyed to create artificial oyster beds and road fill but the site is now under federal protection. Past excavations have been limited but artifact assemblages and radiocarbon dates suggest a minimal occupation range of 1000 BC – AD 1350 (Marquardt 1992b:33). The midden appears to contain stratified deposits of oyster and mussel shells with concentrations of fish bones, similar to the Calusa Island midden. Portions of the midden may have accumulated fairly quickly because more than a meter of the midden dated to the early Caloosahatchee I period (excavation levels 8-20; see Chapter 5 for more details).

Buck Key Shell Midden (8LL722)

Buck Key, as mentioned earlier, is a former barrier island located in the southwestern portion of Pine Island Sound (see Figure 4.1). The island encompasses 141 ha with several archaeological sites, including two shell middens (8LL721, 8LL722) and a sand burial mound (8LL55). Some portions of the shell middens reach approximately 2 m in height (Marquardt 1992b:34, Figure 16). Island formation processes were active approximately AD 440 – 1010 and suggest that much of the visible (above water level) deposits would date to the late prehistoric period. The limited excavations corroborate the geologic findings with occupations that dated to IIB-late and IV periods (approximately AD 1000 – 1450). The habitation sites on Buck Key show evidence of discrete activity areas. One of those areas consists of a shell tool manufacturing location similar to the deposits on Useppa Island (Dietler 2008:446-447; Patton 2001:89). This pattern is repeated at 8LL722 where roughly contemporary (based on radiocarbon dates) but markedly different deposits suggest discrete activity areas are present.

Calusa Island (8LL45)

Originally, Calusa Island was part of Bokeelia Island until a pass was cut in the early twentieth century separating the two land masses (Patterson 2017:11). Little archaeological work has occurred on Calusa Island and so the relationship between extant sites is difficult to unravel. The Calusa Island shell midden (8LL45) is located at the eastern end of the original Pine Island land mass. Two sites are located to the west of the Calusa Island midden, including a large mound (Howard Mound) and a series of linear midden ridges. Both Calusa Island and the large mound are known to date to the Archaic period, however, the temporal association of the linear ridges is unknown and the relationship of the three sites is uncertain.

Big Mound Key (8CH10)

Big Mound Key is a large distinct site that is one component of the state-owned Big Mound Key/Boggess Ridge Archaeological District. Big Mound Key is located on the Cape Haze Peninsula west of Cash Mound (see Figure 4.1). The mound complex covers 15 ha with a maximum elevation of 7 m (Marquardt 1992b:44). The site is symmetrical and resembles an effigy mound; some have suggested that the shape resembles a spider or octopus. Pottery recovered at the site suggests that occupation occurred during the Weeden Island (ca. AD 300 – 1000), Safety Harbor (AD 1000 – 1600), and later historic periods. The main portion of the site contained four large flat-topped midden-mounds (one has largely been destroyed); the largest measures approximately 75x75x6 m and contains two peaks. At least nine, low, linear shell-ridges run from 100-150 m out from the center of the site making up the 'legs' of the effigy. Since the shape of the site is unique, the intentions of the site's creators are unclear; however, both Mound Key and Calusa Island have midden 'extensions' which resemble tails. Aside from resembling animals, these features could have easily been functional in a water-world of canoe transportation.

In 1982, George Luer conducted salvage work at Big Mound Key following several significant episodes of looting. Luer's (2007) investigations were concentrated on the West Mound, which measured 35x30x6 m. He documented episodes of mound building (ca. AD 700 – 1000) using secondary midden and remains of a structure near the mound's summit. In particular, the salvage work focused on a large, stratified pit feature which was partially bisected by a looter's backhoe trench. Upon further excavation, these deposits were found to be beneath the post mold pattern of the structure. Faunal and botanical remains recovered from the excavations lead Luer (2007) to conclude that consumption on the West Mound entailed favored foods, perhaps by a group of elites engaged in patron-client feasting.

Galt Island (8LL27)

Galt Island contains a midden-mound complex (8LL27) with possible canal remnants and a sand burial mound (8LL81) (Marquardt and Beriault 1988) (see Figure 4.1). The sand burial mound is somewhat separated from the midden complex, which is itself somewhat divided by a low, flat, open area. Unfortunately, the sites have undergone extensive looting and so further investigation will be necessary to determine the extent of damage and what remaining features may have originally been portions of larger midden-mounds or ridges. The southern mound complex has greater relief than is seen in the northern portion and appears to contain roughly seven elevated features. These features include several larger oval, rectangular, linear, or knoll-like mounds and are sub-divided by a possible canal remnant. Elevations in the southern mound complex range from approximately 1-2 m (Marquardt and Beriault 1988:Figure 1). The smaller, northern midden complex contains upwards of 6 elevated features, some of which might have once been larger, connected features. This area also appears to contain a canal remnant to Pine Island Sound. Elevations within the northern complex reach up to 1.5 m. Five test excavations were completed in 1986 to initially assess some of the deposits and provide a temporal chronology for the site (Marquardt and Beriault 1988). The recovered artifacts and radiocarbon dates from the site suggest that the western midden complex dates to approximately AD 900 – 1300 (Marquardt and Beriault 1988:11). Detailed ceramic analysis from the five excavations suggest that the deposits at Galt Island occurred during the Caloosahatchee IIA and IV periods, AD 500 – 800 and AD 1350 – 1500 respectively (White 1995:139). Although much of the site remains to be tested, at present there is little evidence to suggest that the site was inhabited beyond the time periods discussed above.

Mound Key (8LL2)

Mound Key is located to the south of the main project area in Estero Bay (see Figure 4.1) and was the home of the Calusa's principle chief, Carlos, at Spanish contact. The site covers approximately 51 ha and consists of both primary and secondary midden deposition (Thompson et al. 2016). Two large mound complexes are bisected by a central canal, similar to the Pineland Site Complex and Big Mound Key. The tallest mound (Mound 1) measures approximately 10 m in height with the next tallest mound (Mound 2) reaching 6 m. The entire site, however, is complex with numerous secondary canals, terraces, ridges, elevated platforms, and mounds. Mound Key also possesses impoundments, or watercourts, that are seen at other regional sites. Radiocarbon dates from the site suggest that midden accumulation began around AD 400 – 540 (cal.) and that movement, or re-deposition, of midden to create the upper portions of the large mounds occurred circa AD 1000 – 1200 (cal.) (Thompson et al. 2016:15).

Excavations on the summits of the highest mounds revealed patterns of post molds and investigations of these features were combined with an intensive coring operation to investigate the overall chronology, including construction periods site-wide (Thompson et al. 2016). The summed probability of radiocarbon dates resulting from these recent investigations shows construction activity interspersed with periods of low activity and one period of site abandonment. The authors note that periods of lower or inactivity correspond well with the sea-level record developed by Tanner (Thompson et al. 2016:16; see also Walker 2013). The reduction in local population and/or abandonment of Mound Key around AD 850 is contemporaneous with a steep drop in sea-level. This drop in sea-level would have affected not only the water level within the estuary but also the salinity of the bay and consequently, the fishery and shellfishery. Mound Key appears to have been re-occupied by approximately AD 950 (cal.) and Mounds 1 and 2 were subsequently increased in height. Following this construction

stage, the summits of the two largest mounds remained stable for several centuries. Thompson et al. (2016:16) further speculate that the central canal may also have been dug following this reoccupation of the site, which is similar to the construction history at Pineland.

Useppa Island (8LL51)

Archaeological investigations at Useppa Island have documented Middle Archaic (ca. 3700 BC), Late Archaic, Terminal Archaic, and Caloosahatchee I and II (ca. 500 BC – AD 1000) occupations. By approximately 3500 BC, estuarine conditions had developed around or near Useppa Island. Much of the archaic activity on Calusa Ridge was focused on shell-tool production. During this period, cutting edged tools and hammers were produced from the columella portions of large gastropod shells, primarily lightning whelks. By the Caloosahatchee I period, shell tool production had changed in character. Both the gastropod species chosen and the manner of manufacture shifted. There was a reduction in the use of lightning whelks and an increase in the use of horse conchs. Additionally, the later tool production used whole shells in a more expedient but consumptive technology (Torrence 1999:72-74).

Torrence (1999) speculated that the shift in tool production patterns could indicate increasing intensification and indeed, Dietler (2008:443, 446) documented intensification and craft specialization from later (post AD 800) workshop dumps located elsewhere on the island (Shell Ridge). Following several lines of evidence, Dietler's (2008:449-452) research indicated that the standardization and intensification of shell-tool production was likely the result of increased demand by local elites. Not only are shell-tool preforms differentially recovered in caches and residences at elite-occupied mound centers but a lack of documented shell-tool workshops in other areas of Florida suggests that many of these tools were likely supplied from the Caloosahatchee workshops. Wooden items are known to have been valuable elite possessions

and these items (e.g., masks, idols/figurines, and plaques) were likely created at the request of elite patrons (Dietler 2008:453). The intensive Useppa occupations during the Caloosahatchee periods are contemporaneous with other regional sites, including Josslyn Island, Galt Island, Big Mound Key, and Pineland.

Chapter 5

Methodology

Data gathered on modern forest structure and composition are combined with data obtained from archaeological charcoal to address hypotheses concerning fuelwood selection and use in prehistoric Southwest Florida. These hypotheses were outlined in detail in Chapter 1 but broadly encompass fuelwood extraction pressure, the impact of hurricanes on fuelwood availability, the general form and taxa selected for fuelwood, and intrasite/spatial differences in the selection/use of fuelwood taxa. The following sections summarize the methods employed in data collection and analysis, the archaeological sample population, and the depositional context of the archaeological samples.

Forest Structure/Composition – Modern Comparative Data

Modern forest survey data were used to create a baseline against which to compare the prehistoric data. The forest survey procedures broadly followed the methodology of the Forest Inventory and Analysis (FIA) conducted by the United States Forest Service (National Core Field Guide Ver. 6.1 2014). The FIA methodology was utilized for three key reasons. First, conducting a similar survey meant that the data would be comparable between the current data and previously collected FIA data (Scott and Gove 2002). This limited the amount of new field data needed while increasing the forest data available for analysis. Second, the methodology has been tested and found to characterize forest health and growth in a fashion that fits the present purpose (Johnson et al. 2008). The FIA methods are not without criticisms and one weakness of note is

the generally poor ability to track tree recruitment (being in the understory). In order to compensate for this deficiency, subplots were used to record seedlings and saplings (see more details below). Nevertheless, the FIA methods have been shown to have good statistical power for indicating changes in tree density and composition (Johnson et al. 2008). Further, area-based assessments have been shown to perform more consistently than other methods (Steinke and Hennenberg 2006). Finally, using a plot-based approach to characterize the available fuelwood makes sense from a foraging theory perspective, since in essence the plots represent patches (Kaplan and Hill 1992).

As alluded to above, the available FIA data regarding local pine flatwood forests were reviewed and found to be sufficient for the present study. The available FIA data on mangroves located in Lee County (where the project is largely centered) had been recorded just post-Hurricane Charley (2004) and thus were unrepresentative of a more mature forest. Data regarding the impact of hurricanes on barrier island mangrove structure/composition was available from other sources (e.g., Milbrandt et al. 2006), however, it was felt that having more detailed data from the sound's more protected interior and an increased sample size would be beneficial. Therefore, a survey of modern mangrove forests was undertaken to supplement the available FIA mangrove data.

Mangrove Survey Plot Locations

The exact locations of established FIA plots are not generally available beyond the county level because the exact plot locations are confidential but since the FIA goal is to characterize the overall forest health, the exact plot locations are less relevant than their representativeness. As such, no effort was made to relocate previously established FIA survey plots. The selection of new mangrove survey plots was guided by the goal of creating a gradient

between the shoreline and inland locations and a gradient between north/south and east/west portions of Pine Island. All of the surveys conducted during the present work occurred in the mangrove forests of Pine Island (Figure 5.1).

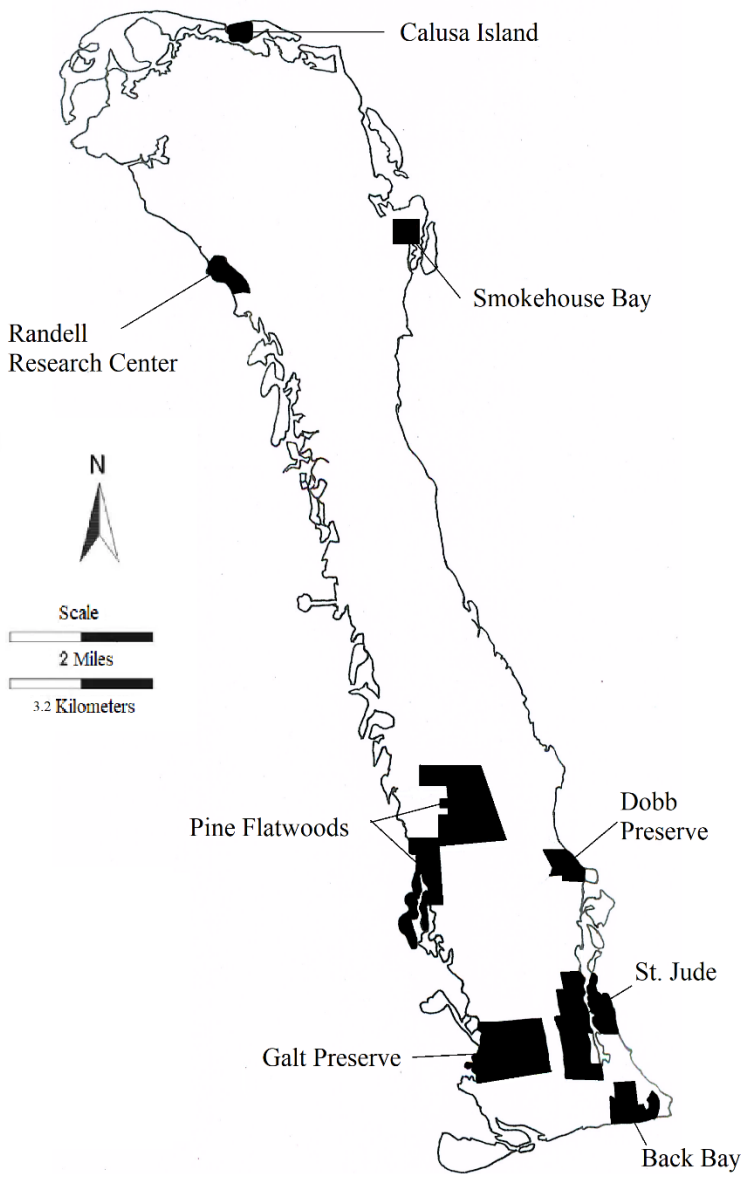

Figure 5.1. Map indicating the locations of preserves where mangrove surveys were conducted on Pine Island, Florida. Adapted from Calusa Land Trust Preserves (2014) base map.

These new mangrove plots were chosen specifically to include regions that had taken major damage during Hurricane Charley (2004) and areas that experienced less damage/disturbance (i.e., more mature forests). Plots which had been heavily damaged during Hurricane Charley had been recruiting for approximately 11-12 years prior to their documentation here (between 2004 and 2015/16). Mangrove plots measured nearest the shoreline consisted of coastal adjacent plots or near shore tidal zone areas. If the plots were located at the junction of the mangrove forest and the island interior, then they were considered here as landward while those plots which fell between the coastal and landward edges were deemed to be in the middle of the mangrove forest.

Mangrove Survey Plot Methods

Following FIA survey guidelines, the present surveys were based on 24 ft (7.3 m) radius plots (Figure 5.2). In order to create these plots in the field, a physical baseline was consistently laid out in an east-west direction with chaining pins and string. This baseline measured 48 ft in length (i.e., double the radius length) and served as the anchoring diameter of the circular plot. The northern and southern extents of the plot (i.e., the north/south radii) were paced in the field from the center of the established baseline (or diameter) of the circular plot. This methodology established four cardinal points along the plot circumference. After the four cardinal points were established in the field, an estimate of which trees lay within the plot and which trees lay without the plot was established visually by using the two nearest cardinal points of the plot circumference. In other words, the entire perimeter of the plot was not established with a tape but was judged visually by comparing a tree’s location relative to any two of the previously established cardinal points.

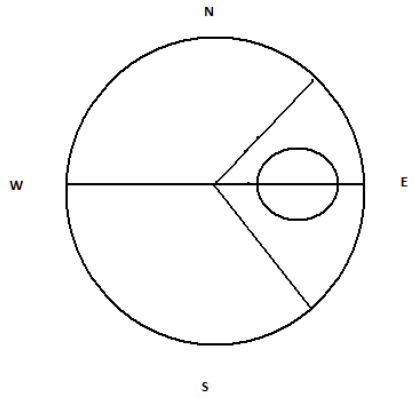

Figure 5.2. Diagram of the mangrove survey plots showing transects for coarse woody debris and circular sub-plot for seedlings.

Once the circular plots were physically established (i.e., the east-west diameter established with chaining pins and string), trees were systematically measured. After an individual tree was identified to species and its characteristics recorded, it was marked with bright colored chalk so that it was clear, at a distance, which trees had already been recorded. These marks were placed consistently so that one could stand in the center of the plot and determine visually if any trees had escaped the inventory. Using brightly colored chalk provided an environmentally friendly and efficient method of establishing/confirming that each tree in the plot had been recorded during the survey.

Trees within the plot radius with a diameter at breast height (4.25 ft [1.3 m]) of at least 1 inch (2.54 cm) were recorded individually during the survey. Tree diameters were recorded using diameter tapes purchased for the purpose. The tapes were marked in the English rule, again consistent with the FIA methodology, with inches divided into 64ths. All of the subsequent conversion to the metric system was completed in the lab making the field data consistent and comparable with the publically available FIA data. Modern mangrove diameters (cm) are available by plot in Appendix D.

Modern Mangrove Tree Taxa Data

Several characters were recorded for each tree individually itemized within the plot (i.e., those with diameters greater than 1 inch). These data included the tree taxon, whether the tree was alive or dead, the number of stems present, and the range of branch diameters present. If a tree forked below breast height (1.3 m), then it was considered to have multiple stems (i.e, a shrub) and each stem diameter was then recorded at breast height. If the trunk forked above breast height, then the subsequent divisions were considered as branches and the largest and smallest was recorded in addition to the trunk diameter at breast height. In other words, all branch diameters were recorded for divisions occurring above breast height (1.3 m).

Additionally, the amount of deadwood or downed woody debris and the number of seedlings/saplings (defined as woody species less than 1 inch in diameter) was also recorded within each plot. Adapting the FIA methodology again, the downed woody debris were recorded along three (24 ft) linear transects within the plot. One transect was consistently established along the physical diameter (east-west baseline) with the two subsequent transects diverging at 45 degree angles from the plot center forming a ‘Y’ transect pattern (see Figure 5.2). The diameters of any downed wood that crossed these linear transects were recorded. Finally, a count of live seedlings/saplings was conducted within a microplot with a radius of 6.8 feet. This microplot was consistently centered within the open arms of the woody debris ‘Y’ transects. In other words, the center point of the seedling microplot was placed at the midpoint of the eastern radial arm of the main plot. A total count of seedlings was conducted without regard to taxonomic assignment.

Review of Excavation and Laboratory Procedures for Archaeological Charcoal

Most of the archaeological charcoal analyzed during this research was previously excavated over the course of numerous field seasons between 1982 – 2016 (see Ayvaz 2014; Luer 2007; Marquardt 1992a; and Marquardt and Walker 2013a). Limited excavations were conducted by the author at Calusa Island (8LL45) to supplement the previously excavated, sample population (Haney et al. 2016). In order to contextualize the archaeological samples, the brief discussion which follows summarizes the provenience notation, depth designations, and general recovery procedures.

Southwest Florida Project: 1983 – 2015 Excavations

Excavations conducted under the auspices of the Southwest Florida [Archaeological] Project between 1983 – 2015 produced collections examined from the Pineland Site Complex (8LL33, 8LL37, and 8LL1612), Josslyn Island (8LL32), Buck Key (8LL722), Cash Mound (8CH38), Galt Island (8LL27), Mound Key (8LL2), and Useppa Island (8LL51). Provenience designations follow a consistent format of Operation-Excavation Unit-Level-Locus/Plotted Specimen (for example, C-4-96-2/1 denotes Operation C, Excavation Unit 4, Level 96, Locus 2, Plotted Specimen 1) (Walker and Marquardt 2013:59). The notation will always include an Operation, Excavation Unit, and arbitrary Level but may not include a stratigraphic or feature Locus and/or Plotted Specimen designation. The Locus designation indicates a stratigraphic change, material concentration or ‘feature’ with a visually evident boundary. A locus is a more general label that could result from natural (e.g., root casts or rodent disturbances) or cultural (e.g., roasting pit) processes. Additionally, a large locus which was located within several excavation units would be given a unique designation within each unit. In other words, a unique

provenience designation does not necessarily mean that additional, related contexts were not extant. The nature of related contexts, or features, was provided to the author by the original excavators in the form of inventories and excavation reports (e.g., Marquardt 1992a; Marquardt and Walker 2013a).

As one might imagine given the extensive period of excavations, some changes have occurred in the system of recording. One of these changes involved the manner in which elevation (or arbitrary level) was designated. During the early excavation seasons of the Southwest Florida Project (1985 – 89), unit levels were designated at the modern, ground surface with Level 1 and subsequent Levels as 2, 3, and so forth (Marquardt 1992a; Walker and Marquardt 2013:59). Beginning in 1990, however, a standard elevation system was adopted based on mean sea level at Pineland. The standardized system had the advantage of immediately relating deposit elevations across Pineland and between other local sites. The Pineland datum (or level zero) was set at 10 m above the existing, highest point on site – Brown's Complex Mound 1. Under the standardized system, the level designations equate to meters below the site datum (Table 5.1). All of the pre-1990 level designations were converted to the new system and are noted with the original level number (levels below ground surface) and the site wide elevation in brackets [levels below datum].

Excavated samples from dry deposits (i.e., positioned above the water table) were passed dry through the general excavation screens or, if a specialist sample, were processed via water flotation and/or a nested sieve series (4.0 – 0.42 cm mesh openings). All sediments/bulk samples from water-saturated strata located below the water table were field-screened or nested-sieved, as appropriate, using a gentle stream of water. A majority of the analyzed material represents dry recovery methods from hand-excavated units. Only the deeper strata of Old Mound Operation A, Brown's Complex Operation C, and the Randell Complex Operation P consisted of waterlogged midden deposits.

Table 5.1. Examples of relationships between excavated levels and the Pineland Elevation System (PES). Adapted from Walker and Marquardt 2013:58, Figure 4).

Excavation Level	Meters below site datum	Meters below MSL (projected 1900)
75		
80	8 m bd	
85		1.25 m MSL
90	9 m bd	
95		
100	10 m bd	-0.25 m MSL

Following excavation, most of the previously recovered samples were minimally sorted into gross categories (i.e., lithics, pottery, faunal, charcoal, seeds) by trained volunteers and/or students prior to any specialized analysis. Although it is likely that additional wood charcoal fragments are present in as yet unanalyzed bags of pottery or carbonized seeds, it is probable that these minimal inclusions have not systematically biased the present analysis. A number of charcoal samples were previously analyzed by Newsom and Scarry (Newsom and Scarry 2013; Scarry 1999; Scarry and Newsom 1992) and consisted of only samples previously published in the region until the present undertaking. Methods for previously analyzed wood charcoal can be found in Newsom and Scarry (2013), Scarry (1999), and Scarry and Newsom (1992).

A portion of these previously analyzed samples, consisting of those that were from undisturbed contexts, was obtained for further analysis but some of these samples were incomplete (i.e., the contents did not match published reports) upon arrival. Therefore, all previously analyzed counts and species identifications have been taken from the published reports (Newsom and Scarry 2013; Scarry 1999; Scarry and Newsom 1992). The percentage of samples re-examined was much higher for some of the smaller regional collections included in this analysis (e.g., Josslyn Island, Cash Mound, Big Mound Key, and Buck Key) because only minimal excavations have been conducted at these sites.

Big Mound Key (8CH10)

Since the materials from Big Mound Key were recovered by George Luer (2007) as part of a 1982 salvage operation following substantial damage to the site from looters, these materials were not recovered as part of the Southwest Florida Project, though the samples were initially reported on in Scarry and Newsom (1992). Since the excavations at Big Mound Key were not undertaken by the Southwest Florida Project, the documentation and recording of proveniences does not follow the protocol discussed above (i.e., Operation-Unit-Level-Locus/Plotted Specimen). All of the Big Mound Key wood charcoal materials included in this analysis were previously examined by Newsom (Scarry and Newsom 1992) and were processed by water flotation. After flotation, the light fractions were sorted by the original analyst; however, the heavy fractions (i.e., materials greater than 1/16 inch) were initially sorted for the removal of non-botanical artifacts prior to examination of the heavy residuals (Scarry and Newsom 1992:381-382). All of the available samples examined here were recovered from stratified deposits located near the summit of the West Mound. Luer's (2007) excavation designations used a unique catalog number for each provenience (FS#s) of units, squares, and stratigraphic layers. Although the detailed proveniences will be discussed below, the excavation units measured 2x2 m with each unit sub-divided into 4, 1x1 m squares. The stratigraphic layers were numbered from the bottom of the deposit (layer 1, approximately 3 m bd [below datum]) to the top (layer 11, approximately 1.6 m bd) based on the midden profile which was exposed in a looter trench (Luer 2007:131).

Calusa Island (8LL45)

The author conducted the recovery of archaeological samples at Calusa Island (Haney et

al, 2016) and similar to Big Mound Key above, the proveniences are not consistent with those designated under the Southwest Florida Project. The salvage work at Calusa Island was partially funded by the National Science Foundation (Newsom and Haney, award no. 1636872) and the Hill Fellowship Award (Dept. of Anthropology, Penn State). Since the shell midden is eroding at a fast pace, the initial field work set up an erosion monitoring system and collected samples from along the exposed midden edge. The height of the entire northern midden perimeter was documented so that sample locations could be mapped and so that the midden profile could be examined for features or stratification. No features were observed, however, the midden appeared to be stratified and the sample location was chosen to take best advantage of exposed midden height and stratification. Since erosion had undercut the midden face, the upper midden section was cut back to create a more vertical profile. The sample location was then photographed and its profile drawn. Bulk samples were then removed from the profile face which measured approximately 1 m in length, 10 cm in width, and an arbitrary 10 cm depth within natural zones. Given the arbitrary within natural zones sampling strategy, the volumes of the bulk samples were not consistent but were recorded for future use.

The bulk samples were returned to the field laboratory at the Randell Research Center, Pineland, Pine Island, Florida, where the samples were dry screened through nested sieves. All materials greater than 1 mm were recovered and bagged for sorting and analysis by fraction (> 4 mm and <4>1 mm). Given the scarcity of observed plant remains, a decision was made not to retain the less than 1 mm materials. The author then sorted all of the recovered samples and removed all wood charcoal greater than 2 mm in size. Wood charcoal less than 2 mm in size generally cannot be identified to genus or species and would not have been large enough for the recording of additional anatomical features. After the wood charcoal was recovered, Penn State undergraduate student volunteers sorted a portion of the remaining shell and bone materials from the greater than 4 mm fractions and the less than 4 mm fractions. The Calusa Island materials are

curated at the Florida Museum of Natural History, Gainesville.

Archaeological Wood Charcoal Sample Population and Size

The research sample includes largely primary midden contexts but discrete features (i.e., pits, floors) and secondary midden samples are also represented. Primary midden denotes materials which remain *in situ* where discarded while secondary midden describes any midden materials which have been redeposited. In other words, secondary midden materials have been moved following their initial discard; these materials are often temporally out of sequence in stratified deposits, which aids in their identification. Table 5.2 provides a summary of the archaeological sample. As can be seen, most are from midden contexts; however, 27 newly analyzed samples are from cultural features or discrete floor middens. The chronological assignments for the samples are based on site stratigraphy, artifact associations, and independent dating techniques (i.e., radiocarbon dates) (Marquardt 1992b:11-12; Marquardt and Walker 2013b). For discussion, each sample group is subdivided into gross chronological time frame and then finer stratigraphic assignments, calendar dates, and site locations. The sample covers just over 2,000 years of prehistoric deposits (i.e., 256 proveniences with newly identified taxa), from among nine sites (11 archaeological site numbers) (see Table 5.2). Additionally, charcoal specimens previously identified to the lowest possible taxonomic level and published (Newsom and Scarry 2013; Scarry 1999; Scarry and Newsom 1992) are integrated and discussed in summary tables (106 proveniences; see Table 5.2).

Table 5.2. Summary of specimen counts of species identifications and associated proveniences and previously published sample counts (no new data generated).

			Current*			Previous**	
Site	**Chronology**	**Date**	**Midden**	**Feature**	**Identified**	**Midden**	**Feature**
	unassigned		5		73		
	I late	AD 1 – 500	80		3011	1	
Pineland Site	IIA	AD 500 – 800	68	25	1977	6	10
Complex (8LL33,	IIB	AD 800 – 1200	19		557		
8LL37, 8LL1612)	IIB/III	AD 800 – 1350				17	
	III	AD 1200 – 1350	11	1	346		
	IV	AD 1350 – 1500	11		416	20	
	I early	324 – 367 BC	1		20	1	
Josslyn Island	IIB	AD 800 – 1200	2		40		
(8LL32)	IIA-late/III	AD 500 – 1350					1
	III	AD 1200 – 1350				1	
	IV	AD 1350 – 1500		1	12	9	
Buck Key Midden	III/IV	AD 1200 – 1500				4	
(8LL722)	III	AD 1200 – 1350				5	
	IIB	AD 800 – 1200	1		8	5	
Cash Mound	I late	AD 1 – 500	3		61	3	
(8CH38)	IIA	AD 500 – 800				1	
Big Mound Key							
(8CH10)	IIB	AD 800 – 1200				6	
	IIA	AD 500 – 800	6		16		
Galt Island (8LL27)	IIB/III	AD 800 – 1350	4		81		
	IV/V	AD 1350 – 1500	1		11		
Calusa Island (8LL45)	Terminal Archaic	~ 900 – 700 BC	10		323		
Mound Key (8LL2)	I-late/IIA	AD 1 – 800	2		35		
	Middle Archaic					6	
Useppa Island	Late Archaic					7	
(8LL51)	Terminal Archaic					1	
	Archaic ?		5		79		
	I	500 BC – AD 500				2	
Totals			229	27	7066	95	11

*In order to avoid double counting proveneinces that were revisited to increase the overall specimen counts, revisited samples are counted as analyzed. Specimen counts, however, represent only those identified by Haney.

**Count of samples solely completed by other analysts

Chronological Review of the Archaeological Sample Population

Middle Archaic (4620 – 3330 BC)

Data concerning the Middle Archaic in Southwest Florida are available from Useppa Island (8LL51). These materials are presented as context for the later samples analyzed here and discussed below. All of the Middle Archaic samples were previously analyzed with results published; six samples in all (see Scarry 1999). All of the Middle Archaic proveniences were recovered from midden-covered, dune ridges at Operation B on Calusa Ridge. Operation B consisted of 32, 1x1 m excavations arranged in a nearly 5x6 m block (Torrence 1999).

Late-Terminal Archaic (2000 – 500 BC)

Seven Late-Terminal Archaic samples from Useppa Island are also presented from published sources (see Scarry 1999). Additionally, five samples were analyzed by the author from Useppa Island. All twelve of these Late-Terminal Archaic samples were also from Operation B. Finally, one previously analyzed sample is included from Operation D (Scarry 1999). Operation D was also located on Calusa Ridge and consisted of a 50x50 cm column removed from the exposed midden profile (Marquardt 1999b).

Late-Terminal Archaic samples have also been analyzed from Calusa Island (8LL45). Ten midden samples from Calusa Island were dated to the Terminal Archaic period based on radiocarbon and mass accelerator dates. Two dates were conducted on zones C (21-31 cmbs) and G (68-70 cmbs) (see Appendix A for full details). While both dates confirm a Terminal Archaic period of deposition for the midden (ca. 900-500 BC), the dates are inverted suggesting that older

materials were secondarily deposited atop the midden. Nine zones were documented on the exposed midden profile.

Zone A (0 – 10 cm bgs [below ground surface]) was the only zone from which pottery was recovered and this sample was not analyzed because of modern contamination/mixing of charcoal. The remaining zones contained of sand, faunal, and botanical remains. The midden contents were overwhelmingly that of eastern oyster shell. Oyster shell orientations for Zones A and H appeared in this profile section to be more random than adjacent levels and could represent a different pattern of deposition than seen in adjacent layers. Zone E contained a concentration of small (ribbed ?) mussel shells which appeared to be an individual dumping episode. Zone C contained the highest densities of fish bone. Zone G stands out as a possible living surface both because of its organic content (dark color) and the small and highly fragmentary nature of its shell. Zone H also appeared unique within the profile due to the high concentration of smaller fragmentary shell within the larger shell matrix. Zone I was only minimally exposed.

Caloosahatchee I – Early (500 BC – AD 1)

Two Useppa Island samples from Operation D (discussed above) date to the Caloosahatchee I-early period and were previously analyzed by Scarry (1999). Additionally, two samples from Josslyn Island (8LL32) have been included and date to the early portion of the Caloosahatchee I period. Additional materials were analyzed from one of these Josslyn Island samples to increase the available data from this time frame.

Although three excavations, Operations A-C (Marquardt 1992b), were conducted at Josslyn Island between 1985 – 1987, only proveniences from Operation A have been examined for archaeobotanical remains. Operation A was located on the edge of a looter-disturbed hole (area # 8). Excavation A-1 consisted of a column measuring 50x50 cm which was halted when

ground water was encountered (Level 38). Excavation A-2 was more expansive measuring 3x2 m and was situated to investigate an ash feature/concentration observed in the profile of A-1. The A-2 locus demonstrated complex stratigraphic deposition of ash and burned/unburned bone. Marquardt (1992b:21-22) suggested that the ash concentration may represent a domestic cooking activity area where repeated meal preparation lead to the charring of refuse. Deposits documented in excavation A-1 range from the Caloosahatchee III period at the upper strata to the early portion of the Caloosahatchee I period at the excavation base.

Caloosahatchee I – Late (AD 1 – 500)

Eighty-two samples dating from the latter half of the Caloosahatchee I period were analyzed from Cash Mound (8LL38), Mound Key (8LL2), and the Pineland Site Complex (see Table 5.2). Six midden contexts were available from Cash Mound; these samples were taken from a remnant portion of the eastern, mounded midden (Marquardt 1992b:29). Three of the Cash Mound proveniences were flotation samples with previously identified charcoal (Scarry and Newsom 1992). All six Cash Mound samples were recovered from a 50x50 cm column designated as Excavation A-1. While the bulk of the analyzed deposits date to the Caloosahatchee I-late period, IIA deposits were also present in the upper strata.

Two samples were analyzed from Mound Key. Both samples were excavated in Operation C, which is located on a platform just to the east of Mound 1. Excavation C-1 was a 1x1 m unit (Torrence et al. 1994). Nine strata were designated within C-1 which consisted of fine sand and shell. The deepest level, Level 93, was comprised largely of surf clam and oyster shell deposits which were devoid of cultural materials. The samples analyzed are upper strata as ground surface began at Level 63. These strata contained high frequencies of bone which was not noted in nearby excavations. At least some of the C-1 deposits have been radiocarbon dated and

both primary and secondary midden deposits possibly exist here. Based on radiometric dating of wood charcoal from a core adjacent to the unit, these Mound Key samples range in age from the Caloosahatchee I-late to IIA-late periods (AD 400-800) (Thompson et al. 2016); however, the pottery assemblage associated with these samples suggests a IV period date for the deposit (personal communication, Karen J. Walker). It is possible that the samples are from secondary midden and may represent a mix of temporal artifacts. Since the wood is of prime interest here, the samples have been tentatively included in the I-late/IIA sample following the radiometric dating, however, this assignment is considered tentative.

By far, the majority (n = 77) of the Caloosahatchee I-late samples was analyzed from the Pineland Site Complex and included proveniences from Citrus Ridge (8LL33), South Pasture (8LL33), Old Mound (8LL37), and Low Mound (8LL1612). The Old Mound, South Pasture, and Citrus Ridge are all located relatively close to one another (within approximately 100 m of each other; see Figure 4.3). As noted in the Archaeological Background (see Chapter 4), the Caloosahatchee I-late period has been subdivided into smaller (50 year) increments. As will be seen in the following discussion, the chronological assignment for most of the I-late samples could not be refined to a single subperiod increment. The notable exception, however, was the I-late-f subperiod (AD 250 – 300), for which 25 total samples were analyzed.

Pineland – Citrus Ridge (8LL33)

Forty-two samples from Citrus Ridge date to the Caloosahatchee I-late period including I-late-e/f (n = 13), I-late-f (n = 3), I late-f/g (n = 1), I-late-g (n = 4), I-late-g/h/i (n = 16), and I-late (n = 5). All of the Citrus Ridge samples were recovered from four excavation units designated as Operation N. Three of the units (N-1, N-2, and N-4) measured 1x1 m while N-3 measured 1x2 m in plan. Specimens analyzed from Excavations N-1 and N-2 included only dry-sieved, one-

quarter inch materials, however, analyzed charcoal from Excavations N-3 and N-4 included both the one-quarter and one-eighth inch, dry-sieved fractions.

Generally, the designated strata within Operation N are consistent across the four excavations. At least, Excavations N-1 and N-4 are known to contain primary and secondary midden deposits. The primary deposits within N-4 appear to be capped by secondary deposits. Artifacts recovered within stratum (ST) 1 date to the I-late period (AD 1 – 500) but appear to be from secondary midden deposits. Stratum 2 is also secondarily deposited (Walker and Marquardt 2013:134) on the ridge but the parent midden material dates to the Caloosahatchee IIB period (AD 800 – 1200). Strata 3 and 5 are sandy, shell middens. Stratum 4 also has a sand matrix and contained only sparse artifacts. Stratum 7 consisted of a dark organic sand midden. Radiocarbon dates for ST 3, 5, and 7 suggest that these materials represent primary midden deposits. Ayvaz (2014:43) noted that ST 8 contained pottery and mussel shells, many of which were articulated but that no cultural artifacts were recovered from the deepest N-4 levels excavated, ST 10.

Pineland – South Pasture (8LL33)

Eight additional I-late-e (n = 2) and I-late-g (n = 6) samples were completed from South Pasture deposits. South Pasture proveniences were recovered from a small excavation adjacent to Trench 11A, a backhoe trench located between Surf Clam Ridge and the Old Mound remnant. The trench was located northwest of the Citrus Ridge excavations and ran almost perpendicular to the sandy ridge. The deposits between the two site areas demonstrate spatial continuity with all of the strata in the trench gently sloping toward the sound. Strata 4 and 5 document some of the deeper cultural deposits of Trench 11A. Faunal remains excavated from ST 4 (I-late-g) indicate that the area of original midden accumulation (ST 5) was buried by storm and debris deposits and subsequently became a black mangrove wetland (Walker and Marquardt 2013:127). Stratum 5 (I-late-e) is a sandy shell midden. Both deposits are thought to represent primary midden deposits.

Pineland – Old Mound (8LL37)

Thirty-two proveniences from Old Mound, Operation A were analyzed and date to the I-late period. Ten proveniences from Operation A had previously been analyzed for archaeobotanical remains (Newsom and Scarry 2013; summarized in Table 6.9) but nine of these were further analyzed providing additional taxa identifications. All of the analyzed materials from the Old Mound, Operation A locale were recovered from the one-quarter inch wet/dry-screened fractions or were hand collected from profiles. As noted previously, the lower strata at Old Mound contained waterlogged deposits which produced an abundance of materials (Levels 100 – 103). At Old Mound, these lower levels date to the I-late-f (AD 250 – 300) period and provide a substantial sample upon which to characterize fuelwood selection/use for the period.

The five excavations discussed in this study from Operation A are A-4, A-8, A-12, A-15, and A-16. Four of these (A-4, 8, 12, and 16) form a continuous 1x4 m plan with A-15 located adjacent to the south side of A-16 (Walker and Marquardt 2013:111, Figure 58); the Operation A excavation lies nearly parallel to the Old Mound remnant and prehistoric shoreline. The deposits at the modern surface of Operation A dated to the Caloosahatchee IIA-early-a subperiod (ST 1-3, discussed further below).

The lower strata (ST 4-10) date to the Caloosahatchee I-late period and include I-late-f (n = 22), I-late-g/h (n = 5), and I-late-i/j (n = 5). Strata 4-10 appear to represent *in situ*, primary midden development interspersed with natural deposits that dates AD 250 – 500 (i.e., I-late-f to I-late-j). Stratum 4 likely represents, to some degree, a mixture of IIA and I-late deposits based on radiocarbon essays and pottery types (Walker and Marquardt 2013:115). Stratum 4 is described as a “greasy black sand” with high organic content including ash, charcoal, and burned shell (Walker and Marquardt 2013:122). Stratum 5 is also a black sand layer but it contained fewer and more fragmented shells than Stratum 4. Stratum 6 was distinguished by its contents which included higher frequencies of small fish bones and oyster, whelk, and clam shells. Conversely,

Stratum 7 consisted of a discrete shell layer that included lightning whelks, pear whelks, clams, oysters, crown conch, tulip, and scallops (Walker and Marquardt 2013:122). Stratum 8 is also a highly organic layer but is notable because it includes post molds, similar to Stratum 2/3 above (though none of these post mold proveniences are analyzed here).

The deepest levels of Operation A, ST 9-10, date to the I-late-f subperiod (AD 250- 300). Stratum 9 is midden of black sand and abundant shell (the lowest two levels of which are waterlogged [Levels 101-102]). The waterlogged nature of these levels provided a setting of extraordinary preservation from which remains of more than 60 different plants were recovered in 1992 and subsequently analyzed (Newsom and Scarry 2013). Many of the plants represented fleshy fruits, such as papaya, cucurbits, and chili pepper. Recovered artifacts also included uncharred wood debitage and cordage fragments (Newsom et al. 2013). Walker and Marquardt (2013:123) note that the faunal assemblage of Stratum 9 includes a number of high-salinity mollusks which normally do not inhabit the waters near Pineland. The presence of these mollusks in the midden suggests that at least some of these Stratum 9 deposits may represent storm-surge deposits. Finally, Stratum 10 appears to represent a mix of cultural and non-cultural deposits which suggests that this early refuse was deposited directly into the intertidal zone (Marquardt and Walker 2013b: 812).

Pineland – Low Mound (8LL1612)

The existence of the Low Mound midden was not documented until 1990. The midden is located some distance from the more prominent middens in a wooded area at the Pineland Site Complex. The midden itself is approximately 30x30 m with a maximum elevation of 2.9 m (Walker and Marquardt 2013:138). Four proveniences were analyzed from Low Mound, Excavation A-1. All of these samples date to the Caloosahatchee I-late-g/h period (AD 300 – 400) based on radiocarbon dating and pottery analysis.

Caloosahatchee IIA (AD 500 – 800)

Altogether, the sample size from the Caloosahatchee IIA period is quite large (n = 100; see Table 5.2); most of the samples (n = 74) actually date to the early portion of the period (AD 500 – 650). Proveniences which dated to the IIA period were analyzed from Josslyn Island (n = 1), Galt Island (8LL27; n = 6), and the Pineland Site Complex (n = 93) (i.e., Old Mound, Brown's Complex, Brown's Complex Court 1, and Randell Complex Mound 1).

Galt Island (8LL27)

Marquardt (see Marquardt and Beriault 1988) conducted preliminary excavations which consisted of five test pits. Since Excavation B (Marquardt's "test pit" B) has been most thoroughly dated, these samples were chosen of those available for detailed archaeobotanical analysis. Excavation B was a 1x2 m excavation located on Feature 2, the southern portion of the western most midden-ridge in the western midden complex. Although Late Archaic artifacts, such as fiber-tempered pottery (ca. 1500 BC), have been reported from Galt Island, the earliest deposits documented during Marquardt's (see Marquardt and Beriault 1988:11) testing date to the Caloosahatchee I period (ca. 300 BC).

Upper deposits (0-50 cm bs) consisted of a dense, black shell midden with large whelk shells and sparse Belle Glade pottery sherds. A quahog clam shell from the base of this zone (Level 5) was radiocarbon dated to the early Caloosahatchee III period, circa AD 1220-1320 (personal communication, Karen J. Walker). The second depositional zone (50-80 cm bs) was a similar dense, black shell midden but with frequent Belle Glade pottery sherds. While no materials from this second zone have been directly dated, an indirect date may be gained from the pottery present. Since Belle Glade pottery is not known to appear in the region prior to about AD 650, levels 6-8 likely post-date the Caloosahatchee IIA-late period. The next two zones both contain considerable amounts of ash. Zone III (80-140 cm bs) was gray, ashy shell midden with

many crushed shells and Zone IV (140-210 cm bs) was a dark gray, ashy shell midden with crushed shell and bone. An oyster shell from within Level 19, near the base of Zone IV, was dated to the middle portion of the Caloosahatchee IIA period (ca. AD 630-710 [personal communication, Karen J. Walker]).

A further AMS date was conducted on wood charcoal recovered from the general midden of Level 18. This B-1-18 charcoal date confirmed that the general midden deposits are from the IIA period (Beta-471979, cal. AD 574-657; see also Appendix A). Both direct and indirect dating of zones II-IV suggests that substantial IIA deposits may be present at Galt Island (White 1995). The final zone (225-315 cm bs) encountered above the base of Excavation B consisted of dense shell and bone with little sand or sediment matrix (Marquardt and Beriault 1988:4). An oyster shell from Level 31 was radiocarbon dated and produced a date at the boundary of the IIA – IIB periods (ca. AD 770-910 [personal communication, Karen J. Walker]). Secondary midden deposits have been documented at other Calusa sites and it is possible that much of the IIA midden analyzed from Excavation B (Levels 6-21) was (secondarily) moved to its current location after the beginning of the Caloosahatchee IIB period.

Pineland – Old Mound (8LL37)

Two excavations yielded deposits that date to the IIA period, Operation A and C. The depositional context for Operation A was discussed in detail above (see Caloosahatchee I period). Sixteen additional proveniences were analyzed from Operation A; about one-third of these samples were from feature contexts (i.e., ash loci and a post mold [see Table 5.2]).

Forty-three samples were analyzed from Old Mound, Operation C. A single 1x2 m unit designated Excavation C-1 was placed atop the extant midden mound near the mound's western edge. Deposits from the extant mound remnant date to the Caloosahatchee IIA period (AD 500 –

800). A substantial portion (ST 1-10) of the deposits date to the IIA-early-b period (AD 550 – 600) but levels near the mound's base (ST 11-12) date to the IIA-early-a period (AD 500 – 550).

The uppermost levels (ST 1-3) of Old Mound evidenced signs of disturbance especially as a result of uprooted/decayed trees. Despite these noted disturbances, the temporal associations appear to remain largely intact and no intrusive artifacts were noted during the excavations. Strata 1 and 2 appeared to contain the greatest amount of disturbance and no materials from ST 1 were analyzed here. Stratum 2 consists of loose shell and gray sand of an irregular depth. Conversely, ST 3 is relatively level and consists of dark gray sand with broken shells. Stratum 3 also contains a pit-like depression that was intrusive into ST 4. This pit-like depression contained highly organic, greasy-black sand and crushed shells (Wallace 2013:747).

Stratum 4, similar to above, is a layer of light gray sand with loose shells. Stratum 5 is highly organic, black compact sand. A number of cultural features were identified in ST 5 including a complex pit feature (i.e., the feature fill was stratified) and several possible post molds. Strata 4 and 5 also contain a high frequency of pottery. The frequency of pottery together with the presence of cultural features suggests that ST 5 may represent a living surface where domestic activities occurred (Wallace 2013). Strata 6-10 were delineated largely on the basis of soil color. Nevertheless, ST 2-10 all appear to be primary midden deposits.

Strata 11-12 at Operation C are primary midden deposits that date to the IIA-early-a subperiod (AD 500 – 550) and these deposits are continuous and contemporary with the IIA deposits at Operation A, ST 1-3. Stratum 11, at the base of the extant mound, contained post mold patterns that are suggestive of a structure pattern (Wallace 2013:749). Stratum 11 is a fairly compact, black sand midden with sparse inclusions of crushed shell and bone. Stratum 12 is similar to ST 11 but Wallace (2013:749) noted that the area within the post mold arc appeared to contain fewer and more fragmentary midden inclusions.

Pineland – Brown's Complex (8LL33)

Twenty-three samples were analyzed from the Brown's Complex, Operation C. Although six excavations are designated as Operation C, all six units are located in a single 4x4 m block excavation located between Brown's Mounds 1 (BCM1) and 2 (BCM2). Initially, C-1, C-2, C- 3, and C-4 were configured as continuous 2x2 m units to form this 4x4 m square block. During subsequent seasons of excavation, however, the instability of the open block walls necessitated a change in strategy. The size of the block was reduced and a single 2x2 m excavation (C-5) was delineated in the center of the original block. When the interior, shelly walls of the deeper C-5 collapsed exposing additional intact floor-midden deposits, the collapsed and exposed margins of C-5 were excavated as C-6. Thus, C-6 forms an irregular border around C-5, both of which are lower in elevation than the original C-1, C- 2, C-3 and C-4 excavations of the upper strata.

The excavated deposits in Operation C date to the Caloosahatchee IIA-early to IV periods (AD 500 – 1500). The upper, Caloosahatchee IV levels (ST 1-4) are generally characterized as loosely packed sediments with abundant medium-sized gastropods, other mollusks, and abundant fish bones. Strata 5-7 are dark gray to black and highly compact sandy midden dating from the Caloosahatchee III period. These strata may be contemporary with an activity area/structure floor in Operation I (discussed below). Immediately below these Caloosahatchee III deposits are IIA deposits. In C-5, a IIA floor midden or activity area with post molds is documented at ST 3 (C-4 and C-5) and dates to IIA-late-c (AD 750 – 800) period (Marquardt and Walker 2013b:836; Walker and Marquardt 2013). A second floor midden or activity area (designated at ST 8) of C-5 and C-6 is also associated with post molds and dates to Caloosahatchee IIA-late-a period (AD 650 – 700). Both the IIA and III deposits appear to be *in situ*, primary midden deposits; the intervening IIB period deposit appears to be locally absent (Walker and Marquardt 2013:91) but see Marquart and Walker (2013b:837) for a revision on this.

Pineland – Brown's Complex Court 1 (8LL33)

Eight samples were analyzed from Brown's Complex Court 1 (BCC1), Operation D. The midden fronts Pine Island Sound and is located between Brown's Complex Mounds 4 and 5. The 'court' moniker, however, may be misleading because the modern depression may have resulted from historic disturbance of a mounded midden (Walker and Marquardt 2013:100). The midden deposits documented in Excavation D-1 date to the Caloosahatchee IIA and IIB, the midden matrix in D-2 dates to IIA, and the intrusive pit fill dates to the III period.

The upper midden deposits, as seen in D-1, consist of a primary, dark, sandy shell midden. The lower deposits are dense shell midden. Based on nearby Trench 10, Scudder (2013) suggests that the natural sediments below the BCC1, IIA midden are consistent with a marsh surface that was repeatedly buried by storm surge and overwash deposits. These periods of natural burial were sufficiently distant from one another so that the marsh ecosystem could stabilize between disturbance events. One possible activity level was identified in D-1, ST 5 where a layer of dense, crushed shell was identified. An intrusive pit feature was also identified associated with Trench 10 and D-2 was excavated to sample the pit fill. A portion of this feature's pit fill has been analyzed during this study.

Pineland – Randell Complex Mound 1 (8LL33)

Wood charcoal was analyzed from two areas of the Randell Complex Mound 1 (RCM1), however, only the proveniences from Operation A contained IIA deposits (n = 8). Operation A is located on the northwestern edge of the extant RCM1. Portions of RCM1 were removed in the mid-twentieth century and used as fill in the surrounding low-lands (Walker and Marquardt 2013:70). Nevertheless, excavation profiles and early historic sketch maps suggest that at least the width of the remaining mound portion has not been much altered by historic disturbances. The IIA materials were obtained from the A-5 excavations but altogether, the A-1, A-5, and A-11

deposits create a nearly complete temporal sequence of the deposits within the midden mound. Excavation A-5 was a 1x1.5 m (levels 68-73 [1.3x1.3 m for levels 74-98]) unit located at the base of RCM1 (Walker and Marquardt 2013:73). All of the charcoal analyzed from RCM1 was recovered from dry or wet, one-quarter-inch screened fractions.

The stratification of midden deposits at RCM1 were delineated largely by the color of sand, the relative amounts of sand versus shell, and the quantities of whole versus crushed shell (Walker and Marquardt 2013:70). Much of the upper levels of A–5 were disturbed from historic activity but undisturbed midden was documented at level 79. Five strata were included in the analyzed A-5 samples. Strata 14-17 date to the IIA-late-a period (AD 650 – 800). Stratum 17 is particularly noteworthy because the elevation and temporal affiliation are similar to that of the IIA floor-midden deposit in the Brown's Mound Complex (discussed above) and Old Mound Operation A deposits (discussed above).

Caloosahatchee IIB (AD 800 – 1200)

Nineteen samples were analyzed which date to the IIB period. The total sample size is small and these samples are widely distributed spatially within the sound. Data contributing to the IIB period discussions include samples from Josslyn Island (n = 3), Galt Island (n = 4), Buck Key (8LL722; n = 3), Big Mound Key (8CH10; no new taxa identified), and the Pineland Site Complex (CR, Brown's Complex Mound 1, BCC1, and RCM1; n = 19). Depositional contexts for Josslyn Island (see Caloosahatchee I), Galt Island (see Caloosahatchee IIA), Big Mound Key (see Chapter 4), Citrus Ridge (see Caloosahatchee I), and BCC1 (see Caloosahatchee IIA) were discussed in detail above and so will not be repeated here. Further discussion of the depositional contexts for Buck Key, Brown's Complex Mound 1 (BCM1), and RCM1 are warranted, however, as these contexts have operations which have not yet been presented.

Buck Key (8LL722)

Several archaeological sites have been documented on the island of Buck Key; however, archaeobotanical materials have been analyzed from only one of these sites, the shell midden 8LL722. A number of samples from Buck Key were previously analyzed by Newsom (Scarry and Newsom 1992) but two additional samples from A-1 and B-1 were analyzed by the author. Materials analyzed here were obtained during testing in 1986 (Marquardt 1992b). Excavations A-1, B-1, and I-1 consisted of 1x1 m test pits within close proximity to each other. These three excavations were oriented north to south along a nearly linear shell midden ridge. Excavation A-1 was terminated when the water table was encountered (base of Level 14) but a 50x50 cm column was excavated into the eastern profile wall and designated as A-2. A few meters to the south of A-1, excavation B-1 demonstrated a stratigraphy that differed from that evidenced in A-1 (see more detail below). Following a similar methodology, a 50x50 cm column sample was collected from the west profile wall of Excavation B-1 and designated B-2. Finally, Excavation I-1 was placed between A-1 and B-1 to further explore the complex stratigraphic sequences observed in the previously excavated test pits.

The depositional record of Excavation A-1 broadly consisted of four zones. The first sub-surface zone (levels 2-3; 10-25 cm bs) consisted of a very dark gray sand with lenses of light yellow ash and concentrations of shell and bone (Marquardt 1992b:34-35). The second zone was quite substantial (levels 4-8; 20-80 cm bs), however much of the excavation area was designated as loci, consisting of circular concentrations of surf clam shells surrounded by large whelk shells. These surf clam concentrations measured approximately 12-24 cm in diameter and contained little sand or sediment. This second zone also contained (levels 5-7, 50-70 cm bs) charcoal lenses that were evident in the profile walls. Marquardt (1992b) speculated that the shell concentrations may represent posthole supports with shell chinking near a hearth or activity area but further excavations would be needed to confirm any post patterns. The third zone (levels 9-12, 90-120

cm bs) was similar to the previous zone except for the absence of the surf clam concentrations and the increased frequency of large lightning whelk shells, many of which were complete. The final zone (levels 13-15, 120-150 cm bs) documented above the water table contained many crushed shells, bone, and charcoal. Sterile sediments were not reached and the temporal affiliation of these lower deposits remains uncertain.

The stratigraphic profile of Excavation B-1 also contained approximately four subsurface zones. The first subsurface zone (Levels 2-4; 10-40 cm bs) was a dark grayish brown sand with many whelk and conch shells and bone (Marquardt 1992b:36-38). The next zone consisted of an *in situ* burned area (Levels 5-7; designated as Locus 1) which contained mottled gray ash, burned shell, and bone between layers of charcoal. Beneath this burned area was a layer of black sand with sparse shell inclusions (level 8). The final zone consisted of a grayish brown sand with dense shell, many large whelks, which was similar to the third zone evident in A-1. This final zone (levels 9-11) became inundated at Level 11 but contained fewer large whelk shells than seen in the upper levels.

Marquardt (1992b:37) notes that this burned zone resembled the ash concentration seen at Josslyn Island (Excavation A-2 discussed above) which dated to the Caloosahatchee IIB period and was intrusive upon the earlier midden. Shells from near the charcoal lenses of Level 6 and from near the circular, surf clam concentrations date (via radiocarbon dating) to the Caloosahatchee IV and III periods respectively (i.e., ca. AD 1301-1424 and AD 1260-1345). The deposits of the third zone (level 9), directly beneath the charcoal and shell concentrations dated to the latter half of the Caloosahatchee IIB period (ca. AD 1027-1210) (Marquardt 1992b:35).

Pineland – Brown's Complex Mound 1 (8LL33)

Operation B is located on the summit of the tallest mound at Pineland, BCM1. The depositional complexity encountered on the midden summit of BCM1 has led to some uncertainty

in deposit age/context. As such, few new samples (n = 3) were analyzed for this work. Contexts on the summit of BCM1, Operation B (2x2 m), date to the Caloosahatchee IIB – III periods (AD 800 – 1350). The stratigraphic deposition within the mound is complex and in order to determine the best method of documentation, B-1 was excavated using two recording systems. Excavation B-1 was at some point divided in half and deposits from one half were excavated using the level/locus system seen throughout this analysis while the other half was excavated using natural strata (these latter proveniences were designated with a letter assignment). Much of the wood charcoal from the level/locus half was previously identified by Newsom (Scarry and Newsom 1992), however, the temporal assignments of those materials have been updated since the original publication. Likewise, the levels as originally published reflected a below surface delineation (e.g., B-1-1, 2, 3) and so the levels have been updated to reflect the site-wide Pineland elevation system adopted in 1990.

Interpretation of the B-1 depositional sequence was initially based on radiocarbon dating of shell within the strata (Marquardt 1992b:11-12; Walker and Marquardt 2013:79). These radiometric dates suggested that secondarily deposited strata were interspersed with primary midden deposits. Stratum 4, which began approximately 35 cm below the surface, was dated to the IIA – IIB periods (AD 730 – 920) while deeper strata dated to the thirteenth and fourteenth centuries (ST 11 dated AD 1300 – 1410 and ST 21 dated AD 1210 – 1300). Following the pottery analysis, Cordell (2013) proposed a Caloosahatchee III (AD 1200 – 1350) assignment for these upper strata which clearly conflicted with the previous absolute dates. The temporal assignments of ST 1-20 remain in question. Walker and Marquardt (2013:79) note that the artifact assemblage of these upper B-1 deposits is consistent with those in house floors and activity areas documented elsewhere at the Pineland Site Complex. The lower strata (B-1-22 to B-1-25) have been analyzed here because their temporal affiliation with the Caloosahatchee IIB period (AD 800 – 1200) is securely supported by all available lines of evidence.

Pineland – Randell Complex Mound 1 (8LL33)

Analyzed samples which date to the IIB period were obtained from deposits in Operations A (n = 4) and P (n = 2) at the Pineland Site Complex. Although six distinct strata were identified during the excavation of A-1, only the deeper strata were thought to be relatively undisturbed. As such, ST 5 and 6 date to the Caloosahatchee IV (AD 1350 -1500) period. Two distinct strata (ST 3 and 11) were examined from A-11 which date to the IIB period. A possible pit feature (ST 4, not examined) was also identified in the profile wall at the interface of Stratum 3A and 3B but the exact nature of the stratum could not be determined. The portion of ST 4 exposed within A-11's profile contained black, fine sand similar to the intrusive pit features documented within the Old Mound deposits. Stratum 11 extends beyond the base of A-11 but the upper edge of the stratum was noted to be nearly horizontal. A small ash concentration was also identified within Stratum 11 which adds to the suggestion that this stratum also resembles Old Mound deposits (Wallace 2013).

Operation P consisted of six, 1x1 m excavations located between RCM1 and RCM2. The lower Operation P deposits were waterlogged and so the analyzed materials were recovered from water screened one-quarter inch fractions. There materials were excavated in 2015 and at present, have not undergone detailed analysis. Materials from four strata have been analyzed and include ST 2, 3, 4, and 5. Stratum 2 is noted as a compact, very dark gray to black, silty sand with highly fragmentary shell debris. The compaction and resulting shell fragmentation may be the result of Twentieth Century road building/construction activities (personal communication, Karen J. Walker). Stratum 3 is very similar to ST 2 but with perhaps a slightly different shell assemblage (again, these materials have not been analyzed in detail). Stratum 4 is dark gray silty sand that transitions to gray coarse sand shell midden; cordage and seeds were noted during excavation of this stratum. Stratum 5 is gray coarse sand, shell midden; excavation profiles note that non-cultural, inter-tidal taxa were noted interspersed within ST 5.

Caloosahatchee III (AD 1200 - 1350)

Twelve samples were analyzed from the Caloosahatchee III period; most are from the Pineland Site Complex (BC, n = 2; BCC1, n = 1; RCM1, n = 3; BCM2, n = 5) but samples from Josslyn Island (n = 1) and Buck Key (n = 5) were also included. The depositional contexts for the BC, BCC1, and RCM1 samples were discussed above in the Caloosahatchee IIA section, the Josslyn Island contexts were discussed in the Caloosahatchee I section, and the Buck Key contexts were discussed in detail in the IIB section. As such, only the BCM2 sample contexts will be discussed here in detail.

Pineland – Brown's Complex Mound 2 (8LL33)

Operation I is located on the summit of Brown's Complex Mound 2 (BCM2) and consists of four 2 x 2 m units. The deposits on the summit of BCM2 consist of numerous layers of dense (primary) shell midden and activity surfaces, including an area of burned midden. These strata are well defined in contrast to the summit BCM1. Wood charcoal was previously identified from three of these excavations (Newsom and Scarry 2013). The upper strata (Caloosahatchee IV) are notable because they also contained numerous non-wood botanical remains which were identified by Scarry (Newsom and Scarry 2013). Below the IV deposits, is a Caloosahatchee III floor midden or activity area associated with post molds (ST 19). Diameters of the ST 19 post molds ranged from 5 – 24 cm but averaged 13 cm (Walker and Marquardt 2013:86). The ST 19 structure floor was artifact rich and the numerous post molds appeared to be oriented parallel to the shoreline.

Caloosahatchee IV (AD 1350 – 1500)

Finally, 13 samples were analyzed which dated from the Caloosahatchee IV period. Most of these samples were from the Pineland Site Complex (BC, no new taxa identified, BCM2, n = 5, RCM1, n = 6), however, one sample was recovered from Galt Island and one new sample was analyzed from Buck Key. The samples from BCM2 were recovered from Operation I while the RCM1 samples come from Operation A. All of these depositional contexts have been discussed above in detail (see Caloosahatchee IIA, IIB, and III sections).

Charcoal Data Collection, Recording, and Analysis Methods

Following Scarry and Newsom (1992:383), large newly analyzed samples were sub-sampled and where possible a minimum of 40 individual wood charcoal specimens were identified to the lowest possible taxon. In samples with fewer than 40 suitable charcoal specimens, all those present were identified to the lowest possible taxon. Asouti and Austin (2005) suggest that a total of less than 400 identified wood specimens per subperiod or stratigraphic zone may not be large enough to accurately reflect broad scale trends and avoid the pitfalls of individual sample biases. However, such a pronouncement or assessment is always going to be regional/site specific, thus it can only be employed as a very rough guide to adequate sample size. Given this fact, some subperiods were analytically collapsed following the analysis to increase overall sample sizes. Final decisions regarding analytical combinations (i.e., the combining of sub-sample data) were made on the basis of archaeological context, on a case by case basis, and are discussed in detail in the Results chapter.

Charcoal Analysis: Sub-sampling and Charcoal Taxon Identification

Initial processing of the archaeobotanical remains from previously unanalyzed samples involved a low magnification scan to separate non-botanical materials, wood charcoal, and non-wood plant remains and recording the total wood weight. The non-wood items were bagged separately but returned to the original/unanalyzed charcoal bag. All of the wood charcoal was subsequently counted and then if large enough a sub-sample was selected. To ensure that a random and representative sample was selected from each charcoal lot (i.e., bag), each large charcoal sample was temporarily divided into four sub-lots. Generally, when the charcoal was poured out of the sample bag, the fragments would be size sorted such that the larger fragments were on top with the smaller fragments on the bottom. Temporarily dividing the sample into four sub-lots and then selecting 10 specimens from each sub-lot ensured that the analytical sample was not skewed towards taxa whose characteristics make them more resistant to fragmentation. After the analytical sub-sample was selected, the specimens were grossly divided between hardwoods and conifers. Each specimen was subsequently re-examined to orient the fragment with respect to the standard wood-anatomical planes of reference, upon which fresh breaks were made whenever necessary to clarify the surface, and all salient anatomical characteristics were recorded. Since the type of additional functional and ecological characters recorded differed between the conifers and hardwoods, with emphasis on pine and black mangrove, the rough sort into these two broad categories facilitated further data recording.

Each charcoal fragment was next grouped by anatomical “type”, for example “wood type 1,” if not immediately recognized to the ranks of genus or species. As each new charcoal fragment was examined it was compared to the type categories already established. If the fragment possessed identical or very similar cellular characteristics as that of an existing type category, then it was recorded as that type. Type descriptions focused on anatomical characters

that typically vary within hardwood and conifer species. For hardwoods, very briefly, key diagnostic features include aspects of growth rings, vessels, axial parenchyma, rays, secretory elements, and cambial variants, among other characters (Alfonso et al. 1989; Brazier 1976; Panshin and de Zeeuw 1970; Schweingruber et al. 2006, 2008; Wheeler and Baas 1998). For conifer charcoal, species identification depends on growth rings, cell wall thickenings, axial parenchyma, rays, cross-field pitting, intercellular canals, and mineral inclusions, among other features (Baas et al. 2004; Panshin and de Zeeuw 1970). When working with carbonized material, care must be taken not to mistake burn distortion for true cellular characteristics.

Wood taxonomic assignments were pursued using the database *InsideWood* (2004-onwards; Wheeler 2011) and/or published anatomical descriptions (e.g., Panshin and de Zeeuw 1980; Record and Hess 1943; Urling and Smith 1953). Modern comparative wood specimens housed at the Environmental Archaeology Laboratory at Penn State were also referenced. In most instances, each analytical type represented a different genus or perhaps species but some specimens (i.e., types), represented infra-taxon variation or subtly different expressions of the anatomy within the same taxon, due to ecological or functional variation.

Aside from basic taxonomic assignments and the characterization of species diversity within and among samples, this study focused on two sets of woods that appear to have been the dominant fuelwoods over time in the southwestern Florida cultural region (Newsom and Scarry 2013). This includes on the one hand, the three mangrove species and mangrove associates (i.e., black, red, and white mangroves along with buttonwood), and on the other, pine. Of these taxa, pine and black mangrove have been shown to be the most abundant of the wood taxa from the archaeological assemblages (Newsom and Scarry 2013; Scarry and Newsom 1992). Moreover, these two woods have well defined, clearly expressed growth increments, thus they were scrutinized in greater depth than any of the other taxa among the archaeological samples, serving as the material for the growth increment analyses (see below). Black mangrove, like the other two

mangroves, is assigned to species, as opposed to genus, simply because only a single species occurs in the region (otherwise the assignments likely would be placed to the higher rank, given the limitations of wood anatomy). The archaeological pine is assigned to the southern hard or yellow pine anatomical group (*Pinus* sp., sect. *Taeda*) and encompasses several southeastern species (Panshin and de Zeeuw 1970). Two among these species-- longleaf pine (*P. palustrus)* and south Florida slash pine (*P. elliottii* var. *densa)* occur in the general study area.

One additional comment will be made here concerning the anatomical structure of black mangrove (*Avicennia germinans*) because it is unusual when compared with most trees. Further, it will be helpful to introduce some specific terminology relevant to the interpretation and discussion of this wood in the Results chapter (Chapter 6). The growth increments of black mangrove are visually distinct because each section consists of xylem, phloem, and conjunctive tissue (Carlquist 2001; Tomlinson 1986). This black mangrove stem configuration differs from the majority of trees where the secondary xylem (i.e., wood) and the secondary phloem (located in the bark) are spatially divided by the vascular cambium (Zimmerman and Brown 1971). In black mangroves, the anomalous configuration is termed successive cambia (Carlquist 2001:271-277). Frequently, some of these growth increments appear to pinch out and not fully encircle (i.e., are discontinuous) the circumference of the tree as do tree-rings; however, these ‘pinched out’ areas are really just areas of secondary xylem which are divided by radial series of conjunctive tissue (Tomlinson 1986:195). Tomlinson (1986) notes the conjunctive tissue connections (i.e., radial series) between growth increments are most numerous in the area of branch insertions.

The development of growth increments in black mangrove appears to be under endogenous control such that organs (i.e., branches or stems) of the same age do not exhibit the same number of growth increments (Gill 1971). Rather, trees appear to produce anywhere from one to six rings in a year (Gill 1971; Tomlinson and Craighead 1972). Consequently, the number of growth increments is not consistent between trees or individual shoots of a single tree of

similar age; therefore, growth increments cannot be counted to estimate the age of a black mangrove as would be true of trees with annual tree-rings. Based on observations made on trees and branches/shoots of known age, Gill (1971) demonstrated that the number of growth increments in black mangroves was more dependent on the vigor of the individual plant than its age.

Functional and Ecological Wood Anatomical Characteristics

In addition to recording standard charcoal data (i.e., taxon counts, weights, etc. [Pearsall 2008] and see also Newsom and Scarry 2013), anatomical evidence of anomalous wood structure that may be reflective of growth disruptions from hurricanes and other natural disasters. The following sections provide some additional relevant details regarding wood as a tissue system, wood anatomy, and some of the salient features of functional and ecological wood anatomy recorded during the analysis.

Secondary xylem (wood) provides mechanical support as well as a fluid transportation system moving water and dissolved minerals between the root system and crown (Zimmerman and Brown 1971:169). In ring-porous hardwoods, water conduction takes place primarily in the vessels of the current tree ring but in conifers, more rings are typically involved in water conduction annually (Zimmerman and Brown 1971:172). While water conduction in hardwoods is straight forward with one area of the root system dedicated to one particular portion of the crown, conduction in conifers is more complex. As a conifer ages, its roots become connected to numerous branches and crown sections (Zimmerman and Brown 1971). The differing configurations are important because these anatomical variations affect how resistant the tree taxa are to freezing and drought. Conifers are more resistant to freezing and drought.

Conifer, or softwood (gymnosperms), anatomy contains a limited number of cell types with the majority of the xylem consisting of largely one or two cell types. Approximately 90 percent of softwood xylem consists of longitudinal or axial tracheids (Bowyer et al. 2007:110; Panshin and de Zeeuw 1970:67). Aside from these longitudinal tracheids, ray tracheids, ray parenchyma, axial parenchyma, and epithelial cells (e.g., secretory cells associated with resin ducts) make up the remaining cellular bulk in a given typical conifer wood (Panshin and de Zeeuw 1970). Resin canals are genetically determined and consistently found only in some conifer species, e.g., the Pinaceae (including *Pinus* spp.), but may occur in other conifers as a result of injuries (i.e., traumatic resin canals) (Bowyer et al. 2007:73; Panshin and de Zeeuw 1980:144). Where normal (longitudinal) resin canals do occur, they are typically associated with horizontal resin canals, which are located in the rays (Panshin and de Zeeuw 1980:115).

Hardwood (angiosperm) anatomy contains a wider array of cell types that tend to be more specialized in their functions. Often the most numerous cells, by volume, in a typical hardwood are either vessel elements, which function principally in water conduction, or libriform fibers, which provide mechanical support (with variations between the two extremes) (Panshin and de Zeeuw 1970:155). Temperate hardwood taxa are commonly classified initially based on the size and distribution of their vessel elements as either ring-porous, diffuse-porous, or semi-ring porous (among other features [see for example IAWA list or Insidewood]). Although each taxon has a particular presence and arrangement of cell types that are characteristic of the genus and/or species and allows for wood identification, some variation may result from ecological influences. For example, a wood taxon may be ring-porous when located in the North Temperate zone but nearly diffuse-porous when grown in the Southern Moist Temperate zone (Panshin and de Zeeuw 1970:163). Likewise, organ (i.e., root, branch, and stem) or position on the stem/root axis and age entail additional sources of normal anatomical variation (functional variation) (Baas and Miller

1985; Carlquist 2001; Corcuera et al. 2006; Ewers et al. 1997; Howard and Manwiller 1968; Larson et al. 2001; Machado et al. 1997).

Functional Wood Anatomy

The presence and arrangement of reaction wood, a normal type of functional variation found in wood, and its subsequent effects on growth patterns may be used to identify branch wood. As might be expected, the anatomy of reaction wood differs between hardwoods and conifers. In hardwoods, the specific type of reaction wood formed is known as tension wood (Zimmerman and Brown 1971). In the formation of tension wood, it is the fibers (libriform fibers and allies) which are most conspicuously affected. The fibers develop a thickened innermost cell wall that appears gelatinous in cross-section (Timell 1986:5-6). Moreover, tension wood tends to be finer-textured than normal wood and have fewer, smaller vessels than normal (Wilson and White 1986:230-231). Tension wood commonly develops on the upper side of inclined stems or branches and applies a tensile stress which contracts along the grain, pulling the stem/branch back toward the desired orientation (Timell 1986:2). Therefore, tension wood anatomy is the result of functional anatomy and mechanical stresses (Schweingruber et al. 2008:96). Solid areas of tension wood are rare but when concentrated occurs in the outer portion of tree rings. More often than not, the thickened fibers are scattered among the normal xylem cells (Timell 1986:5-6). The anatomical features of tension wood may be difficult to recognize in charcoal; however, hardwood branches (or material from leaning stems) may be apparent by the eccentric growth pattern often caused by the formation of tension wood (all forms of reaction wood). In other words, whether branch or stem, specimens with tension wood will exhibit eccentric growth ring formation, meaning the growth rings will be markedly wider on the upper side and comparatively narrow in the “opposite wood” portion of the growth ring. This growth pattern means that in hardwood specimens where tension wood is present, the pith will appear to be offset from true

center. Whereas, in hardwood specimens, where a pith is present, the presence of normally concentric growth rings will signal stem wood (Panshin and de Zeeuw 1980:243-244).

Compression wood is the corresponding type of reaction wood typically formed by coniferous species. It develops on the lower side of inclined stems or branches. Tracheids in the compression wood expand along the grain while being formed. The force of their expansion pushes the stem/branch back toward the desired orientation by slightly compressing the cells on the opposite side (Timell 1986:2) (see Carlquist 2011 and others for additional theories on formation processes). Compression wood is extremely hard and brittle, often with a density greater than normal wood. The longitudinal tracheids of compression wood are very different from typical tracheids. The compression wood tracheids are shorter and distorted with a thickened secondary cell wall (Timell 1986:4). The common features of compression wood may be discerned in charcoal. These features typically include thickened, rounded-tracheid cross-sections with the presence of intercellular spaces. Additionally, similar to hardwoods, the piths often become offset but the rings containing compression wood will be located on the lower side of branches/stems (i.e., the reverse location of tension wood formation).

It may be difficult to assign terms such as early wood and late wood to severe instances of compression wood because in these cases, the entire growth ring may be uniformly composed of compression wood. In milder cases, however, compression wood tends to form only during the late season growth or the outer portion of the growth increment (Timell 1986:83-85). Using *Pinus sylvestris* (Scots pine), Timell (1986:95) documented various formation sequences for compression wood. Compression wood may form at any point during the growing season, however, rarely appears to develop in the middle of late wood formation. Timell (1986) further observed that the development of compression wood was associated with a reduction in early wood production and an increase in late wood proportion. The development of tissues that

contribute to mechanical strength in conifers (i.e., compression wood and late wood cells) may then be produced in lieu of weaker tissues (i.e., early wood cells).

Ecological Wood Anatomy

Ecological wood anatomy has been defined as "the study of direct, phenotypic modifications of wood structure as a response to one or more changing ecological factors" (Baas and Miller 1985:282). At the shorter-term, local scale, these ecological factors include changes in temperature, water, light, or nutrient availability and can include responses to injuries or pathogens. Intra-annual variation occurs when the normal pattern of growth is interrupted and then resumes, producing density variations (i.e., bands of cells with thicker and thinner walls). These fluctuations can occur when abrupt changes in temperature or hydrological routine interrupt the normal growth cycle of the tree (Schweingruber et al. 2008:108). Low late wood production in warm regions suggests cool summers that resulted in a shortened growing season or a response to some pathogen (e.g., insect attacks). At the broader scale, ecological anatomy relates to anatomical expression and variation at different latitudes, altitudes, and under varying moisture regimes (e.g., the range from moist tropical to arid climates) (Bass 1982). It has also been extended to observations of variation associated with longer-term growth-disruptive events such as hurricanes, volcanoes, tsunamis, landslides, and earthquakes (Creber and Chaloner 1984; Čufar et al. 2008; Fonti et al. 2010; Ford and Brooks 2003; Schweingruber et al. 2006, 2008; Schweingruber 2007; Vaganov et al. 2006; Verheyden et al. 2005; Wimmer 2002; Yamamoto et al. 1995).

If the external influence and disruption are severe enough, then sudden changes in radial growth will be evident (i.e., growth increments will be reduced in width) and/or cells may be damaged. Frost rings are an example of a characteristic cellular damage that occurs as a result of freezing temperatures, when experienced during the growing season. Frost rings may be caused

by either the contracting of the cortex/phloem or the formation of ice within cells near the cambium. In either scenario, the cells near the cambium are crushed or collapsed. As growth resumes, the collapsed cells remain misshapen and traumatic parenchyma (i.e., callus) forms. Ray cells also multiply and widen such that the rays become displaced and crooked/bent (Schweingruber et al. 2008:158; Timell 1986:1439-40). A frost ring may also occur when the crown thaws but the base of the tree is still frozen. In this event, the active transpiration in the crown draws available water up through the trunk and as the available water is used, the pressure increases until the now empty cells collapse. A similar anatomical response is induced when water is lost through either root exposure or defoliation (Schweingruber et al. 2008:158).

Changes in water and nutrient availability may affect the radial growth and the size of the vessels/tracheids (i.e., the water conducting tissues) (Schweingruber et al. 2008:136). Flooding also produces characteristic cellular anatomy. Largely, flooding results in the production of abnormally sized vessels. In taxa which normally produce small late wood vessels, the flooding response may produce abnormally large late wood vessels (Yanosky 1983). Flooding has also been documented to increase the presence of intercellular spaces, decrease radial growth, increase the proportion of parenchyma cells/resin ducts, and increase the number and size of rays in some conifers (Yamamoto et al. 1987).

Fires may also have an effect on wood anatomy, often producing a fire scar when the tree survives the fire (Figure 5.3). When a tree experiences only moderate heat from a fire, the bark may remain largely intact but the internal cellular anatomy may be affected. Internal damage can take the form of tangential rows of resin ducts or gums ducts (i.e., traumatic ducts) in conifers, cellular collapse, the formation of tyloses, and production of callus cells (Schweingruber et al. 2008:176). Recurring fires can lead to crooked stems or forks; these crooks contain reaction wood (Timell 1986:1474-1476).

Figure 5.3. Example of fire scar on pine bole (left) and image of cross-section of similar fire scar from non-pine conifer (right). Photos by author – neither image is from Southwest Florida.

Physical damage to trees, either removing/damaging limbs or defoliation, is also recorded in patterns of radial growth and cellular anatomy. Physical damage can be natural, including storms/hurricanes (wind damage) or browsing, or the damage could be anthropogenic in nature, including pruning (i.e., pollarding), coppicing, or grazing (Moe and Rackham 1992; Rackham 1996; Sennerby-Forsse and Zsuffa 1995; Thiébault 2006). Damage to the crown, through storm activity or pollarding, can ultimately reduce the radial growth or produce a false growth ring. Initially, the wound(s) are compartmentalized and then new shoots are initiated. Once new wood begins to form, the result depends on the severity and season of damage. If severe damage occurred during the dormant period, then the subsequent growth ring will be reduced in width. If severe damage occurred during the growing season, then ongoing lignification is reduced (i.e., cell walls become thinner) and may result in a false ring (Schweingruber et al. 2008:168). Continuous browsing and grazing can produce pinched/wedged rings, smaller than normal vessels, and thinner-walled fibers. Periodic grazing will produce density fluctuations and may

mimic intra-annual variation (Schweingruber et al. 2008:166). Pollarding is a common management technique where the canopy is reduced or removed – or limbs are removed in hedges. Pollarding is often practiced to produce fodder for livestock (Rackham 1996). Coppicing occurs when adventitious shoots are triggered by stress (loss of stem or damage to crown). These adventitious shoots, sometimes also known as stump sprouts, grow quickly and have been employed prehistorically as a means to quickly generate large volumes of small diameter material (Anderson 1999; Crone 1986; Ferm and Kauppi 1990; Kaschula et al. 2005; Newsom 1993:126).

Analysis Procedures for Functional and Ecological Wood Anatomical Characters

Beyond the standard charcoal analysis (detailed above), additional functional and ecological features were recorded where possible. For the most part, the recording of additional anatomical characters was restricted to taxa that have readily demarcated growth increments (e.g., conifers, black mangrove, and oaks). Additional data recorded included an estimate of the maximum diameter, which was obtained either by measuring out from the pith (i.e., a radius spanning from stem/branch center to the outermost edge) or by using an arc chart to estimate the diameter of the specimen. The smallest possible arc that matched the outer most growth increment was chosen and the percent of arc represented by the specimen was also recorded as a means to estimate the reliability of the diameter estimate. The presence of a pith and bark were also recorded. When a pith was present and the specimen could be determined to be a fragment of either stem wood or branch, then this information was recorded. Additionally, the anatomical characters of ecological variation were also noted and examples include wedged rings, off-center pith/eccentric growth increments, traumatic resin canals, intra-annual density fluctuations (IADFs). Finally, growth increment widths were measured using a Velmex, Inc., unislide stage and VRO-1B encoder in conjunction with MeasureJ2X software. These raw, growth increment widths are presented in Appendix C.

Since coppiced growth tends to be more vigorous (wider growth increments per unit of time), the growth increments of coppiced taxa would predictably be wider (growth at a faster rate) when compared to uncoppiced saplings (Newsom 1993:126). I extrapolate that the same basic effect may result from hurricane disruption of crown growth. Thus wider growth increments per unit time on average could signal either human influence (extraction pressure) or hurricane disruption. The overall trends and contextual data were used here to try and discern whether trends in the average growth increments changed through time.

Consistently wider growth increments in pine would potentially result from release events, either natural (e.g., fire) or anthropogenic, associated with a reduction in resource competition, e.g., root competition (see Meldahl et al. 1999). Further, hurricanes might also spark release events by reducing competition in both mangrove and pine forest communities. Growth increment diameters will be used to create patterns of fuelwood selection by size within each taxon and ring widths may demonstrate trends in growth associated with natural disruption or some management/extraction practices (i.e., coppicing, see Newsom 1993). Damage, such as the presence of bark beetle channels (in pine), would indicate the use of fallen dead wood, i.e., abscised limbs. Off center piths and the presence of reaction wood (i.e., compression wood in conifers and tension wood in hardwoods or angiosperms) could aid in identifying the use of secondary members (branches) from upright stems or trunk wood. The overall size and functional class is what will matter to this study; what is the *form* of the wood generally harvested and utilized?

Quantitative Analysis

Although I have targeted hypotheses which are being tested, it is also important to thoroughly investigate and evaluate the data generally to characterize the fuelwood patterns

across time and space. Graphic displays provide a useful means to examine data for patterns (De Veaux et al. 2005). A well designed image of the data can reveal patterns and relationships that might not be as evident in a large table of numbers. Initial visualization and description of the data began with simple graphing to look for patterns and trends in the data. Percentages were used throughout the analysis to standardize the differing provenience sizes (i.e., individual sample counts). Also, using a percentage rather than raw frequency reduces the effect that excavation volume may play in the frequency of recovered specimens. As noted above, there are substantial differences in sample numbers between the sites/temporal periods under analysis.

One standard quantitative measure is ubiquity (Popper 1988). Ubiquity is simply the percentage of proveniences from which a plant has been identified. Ubiquity is a presence/absence measure without regard to the absolute frequency, minimizing the influence of differential preservation and fragmentation effects. Also, the ubiquity of one taxon does affect the ubiquity of another taxon allowing for the scores to be evaluated independently of each other, though Popper (1988) cautions against using ubiquity measures for comparisons across taxa. Rather, ubiquity should be used for comparisons of a single taxon across space and time. It should not be used as an absolute measure of taxa importance. Because ubiquity assumes that samples are independent, it is very sensitive to mistakenly treating two dependent samples as independent. Violating the assumption of sample/provenience independence will artificially inflate the ubiquity scores and thus the relative importance of the taxon in question. Similarly, caution is noted regarding assumptions of equivalent activities and plant use. When ubiquity scores are used to compare plant use across space and time, it is important that the contexts of use be similar. Otherwise, patterns of relative importance may be misinterpreted.

Often archaeological data are skewed. A majority of the fuelwood data generated during this analysis is skewed data. In most instances, this pattern of non-normality likely results from having a small number of samples available for the particular time frame. In other cases, despite

larger sample sizes the data are inherently non-normally distributed with a small number of classes containing an overwhelming majority of the data. Sometimes a data transformation will make a skewed distribution more symmetric (De Veaux et al. 2005; Hoaglin et al. 1983), however, this fuelwood data set was resistant to transformation efforts.

Given that medians are more resistant to the effects of skewed distributions (Hoaglin et al. 1983), boxplots can be extremely informative. Boxplots are visual representations of distributions about the median. The extent of the diagram is determined by the minimum and maximum data values. Fifty percent of the data is enclosed within the box with the whiskers showing the remaining upper and lower 25 percent respectively. Outliers are depicted when the data values fall more than 1.5 box lengths from the 25th or 75th percentile. Boxplots can then, not only convey the median, spread, and symmetry of the data but can be used broadly to determine differences in distribution medians.

Much of the investigation required the comparison of distributions. One method to compare charcoal taxonomic distributions with either hypothesized distributions or modern comparative data (e.g., mangrove forest structures) employed a g-test for goodness of fit (i.e., log-likelihood ratio test). Data are expressed as percentages in the g-test which allows it to handle unequal sample sizes. Further, the g-test is more robust than a traditional chi-square when classes are greater than 5 and some expected frequencies are low (Sokal and Rohlf 1995).

Chapter 6

Results

Fuelwood collection and production strategies can vary through time and across ecological settings. The charcoal data presented here are used to investigate the consistency of fuelwood strategies through time and to discern the human-environmental relationships that existed as a result of those strategies. The following summarizes the results of the modern forest survey, archaeobotanical analysis, and growth ring increment study. Several assumptions have been made during the analysis. First, it has been assumed that the analyzed charcoal was used as fuelwood. Second, an assumption of energy conservation has been made with respect to the collection and transport of fuel. In other words, fuelwood collection and transportation costs would have been reduced by collecting as close to the use site as feasibly possible and by incorporating fuelwood collection into other daily/routine activities.

Modern Forest Survey: Modern Comparative Assemblage for Forest Resources

Modern forest information was generated or obtained to create several comparative data sets. Broadly, these data sets included the diameters of available wood resources by taxa (both living and dead); both data sets specifically incorporated geographical areas that ranged in distance from the eyewall of a relatively recent, severe hurricane (in this case, Hurricane Charley in 2004). These datasets are used in conjunction with diameters of archaeological charcoal to address the impact of hurricanes on fuelwood resources and to test whether the selection of

fuelwood diameters in the Caloosahatchee region mirrors the available size classes or is more selective.

Modern Mangrove Survey Results

Sixteen modern mangrove forest plots were surveyed and the locations of these plots are listed in Table 6.1 (metric diameters are available in Appendix D). A variety of ecological situations was surveyed, including the tidal/coastal, landward, and the zone between these two extremes. Modern plots were also located, as best as possible, from north-to-south and east-to-west of Pine Island in an attempt to encompass the existing variation.

Pine Island was in the path of Hurricane Charley (2004) with the eyewall passing over the northern half of the island. Northern plots that experienced severe hurricane damage included Smokehouse Bay and the Randell Research Center Preserves; at present, these areas are undergoing regeneration (recruitment), with numerous black and white mangrove (live) saplings and standing dead snags (Table 6.2). The southern mangrove forests appeared to have been less impacted by Hurricane Charley. Hurricane damage was noted at the St. Jude Trail, however, the damage was not as extensive as that seen at the Randell Research Center. The southern-most regions, such as the Back Bay Preserve, contained fewer, but larger red and black mangroves with a more open understory. Little residual hurricane damage was in evidence at the time the Back Bay survey was completed in 2015.

Smokehouse Bay

Smokehouse Bay is located on the northeastern shore of Pine Island and two survey plots (Plots 1 and 2) were conducted at this preserve, including the landward-edge and tidal-zone

Table 6.1. Summary of modern survey plot locations.

Plot #	Location	Ecological Loc		Grid N	Grid E
1	Smokehouse Bay	tidal zone	17 R	2951255	388671
2	Smokehouse Bay	landward	17 R	2951370	388606
3	Galt Preserve	mid btwn l/c	17 R	2932447	391367
4	Galt Preserve	mid btwn l/c	17 R	2932511	391068
5	Galt Preserve	mid btwn l/c	17 R	2933031	390986
6	Pine Flatwoods	coastal	17 R	2936859	389430
7	Pine Flatwoods	salt flat	17 R	2936854	389840
8	RRC	coastal	17 R	2948881	385309
9	RRC	mid btwn l/c	17 R	2948867	385346
10	Dobb Preserve	mid btwn l/c	17 R	2936426	392233
11	Dobb Preserve	landward	17 R	2936462	392150
12	St. Jude	landward	17 R	2932865	392383
13	St. Jude	coastal	17 R	2934853	393131
14	St. Jude	landward	17 R	2932942	392704
15	Back Bay	coastal	17 R	2930756	393689
16	Calusa Island	coastal	17 R	2954149	386316

(Figure 6.1). Smokehouse Bay suffered severe damage during Hurricane Charley and many of the larger trees were killed or severely damaged. Many of these larger (now dead) trees were white mangroves (personal communication, Michelle Miller [20/20 Conservation Ranger]). This area is currently under restoration and the landward-edge Plot 2 was conducted near recent infilling of old mosquito ditches. At the time of the survey, buttonwood mangroves were scarce and none were located within either survey plot. Overall, as can be seen in Table 6.2, white mangroves dominated these two survey plots. In particular, white and red mangroves were recruiting following the recent disturbances (Hurricane Charley and recent restoration activities). Black mangroves were present in low numbers on these plots.

Galt Preserve

Three survey plots (Plots 3, 4, and 5) were conducted at the Galt Preserve, along the southwestern shores of Pine Island. All three of these plots were inundated with Plot 4 being located closer to the coast and Plots 3 and 5 being located closer to the landward edge. Plot 4 retained evidence of

Table 6.2. Mangrove stem diameters at breast height in modern survey plots by taxa – black mangrove (B), red mangrove (R), white mangrove (W), buttonwood (Bt), and unidentified (UNID).

	(mm)	0-25	26-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-200	201-300	300+	Total
Smokehouse (2 plots)	B	1		5	3	1	1	1		2	3	1		18
	R	23	14	42	17	2	5	3			3			109
	W	11	9	26	20	8	15	9	8	6	23	1		136
	UNID	175*				1								1
Galt (3 plots)	B	55	24	35	31	18	8	8	10	3	2			194
	R	7	8	33	32	14	17	8	8	5	8			140
	W	10	3	10	7	4	9	1		2	7			53
	UNID	788*	2			2	1		1					6
Pine Flatwoods (2 plots)	B	17	6	11	16	4	4	4	3		4			69
	R	7	28	37	23	16	10	5	5	3				134
	W	14	6	8	5	4	6	1	3					47
	UNID	89*		5	1	2								8
Randell Research Center (2 plots)	B	1	4	1	1	1			1	1	7	4	5	26
	R		1	4		1	3	3	4	4	8	1		29
	W	31	25	28	27	14	5	4	1					135
	UNID	72*	1	1	4	5	4	8	2	4	41	5		75
Dobb (2 plots)	B		1	4	11	2	4	2		3	3			30
	R										1			1
	W	1	1	1			1							4
	Bt	19	11	16	17	9	7	4	2	1				86
	UNID	144*		2										2
St. Jude (3 plots)	B	89*	1	3	3	1		5	3		7	7		30
	R	143*	10	18	17	9	3	7	2	3	13			82
	W	69*	2	10	3	1	2		7	3	18	3		49
	Bt	7	13	22	15	8	1	1	1					68
	UNID				2			1			2			5
Back Bay (1 plot)	B											1		1
	R		2	4	2	1	4	1		2	14	3	2	35
	W	7	4	4	9	6	1	1	3		2	1		38
	UNID	32*									2			2
Calusa Island (1 plot)	B				1			1			1			3
	R	24*	16	21	29	22	16	5	1	2	7			119
	W	12	5	13	9	6	6	6	4	2	1	1		65
	UNID						1				2			3

*Seedlings were not identified to taxon on most plots and were counted only in a sub-plot (see Methods [Chapter 5]).

Figure 6.1. Modern survey Plot 1 at Smokehouse Bay Preserve showing extensive deadwood and standing snags among the red mangrove.

a lightning strike (i.e., split and partially burned tree) while fire scars were observed on several trees in Plot 5. Plot 3 mainly consisted of sparse, younger black mangroves with a medium-

density of short seedlings (1-2 ft high) (Figure 6.2). Plot 4 had a closed but sparsely leaved canopy and many densely growing seedlings. Given the coastal proximity of Plot 4, it is possible that more propagules wash into this area. Much of Plot 5 consisted of open water and pneumatophores. The Galt Preserve plots were dominated by red and black mangrove but no large diameter (i.e., 201+ mm) trees were documented.

Figure 6.2. Modern survey Plot 3 at Galt Island Preserve showing forest gaps with young growth among ubiquitous black mangrove pneumatophores.

Pine Flatwoods Preserve

The Pine Flatwoods Preserve is located along the western shore of Pine Island between the Randell Research Center and the Galt Preserve. Two survey plots were conducted here, including a coastal-plot (Plot 6) and a plot within a salt marsh (Plot 7). Plot 6 had a closed, sparse canopy. Most of the stems in Plot 6 were relatively small and no larger diameter (201+ mm) trees were encountered. Plot 7 consisted of numerous dead snags (unidentified to taxon) and shorter (approximately 5 ft tall) black mangroves. This salt marsh is rarely inundated limiting mangrove

recruitment from waterborne propagules. While all three mangroves (red, black, and white) were recorded in these two plots, 58 percent (see Table 6.2) were red and black mangroves. Most of the seedlings/saplings (n = 64) were recorded in coastal Plot 6.

Randell Research Center Preserve

Two survey plots (Plots 8 and 9) were conducted on the Randell Research Center/20-20 Conservation lands, immediately to the south of the Pineland site. Plot 8 had a closed canopy formed by mature red and black mangrove trees. Numerous dead snags were present and most of the mature trees evidenced hurricane damage (e.g., missing sections of bark on their windward sides) (Figure 6.3). Most of the new growth (n = 71) was red mangrove seedlings. Trees of Plot 9 were more damaged by Hurricane Charley (Figure 6.4); All of the mature trees were dead, standing snags. The newly recruiting trees consisted of even-aged black and white mangroves approximately 5 ft in height. The disparity in height between the dead and live trees is evident in the Figure 6.4. Plot 9 likely resembled Plot 8 prior to Hurricane Charley; no cause for the apparent disparity of hurricane impact was evident at the time of the survey.

Dobbs Preserve

Two plots were surveyed at the Dobbs Preserve, including one mid-forest plot (Plot 10) and one on the landward edge (Plot 11). Plot 10 was dominated by even-aged black mangrove approximately 4 ft in height. This area also contained sparse mature black mangroves. Evidence of increasing inland inundation was observed along the landward mangrove fringe. Within survey Plot 11, red and black mangroves are slowly replacing buttonwoods and (native) palms (Figures 6.5, 6.6). The inland march of the mangrove forests is analogous to the processes ongoing at

Figure 6.3. Modern survey Plot 8 at the Randell Research Center/20-20 Conservation in black mangrove forest, showing fallen deadwood and localized bark damage from recent hurricane.

Figure 6.4. Modern survey Plot 9 at the Randell Research Center/20-20 Conservation showing numerous standing snags with young mangrove recruitment in the understory.

Calusa Island (see below). Much of Plot 11 was covered with pneumatophores and the seedlings consisted of mostly (approximately 90 percent) black and white mangroves, though some buttonwood seedlings were also identified (approximately 10 percent).

The Dobbs Preserve was also the only location surveyed where invasive species occurred within a plot (i.e., *Melaleuca quinquenervia* [broad-leaved paperbark tree]); conservation efforts are actively working to remove these invasives. Therefore, some additional disturbance, although minor, is likely the result of the active cutting and removal of these non-native species. As can be seen from Table 6.2, these two plots contained largely either black mangrove (Plot 10) or buttonwood (Plot 11), though no trees larger than 201 mm in diameter were present in either plot.

St. Judd Trail Preserve

Three survey plots (Plots 12, 13, and 14) were conducted at the St. Judd Trail Preserve, including two landward-forest edge plots and a coastal plot. Plot 12 (landward) consisted of dead buttonwood snags of approximately 5-6 ft in height with live juvenile trees of black mangrove, white mangrove, and buttonwood. These dead buttonwoods may have been hurricane-related mortality as no other disturbances were noted in this area of the preserve.

Plot 13 contained a few larger dead snags (likely hurricane mortality) and one larger black mangrove that evidenced hurricane damage (missing/healing bark) (Figure 6.7). This plot contained a good mix of all three mangrove taxa with several larger black mangroves in addition to numerous younger (i.e., smaller in diameter) red and white mangroves. Two cohorts of seedlings were present with a cohort of more mature black mangroves at 3-4 ft in height and a younger cohort of red mangroves measuring approximately 1-2 ft in height.

Figure 6.5. Modern survey Plot 11 at the Dobbs Preserve where the mangrove association is beginning to encroach inland.

Figure 6.6. Modern survey Plot 11 at the Dobbs Preserve showing a dead palm trunk, which died as a result of a rising water table (same plot as depicted in Figure 6.5).

Plot 14 was somewhat similar to Plot 13 despite being on the edge of permanent inundation. Although this plot contained a handful of black mangroves (n = 4), the bulk of the identified taxa belonged to red and white mangroves. Most of the identified seedlings belonged to red mangroves and were approximately 1-2 ft in height.

Figure 6.7. Modern hurricane damage (bark stripping) documented at the St. Jude Trail.

Back Bay Preserve

The Back Bay Preserve is located on the southeastern tip of Pine Island and was thought to represent the least hurricane disturbed preserve surveyed. Back Bay had a fairly tall canopy and a relatively open understory (Figure 6.8). Plot 15 was located approximately 8 m from the open water. Though one large black mangrove was identified, most of the larger diameter trees documented were either red or white mangroves. Seedlings were sparse, measuring 1-2 ft in height, and consisted of nearly equal numbers of red and white mangroves.

Figure 6.8. Modern survey Plot 15 at Back Bay Preserve.

Calusa Island

One survey plot (Plot 16) was conducted at Calusa Island just off the northern beach where active erosion is occurring (Figure 6.9). At Calusa Island, this erosion is steadily pushing the young mangroves to recruit while the mature/established trees die (by drowning ?) along the eroding beach. One larger white mangrove was located within the survey plot but most of the identified trees were much smaller/younger (see stark contrast in tree diameters, Figure 6.9). Most of this recruitment consists of red and white mangroves. Few black mangroves were identified within the plot.

Figure 6.9. Calusa Island at edge of beach showing differences in stem diameters.

Coarse Woody Debris

Data on the diameters of deadwood within each survey plot were also recorded. The distribution of diameters for deadwood is presented in Table 6.3. As can be seen, when compared with the number of live trees surveyed (see Table 6.2), the amount of deadwood is relatively low. The diameter classes are more evenly spread but slightly skewed away from the smallest class (1-10 mm). The lack of small debris makes sense given the tidal influence, where the smallest items rot away quickly from inundation or are carried off by tides. The larger diameter classes resist movement and resist decay longer by snagging on adjacent limbs, thus avoiding submersion. Much of the larger deadwood and standing stags seen dated from Hurricane Charley, surviving more than 10 years in the forest.

Mangrove Survey Summary – Highlights of the Modern Forest Resource

A number of key findings were drawn from the modern mangrove survey data. First, a distribution of modern mangrove stem diameters was obtained for a sample of mangrove forests around Pine Island. These data indicate that 59 percent of the modern mangrove stems (i.e., available modern fuelwood) (exclusive of seedlings), measure less than 50 mm in diameter (Figure 6.10 and see Table 6.2). The abundance of smaller size classes confirms expectations from mangrove ecology (see Chapter 3). Furthermore, 11-12 years after a severe hurricane made landfall (Charley 2004), less than 15 percent of the trees surveyed have a diameter greater than 100 mm. Most of the larger diameter trees were red and black mangroves, though large white mangroves were also documented. Large-diameter white mangroves were recorded more often in preserves which are positioned farther from the more intense effects of storms/hurricanes, on the eastern shore of Pine Island.

Table 6.3. Coarse woody debris recorded during modern mangrove survey.

Diam (mm)	N	%
0-10	1	1
11-20	11	9
21-30	25	20
31-40	22	17
41-50	20	16
51-60	16	12
61-70	5	4
71-80	4	3
81-90	8	6
>91	16	12
Total	128	100

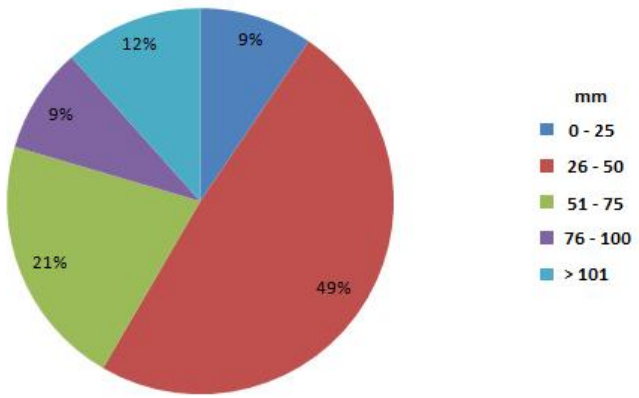

Figure 6.10. Distribution of modern mangrove stem diameters.

Modern Pine Survey Results

Forest Service data (i.e., FIA data) were available for the local pine woodlands and so additional pine surveys were not conducted. Table 6.4 summarizes the available FIA data for local hard pine stems. Hard pine data was available from 4 and 12 plots respectively. The recorded hard pine diameters (n = 172) ranged from 35.6-396.2 mm. Although the range of pine stem diameters covers nearly the same sizes as the mangrove, the median and mean values make it clear that the pine distribution contains far larger diameter stems than does the mangrove size distribution. Since one of the hypotheses being tested here expects that pine branches (not stems) will be a major source of fuelwood, a sample of pine branches was also measured.

Table 6.4. Summary of Forest Service (FIA) data for southern hard pine in Charlotte and Lee Counties, Florida.

	No. plots	N	Range (mm)	Median (mm)	Mean (mm)
Charlotte County					
Pinus palustris (longleaf pine)	4	17	81.3-467.4	254	304.8
Pinus elliottii (slash pine)	4	3	269-335.3	292	297
Lee County					
Pinus elliottii (slash pine)	12	152	35.6-396.2	203.2	185.4

To this end, modern pine branches (n = 17) from the Pine Flatwoods Preserve, Lee County, Florida, were collected and measured for comparison with the pine charcoal data. These modern branch diameters ranged from 10-46 mm (1.0-4.6 cm) with a mean of 23 mm (2.3 cm) and standard deviation of 9.2.

Archaeobotanical Results

Wood Taxa Identified

Having explored parameters of the (modern) forests and thus, the availability of fuelwood on the landscape, I turn to characteristics of the ancient fuelwood assemblages. Wood taxa identifications were used to address a portion of two different questions. One question centered on the impact that major hurricanes would have on the availability, and thus selection, of fuelwood taxa while the second question addressed whether or not intra-site variability was present in the taxa used as fuelwood. In order to address these questions, wood taxa identifications were determined from 256 unique proveniences from 11 archaeological site numbers (see Table 5.2 and Table 6.5). In total, 7,066 wood specimens were identified and wood anatomical characters were recorded on 4,210 specimens. As mentioned in the Methods (see Chapter 5), a number of samples contained previously identified charcoal specimens (Newsom and Scarry 2013; Scarry and Newsom 1992). When these previously analyzed samples contained unexamined specimens, additional specimens were identified but when the sample had been fully analyzed, only wood anatomical characters and/or growth increment values were recorded (see for example zero Charcoal Identified at Big Mound Key on Table 5.2).

The summary tables and figures that follow include percentages of identified wood specimens and taxa ubiquity (raw taxa counts are available in Appendix B). The data tables are

organized according to the actual excavation stratigraphy. In other words, upper levels appear at the top of the tables with deeper strata organized farther down the results. The organization of the tables by excavation level and temporal association then allow for the quick identification of secondary midden materials which are temporally out of sequence from top to bottom (youngest to oldest).

The Pineland Site Complex

The bulk of the analyzed charcoal was recovered from the Pineland Site Complex (8LL33, 8LL37, and 8LL1612) and represents a time frame of approximately AD 50 – 1500. The earliest deposits (i.e., Caloosahatchee I-late period) are located in the South Pasture, Citrus Ridge, Old Mound, and Low Mound. Pineland's Caloosahatchee IIA deposits are to be found in the South Pasture, Old Mound, and at the bases of the Brown's and Randell Complexes. Later deposits, dating from the IIB, III, and IV/V periods, have been found in the midden deposits of the Brown's and Randell Complexes. The Pineland Site Complex chronology is based on a large number of radiocarbon essays, stratigraphic associations, and artifact assemblages (see Chapter 5 for further details).

Citrus Ridge and South Pasture (8LL33)

Charcoal was analyzed from four excavation units designated as Operation N on Citrus Ridge (CR) and Trench 11A, in the South Pasture. In total, 52 proveniences were analyzed from CR and all but five proveniences could be assigned to a temporal affiliation. Generally, the designated strata within Operation N are consistent across the four excavations. Strata designations are not equivalent between the CR excavations and Trench 11A, however, the deposits do relate spatially.

Table 6.5. Summary of scientific and common names for taxa.

Family	Scientific Name	Common Name
Cannabaceae	*Celtis* sp.	sugarberry
Cannabaceae	*Trema* sp.	trema
Combretaceae	*Conocarpus erectus*	buttonwood
Combretaceae	*Laguncularia racemosa*	white mangrove
Combretaceae	-	white mangrove family
Cupressaceae	*Taxodium* sp.	cypress
Fabaceae	*Caesalpinia* sp.	grey nicker
Fabaceae	*Cassia* sp.	senna
Fagaceae	*Quercus* spp.	oak
Fagaceae	*Quercus virginiana*	live oak
Gymnosperm	-	conifer
Malvaceae	*Gossypium* sp.	cotton (wild cotton)
Meliaceae	*Swietenia mahagoni*	West Indian mahogany
Moraceae	*Ficus* sp.	wild fig
Myrsinaceae	*Myrsine cubana* (syn. *Rapanea punctata)*	rapanea
Myrtaceae	*Eugenia auxillaris*	white stopper
Myrtaceae	*Eugenia* sp.	stopper
Myrtaceae	*Myrcianthes fragrans*	twinberry
Myrtaceae	*Morella cerifera* (syn. *Myrica)*	wax myrtle
Palmae	*Sabal* sp.	cabbage palm
Palmae	-	palm family
Pinaceae	*Pinus* sp.	hard or yellow pine group
Polygonaceae	*Cocoloba uvifera*	seagrape
Myrsinaceae	*Ardisia escallonioides*	marlberry
Theophrastaceae	*Jacquinia keyensis*	joewood
Rhizophoraceae	*Rhizophora mangle*	red mangrove
Rubiaceae	-	madder family
Rubiaceae	*Casasia clusiifolia*	seven-year apple
Rubiaceae	*Psychotria* sp.	wild coffee
Sapotaceae	*Sideroxylon foetidissimum*	false mastic
Verbenaceae	*Avicennia germinans*	black mangrove
Vitaceae	*Cissus* sp.	possum grape
Vitaceae	*Vitis* sp.	grape vine

Excavation N-1

Table 6.6 summarizes the identified wood taxa from excavations N-1, N-2, and N-3. The sample count is small and individual specimens were few. Six types of woody taxa were recovered in total across three temporal periods; however, the samples were dominated by black mangrove and pine. Black mangrove was ubiquitous in all of the N-1 samples analyzed. Stratum 2 represents a secondary midden (Walker and Marquardt 2013:134-135) which may partially explain the low frequency of charcoal in these deposits. Strata 3 and 4 represent primary midden deposits but nevertheless, the charcoal frequencies were also low, though only a single sample was analyzed from each of these N-1 strata.

Excavation N-2

Only two samples were analyzed from excavation N-2 (see Table 6.6). Both samples contained very few specimens with three identified taxa in total. Both samples represent sparse midden deposits interspersed with primary sand deposits.

Excavation N-3

Samples from excavation N-3 contained a total of 14 wood taxa (when considering tentative identifications as definitive) (see Table 6.6). Live oak and pine were the most frequently identified wood types (Ubiquity [U], 100%). Three mangrove taxa (i.e., black mangrove, red mangrove and buttonwood) were documented in about half of the samples analyzed (U, 43%). Of the CR samples, N-3 showed the greatest diversity of wood types. The additional hardwood taxa assigned, including *Caesalpinia* sp., cf. *Eugenia axillaris*, Rubiaceae, cf. *Sideroxylon* sp., cf. *Swietenia mahagoni*, and Vitaceae, are native and grow in coastal strands or hammocks. All could have been located relatively close to the site. Considering that these levels represent the surface ST 1 (0-35 cmbs) and the fact that these are secondary midden materials (Ayvaz 2014), the diversity of the taxa assemblage stands in contrast to other CR results. While the typical

fuelwoods are present in the samples, the diversity of wood taxa identified in these upper deposits is noticeably greater. No visible disturbances were noted during the excavations; however, these samples consisted of fine sand (Ayvaz 2014:39) which may have masked historic disturbance. Partially carbonized wood specimens were recovered from four of these upper deposits and are likely modern intrusions. Given the presence of modern charcoal/wood intrusions and the lack of visible disturbances, the diversity of identified wood taxa present in the N-3, I-late-e/f, deposits may be the result of historic land clearing/burning activities.

Table 6.6. Percent of identified wood taxa from excavations N-1, N-2, and N-3 at the Citrus Ridge, Pineland (8LL33).

Provenience	Count Identified	Pine	cf. Pine	Black Mangrove	Red Mangrove	White Mangrove	Buttonwood	Combretum Family	Live Oak	cf. Live Oak	cf. Oak sp.	Palm	cf. Palm	Nicker sp.	cf. White Stopper	Madder Family	Sapodilla Family, cf.*Sideroxylon*	cf. Mahogany	cf. Grape Family	Grape	Indeterminate Wood	Unident. Bark	Modern Plant
IIB-c, d, e																							
N-1-82, ST 2	8	25		75																			
N-1-83, ST 2	14			86		7	7																
N-1-84, ST 2	3	33		67																			
Total Percent	25	**12**		**80**		**4**	**4**																
Ubiquity		**66**		**100**		**33**	**33**																
I-late-g, h, i																							
N-1-85, ST 3	19	11		84			5																
N-2-86, ST 3 A + B	9						78														22		
Total Percent	28	**7**		**57**			**29**														**7**		
Ubiquity		**50**		**50**			**100**														**50**		
I-late-g																							
N-1-86, ST 4	16	50		13				31	6														
I-late-g, f																							
N-2-87, ST 4/5	5	100																					
I-late-e, f																							
N-3-81.5, ST 1	19	10.5			10.5		15.8		10.5	5.3	10.5						5.3					5.3	26.3
N-3-82, ST 1	96	6		3	3		3		15			6		1		1				7			55
N-3-82.5, ST 1	33	10	3		3				48						6					18	3		9
N-3-83, ST 1	37	19							46		4					5		5	5	16			
N-3-83.5, ST 1	35	20							57							6							17
N-3-84, ST 1	30	20	3	7			3		64				3										
N-3-84.5, ST 1	20	25	25	30					20														
Total Percent	270	**13**	**2.6**	**4**	**2**		**2.6**		**34**	**0.4**	**1**	**1.8**	**0.4**	**0.4**	**0.7**	**1.8**	**0.4**	**2.6**	**0.7**	**7**	**0.4**	**0.4**	**24**
Ubiquity		**100**	**43**	**43**	**43**		**43**		**100**	**14**	**29**	**14**	**14**	**14**	**14**	**43**	**14**	**14**	**14**	**43**	**14**	**14**	**57**

Excavation N-4

Excavation N-4 (Table 6.7) samples were more numerous but also contained a slightly wider array of wood types (9 taxa) than N-1 or N-2, though not as high as N-3. Live oak was present in approximately one-third of the N-4 samples (U, 33%) while both black mangrove and

pine were present in just over two-thirds of the samples (U, 69%). Two additional hardwood taxa were identified including cf. *Morella cerifera* (southern bayberry) and Wood Type 18 (Haney and Newsom 2013). The tentatively identified *Morella cerifera* occurs across several habitats (e.g., hammocks, swamps, and flatwoods) so this bayberry could also have been locally available near the CR.

As with the previously discussed CR materials, pine (U, 67%), live oak (U, 67%), black mangrove (U, 50%), and buttonwood (U, 50%) are well represented in the ST 1 assemblage. Pine and black mangrove were nearly ubiquitous in the identified taxa from ST 2. From ST 3, 4, 5, and 7, pine is the most ubiquitous taxon and occurs in 70 percent of the samples. Mangrove taxa are also well represented with black mangrove and buttonwood in more than half of the samples. Live oak was only present in about one-quarter of the samples (25 %). Wood charcoal identified from ST 8 and 10 included pine, black mangrove, and buttonwood. The sparse nature of the cultural artifacts and the presence of articulated mussels (Ayvaz 2014) indicated that ST 8-10 were non-cultural deposits with sparse intrusive cultural material. The charcoal from these deepest levels was very small and may have moved downward through the sand from upper strata.

Trench 11A

Eight samples were examined from Trench 11A (Table 6.8) and seven taxa were assigned with pine and black mangrove again being particularly conspicuous (U, 100%). Red mangrove and buttonwood were identified in half of the samples (U, 50%) while live oak was only identified in a single provenience. Four wood types were identified from ST 4, the assemblage being dominated by pine and mangrove taxa. Stratum 5 contained six wood types. In addition to the pine and mangrove taxa, wild cotton (*Gossypium* sp.) was also provisionally identified from Trench 11A (ST 5, Level 99).

Table 6.7. Percent of identified wood taxa from Excavation N-4 on the Citrus Ridge, Pineland (8LL33).

Provenience	Count Identified	Pine	cf. Pine	Conifer sp.	Black Mangrove	cf. Black Mangrove	Red Mangrove	cf. Red Mangrove	Buttonwood	Live Oak	cf. Oak sp.	Palm	cf. Southern Bayberry	Wood Type 18	Indeterminate Hardwood	Indeterminate Wood	Modern Plant
I-late-e/f																	
N-4-82, ST 1	7								86								14
N-4-83, ST 1	24	25	29	12	5				5	12					12		
N-4-83/2, ST 1	15									100							
N-4-84, ST 1	25	64			16				4	12	4						
N-4-84/6, ST 1	3	100															
N-4-84.5, ST 1	29	41		24	17		4			14							
Total Percent	103	**36**	**6.5**	**10**	**10**		**1**		**7.5**	**24**	**1**				**3**		**1**
Ubiquity		**67**	**17**	**33**	**50**		**17**		**50**	**67**	**17**				**17**		**17**
IIB-c, d, e																	
N-4-85, ST 2	31	81			10		3		3	3							
N-4-85.5, ST 2	30	53	20		13				3.5	3.5	3.5			3.5			
N-4-86, ST 2	32	50	22	6	16				3	3							
N-4-86.5, ST 2	30	43		4	53												
N-4-86.5/1, ST 2	4				100												
N-4-87, ST 2	36	39			58							3					
N-4-87/1, ST 2	1	100															
Total Percent	164	**52**	**8.2**	**1.8**	**32**		**0.6**		**1.8**	**1.8**	**0.6**	**0.6**		**0.6**			
Ubiquity		**86**	**29**	**29**	**86**		**14**		**43**	**43**	**14**	**14**		**14**			
I-late-g, h, i																	
N-4-87-1, ST 3	9	22		33	45												
N-4-87-2, ST 3	26	8		38	46			4			4						
N-4-87-2/2, ST 3	3				100												
N-4-87.5, ST 3	30	47			37				13	3							
N-4-87.5-1, ST 3	30	13			80	3.5				3.5							
N-4-88, ST 3	30	57			37				3	3							
N-4-88/5, ST 3	1	100															
N-4-88-1, ST 3	10	100															
N-4-88-2, ST 3	34	6	3		73		12		3	3							
N-4-88.5, ST 3	30	50			23				23				4				
N-4-88.5/6, ST 3	1						100										
N-4-88.5/8, ST 3	2								100								
N-4-88.5/9, ST 3	12								100								
N-4-S. Profile #7, ST 3	7								100								
Total Percent	225	**30**	**0.5**	**6**	**43**	**0.5**	**2**	**0.5**	**15**	**2**	**0.5**		**0.5**				
Ubiquity		**64**	**7**	**14**	**57**	**7**	**14**	**7**	**50**	**29**	**7**		**7**				
I-late-g																	
N-4-89, ST 4	30	17			40				43								
N-4-89/6, ST 4	4								100								
N-4-89.5, ST 4	30	37		3	44		10		3	3							
Total Percent	64	**25**		**1.5**	**39**		**5**		**28**	**1.5**							
Ubiquity		**67**		**33**	**67**		**33**		**100**	**33**							
I-late-f																	
N-4-90, ST 5	30	23		7	50		10		10								
N-4-91.5, ST 7	28	82			7		11										
N-4-92, ST 7	19	69		16	5		5		5								
Total Percent	77	**56**		**6**	**23**		**9**		**6**								
Ubiquity		**100**		**67**	**100**		**100**		**67**								
N-4-92.5, ST 8	25	16		44	32				4							4	
N-4-92.5-1, ST 8	2				100												
N-4-92.5-1/1, ST 10	1				100												
N-4-93, ST 10	35	26		8	20				3	6						37	
N-4-93.5, ST 10	10	10			70				20								
Total Percent	73	**19**		**19**	**34**				**5**	**4**						**19**	
Ubiquity		**60**		**40**	**100**				**60**	**20**						**40**	

Table 6.8. Percent of identified wood taxa from South Pasture, Pineland (8LL33).

Provenience	Count Identified	Pine	Conifer spp.	Black Mangrove	cf. Black Mangrove	Red Mangrove	Buttonwood	cf. Buttonwood	Live Oak	cf. Cotton	Indeterminate Wood
I-late-g											
Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4	6	50		50							
Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4	8	50		50							
Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4	19	37	11	42	5						5
Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4	28	56		36		4	4				
Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4	22	27	10	27		36					
Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4	23	13	9	44	4		26				4
I-late-e											
Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5	30	23	3	30		7	14	20	3		
Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5	19	37	21	21		11	5			5	
Total Percent	155	**34**	**7**	**35**	**1**	**8**	**8**	**4**	**1**	**1**	**1**
Ubiquity		**100**	**63**	**100**	**25**	**50**	**50**	**13**	**13**	**13**	**25**

Citrus Ridge and South Pasture Summary

Deposits in this area of the site demonstrate spatial continuity between the CR and an area of the South Pasture where an ancient shoreline was once forested in black mangrove (see Figures 4.2 and 4.3). At some point during the IIB period (AD 800 – 1200) or later, the site inhabitants moved midden debris and re-deposited it onto the CR. From the charcoal data alone, it would be difficult to discern the primary from secondary midden deposits. There were no obvious differences in specimen sizes. The number of identified wood types, however, does highlight CR ST 1 as unusual within the overall assemblage. The greater number of wood types identified from ST 1 and the increase in live oak ubiquity (and frequency) may reflect historic disturbance of the surface deposits and the introduction of modern wood types.

All of the 14 assigned wood taxa from the CR and South Pasture are native to the region, or at the rank of family have genera that are native (Wunderlin and Hansen 2011). Overall, pine represents about one-third of the identified wood charcoal from Citrus Ridge (Table 6.9). Four percent of the overall CR sample could only be identified to the level of Gymnosperm, however, it is likely that a good portion of these specimens may be *Pinus* spp. which would elevate the overall representation of pine to nearly 40 percent. Black mangrove represented nearly one-

quarter of the identified specimens from CR and the South Pasture. Live oak also appears to be well represented (12 %); however, the frequency of live oak may have been inflated by historic disturbance/intrusion. If the count of live oak recovered from ST 1 is excluded, then the overall percentage of live oak drops to 3 percent. Ubiquity of live oak, however, is approximately 20-43 percent in these lower deposits. The fourth major fuelwood identified in this area was buttonwood which represents 7 percent of the overall identified sample in these site areas. Two hardwood taxa were provisionally assigned from buried, midden deposits (i.e., secure contexts unlikely to have been historically disturbed) and include *Morella cerifera* and *Gossypium* spp.

Old Mound (8LL37)

Altogether, 47 proveniences were analyzed at Operation A and 43 were analyzed from Operation C. Temporal affiliations of these Old Mound samples range from Caloosahatchee I-late-f to IIA-early-b (ca. AD 250 – 600).

Operation A

As can be seen in Table 6.10, seven wood taxa (i.e., combining provisional and definitive taxonomic assignments) were identified during the analysis of the IIA-early deposits and included species from pine flatwoods, mangrove forests, and hammock habitats. Identified wood taxa differed little between ST 2 and 3. Pine and black mangrove were well represented (U, 80%) with additional mangrove taxa (red mangrove and buttonwood) present in about one-third of the samples.

The wood taxa from the ash concentrations were dominated by black mangrove but pine, live oak, and buttonwood were also identified. The post mold feature contained black mangrove,

Table 6.9. Summary of taxa identifications by temporal period from Citrus Ridge and South Pasture, Pineland (8LL33).

	IIB-c, d, e		I-late-e, f, g, h, i		Total	
Taxa Identified	**Count**	**%**	**Count**	**%**	**Count**	**%**
Pine	88	46.6	267	28.4	355	31.4
cf. Pine	13	7	15	1.6	28	2.5
Conifer	3	1.6	40	4.2	43	3.8
Black Mangrove	73	38.6	233	24.8	306	27
cf. Black Mangrove			3	0.3	3	0.3
Red Mangrove	1	0.5	35	3.7	36	3.2
cf. Red Mangrove			1	0.1	1	0.1
White Mangrove	1	0.5			1	0.1
Buttonwood	4	2.1	91	9.8	95	8.4
cf. Buttonwood			6	0.6	6	0.5
Combretum Family			5	0.5	5	0.4
Live Oak	3	1.6	124	13.2	127	11.1
cf. Live Oak			1	0.1	1	0.1
cf. Oak spp.	1	0.5	5	0.5	6	0.5
Palm	1	0.5	5	0.5	6	0.5
cf. Palm			1	0.1	1	0.1
cf. Cotton			1	0.1	1	0.1
Nicker sp.			1	0.1	1	0.1
cf. White Stopper			2	0.2	2	0.2
cf. Southern Bayberry			1	0.1	1	0.1
Madder Family			5	0.5	5	0.4
Sapodilla Family, cf. *Sideroxylon*			1	0.1	1	0.1
cf. Mahogany			2	0.2	2	0.2
cf. Grape Family			2	0.2	2	0.2
Grape spp.			19	2	19	1.7
Wood Type 18	1	0.5			1	0.1
Indeterminate Hardwood			3	0.3	3	0.3
Indeterminate Wood			5	0.5	5	0.4
Unident. Bark			1	0.1	1	0.1
Modern Plant			68	7.2	68	6
Total Identified	**189**	**100**	**943**	**100**	**1132**	**100**

pine, and red mangrove. All of the mangrove taxa are dense hardwoods (Sciences 1980, 1983) and if left, in the presence of free oxygen, will burn down to ash. A number of these ash concentrations were previously analyzed by Newsom and Scarry (2013) and the previously identified wood taxa are consistent with the present results. In both cases, the ash concentrations contain a limited number of species that include pine and mangrove taxa, especially black mangrove.

The sample sizes for some of these earlier subperiods, I-late-g through I-late-j, are not large enough to be considered representative of their temporal assignments. Pine, black mangrove, and red mangrove were ubiquitous in the I-late-i/j period samples (ST 4-5).

Buttonwood and live oak were identified in more than half of the samples. A small number of additional hardwoods were also identified and included Wood Types 31, 34, and 35. Taxa identified from I-late-g/h (ST 6-8) are largely consistent with the previous discussion. The samples are dominated by black mangrove, pine, red mangrove, and buttonwood. Live oak and white mangrove were also identified in single proveniences.

The deepest levels of Operation A, ST 9-10, date to the I-late-f period (AD 250-300). The wood identified during the present analysis confirms the earlier findings (Newsom and Scarry 2013; see also Table 6.12). Uncarbonized wood specimens of pine were recovered from ST 9 but since this stratum contained waterlogged deposits, these uncharred pieces likely represent archaeological specimens and not historic contamination/intrusion. Buttonwood was also a dominant fuelwood in ST 9/10 with an 86 percent ubiquity and live oak was also more ubiquitous. The ubiquity of palm increased when compared with the upper strata.

Operation C

Despite the fairly large number of samples from ST 2-10 at Operation C, the frequency of charcoal was quite low comparatively (Table 6.11). Overall, the charcoal taxa identified from these IIA-early-b (AD 550 – 600) deposits appear relatively uniform and no marked differences were noted between these strata. Black mangrove and pine were the most ubiquitous. Additionally, red mangrove, and white mangrove were also identified in about one-third of the samples.

Table 6.10. Percent of identified wood taxa from Operation A, Old Mound, Pineland (8LL37).

Provenience	Context	Count Identified	Pine	Pine (unburned)	cf. Pine	Black Mangrove	cf. Black Mangrove	Red Mangove	White Mangrove	Buttonwood	Live Oak	cf. Live Oak	Palm	cf. Palm	Sea Grape	Mastic	Wild Fig	Senna	Myrsine	Wild Coffee	Trema	cf. Stopper	Wood Type 21	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	Wood Type 36	Indeterminate Wood	Unidentified Bark	Indeterminate Plant
IIA-early-a																																										
A-4-90, ST 2 [2]		42	45		5	48		2																																		
A-4-90-1, ST 2 [2]	ash locus	3				100																																				
A-4-90-2, ST 2 [2]	ash locus	20				95				5																																
A-4-90-3, ST 2 [2]	post mold	40	12			83		5																																		
A-8-90, ST 2 [2]		40	15			80				2.5	2.5																															
A-8-90-1, ST 2 [2]	ash locus	40	7			90					3																															
A-8-90-2, ST 2 [2]	ash locus	4				100																																				
A-12-90, ST 1-2 [2]		29	35			41	3	21																																		
A-12-90-1, ST 2 [2]		40	15			75		2.5		7.5																																
A-14-90-3, ST 3 [1]	ash locus	3	100																																							
A-14-90-3, ST 3 [1]		3	100																																							
A-14-90-4, ST 3 [1]	ash locus	11	18			73				9																																
A-15-90-3, ST 3 [1]		6	50			33																																	17			
A-15-90-4, ST 3 [1]	ash locus	2	100																																							
A-15-90-4, ST 3 [1]		1				100																																				
A-4-91, ST 3 [2]		47	13			85		2																																		
A-4-91-1, ST 3 [2]	ash locus	9	22			67					11																															
A-8-91, ST 3 [2]		39	21			79																																				
A-12-91, ST 3 [2]		40	7.5			87.5		5																																		
A-16-91, ST 3 [2]		39	31			49		5		15																																
A-12-92, ST 3 [2]		40	22.5			67.5				7.5																												2.5				
A-16-92, ST 3 [2]		80	34			54		9		1		1																						1								
Total Percent		578	**22**		**0.5**	**69**	**0.2**	**4**		**3**	**0.5**	**0.2**																						**0.2**				**0.2**	**0.2**		
Ubiquity			**82**		**5**	**86**	**5**	**36**		**32**	**14**	**5**																						**5**				**5**	**5**		
I-late-i/j [2]																																										
A-16-93, ST 4		40	17.5			55		25																									2.5									
A-4-93, ST 4-5		40	30			40		10		15																										5						
A-12-93, ST 4-5		40	22.5			45		27.5		2.5	2.5																															
A-8-93, ST 5		40	22.5			62.5		10			5																															
A-16-94, ST 5		40	20			55		17.5			2.5																										5					
Total Percent		200	**23**			**52**		**18**		**3.5**	**2**																						**0.5**			**1**	**1**					
Ubiquity			**100**			**100**		**100**		**40**	**60**																						**20**			**20**	**20**					
I-late-g/h [2]																																										
A-12-94, ST 6-7		40	25			57.5		7.5		2.5	2.5																												5			
A-8-95, ST 7?		40	25			57.5		7.5		5																							5									
A-12-96, ST 8?		40	2.5			80		10	2.5														5																			
A-16-96, ST 8		40	5			85		2.5		7.5																																
A-16-98, ST 8		29	34			21				38																													7			
Total Percent		189	**18**			**62**		**6**	**0.5**	**9**	**0.5**												**1**										**1**						**2**			
Ubiquity			**100**			**100**		**80**	**20**	**80**	**20**												**20**										**20**						**40**			

Table 6.10. Percent of identified wood taxa from Operation A, Old Mound, Pineland (8LL37). (Cont.)

Provenience	Context	Count Identified	Pine	Pine (unburned)	cf. Pine	Black Mangrove	cf. Black Mangrove	Red Mangove	White Mangrove	Buttonwood	Live Oak	cf. Live Oak	Palm	cf. Palm	Sea Grape	Mastic	Wild Fig	Senna	Myrsine	Wild Coffee	Trema	cf. Stopper	Wood Type 21	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	Wood Type 36	Indeterminate Wood	Unidentified Bark	Indeterminate Plant
I-late-f																																										
A-8-98, ST 9		40	35			45		15		2.5																														2.5		
A-12-98, ST 9		40	32.5			50		10	2.5		2.5																													2.5		
A-16-98-1, ST 9		40	22.5			40		22.5	2.5			10																								2.5						
A-8-99, ST 9		40	25			37.5		27.5		2.5														2.5		5																
A-12-99, ST 9		40	20			55		15		2.5			5																											2.5		
A-16-99, ST 9		40	20			35		22.5	2.5	5	5																													10		
A-8-100, ST 9 [1, 2]		143	31			28		7		6		1	0.5										0.5			0.5														25		
A-8-100-1, ST 9		40	17.5			70		5		2.5																2.5			2.5													
A-12-100, ST 9		40	42.5			45		10		2.5																																
A-16-100, ST 9 [1, 2]		98	33			26		18		7	3																						2							11		
A-4,8,12,16-101, ST 9		45	16	33		27		11		2	2																	2	2											5		
A-4-101, ST 9 [1, 2]		150	22			56		8		9	1	1									1			1				1														
9		40	17.5			37.5		17.5		15	7.5													2.5		2.5																
A-8-101, ST 9 [1, 2]		135	29			45		14		7		1													1	2														1		
A-12-101, ST 9 [1, 2]		166	26			39		22		7	2											1	1																	1		1
A-16-101, ST 9 [1, 2]		116	36			38		16	1	3									1					1								3			1							
A-4-102, ST 9-10 [1, 2]		150	10			49		29		5	0.5	1				0.5	0.5											1	1												2	
A-4-102 NE quad, ST 9-10		40	20			42.5		22.5		7.5	5																			2.5												
A-8-102, ST 9-10 [1, 2]		199	13			41		33		2.5	0.5		3.5		0.5		0.5						1.5			0.5					1.5								2		
A-12-102, ST 9-10 [1, 2]		209	11			41		31	1	5	0.5		1	0.5			1	1							0.5	1					0.5	2		1					2		
A-16-102, ST 9-10		64	14			43		23		14			2										2				2															
A-8-103 [1]		11	27			27		27											9.5	9.5																						
Total Percent		1886	**22**	**0.8**		**42**		**20**	**0.5**	**5**	**1**	**0.5**	**0.5**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.3**	**0.3**	**0.1**	**0.6**	**0.1**	**0.2**	**0.2**	**0.1**	**0.2**	**0.5**	**0.1**	**0.1**	**0.1**	**0.1**			**3.5**	**0.2**	**0.1**
Ubiquity			**100**	**5**		**100**		**100**	**23**	**86**	**50**	**23**	**23**	**5**	**5**	**5**	**14**	**5**	**9**	**5**	**5**	**5**	**18**	**18**	**9**	**32**	**5**	**14**	**14**	**5**	**9**	**9**	**5**	**5**	**5**	**5**			**50**	**5**	**5**

1 Adapted from Table 19 in Newsom and Scarry (2013). Original wood charcoal identifications completed by Newsom.

2 Charcoal identifications completed by Haney.

Table 6.11. Percent of identified wood taxa from Excavation C-1, Old Mound, Pineland (8LL37).

Provenience	Context	Count Identified	Pine	Black Mangrove	Red Mangrove	White Mangrove	Buttonwood	Live Oak	cf. Wood Type 23	Wood Type 30	Wood Type 35	Indeterminate Hardwood	Indeterminate Wood
IIA-early-b													
C-1-73, ST 2		8	100										
C-1-74, ST 2		15	80	20									
C-1-74/1, ST 2, 3		1	100										
C-1-75, ST 2, 3		20	35	50		10						5	
C-1-75-1, ST 2, 3		4		100									
C-1-76, ST 3, 4		6		50	33								17
C-1-76-1, ST 3, 4		7		72	14							14	
C-1-76-2, ST 3, 4		4	25	25	50								
C-1-77, ST 3, 4		26	50	38			8				4		
C-1-78, ST 3, 4		40	20	80									
C-1-78-1, ST 3, 4		1		100									
C-1-78-2, ST 3, 4		6	67	33									
C-1-78-3, ST 3, 4		2		100									
C-1-79, ST 4, 5		7	43	57									
C-1-79-1?, ST 4, 5		23	35	39	26								
C-1-79-3, ST 4, 5		4		100									
C-1-80, ST 5		2	50	50									
C-1-80-1, ST 5		7	29	71									
C-1-80-2, ST 5		2		100									
C-1-81, ST 5, 6, 7, 8		40	70	27.5	2.5								
C-1-82, ST 5, 6, 7, 8		1											100
C-1-82-2, ST 5, 6, 7, 8		3		33									67
C-1-83, ST 5, 6, 7, 8		40	77.5	5									17.5
C-1-83-2, ST 5, 6, 7, 8		6	66	17									17
C-1-84-2, ST 6, 7, 8		40	35	52.5	7.5		5						
C-1-84-6, ST 6, 7, 8		12	100										
C-1-85 N Profile, Artifact #4		3		100									
C-1-85, ST 6, 7, 8, 9, 10		32	28	50	19		3						
C-1-86 W Profile, Artifact #1		9	100										
C-1-86, ST 7, 8, 9, 10		34	26	62	12								
C-1-87, ST 7, 8, 9, 10		40	45	37.5	15					2.5			
C-1-88, ST 8, 9, 10, 11		40	37.5	50	2.5		5	2.5	2.5				
C-1-88/3, ST 8, 9, 10, 11		4	25	75									
C-1-88-1, ST 8, 9, 10, 11		1		100									
C-1-88-2, ST 8, 9, 10, 11		3		100									
Total Percent		493	**44**	**44**	**6.5**	**0.4**	**1.4**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**	**2.4**
Ubiquity			**66**	**86**	**29**	**29**	**11**	**3**	**3**	**3**	**3**	**6**	**14**
IIA-early-a													
C-1-89 N Profile, Artifact #2		7					100						
C-1-89, ST 11		40	17.5	67.5	12.5								2.5
C-1-89-2, ST 11		26	15	81									4
C-1-89-3, ST 11	floor midden	7	29	57	14								
C-1-90	floor midden	28	32	50			14	4					
C-1-90-3	floor midden	1	100										
C-1-91		18		6	22		28	44					
C-1-91-2	post mold	3	33		67								
Total Percent		130	**18.5**	**51.5**	**9.2**		**12.3**	**7**					**1.5**
Ubiquity			**75**	**63**	**50**		**38**	**25**					**25**

Stratum 11 at Operation C dates to the IIA-early-a subperiod (AD 500 – 550); these deposits are continuous and contemporary with the IIA deposits, Operation A, ST 1-3. Stratum 11, at the base of the extant mound, contained post mold patterns that are suggestive of a structure pattern (Wallace 2013:749). Eight samples from the IIA-early-a deposits were analyzed. Only five wood taxa were identified from these samples. Pine, black mangrove, and red mangrove were the most ubiquitous. Live oak and buttonwood were identified in nearly one-third of the samples.

Old Mound Summary

Wood charcoal from Old Mound was identified from two separate excavation areas, Operations A and C (Table 6.12). The analyzed deposits range in date from the Caloosahatchee I-late-f to the IIA-early-b period (AD 250 – 600). All of these strata appear to be primary midden deposits which differ from the deposits analyzed at CR. Thirty wood types were identified in these combined Old Mound samples; sixteen of these taxa were identified within the I-late-f samples alone.

The ash loci contain fewer charcoal taxa than the general midden debris. The ash loci are dominated by pine and black mangrove. When all contexts of ash loci are combined, pine and black mangrove are present in 64 and 72 percent of the proveniences respectively. While some of the ash loci represent a mixture of wood taxa, nearly half of the proveniences (n = 7) contain exclusively pine or black mangrove. These ash loci may represent either single refuse dumps or several short-term hearth cleanings.

Identified charcoal taxa are remarkably consistent between the midden samples of Operations A and C. The earliest samples documented at Old Mound date to the I-late-f period (AD 250 – 300). All of these Old Mound I-late-f samples contain ubiquitous pine, black mangrove, and red mangrove (U, 100%). The later Caloosahatchee I samples, subperiods I-late-g

through I-late-j, nearly duplicate this taxa ubiquity. Upper deposits (ST 1-3) date to the IIA-early-a subperiod; pine (U, 82%) and black mangrove (U, 86%) remain quite ubiquitous but red mangrove and buttonwood were present in approximately one-third of the proveniences.

Table 6.12. Summary of taxa identifications by temporal period from Old Mound, Pineland (8LL37).

	IIA-early-b		IIA-early-a		I-late-i/j		I-late-g/h		I-late-f		Total	
Taxa Identified	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Pine	218	44.3	153	21.6	45	22.5	33	17.5	418	22.1	867	24.9
cf. Pine			2	0.3							2	0.1
Pine (unburned)									15	0.8	15	0.4
Black Mangrove	216	43.8	468	66.1	103	51.5	118	62.4	785	41.6	1690	48.5
cf. Black Mangrove			1	0.1							1	0.1
Red Mangrove	32	6.5	34	4.8	36	18	11	5.8	377	20	490	14
White Mangrove	2	0.4					1	0.5	6	0.3	9	0.2
Buttonwood	7	1.4	32	4.6	7	3.5	17	9	102	5.4	165	4.6
Live Oak	1	0.2	12	1.8	4	2	1	0.5	21	1.1	39	1.1
cf. Live Oak			1	0.1					10	0.5	11	0.3
Palm									13	0.6	13	0.3
cf. Palm									1	0.1	1	0.1
Sea Grape									1	0.1	1	0.1
Mastic									1	0.1	1	0.1
Wild Fig									4	0.2	4	0.1
cf. Senna									2	0.1	2	0.1
Joewood									2	0.1	2	0.1
Wild Coffee									1	0.1	1	0.1
cf. Trema									1	0.1	1	0.1
cf. Stopper									2	0.1	2	0.1
Wood Type 21							2	1.1	6	0.3	8	0.2
Wood Type 23									5	0.3	5	0.1
cf. Wood Type 23	1	0.2							2	0.1	3	0.1
Wood Type 24									11	0.5	11	0.2
cf. Wood Type 24									1	0.1	1	0.1
Wood Type 25									4	0.2	4	0.1
Wood Type 26									4	0.2	4	0.1
Wood Type 27									1	0.1	1	0.1
Wood Type 29									4	0.2	4	0.1
Wood Type 30	1	0.2							9	0.4	10	0.2
Wood Type 31					1	0.5	2	1.1	2	0.1	5	0.1
Wood Type 32			1	0.1					2	0.1	3	0.1
cf. Wood Type 32									1	0.1	1	0.1
Wood Type 33									1	0.1	1	0.1
Wood Type 34					2	1					2	0.1
Wood Type 35	1	0.2			2	1					3	0.1
Wood Type 36			1	0.1							1	0.1
Unidentified Bark									3	0.2	3	0.1
Indeterminate Hardwood	2	0.4									2	0.1
Indeterminate Wood	12	2.4	3	0.4			4	2.1	67	3.5	86	2.3
Indeterminate Plant									1	0.1	1	0.1
Total Identified	**493**	**100**	**708**	**100**	**200**	**100**	**189**	**100**	**1886**	**100**	**3476**	**100**

The earliest proveniences analyzed in Operation C are contemporary with the latest strata of Operation A, namely Caloosahatchee IIA-early-a. Similar to the deposits of Operation A, these

samples contained high frequencies of pine (U, 75%) and black mangrove (U, 63%). Red mangrove (U, 50%) is nearly as ubiquitous between the two excavations. Wood taxa identified in the later IIA-early-b deposits were also dominated by black mangrove (U, 86%) and pine (U, 66%) with red mangrove identified in one-third of the samples. The ubiquity of buttonwood, however, fell to approximately 11 percent.

The Caloosahatchee I-late-f period demonstrates the highest identified wood taxa diversity of the Old Mound excavations thus far analyzed. Since faunal evidence recovered from these I-late-f deposits is suggestive of storm surge deposits, the increase in fuelwood diversity could have resulted from storm clean-up activities. By comparison, the CR I-late-f materials (N-4, ST 5, 7) contained only 5 identified wood taxa while the similar deposits of Old Mound, Operation A, contained 16 wood taxa. Since both deposits are of a similar temporal affiliation and neither is located at the modern surface (i.e., unlikely to be historically disturbed), the disproportion in the number of identified wood taxa is curious. The remaining IIA-early-c deposits from C-1 evidence a more restricted number of identified wood taxa (n = 9). Later deposits contain a mix of the dominant fuelwood types, including black mangrove, pine, and red mangrove, with fewer instances of other hardwood taxa.

Low Mound (8LL1612)

Four proveniences were analyzed from Low Mound, Excavation A-1 (Table 6.13). All samples date to the Caloosahatchee I-late-g/h period (AD 300 – 400) based on radiocarbon dating and pottery analysis. The frequency of recovered charcoal was low, however, consisting of only 23 individual specimens. Pine was ubiquitous (U, 100%) but black mangrove, live oak, and buttonwood were also identified.

Since Low Mound is farther inland than the other Pineland areas included for analysis, it is tempting to equate the dominant use of interior fuelwood species (i.e., pine and live oak) with

Table 6.13. Percent of identified wood taxa from Excavation A-1, Low Mound, Pineland (8LL1612).

Provenience	Count Identified	Pine	Black Mangrove	cf. Buttonwood	Live Oak	cf. Live Oak	Indeterminate Wood
I-late-g/h							
A-1-75, ST 2	13	77				23	
A-1-76, ST 2	4	75		25			
A-1-77, ST 2	3	33.3			33.3		33.3
A-1-78, ST 2	3	33	67				
Total Percent	23	**66**	**9**	**4**	**4**	**13**	**4**
Ubiquity		**100**	**25**	**25**	**25**	**25**	**25**

location. However, the Low Mound midden would have only been about 200 m from the mangrove fringe. So in theory, there should have been ample choice of available fuelwood. The low number of analyzed samples and the low frequency of recovered charcoal specimens hamper interpretations. It is possible that given the relatively short disposal period represented at Low Mound, the midden may correspond to a more limited set of activities which are obscured in other I-late assemblages.

Randell Complex (8LL33)

Altogether, the wood charcoal sequence from the Randell Complex proveniences date to the Caloosahatchee IIA-early-c to IV period (ca. AD 600 – 1500). In total, 23 proveniences from two areas (Operations A and P) have been analyzed from the Randell Complex (Table 6.14).

Operation A

Eleven wood taxa were identified from 18 proveniences at Operation A. In the upper strata, pine and black mangrove were ubiquitous (U, 100%). Red mangrove and buttonwood were identified from half of these IV period samples (U, 50%). Live oak and other hardwood taxa were also identified but in fewer samples.

Analyzed samples (n = 4) from Excavation A-11 date to the latter portion of the Caloosahatchee IIB period. Eight wood types were identified from these samples. Pine, black

Table 6.14. Percent of identified wood taxa from the Randell Complex Mound 1, Pineland (8LL33).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	Live Oak	cf. Live Oak	cf. Wood Type 23	Wood Type 25	Wood Type 28	Wood Type 30	Wood Type 35	cf. Wood Type 35	Wood Type 36	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Indeterminate Wood	Unidentified Bark
IV																					
A-1-6[39], ST5	40	55	35	7.5																2.5	
A-1-9[42], ST 6	40	52.5	37.5	2.5					5											2.5	
A-1-10[43], ST 6	40	50	35		12.5										2.5						
A-1-11[44], ST 6	40	35	47.5	15												2.5					
A-1-12[45], ST 6	23	35	52		8							5									
A-1-13[46], ST 6	33	61	30		3	6															
Total Percent	216	**49**	**39**	**4**	**3.5**	**1**			**1**			**0.5**			**0.5**	**0.5**				**1**	
Ubiquity		**100**	**100**	**50**	**50**	**17**			**17**			**17**			**17**	**17**				**33**	
III-b																					
P-1-98, ST 2, 3	40	22.5	57.5	10	2.5					2.5							2.5	2.5			
P-1-99, ST 3	40	2.5	77.5	10	5	5															
III-a																					
P-1-101, ST 4	40	7.5	62.5	10	2.5	2.5								5					7.5	2.5	
IIB-h																					
A-11-48, ST 3A-3B	40	60	32.5	2.5		2.5							2.5								
A-11-49, ST 3B	40	37.5	37.5	22.5			2.5														
A-11-51, ST 3B, 5	40	70	15	5	2.5	5						2.5									
Total Percent	120	**56**	**28**	**10**	**1**	**2**	**1**					**1**	**1**								
Ubiquity		**100**	**100**	**100**	**33**	**67**	**33**					**33**	**33**								
IIB-e, f																					
A-11-66, ST 11	40	67.5	25	5			2.5														
P-3-103, ST 4	44	2	72	11		6															9
P-3-104, ST 4, 5	40		87.5	5	2.5	5															
Total Percent	124	**23**	**62**	**7**	**1**	**3**	**1**														**3**
Ubiquity		**67**	**100**	**100**	**33**	**67**	**33**														**33**
IIA-late-a																					
A-5-14[82], ST 14	40	42.5	42.5	10	2.5	2.5															
A-5-17[85], ST 16	40	22.5	67.5	7.5			2.5														
A-5-18[86], ST 16	40	25	42.5	7.5		15		5				5									
A-5-19[87-89], ST 16-17	40	30	45	10	2.5	7.5						5									
Total Percent	160	**30**	**49**	**9**	**1**	**6**	**1**	**1**				**3**									
Ubiquity		**100**	**100**	**100**	**50**	**75**	**25**	**25**				**50**									
IIA-early-c																					
A-5-22[92,93], ST 19	17	41	59																		
A-5-23[94], ST 22	40	40	50	2.5	2.5	2.5					2.5										
A-5-24 [95,96], ST 22	13	23	69	8																	
A-5-25[97,98], ST 22	19	11	84		5																
Total Percent	89	**31**	**63**	**2**	**2**	**1**					**1**										
Ubiquity		**100**	**100**	**50**	**50**	**25**					**25**										

mangrove, and red mangrove were ubiquitous (100%) in the IIB, Operation A, but live oak was also present in 80 percent of these samples.

Eight samples were analyzed from A-5 and date to the transition of the IIA-early to IIA-late period (AD 600 – 700). The samples from ST 14-17 (IIA-late-a) contain seven identified wood types while those of ST 19-22 (IIA-early-c) contained six wood types. The samples from both temporal affiliations were dominated by pine and black mangrove (U, 100%). Red mangrove, live oak, and buttonwood were also identified in more than half of the samples. Although the present sample is very small, identified wood types were remarkably consistent between the IIA-early c and IIA-late-a periods.

Operation P

Five samples from Operation P date to the IIB-late and III periods (AD 1000 – 1350) (see Table 6.14). Ten wood taxa were identified in these samples. Black mangrove and red mangrove were ubiquitous (100 %) in the identified taxa, while pine and live oak were present in 80 percent of the samples.

Randell Complex Summary

In all, 23 midden samples were analyzed from the Randell Complex. The upper strata include IV deposits where pine and black mangrove were ubiquitous (100%) and red mangrove was present in 50 percent of the samples. Buttonwood, live oak, and other hardwood taxa were also present in these late samples. A small number of samples dated to the Caloosahatchee III period and their taxa patterns closely resemble those of the IV period; pine, black mangrove, red mangrove, and buttonwood are all ubiquitous while live oak is present in two of the three samples.

Six wood taxa were identified in the IIB-late samples, assuming that provisional taxa assignments are correct. Black mangrove and red mangrove were ubiquitous with pine being

identified from two-thirds of the samples. Buttonwood and Wood Type 35 were present in about one-third of the samples, though the sample size was small.

The lower, Operation A represented the transition from the IIA-early-c into the IIA-late-a. Fewer wood taxa were identified from these samples. Pine and black mangrove were ubiquitous in both of these subperiods. The IIA-late-a samples also contained ubiquitous red mangrove with live oak identified in 75 percent of the samples. In the IIA-early-c samples, red mangrove was only identified in half of the samples while live oak was only identified in a single sample (U, 25%).

Wood taxa from the Caloosahatchee IIA, IIB, III, and IV periods included 16 identified taxa, though no more than nine taxa were identified in any one temporal period. To date, samples from the Randell Complex suggest that a limited few wood taxa were relied upon as fuel. Specifically, pine and black mangrove dominate the RC samples; however, red mangrove was also present in a large number of samples. Buttonwood and live oak were present in low frequencies in just over half of the samples from RC Operations A and P.

Brown's Complex (8LL33)

Wood charcoal was analyzed from four areas (Operations B, C, D, and I) within the Brown's Complex. In total, 44 proveniences have been analyzed from the Brown's Mound Complex at Pineland. Twenty-one of these proveniences were from floor midden/activity areas. Proveniences from the Brown's Complex date to the IIA-early-c to IV periods.

Operation B

The depositional complexity encountered has led to some uncertainty in deposit age. Therefore, much of the Operation B discussion below is centered on previously analyzed materials (Scarry and Newsom 1992) with only limited additional identifications conducted. Despite difficulties, much of the previously identified materials have had temporal assignments

updated since their original publication. Now designated as IIB/III, the upper strata from Operation B contained 11 wood types (Table 6.15). Pine and black mangrove were ubiquitous with red mangrove being identified in 76 percent of the samples. Buttonwood (U, 24%) and other hardwood taxa were also identified.

Eight wood types were identified in the Caloosahatchee IIB samples. Although pine and black mangrove remained ubiquitous (100%) in these deeper strata, red mangrove was less ubiquitous (33%) when compared with the upper strata. Live oak was also identified from these lower IIB deposits while none was previously identified from the 17 upper IIB/III samples.

Operation C

Operation C samples date to the Caloosahatchee IIA-early-c to IV periods (AD 600 – 1500). In general, few taxa (7-9) were identified in the Operation C samples, except for the IIA-late-a deposits where 13 wood taxa were identified (Table 6.16). Two floor middens (ST 3 and 8) are included in these samples and it is the some of these, ST 8 floor midden, which contain the high number of identified taxa.

In the IV period samples, pine and black mangrove are the dominant fuelwoods (U, 100%) identified but live oak was also present in 36 percent of these midden samples. Additional mangrove and hardwood species were also identified but only in one or two samples each. The two Caloosahatchee III samples had extremely low frequencies of charcoal all of which was identified as either pine or black mangrove.

Two structure floors/activity areas provide the samples for the IIA-late samples. Pine (U, 76%) and black mangrove (U, 75-81%) dominate and are nearly ubiquitous. Live oak was identified from about one-quarter of the IIA-late-a samples. As with the later Caloosahatchee IV samples (discussed above), other hardwood species were present but generally present in only a single sample each. Red mangrove was identified in approximately 40-50 percent of the IIA-late samples.

Table 6.15. Percent of identified wood taxa from Excavation B-1 of the Brown's Complex, Pineland (8LL33).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	cf. Buttonwood	Live Oak	cf. Marlberry	Mastic	cf. Mastic	Cypress	Unidentified Wood Type 1	Unidentified Wood Type 2	Unidentified Wood Type 3	cf. Wood Type 23	Wood Type 24	Wood Type 35	Indeterminate Wood
IIB/III[1]																		
B-1-1, ST 2	2	50	50															
B-1-2, ST mixed	6	50	50															
B-1-4[19], ST mixed	50	50	40	8				2										
B-1-5[20], ST mixed	50	45	47	7														
B-1-6[21], ST mixed	40	48	45	5					2									
B-1-7[22], ST mixed	50	58	35	2	2									2				
B-1-8[23-24], ST mixed	50	48	45	7														
B-1-9[25], ST mixed	50	58	35	7														
B-1-10[26], ST mixed	40	50	37	10	2													
B-1-11[27], ST mixed	50	50	45	5														
B-1-12[28], ST mixed	40	47	47	3	3													
B-1-13[29], ST mixed	70	52	35	7							3		3					
B-1-14[30], ST mixed	40	40	52	7														
B-1-15[31], ST mixed	40	50	40	2	2							5						
B-1-16[32], ST mixed	40	52	47															
B-1-17[33-34], ST 21	40	67	32															
B-1-18[35], ST 21	29	52	31	14						3								
Total Percent	687	**51**	**41**	**6**	**1**			**0.1**	**0.1**	**0.1**	**0.1**	**0.4**	**0.1**	**0.1**				
Ubiquity		**100**	**100**	**76**	**24**			**6**	**6**	**6**	**6**	**6**	**6**	**6**				
IIB[2]																		
B-1-M[36-40], ST 22-24	40	80	7.5	5		5	2.5											
B-1-N[38-43], ST 23-25	25	84	8		4										4			
B-1-P[40-43], ST 24-25	40	55	22.5		5		7.5									5	2.5	2.5
Total Percent	105	**71**	**13**	**2**	**3**	**2**	**4**								**1**	**2**	**1**	**1**
Ubiquity		**100**	**100**	**33**	**66**	**33**	**66**								**33**	**33**	**33**	**33**

1 Adapted from Table 13 in Scarry and Newsom 1992. Original wood charcoal identifications completed by Newsom.

2 Charcoal identifications completed by Haney.

The upper floor midden (ST 3) dates to the IIA-late-c subperiod. Five wood taxa were identified and included pine, black mangrove, red mangrove, buttonwood, and mastic. The lower floor (ST 8) samples, in contrast, contained 13 wood taxa. These taxa included the major fuelwoods (pine, black mangrove, red mangrove, and buttonwood) but also included white mangrove, live oak, and a number of other hardwood taxa. Sample size could play a role in the difference in identified wood taxa between these two floor contexts because more than six times the number of specimens was identified for the lower floor midden.

Table 6.16. Percent of identified wood taxa from Operation C, Brown's Complex, Pineland (8LL33).

Provenience	Context	Count Identified	Pine	cf. Pine	Black Mangrove	Red Mangrove	cf. Red Mangrove	White Mangrove	Buttonwood	cf. Buttonwood	Combretum Family	Live Oak	Stopper	Rapanea	cf. Rapanea	Mastic	Sugarberry	cf. Trema	Sapodilla Family	Wood Type 23	cf. Wood Type 23	Wood Type 30	Wood Type 36	Indeterminate Hardwood	Indeterminate Wood	Indeterminate Plant
IV[1]																										
C-1-1[58,59], ST 1-3		8	25		63							12														
C-1-2[59,60], ST 2-4		23	78		22																					
C-1-3[60,61], ST 4	ash	11	73		18									9												
C-1-4[61,62], ST 4		30	87		7		3					3														
C-1-5[62,63], ST 4		30	87		3					3		7														
C-1-6[62], ST 4		30	70		27	3																				
C-1-7[64,65], ST 4		40	80		17				3																	
C-1-8[65,66], ST 4		35	80		20																					
C-1-9[66,67], ST 4-7		31	64		29										6											
C-1-10[67,68], ST 5-7		33	81		9			3				3	3													
C-1-13[70,71], ST 7, 14		6	33		50	17																				
Total Percent		277	**76**		**18**	**0.8**	**0.4**	**0.4**	**0.4**	**0.4**		**2**	**0.4**	**0.4**	**0.8**											
Ubiquity			**100**		**100**	**18**	**9**	**9**	**9**	**9**		**36**	**9**	**9**	**9**											
III-b[2]																										
C-1-11[68,69],ST5-7, 14		5	100																							
C-1-14[71,72],ST 7, 13-14		2	50		50																					
IIA-late-c [3]																										
C-4-15[72,73]-1, ST 3	floor midden	25	80			16																			4	
C-4-16[73,74]-1, ST 3	floor midden	30	73		7				7							10									3	
C-5-19[75]-1, ST 3	floor midden	20	90		10																					
C-5-20[76]-2, ST 3	floor midden	25	80		8	8																			4	
Total Percent		100	**80**		**6**	**6**			**2**							**3**									**3**	
Ubitquity			**100**		**75**	**50**			**25**							**25**									**75**	

Table 6.16. Percent of identified wood taxa from Operation C, Brown's Complex, Pineland (8LL33). (Cont.)

Provenience	Context	Count Identified	Pine	cf. Pine	Black Mangrove	Red Mangrove	cf. Red Mangrove	White Mangrove	Buttonwood	cf. Buttonwood	Combretum Family	Live Oak	Stopper	Rapanea	cf. Rapanea	Mastic	Sugarberry	cf. Trema	Sapodilla Family	Wood Type 23	cf. Wood Type 23	Wood Type 30	Wood Type 36	Indeterminate Hardwood	Indeterminate Wood	Indeterminate Plant
IIA-late-a																										
C-5-32[88]-2, ST 8 [3]	floor midden	30	43		43				10																4	
C-5-32[88]-2/14, ST 8 [2]	floor midden	1																			100					
C-5-32[88]-3N, ST 8 [3]	floor midden	8	38						24																38	
C-5-33[89], ST 8 [2, 3]	floor midden	27	30		44	7			12																7	
C-5-33[89]-1, ST 8 [2]	floor midden	10	80		20																					
C-5N-33[89]-3 [2]	floor midden	3			100																					
C-6-89, ST 7, 11, 21 [2]	floor midden	40	50		33	2		7.5													7.5					
C-6-89 E[88], ST 7, 11 [2]	floor midden	6	33		50																			17		
C-6-89-1 [2]	floor midden	40	73		25		2																			
C-6-89-3 [2]	floor midden	13	85			15																				
C-5-34[90], ST 8 [3]	floor midden	30	43		30				10							7									10	
C-6-90W, ST 8 [2, 3]	floor midden	95	23		48	5			6			6						6	1.5		1.5	3				
C-6-90-1 [2]	floor midden	1			100																					
C-6-91, ST 8, 21, 22 [2]	floor midden	7			100																					
C-6-91W, ST 8 [3]	floor midden	35	31		54	6			6									3								
C-6-91W (West ledge), ST 8 [2]	floor midden	113	28		55	3.5			6			2.5														5
C-6-91-1 [2]	floor midden	8	62		38																					
C-6-91-3, ST 8 [2, 3]	floor midden	47	24	13	32	15						2					4			2	2				6	
C-6-92, ST 8, 13, 21 - 23 [2]	floor midden	1		100																						
C-6-92W/E, ST 8 [3]	floor midden	41	32		59	2			2			5														
C-6-92-1 [2]	floor midden	40	43		25	15					5	7												5		
Total Percent		596	**37**	**1**	**42**	**5**	**0.3**	**0.5**	**4.5**		**0.4**	**2**				**0.4**	**0.4**	**1**	**0.3**	**0.3**	**1**	**0.4**		**0.5**	**2**	**1**
Ubitquity			**76**	**10**	**81**	**43**	**5**	**5**	**38**		**5**	**24**				**5**	**5**	**10**	**5**	**5**	**19**	**5**		**10**	**24**	**5**
IIA-early-c[2]																										
C-5N-35[91], ST 18		19	47		32	5						5									11					
C-6-92E [91], ST 13		40	45		45	2.5			2.5			2.5											2.5			
C-5-36[92]/3		13																			100					
C-5N-37[93]-1, ST 13		1	100																							
C-6-93, ST 13, 23		14	86		14																					
Total Percent		87	**46**		**31**	**2**			**1**			**2**									**17**		**1**			
Ubiquity			**100**		**60**	**40**			**20**			**40**									**40**		**20**			

1 Adapted from Table 14 in Scarry and Newsom 1992. Original wood charcoal identifications completed by Newsom.

2 Charcoal identifications completed by Haney.

3 Adapted from Table 7 in Newsom and Scarry 2013. Original wood charcoal identifications completed by Newsom.

Operation D

Eight wood types were identified in the BCC1 samples (Table 6.17). Black mangrove, pine, and red mangrove are the dominant taxa identified. Additional hardwood taxa were identified but each from only a single provenience. Overall, the frequency of wood taxa in each provenience was relatively low from Operation D and from the currently available data, patterns of fuelwood use appear to be quite similar to those previously discussed.

Table 6.17. Percent of identified wood taxa from Excavation D-1, Brown's Complex Court 1, Pineland (8LL33).

Provenience	Context	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	Live Oak	Wood Type 25	Wood Type 30	Wood Type 37	Indeterminate Wood
III											
D-2-79, ST 6, 3	pit fill	40	25	53	20		2.5				
IIB-c, -d											
D-1-3[89], ST 2		19		5	5			16		74	
IIA-late											
D-1-5[91], ST 3-4		14	21	72	7						
D-1-6[92], ST 4		8	25	63		12					
D-1-7[93], ST 5-6		14	21	57	14						8
D-1-8[94], ST 6		9	11	78	11						
D-1-9[95], ST 7		40	25	40	27				3		5
D-1-10[96], ST 8		2		50	50						
Total Percent		87	**22**	**54**	**18**	**1**			**1**		**4**
Ubiquity			**83**	**100**	**83**	**17**			**17**		**33**

Operation I

Analysis at Operation I focused on the Caloosahatchee III-b and IV periods (AD 1250 – 1500) (Table 6.18). Eight wood types were identified within each of these temporal periods, however, 10 wood types were identified over all from the Operation I assemblage.

Of the eight wood types identified in the IV period samples, pine (U, 100%) and black mangrove (U, 93%) were most ubiquitous with red mangrove (U, 64%) identified in more than one-half of the proveniences. Live oak (U, 29%) was identified in nearly one-third of the samples and other hardwoods, such as buttonwood, sea grape, Wood Type 29, and Wood Type 30 were present in only one sample each.

Table 6.18. Percent of identified wood taxa from Operation I, Brown's Complex Mound 2, Pineland (8LL33).

Provenience	Context	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	Live Oak	cf. Live Oak	Cypress	Sea Grape	Wood Type 29	Wood Type 30	Wood Type 32	Indeterminate Hardwood	Indeterminate Wood
IV															
I-2-55, ST 1 [1]		30	83	13	4										
I-2-58, ST 3, 4 [1]		30	67	27	3	3									
I-3-58-1, ST 1 [2]		40	62.5	32.5	2.5			2.5							
I-3-60-1, ST 4 [2]		40	42.5	42.5	10		5								
I-2-62, ST 5, 7, 8, 10, 12 [1]		15	87				6.5			6.5					
I-3-63, ST 5, AREA 1 [1]		11	55	45											
I-3-63, ST 5, AREA 3 [1]		3	67	33											
I-2-64, ST 8, 9A, 10, 12 [1]		30	60	27	10										3
I-2-65, ST 9A, 10, 11, 12, 14 [2]		40	77.5	22.5											
I-2-66, ST 9, 12, 14, 15 [1, 2]		70	64	27	7						1	1			
I-2-67, ST 12, 14, 15 [1]		30	43	33	10		10								4
I-2-68-2, ST 15 [1]		30	33	40	23										4
I-3-68-1, ST 9 [2]		40	70	30											
I-2-69, ST 15, 16 [1]		30	47	40	10		3								
Total Percent		439	**61**	**30**	**6**	**0.2**	**1.5**	**0.2**		**0.2**	**0.2**	**0.2**			**0.5**
Ubitquity			**100**	**93**	**64**	**7**	**29**	**7**		**7**	**7**	**7**			**21**
III-b															
I-2-70, ST 15, 16, 18 [1]	floor midden	15	20	60	7	13									
I-2-71-1 [1]	floor midden	30	40	43	10	7									
I-1-72, ST 19, 21 [2]	floor midden	39	28	43	10	8	8						3		
I-2-72, ST 19, 21 [1]	floor midden	30	37	47	17										
I-1-73, ST 19 [2]	floor midden	40	22.5	65	12.5										
I-2-73, ST 19 [1]	floor midden	30	47	40	10		3								
I-1-73-2 [2]	floor midden	40	42.5	37.5			10					2.5			7.5
I-1-74-1 [2]	floor midden	20	85	10			5								
I-2-74-1 [1]	floor midden	30	77	10	7		6								
I-2-75 [1, 2]	floor midden	70	35	50	7	3			3					1	1
Total Percent		344	**41**	**42**	**8**	**3**	**3**		**0.5**			**0.5**	**0.5**	**0.5**	**1**
Ubitquity			**100**	**100**	**80**	**40**	**50**		**10**			**10**	**10**	**10**	**20**

1 Adapted from Table 6 in Newsom and Scarry (2013). Original wood charcoal identifications completed by Newsom.

2 Charcoal identifications completed by Haney.

Although slightly fewer samples (n = 10) were analyzed overall from the Caloosahatchee III-b (ST 19), structure floor, eight wood types were identified. These types principally included pine (U, 100%), black mangrove (U, 100%), red mangrove (U, 80%), live oak (U, 50%), and buttonwood (U, 40%). Cypress, Wood Type 30, and Wood Type 32 were also present in these III-b samples but again, were identified from only a single sample each.

Brown's Complex Summary

Samples discussed above from the Brown's Complex at Pineland included temporal affiliations ranging from the IIA-early-c to IV periods (AD 600 – 1500). The number of taxa identified ranged from seven (IIA-early-c and IIB/III) to 13 taxa in the IIA-late subperiod. As can be seen from Table 6.19, 95 percent (n = 2,566) of the specimens identified, assuming that provisional taxonomic assignments are valid, belonged to just three taxa: pine, black mangrove, and red mangrove. Although 22 additional wood taxa were identified in this BC assemblage, each of these minor fuelwoods was present in only a small fraction of the samples.

Within the IV period samples at BC, nine wood taxa were identified in the Operation C (BC) samples and eight taxa were present in the BCM2 (Operation I) proveniences. In both of these sample sets, pine and black mangrove were nearly ubiquitous while red mangrove and live oak were identified from one-half and one-third of the samples respectively.

Thirteen samples provide data on fuelwood during the Caloosahatchee III period (AD 1200 – 1350). Most (n = 10) of these represent floor/activity area contexts dating from the III-b subperiod (AD 1250 – 1300). Pine (U, 100%) and black mangrove (U, 92%) dominate the identified taxa with high instances of red mangrove (U, 69%) and live oak (U, 46%).

Securely dated IIB samples (n = 4) were present in the assemblages from BCC1 (Operation D) and BCM1 (Operation B). Despite the low number of samples, ten taxa were identified and included pine (U, 75%), black mangrove (U, 100%), red mangrove (U, 50%), buttonwood (U, 75%), live oak (U, 75%), cf. Wood Type 23 (U, 25%), Wood Type 24 (U, 25%), Wood Type 25 (U, 25%), Wood Type 35 (U, 25%), and Wood Type 37 (U, 25%).

Caloosahatchee IIA period samples from BC were discussed from BCC1 (Operation D) and BC (Operation C). While the BCC1 samples could not be temporally subdivided, the proveniences in Operation C date to the IIA-late-c (AD 750 – 800), IIA-late-a (AD 650 – 700), and IIA-early-c (AD 600 – 650) subperiods. Both of the IIA-late subperiods are here represented

by floor/activity middens (ST 3 and 8). Only five taxa have been identified from the IIA-late-c floor contexts while 13 taxa are present in the IIA-late-a floor samples. As discussed above, this could be a result of differing sample sizes but needs further investigation. Alternative explanations could include the special nature of the context, that is floor versus general midden contexts, or the low sample size of the ST 3 samples might be under representing the taxa diversity actually present in these floor deposits. In terms of the major fuelwoods documented within these IIA-late samples, the patterns of pine, black mangrove, red mangrove, and buttonwood are very similar. The deeper floor deposits (ST 8), however, contain low ubiquities of additional hardwoods such as white mangrove, mastic, sugarberry, cf. trema, Wood Type 23, Wood Type 30, and Wood Type 36.

Seven taxa were identified in the IIA-early-c materials from Operation C. Taxa patterns differed somewhat from those BC contexts discussed above. In particular, black mangrove was present in only 60 percent of the samples, though the sample size is small (n = 5). Pine (U, 100%), red mangrove (U, 40%), buttonwood (U, 20%), and live oak (U, 40%) were present in at about the same ubiquities as seen throughout these BC contexts.

Cash Mound (8CH38)

Cash Mound is the most northerly site for which additional wood taxa were identified. Seven proveniences have been analyzed from the IIA and I-late periods (Table 6.20). The single IIA sample from Cash Mound contained only two identified taxa, pine and black mangrove (Scarry and Newsom 1992). Five wood taxa were identified from the I-late samples; pine and black mangrove were most ubiquitous (U, 67%) with red mangrove being identified in one-half of the samples. Buttonwood and rapanea were also identified in one-third of these samples.

Table 6.19. Summary of taxa identifications by temporal period from the Brown's Complex, Pineland (8LL33).

	IV		III		IIB/III		IIB		IIA-late		IIA-early-c		Total	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
Pine	478	67	157	40	349	51	75	61	317	40	40	46	1416	51
cf. Pine									7	1			7	0.3
Black Mangrove	181	25	168	43	282	41	15	12	305	39	26	30	977	35
Red Mangrove	29	4	36	9	44	6	3	2	52	7	2	2	166	6
cf. Red Mangrove	1	0.1							1	0.1			2	0.1
White Mangrove	1	0.1							3	0.4			4	0.1
Buttonwood	2	0.3	9	2	4	1	3	2	30	4	1	1	49	1.1
cf. Buttonwood	1	0.1					2	2					3	0.1
Combretum Family									2	0.3			2	0.1
Live Oak	12	2	12	3			4	3	15	2	2	2	45	1.3
cf. Live Oak	1	0.1											1	0.1
Sugarberry									2	0.3			2	0.1
Sea Grape	1	0.1											1	0.1
Stopper	1	0.1											1	0.1
Rapanea	1	0.1											1	0.1
cf. Rapanea	2	0.3											2	0.1
cf. Marlberry					1	0.1							1	0.1
Mastic					1	0.1			5	0.6			6	0.2
cf. Mastic					1	0.1							1	0.1
Cypress			2	1.1	1	0.1							3	0.1
cf. Trema									7	1			7	0.3
Sapodilla Family									1	0.1			1	0.1
Wood Type 23									1	0.1			1	0.1
cf. Wood Type 23							1	1	6	1	15	18	22	0.8
Wood Type 24							2	2					2	0.1
Wood Type 25							3	2					3	0.1
Wood Type 29	1	0.1											1	0.1
Wood Type 30	1	0.1	1	0.3					3	0.4			5	0.2
Wood Type 32			1	0.3									1	0.1
Wood Type 35							1	1					1	0.1
Wood Type 36											1	1	1	0.1
Wood Type 37							14	11					14	0.5
Indeterminate Hardwood			1	0.3					3	0.4			4	0.1
Indeterminate	3	0.5	4	1	4	0.6	1	1	18	2.1			30	1
Unidentified Plant									5	0.6			5	0.1
Total Identified	716	100	391	100	687	100	124	100	783	100	87	100	2788	100

Table 6.20. Percent of identified wood taxa from Cash Mound (8CH38).

Provenience	**Count Identified**	**Pine**	**Black Mangrove**	**Red Mangrove**	**Buttonwood**	**Rapanea**	**Indeterminate Hardwood**
IIA							
A-1-4 [1]	15	27	67				6
I-late							
A-1-8 [1]	10	100					
A-1-14 [2]	9	100					
A-1-16 [2]	40		23	17	60		
A-1-17 [1]	30	7	60	23		10	
A-1-19 [2]	12		100				
A-1-20 [1]	30	27	7	40	3	23	
Total Percent	131	**22**	**31**	**20**	**19**	**8**	
Ubitquity		**67**	**67**	**50**	**33**	**33**	

1 Adapted from Table 15 in Scarry and Newsom (1992:387). Wood identifications completed by Newsom.

2 Charcoal identifications by Haney.

Calusa Island (8LL45)

Nine sample proveniences contained charcoal from these Terminal Archaic samples (Table 6.21). Nine wood taxa were identified in the sub-surface levels; however, identification was greatly hampered by the highly fragmentary condition of the specimens. The dominant fuelwood taxa identified included pine (U, 80%), black mangrove (U, 60%), and red mangrove (U, 60%) but buttonwood (U, 30%) and white mangrove (U, 30%) were also identified. The remaining hardwood taxa were identified in low frequencies, each in a single sample.

Today, Calusa Island is not connected to a larger land mass and is ringed by mangrove forests. The author knows of no pines currently extant on the island but the interior does evidence typical hammock vegetation. The site's island character, however, is the result of modern dredging (Patterson 2017:110). As such, the dominant presence of pine in the samples may be the result of fuelwood collection from nearby but offsite locales.

Table 6.21. Percent of identified wood taxa from preliminary testing on Calusa Island (8LL45).

Provenience	Comnt Identified	Pine	cf. Pine	Conifer	Black Mangrove	cf. Black Mangrov	Red Mangrove	cf. Red Mangrove	White Mangrove	cf. White Mangrov	Buttonwood	cf. Live Oak	cf. Wood Type 23	Wood Type 43	Indeterminate Hardwood	Indeterminate Wood	Apical Growth	Unidentified Bark
Terminal Archaic																		
Z A, 10-21 cmbs	2	100																
Z B, 21-33 cmbs	0																	
Z C, 21-31 cmbs	92			22											14	64		
Z C, 31-38 cmbs	40	42			5	5	32	3			8		5					
Z E, 25-35 cmbs	36	20					61			3		3				8		5
Z E/F, 45-56/68 cmbs	41	32			2		59		5							2		
Z E, 35-45 cmbs	40	35	10		8		32				10				5			
Z F, 58-68 cmbs	38	46			2		16				2				18	14	2	
Z G, 68-70 cmbs	17	94			6													
Z H, 80-90 cmbs	17	41			12		6	6*	17					6*				12
Total Percent	323	**29**	**1**	**6**	**3**	**1**	**24**	**1**	**2**	**0.5**	**2**	**0.5**	**1**	**0.5**	**6**	**21**	**0.5**	**1**
Ubitquity		**80**	**10**	**10**	**60**	**10**	**60**	**20**	**20**	**10**	**30**	**10**	**10**	**10**	**30**	**40**	**10**	**20**

*Wood fragments not carbonized

Useppa Island (8LL51)

Five proveniences were analyzed (Table 6.22) from Useppa Island. The newly identified taxa of these additional samples are anomalous when compared with previously analyzed samples. These Operation B samples contain the only live oak and red oak group specimens thus far identified from an Archaic deposit at the site (see Scarry 1999). The presence of red oak group charcoal is likely indicative of historic intrusion since red oaks are not typically found this far south.

A pit feature (not included/presented here) was documented in the northeastern portion of the Operation B block and dated to AD 1510 – 1800 (Torrence 1999:65). Additionally, historic artifacts were recovered from levels 12 (surface) to 16 in the block, covering the sample proveniences analyzed here (Walker 1999:172). Historic documents regarding land clearing activities in 1915 also indicate that more than 100 cords of oak wood were harvested from the island at that time (Torrence 1999:65). Altogether, it seems reasonable to propose that at least some of the wood charcoal of these five samples actually post-date the native occupation of Useppa Island.

Reviewing the previously analyzed Middle and Late Archaic samples completed by Scarry (1999), only two taxa were identified in the Middle Archaic samples. Late Archaic taxa are more diverse. During the Late Archaic period, pine (U, 86%) and buttonwood (U, 86%) were identified in the most samples but black mangrove and red mangrove were also identified in nearly one-half of the examined proveniences. This level of diversity is also evidenced by the few Terminal Archaic and Caloosahatchee I period samples previously analyzed.

Table 6.22. Percent of identified wood taxa from Useppa Island (8LL51).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	Live Oak	cf. Oak spp. (red oak group)	Sea Grape	Palm	Wood Type 44	Carbonized bark/ red mangrove sprout	Monocot	Unidentified Hardwood	Indeterminate
Archaic ? [1]														
B-9-12	8					87	13							
B-4-13	40					77	10		5	5	3			
B-12-14	22					45	5		50					
B-22-15/2	5					100								
B-23-15	4					100								
Total Percent	79					**72**	**8**		**16**	**3**	**1**			
Ubitquity						**100**	**60**		**40**	**20**	**20**			
I [2]														
D Lot II-11 Flot #3 Zone 4	10	30	10	20	20							20		
D Lot II-11 Flot #4 Zone 4	30	23.3	30	27	6.7			6.7			6.7			
Terminal Archaic [2]														
D Lot II-11 Flot #9 Zone 10	12	16.7		17				33						33
Late Archaic [2]														
B-24-15, ST 2	20		40	10	30						5			15
B-13-15, ST 2	20	25	5		40							5		25
B-13-16, ST 2	7	28.6		29	14						14.3			14
B-21-16, ST 2	20	40	5	20	15			10			10			
B-21-17, ST 2	30	40			17						26.7			17
B-21-18, ST 2	3	33.3			33									33
B-22-18, ST 2	19	42.1									47.4			11
Total Percent	119	**30**	**8**	**7**	**20**			**2**			**18**	**1**		**14**
Ubitquity		**86**	**43**	**43**	**86**			**14**			**71**	**14**		**86**
Middle Archaic [2]														
B-21-19, ST 3	3	100												
B-22-19, ST 3	9	100												
B-21-20, ST 3	9	100												
B-21-21, ST 3	15	93.3		6.7										
B-21-22, ST 3	10	90											10	
B-21-23, ST 3	10	80		20										
Total Percent	56	**93**		**5**									**2**	
Ubitquity	112	**100**		**33**									**17**	

1 Charcoal identified by Haney.

2 Adapted from Table 3 Scarry (1999:132). Wood identifications completed by Scarry.

Josslyn Island (8LL32)

The analyzed fuelwood assemblage at Josslyn Island is small (see Scarry and Newsom 1992:386) (Table 6.23). The principle fuelwoods, pine and black mangrove, are ubiquitous but red mangrove (U, 50%) and red cedar (U, 17%) have also been identified. As noted previously (see Chapter 3), Josslyn Island is large and would have possessed a variety of vegetation habitats and so all of the identified fuelwood types may have been locally available on the island.

Table 6.23. Percent of identified wood taxa from Josslyn Island (8LL32).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	Red Cedar	Indeterminate Hardwood	Indeterminate
III							
A-1-4 [1], ST 4	20	75	25				
IIB							
A-2-6 [1], ash feature	20	40	55	5			
A-2-6-1 [2], ash locus	20	80	20				
A-1-12 [1, 2], ST 6, 7	40	48	37	7	5		3
Total Percent	80	54	38	5	2		1
Ubitquity		100	100	67	33		33
I-early							
A-1-22 [1, 2], ST 10	40	8	57	25		5	5
A-1-32 [1], ST 13	20	65	15	5		15	
Total Percent	60	**27**	**43**	**18**		**8**	**4**
Ubitquity		**100**	**100**	**100**		**100**	**50**

1 Adapted from Table 12 in Scarry and Newsom (1992:386). Wood identifications completed by Newsom.

2 Charcoal idenfications completed by Haney.

Galt Island (8LL27)

Six wood types were identified in the assemblage from Excavation B dating from the IIA to IV periods (Table 6.24). Pine (U, 91%) and black mangrove (U, 82%) were dominant in the samples but red mangrove (U, 45%) and buttonwood (U, 36%) were present in fewer samples.

Additional hardwood taxa, Wood Type 34 and Wood Type 39, were also identified from single proveniences. Although the assemblage is small, samples from the upper zones (IIB – IV) contained overall higher frequencies of charcoal than seen in the deeper IIA deposits. The low frequency of wood charcoal exhibited in these deeper deposits may result from the secondary nature of the midden; re-deposition may increase fragmentation, hampering recovery and identification.

Table 6.24. Percent of identified wood taxa from Galt Island (8LL27).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	Buttonwood	Wood Type 34	Wood Type 39	Apical growth	Indeterminate
IV									
B-1-2	11	9	82			9			
IIB/III									
B-1-5	41	34	54	7	5				
B-1-6	20	30	35	20	5				10
B-1-7	8	62	13	25					
B-1-8	12	67	25	8					
Total Percent	81	**41**	**41**	**12**	**4**				**2**
Ubitquity		**100**	**100**	**100**	**50**				**25**
IIA									
B-1-17-1	1			100					
B-1-18-1	4	25	50					25	
B-1-19-1	2	50	50						
B-1-20-1	2	50					50		
B-1-21-1	3				100				
B-1-28	4	50	25		25				
Total Percent	16	**32**	**25**	**6**	**25**		**6**	**6**	
Ubitquity		**67**	**50**	**17**	**33**		**17**	**17**	

Buck Key (8LL722)

Thirteen wood types have been identified from 25 samples at the Buck Key midden (Newsom and Scarry 2013; Scarry and Newsom 1992). Scarry and Newsom (1992) note that differences in the recovery techniques may largely account for the differences in frequency of

charcoal recovered. While this may be the case, the numbers of identified taxa also differ between the three Operations at Buck Key. In order to highlight these differences, the excavations have not been combined by temporal period on Table 6.25.

Overall, the combined presence of pine (U, 35%) was much lower than seen in the other regional samples discussed here, especially in Operation A. Black mangrove (U, 69%), red mangrove (U, 42%), and buttonwood (U, 46%) were identified in the highest number of samples at Buck Key. Rapanea (U, 15%) and sea grape (U, 23%) were also identified in several samples.

Operation B stands out as different from both Operation A and I despite being within relatively close proximity at the site. Twelve taxa were identified from the Operation B, III samples while fewer numbers were identified from Operation A (n = 6) and Operation I (n = 4). The taxa configuration is similar to other deposits discussed above from the I-late-f period. These deposits evidence a higher number of taxa along with fuelwood taxa of lower quality, such as palm.

Mound Key (8LL2)

As previously mentioned, the temporal affiliation of these Operation C samples is somewhat disputed. Some charcoal from C-1-65 has been radiocarbon dated to the I-late/IIA period (AD 285 – 585; Thompson et al. 2016 [supplemental]). However, this absolute date conflicts with pottery types also recovered from these samples which place the temporal affiliation to the IV (AD 1350 – 1500) period. Therefore, it is possible that these C-1 samples represent secondary midden deposits, which might also explain the relatively low frequency of specimens recovered from these proveniences. Only three wood types were identified in these Mound Key samples. Pine and black mangrove were ubiquitous but buttonwood was also identified (Table 6.26).

Table 6.25. Percent of identified wood taxa from Buck Key (8LL722).

Provenience	Count Identified	Pine	Black Mangrove	Red Mangrove	White Mangrove	Buttonwood	Live Oak	Palm	Rapanea	Nicker Bean	Sea Grape	Mastic	cf. Twinberry	cf. Possum Grape	Indeterminate
III/IV															
A-1-2, ST 14, 19 [1]	1	100													
A-1-4, ST 13+ [1]	3		100												
A-1-5, ST 13+ [1]	1		100												
A-2-6/7, ST 13+ [2]	20	15	20	20		15			30						
Total Percent	25	**16**	**32**	**16**		**12**			**24**						
Ubitquity		**50**	**75**	**25**		**25**			**25**						
IIB															
A-1-10, ST 13 (upper), 13A [1]	1		100												
A-2-11, ST 13A [2]	17		35	24		29			6		6				
A-1-12, ST 13A [1]	4		25			25			50						
IIB ?															
A-1-13, ST 13 (lower) [1]	6		17	50		33									
A-1-14, ST 13 (lower) [3]	8		12	88											
A-1-15, ST 13 (lower) [1]	1								100						
Total Percent	37		**27**	**38**		**22**			**11**		**2**				
Ubitquity			**83**	**50**		**50**			**50**		**17**				
IV															
B-1-1, ST 1 [1]	1		100												
B-1-3, ST 2 [1]	1			100											
B-1-4, ST 2 [1]	2	50		50											
B-1-5, ST 3, 5, 6, 8 [1]	2					50				50					
B-2-5, ST 2 [2]	58	10	67	9		7				2	3	2			
B-2-7, ST 4, 8 [1]	4	25	25			50									
B-2-8 [1]	3	33	33			33									
B-1-8-1 [3]	12		100												
Total Percent	83	**11**	**65**	**8**		**10**				**2.5**	**2.5**	**1**			
Ubitquity		**50**	**63**	**38**		**50**				**25**	**13**	**13**			
III															
B-2-9 [2]	75	12	28	9	1	28		1			7		9	1	3
B-1-9-1 [1]	6		32	17			17				17	17			
B-1-10, ST 12 [1]	2		100												
B-2-10, ST 12 [1]	2					50					50				
B-1-11, ST 12 [1]	26	28	15	11		11					35				
Total Percent	111	**14**	**26**	**10**	**1**	**23**	**1**	**1**			**14**	**1**	**6**	**1**	**2**
Ubitquity		**40**	**80**	**60**	**20**	**60**	**20**	**20**			**80**	**20**	**20**	**20**	**20**
IV															
I-1-2, ST 1 [1]	5	20	20	20		40									
I-1-5, ST 10 [1]	1		100												

1 Adapted from Table 10 Scarry and Newsom (1992:385). Wood Identifications completed by Newsom.

2 Adapted from Table 11 Scarry and Newsom (1992:385). Wood identifications completed by Newsom.

3 Charcoal idenfications completed by Haney.

Table 6.26. Percent of identified wood taxa from Mound Key (8LL2).

Provenience	Count Identified	Pine	Black Mangrove	Buttonwood	Indeterminate
I-late/IIA ?					
C-1-65	12	9	3		
C-1-66-1	23	3	18	1	1

Big Mound Key

All of the wood charcoal at Big Mound Key was previously identified by Newsom (Scarry and Newsom 1992) and is presented here for discussion. Six wood types were identified in these IIB (AD 800 – 1200) samples (Table 6.27) (Scarry and Newsom 1992); pine was ubiquitous but black mangrove, buttonwood, live oak, and several other hardwoods were also identified. The ubiquities differ substantially, however, from those previously discussed because although present, the mangrove taxa were identified far less often than seen at the more southern sites. Black mangrove which has been nearly ubiquitous at the previously discussed sites was only identified in 50 percent of the Big Mound Key samples. Likewise, red mangrove was not identified in any of these samples and buttonwood and live oak were only identified in a single sample each.

Table 6.27. Percent of identified wood taxa from Big Mound Key (8CH10).

Provenience	Count Identified	Pine	Black Mangrove	Buttonwood	Live Oak	cf. Seven Year Apple	cf. Wild Cotton
IIB [1]							
U-2-11	30	60	40				
U-1-8B	40	95	2	2			
U-1-7	30	97			3		
U-1-6M	30	67	27			3	3
U-1-6B	30	100					
U-1-2	14	100					
Total Percent	174	86	12	0.5	0.5	0.5	0.5
Ubitquity	100	100	50	17	17	17	17

1 Adapted from Table 16 in Scarry and Newsom (1992:388). Wood identifications completed by Newsom.

Variability of Taxa

One of my formal hypotheses proposed intra-site taxa variability as a means to test differential access to non-coastal fuelwood resources, specifically pine. Intra-site taxa variability is only examined at the Pineland Site Complex because, of the sites analyzed here, Pineland is the only site for which excavations have documented spatially discrete but contemporary contexts. No doubt contemporary contexts exist at many of the other sites (e.g., Josslyn Island and Galt Island); however, those deposits have not been sampled or not extensively sampled.

At Pineland, I-late samples were analyzed from CR, South Pasture, and Old Mound deposits. These combined samples cover a number of I-late subperiods including I-late-c/d/e (n = 10), -e (n = 2), -e/f (n = 13), -f (n = 25), -f/g (n = 2), -g (n = 10), -g/h (n = 5), -g/h/i (n = 16), and –i/j (n = 5). Of these I-late subperiod samples, only the I-late-f subperiod sample (samples = 25; specimens = 2,233) was large enough to be considered representative but the I-late-g/h/i subperiod sample (samples = 16; specimens = 253) is also quite sizable.

Boxplots were created to explore spatial variability; these graphs present the percentages of pine and the individual mangrove taxa, as well as, mangrove forest and associate taxa grouped together (including black mangrove, red mangrove, white mangrove, and buttonwood). Despite the small sample sizes for much of the I-late subperiods, all subperiods were graphed and compared with spatially discrete but contemporary deposits at Pineland. No spatial differences were found in the use of pine and mangrove during the I-late subperiods between deposits at CR, South Pasture, and Old Mound.

Caloosahatchee IIA subperiod samples exist from Old Mound, RCM1, and BC, including IIA-early-a (n = 30), -early-b (n = 35), -early-c (n = 9), -late-a (n = 25), -late-c (n = 4). However, contemporary IIA subperiod samples only occur during the IIA-early-c and the IIA-late-a subperiods (RCM1 and BC) (Figure 6.11).

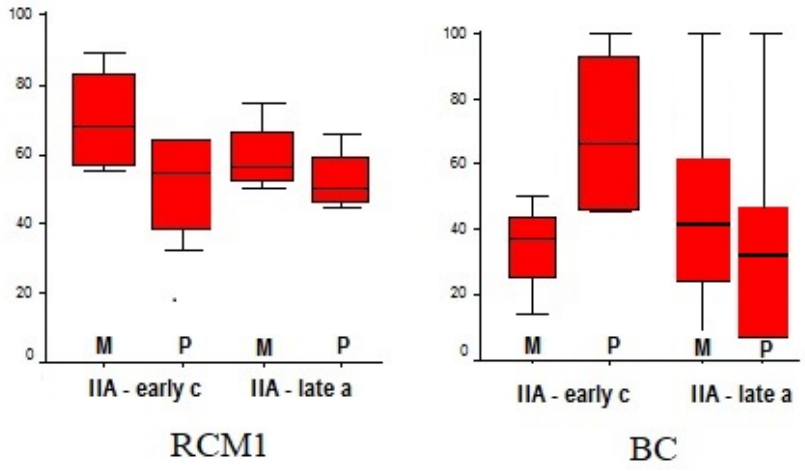

Figure 6.11. Boxplots of pine (P) and mangrove (M - all taxa) from the IIA-early-c and IIA-late-a subperiods at RCM1 and BC.

Caloosahatchee IIB period samples were analyzed from CR (n = 10), RCM1 (n = 6), BCM1 (n = 4), and BCC1 (n = 1), however, only the CR and RCM1 areas provided sample sizes large enough to graph. No spatial differences were documented between these two areas at

Pineland. III period samples were analyzed from BC (n = 2), BCM2 (n = 10), and BCC1 (n = 1). The extremely small comparative sample sizes of BC and BCC1 make it difficult to discern any spatial differences in the III deposits.

Caloosahatchee IV period samples were analyzed from RCM1 (n = 6), BC (n = 11), and BCM2 (n = 14). The boxplots (Figure 6.12) show that the distribution of pine and mangrove at the BC (including BC and BCM2 materials) has more spread or variability in the use of both pine and mangrove fuelwood whereas pine and mangrove from RCM1 shows a tighter distribution with less variability. A difference in the use of pine is evident between the two locations at Pineland. As stated, my hypothesis proposed that if any spatially discrete area at Pineland contained higher percentages of pine when compared with contemporary areas, then some groups had differential access to non-coastal resources (i.e., pine). Since approximately 60 percent (most of box and upper whisker of the boxplot) of the samples at BC contained more pine than those documented at RCM1, the null hypothesis is rejected. Of all the available data, the period IV results show the greatest intra-spatial differences in the use of pine at Brown's and Randell Complexes at Pineland.

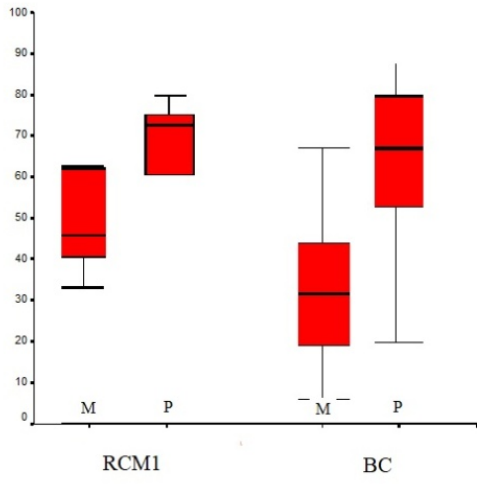

Figure 6.12. Boxplots of pine (P) and mangrove (M - all taxa) from the IV period at RCM1 and BC.

Functional and Ecological Variation

One hypothesis focused on the form of fuelwood used in the Caloosahatchee region. Based on the ecology of the major fuelwoods (i.e., pines and mangroves), it was expected that most of the mangrove specimens would be stems while most of the pine specimens would be branches. Data on functional wood variation were recorded for 4,210 specimens (Appendix C) and used to address the hypothesis concerning the form of the fuelwood selected/used. Almost ninety percent of the specimens for which additional anatomical variables could be recorded were either hard pine or black mangrove; however, characteristics were also recorded for live oak and other tropical hardwoods when present/visible.

Functional Variation

The characteristics of the pith-adjacent wood allows for a determination of the functional placement in the tree as either from a branch or non-branch (i.e., stem) member. As noted in Table 6.28, piths were present in black mangrove specimens far and away more often than in the pine assemblage. In total, the presence of the pith and the growth characteristics of the pith-adjacent growth increments in 370 specimens allowed for a determination of their functional location within the tree/shrub. Nineteen additional specimens (not represented in Table 6.28) of red mangrove (n = 14), white mangrove (n = 2), buttonwood (n = 2), and tropical hardwood Type 25 (n = 1) also retained a pith, however, as these taxa do not routinely exhibit anatomical characters that allow for the identification of growth rings in charcoal (though these taxa do have growth rings), a functional determination could not be assessed.

In the mangrove charcoal, where the situation of branch/stem is more fluid because of the shrub habit, only 25 percent of the specimens with piths (n = 70) were branches based on the

presence of an off-center pith and eccentric growth rings (i.e., anatomical indicators of branches). The overwhelming majority of black mangrove specimens for which a functional determination could be made were from stem wood. Likewise, 80 percent (n = 74) of the pine specimens were from branches. The data support the assertion that in general, the most common form of mangrove fuelwood was stems while for pine fuelwood, branches were used more commonly.

Table 6.28. Summary of functional and ecological variability (raw counts) identified by site.

Site	Branch		Stem (non-branch)	
	Pine	B Mangrove	Pine	B Mangrove
Big Md Key	2		1	
Buck Key	1			1
Calusa Island				
Cash Md			1	2
Galt Island	1			4
Josslyn	1			1
Md Key				
Pineland	69	70	16	200
Totals	74	70	18	208

*Useppa Island, no pine or mangrove identified by Haney.

Black mangroves exhibit discontinuous xylem increments (see Table 6.29; Figure 6.13). Although it is unknown whether or not the control of discontinuous xylem in increment growths is strictly endogenous, Tomlinson (1986:195) has observed that these interconnections between increments occur most frequently in the region of branch insertions. This author also observed an increased number of discontinuous rings in the cross-section of a modern trunk which died on the eroding beach-front at Calusa Island (Figure 6.14). While this cross-section only represents a sample of one, the increased number of discontinuous xylem in growth increments along one-half of the trunk suggests that discontinuous xylem may also be related to mechanical strength.

Table 6.29. Counts of discontinuous xylem increments and percentages out of total identified black mangrove per temporal period.

	Discontinuous xylem	
	N	%
I	36	20.2
IIA	46	8.9
IIB	3	4.5
IIB late	2	3
IIB-IV		
IIB-III	1	2.3
III	15	10.3
IV	8	4.1
Total	111	

Since the cause/location of the discontinuous xylem remains open, the occurrence of these anomalous growth increments was tabulated. Similar to the other characteristics noted above, however, there does not appear to be any dramatic variation in the occurrence of discontinuous growth increments through time. No statistical analysis was performed because the discontinuous xylem cases did not satisfy the assumptions for chi square (e.g., the expected values were not greater than or equal to five).

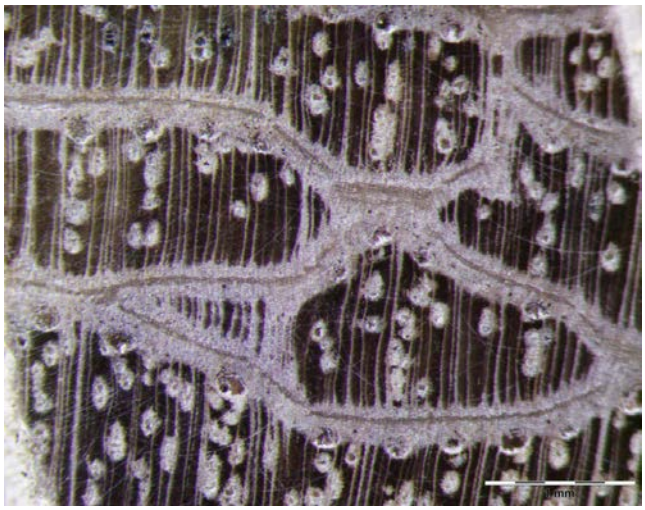

Figure 6.13. Modern black mangrove cross section showing discontinuous xylem increments.

Figure 6.14. Cross section of modern black mangrove from Calusa Island sampled at breast height (dbh), showing interior (heartwood) rot and insect channelization, and overall pattern of regular and discontinuous growth increments, especially along lower and right edges. Section diameter is 26.5 cm.

Ecological Variation

In total, only two types of environmental effects were observed in the charcoal assemblage: injuries/trauma and intra-annual density fluctuations (IADF). Table 6.30 summaries the additional anatomical indicators present which potentially recorded environmental influences on the growth of the source tree. Unlike the previous anatomical variables, specimen fragmentation could artificially inflate the instances of ecological variation tallied by temporal period. Therefore, when multiple specimens were recorded from a single provenience and potentially represent fragments of a single specimen, these are noted on the table by an asterisk. The only instance where multiple specimens represent a single provenience occurred in the IIB-late period. Injured tissue documented in the archaeological wood anatomy was observed exclusively in pine, and consisted chiefly of traumatic resin canals (n = 17). Schweingruber et al.

(2006) note that traumatic resin canals often result from extreme weather events (i.e., physiological stress), such as frosts or droughts, or mechanical stress. Nine of the 17 traumatic canals recorded were from I-late-f samples (AD 250 – 300). Given the I-late-f subperiod sample size, however, the injury rate accounts for just three percent of the specimens examined. Nevertheless, these injuries are not spread evenly throughout the assemblage but concentrated in the I-late-f/g/h, IIB-late, and IV periods.

Table 6.30. Summary of ecological variability documented by time period.

	Traumatic Canals		IADFs	
	n	%	n	%
I				
I-late f	9	3	17	5.7
I-late g/h	2	4.4	2	4.4
I-late i/j			3	6.5
IIA-early			26	5.2
IIA-late			3	3.4
IIB			5	2
IIB-late	2 *	2.1	1	1
III			16	10.1
IV	4	1.5	13	5
Total (Proven ct)	**17 (12)**		**86 (56)**	

* Indicates that count represents a single provenience/sample.

Intra-annual density fluctuation is variation within a growth ring. Density-fluctuations are typically associated with conifers and result when growth inhibiting factors shift to growth stimulating factors (Fritts 1976; Schweingruber 1996). For example, a long dry spell in the middle of the growing season may result in a shift from early wood production to late wood production. If the rains return in sufficient quantity prior to the end of the normal growing season, the tree may return to early wood production then produce another section of late wood as normal. The total number of identified IADFs is listed in Table 6.30. As can be seen, the spread of IADFs is pretty even across the major temporal periods. The recorded incidents of intra-annual

density variations in pine were greatest during the Caloosahatchee III period. A chi square goodness of fit performed on the gross temporal periods (i.e., I, IIA, IIB, III, and IV) fails to reject the null hypothesis ($\chi 2 = 7.46$, $df = 4$) that the occurrences of IADFs are non-uniformly distributed. As such, the distribution of IADFs does not appear to differ significantly through time.

Growth Ring Widths

The ranges of hard pine growth ring widths by temporal period are presented in Table 6.31. As can be seen, the smallest growth rings in the pine sample measured did not differ remarkably. The largest pine growth rings do vary somewhat but are representative of juvenile wood, which typically has a faster rate of growth. The black mangrove increment growth widths were very consistent across the temporal periods, confirming Gill's (1971) assertion that increment growth is under endogenous control.

Table 6.31. Summary of growth ring/increment widths by temporal period.

	Hard Pine		Black mangrove		
	n*	range (mm)	n*	range (mm)	mean
Archaic	69	0.121 - 1.764	0		
I	1,045	0.030 - 3.850	3,760	0.092 - 2.370	0.79
IIA	1,187	0.089 - 5.767	4,389	0.102 - 2.231	0.85
IIB	472	0.077 - 2.818	131	0.167 - 1.719	0.76
III	331	0.105 - 3.627	689	0.217 - 1.988	0.77
IV	897	0.087 - 4.440	873	0.107 - 2.246	0.82

*Represents number of growth rings/increments measured.

Fuelwood Diameters

While an attempt to measure diameter was made on each specimen, only those specimens large enough to provide a reliable diameter are discussed here and reported in Tables 6.32. Naturally, specimens with a small diameter required less of the total circumference to reliably estimate the source stem/branch (roundwood) diameter. Specimens from larger diameter specimens required a larger percentage of the total circumference in order to determine a reliable estimate of the source tree.

Seven specimens retained bark *in situ* on the outer most growth ring or increment. Of these seven, only three were complete pieces of roundwood, representing 100 percent of the branch/stem transverse section (Table 6.33). The remaining four represented only fragments of the original transverse section. As can be seen from Tables 6.32 and 6.33, the largest diameter recorded in the assemblage was 70 mm (7 cm).

Pine Diameters

The distributions of the archaeological pine diameters from branches and the modern branch diameters were compared using the g-test, goodness of fit. Although the two distributions were significantly statistically different (g = 157, *df* = 3, p = .005 [collapsing the final range to 31-70 mm]), the sample of modern branches is very small. Despite the statistical test, the distribution of modern branch diameters does more closely approximate the diameters than does the distribution of modern pine bole diameters.

Table 6.32. Summary of reliable fuelwood diameters by taxa and time period.

	I		IIA		IIB		III		IV	
Diam. (mm)	**Pine**	**B Mangrove**	**Pine**	**B Mangrove**	**Pine**	**B Mangrove**	**Pine**	**B Mangrove**	**Pine**	**B Mangrove**
> 10	8	78	8	21	1	20	1	9	1	9
11-20	32	112	57	122	21	31	11	33	0	38
21-30	17	24	17	20	20	18	7	9	23	5
31-40	7	15	17	23	6	14	5	2	21	6
41-50	1	3	0	0	2	0	0	0	11	1
51-60	2	3	2	0	1	0	1	0	3	0
61-70	0	0	0	0	1	0	0	0	1	0
Totals	67	235	101	186	52	83	25	53	60	59

Table 6.33. Summary of data recorded on charcoal which retained bark on the outer most growth ring.

Taxa	**Diam (mm)**	**% present**	**Functional Portion**
Black mangrove	16	100	branch
Black mangrove	5	100	stem
Black mangrove	40	10	
Red mangrove	7	100	stem
Red mangrove	20	25	
Hard pine	40	10	
Hard pine	40	10	

Most of the recorded diameters were smaller, however, either because fragmentation has differentially preserved the central portion of stems or because the fuelwood assemblage consisted of smaller diameter roundwood. In the pine assemblage, 305 specimens (see Table 6.32) were large enough that a reliable diameter measure could be obtained and were affiliated with a single temporal period. Using the chi square test for homogeneity, the distribution of pine fuelwood diameter sizes across the five major temporal periods differed significantly from one another (Figure 6.15; $\chi^2 = 15.96$, $df = 8$, $p = .05$). Several categories were collapsed for the chi square on pine diameters such that the test was recalculated using size categories 0-20, 21-30, and 31-70 mm. While a number of cases contributed to the significant result, the Caloosahatchee IIA period contributed the most to the finding with higher than expected counts in the 0 -20 mm size class and fewer than expected counts in the 21-30 mm class.

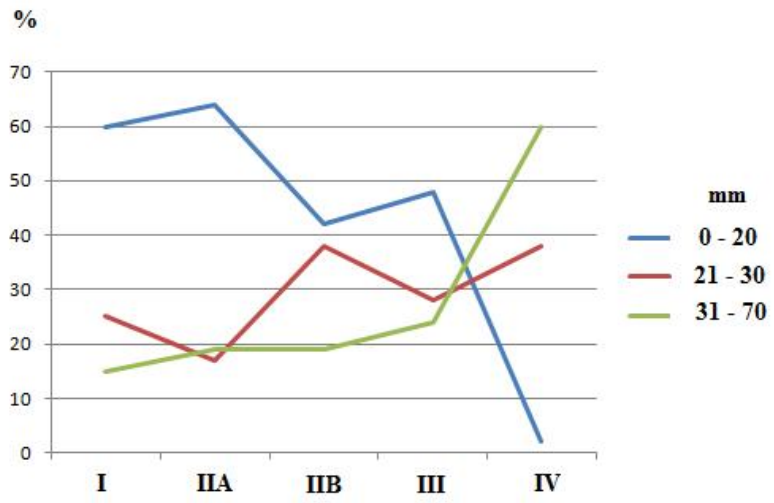

Figure 6.15. Percentages of *Pinus* spp. (hard pine) specimen diameters (mm).

Black Mangrove Diameters

Likewise, the distribution of reliable black mangrove diameter size classes across the five major temporal periods differed significantly from one another (Figure 6.16; $\chi^2 = 62.25$, $df = 12$, p = .005). Again, to accommodate a minimum number of expected cases, size categories were collapsed to include 0-10, 11-20, 21-30, and 31-70 mm. During the Caloosahatchee IIA and IIB periods, higher counts were recorded than might be expected for the 11-20 mm (IIA) and 21-30 mm (IIB) size classes respectively if all of the specimens were drawn from the same population.

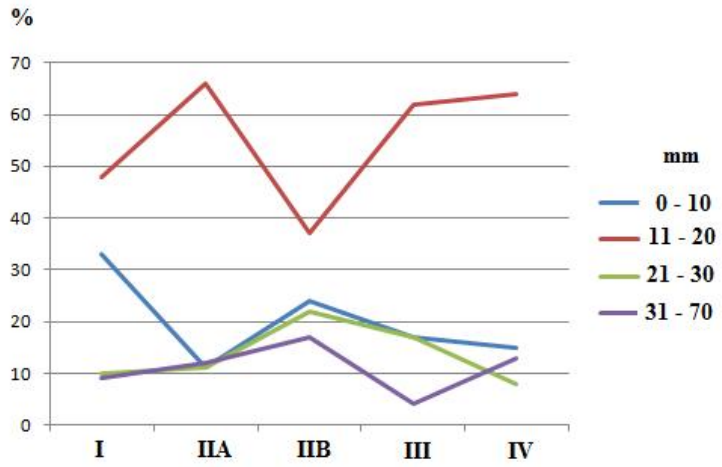

Figure 6.16. Percentages of *Avicennia germinans* (black mangrove) specimen diameters (mm).

Just over 25 percent of the modern black mangrove stems surveyed had a diameter greater than any recorded in the archaeological sample (> 70 mm, see Table 6.32). A g-test, goodness of fit, between the archaeological black mangrove charcoal diameters and the modern black mangrove stem diameters showed statistically significant (p = .05) differences for each of the temporal periods (I g = 643, *df* =7; IIA g = 993, *df* = 6; IIB = 81, *df* = 4; III g = 133, *df* = 4; IV g = 189, *df* = 5). Since the larger size classes are not represented in the charcoal assemblage (i.e., those greater than 70 mm), the distributions were again tested considering only the size ranges 0 – 70 mm. Still the distributions were significantly different which suggests that these differences go beyond simple overrepresentations in the larger size classes. The data suggest that the black mangrove fuelwood diameters do not represent a random selection of what was available in the environment (i.e., modern survey stem data).

The modern deadwood diameter size distribution was also significantly different (p = .05) from the black mangrove charcoal diameters recorded during the analysis (I g = 1272, *df* =7; IIA g = 1128, *df* = 6; IIB g = 195, *df* = 4; III g = 192, *df* = 4; IV g = 247, *df* = 5). The charcoal diameter distributions by time period are not as evenly spread across size classes as is the

deadwood diameters. Therefore, the deadwood distribution alone does not account for the diameter distributions seen in the black mangrove fuelwood data.

Hypothesis Testing

Four broad groups of hypotheses were posed at the outset of this research (see Chapter 1). Each of these is reviewed below along with their conclusions.

Hypothesis 1: the Form of Fuelwood

Based on aerial extent and proximity, the two forest ecosystems most likely to provide woody taxa for fuel include pine woodlands and mangroves. Given the shrubby habit of Florida mangroves, it is expected that the bulk of the fuelwood harvested from mangrove forests will be in the form of smaller diameter stems. Since the southern hard pines are known to naturally shed their lower limbs, it is expected that the bulk of fuelwood harvested from pine trees will be in the form of limbs. Further, it was postulated that the diameters of the archaeological black mangrove charcoal will resemble the diameter distribution of the modern mangrove forest.

Two data sets were used to address this hypothesis: archaeological fuelwood diameters and functional anatomical data. As expected, the majority of the archaeological fuelwood diameters is small (up to 40 mm in diameter; see Table 6.32). The functional anatomical data indicated that 80 percent of the pine assemblage was branch wood and that 75 percent of the black mangrove assemblage was from stem wood (see Table 6.28). A g-test, goodness of fit was used to determine that the distribution of archaeological black mangrove charcoal diameters are significantly different ($p = 0.05$) from the distribution of modern mangrove stem diameters. As

such, the null hypothesis is rejected; the data suggests that mangrove fuelwood diameters were specifically selected and do not simply reflect the size classes commonly available in the forest.

The distributions of archaeological diameters of black mangrove also differed significantly ($p = .05$) by time period suggesting that selection strategies may have shifted through time. As discussed previously, fuelwood sizes for black mangrove were small overall (see Table 6.32); however, a greater number of specimens were recovered from the 11-20 mm size class during the IIA period and 21-30 mm size class during the IIB period than expected. Although not significantly contributing to the chi square results, the frequencies of black mangrove recorded from the III and IV periods is similar to the IIA pattern. Again, sample sizes were small, comparatively, for these later periods but if the pattern holds in future samples, then the IIB fuelwood diameter selection may differ significantly from both earlier and later periods.

Hypothesis 2: Presence of Hurricane-related fuelwood debris

Although a number of natural and recurring disturbances are known to effect mangrove forests, the effect that hurricanes have on mangrove forests in conjunction with human extractive pressure (for fuelwood) is unknown. Mangrove mortality typically increases with tree size (Milbrandt et al. 2006) and proximity to the hurricane eyewall. Thus, it is expected that when the eyewall of a severe hurricane makes landfall in close proximity to the site, the storm will have a marked effect on the fuelwood resources in the immediate vicinity. The need to clean up woody debris, including lower quality fuel taxa, after the storm and the increased availability of standing dead snags (i.e., larger diameter tree trunks) would be expected following a major storm landfall. Thus, if a severe hurricane makes landfall within close proximity, it is expected that there will be an increase in the use of lower quality fuel taxa, such as palm, and that the charcoal (fuel) assemblage will include larger diameter classes (presumably from standing dead snags).

Modern mangrove deadwood data was used to help formulate this hypothesis. Several data sets were used to address this hypothesis including taxa identifications and archaeological charcoal diameters. Two deposits (I-late-f and III) fulfill the expectations of the hypothesis. The first deposit dates from the I-late-f subperiod (AD 250 – 300) and, based on faunal remains, was previously thought to contain storm-related debris. These deposits at Citrus Ridge (N-3, see Table 6.6) and Old Mound (Operation A, see Table 6.10) contain low frequencies of numerous woody taxa, including low quality fuelwoods. Fuelwood diameters were also recorded in the larger size classes during the I-late subperiods (see Table 6.32). Similarly, the III samples from Buck Key also satisfy these criteria and likely represent storm-related debris. Since Buck Key was a barrier island and is located close to the present barrier island chain, it is likely that Buck Key experienced more severe impacts than locations closer to the mainland.

Further supporting the I-late data are the pine injuries, particularly the pattern of traumatic resin canals. These injuries were recorded disproportionately often from samples dating to the I-late-f/g//h and IV periods. Traumatic resin canals may result from a number of different stimuli and if the pattern of injury were spread evenly across the temporal periods, then these injuries might be assumed to be a result of regularly occurring phenomena (such as wildfires). However, since the occurrence of traumatic resin canals follows a similar pattern to the proposed instances of severe hurricanes and subsequent storm-related deposits, the injuries might *largely* be the result of mechanical damage (i.e., damage from hurricane force winds). Additionally, if the pattern of pine injuries was *largely* the result of severe hurricane-induced damage, then samples from the IV period are also indicated for storm-related deposits. Although lower quality fuels were not identified within the IV period samples, these samples contained a small number of large diameter specimens. Since the overall sample size (n = 11) is small from the IV period, these speculations will require further investigation.

Hypothesis 3: Forest Health and Extraction Pressure

If the resident, human population was increasing through time then fuelwood extraction would have also increased through time. If extraction pressure increased and woody taxa experienced shorter intervals between harvesting events, then it is expected that fuelwood diameters will decrease through time. Further, ongoing research (Dobbertin 2005) suggests that trees under stress will prioritize foliage growth, root growth, bud growth, and storage tissue growth before stem growth. If fuel taxa are experiencing increasing levels of stress, from whatever sources or combination of sources, then it is expected that overall incremental growth (i.e., diameters) will decrease as stressed taxa will expend fewer resources in stem growth.

A single data set was used to address this hypothesis, the pine and black mangrove charcoal diameter data. Although the diameter distributions by time period varied significantly from one another, the linear trends in the data did not follow the anticipated pattern. As such, the null hypothesis cannot be rejected. Diameter size trends in the black mangrove (see Figure 6.16) do not show a linear relationship between size and temporal period. The pine diameter size trends (see Figure 6.15) actually appear to show the opposite of hypothesis posed above. Rather than pine diameters decreasing with time, use of the 31-70 mm size class increased through time.

Hypothesis 4: Differential Access to Pine Fuelwood

During the IIA period, the Pineland Site Complex underwent shifts in the pattern of habitation at the site. The internal site structure began to change such that the inhabitants were segregating and occupying discrete midden-mounds. If any of these groups had differential access to the island interior then differences in the use of pine was expected in the fuelwood assemblages.

Much of this chapter has summarized the taxa identifications that were used to address this hypothesis. The dominant fuelwoods are pine and black mangrove but a number of other hardwood taxa were frequently used. As discussed above, many of the subperiod assemblages are small; further, only a few subperiod assemblages have spatially discrete but contemporary proveniences. As such, this hypothesis was tested using IIA-early-c, IIA-late-a, and IV period samples at Pineland (see Figures 6.15 and 6.16). The null hypothesis, that no differential access is apparent, cannot be rejected for the IIA-early-c and IIA-late-a assemblages. Differences in the use of pine were most evident during the IV period between proveniences in the Brown's and Randell Complexes. As such, the null is rejected for the IV period suggesting that inhabitants of the Brown's Complex had greater access to pine.

Similar to the diameter trends discussed above for black mangrove, the size classes in the pine fuelwood were predominantly small for most of the temporal periods (see Table 6.32). The IV period pine diameters, however, differed from the previous periods. In this assemblage, no specimens were recorded in the 11-20 mm size class while numerous specimens were recorded in the 41-50 mm class. This distribution showed a shift away from the smaller diameters toward the larger sizes. Since many of these specimens could not be determined as branch or stem (i.e., they lacked a pith), it is possible that use of larger size classes is related to an increased use of pine boles. For example, these pines might have been used in structures or for the construction of canoes.

Chapter 7

Results and Conclusions

Fuel is an essential resource – it is required for cooking and heating. In South Florida, prehistoric groups relied on wood for fuel because few alternatives were available to them (e.g., dung). Since wood is a limited but renewable resource, its use/extraction could have outpaced its regeneration, particularly as sedentary, prehistoric groups coalesced on the landscape. This research has documented archaeological charcoal to examine the role of fuelwood in the relationship between the dynamic, southwestern Florida environment and its human inhabitants (i.e., the socio-ecological system). As such, hypotheses have been addressed regarding the form of fuelwood used, the impact of natural disturbances (i.e., hurricanes) on the wood supply, indicators of harvesting pressure, and differential access to fuelwood resources. Broadly speaking, trends in wood taxa as well as diameter size classes and functional/ecological wood anatomical variation have been used to investigate the resiliency of the fuelwood resources given natural (e.g., hurricanes, sea level fluctuations, and frosts) and human extraction pressures.

Results

As can be seen in Table 5.2, the number of specimens analyzed from the various Caloosahatchee periods varied but the bulk of the samples dated to the I-late (n = 83) and IIA (n = 98) periods. Sample sizes were much lower for the Archaic (n = 10), IIB (n = 22), III (n = 11), and IV (n = 11) periods. While the number of taxa identified was, in some instances, bolstered by the discussion/inclusion of previously identified taxa (Newsom and Scarry 2013; Scarry and Newsom 1992; Scarry 1999), no previously recorded data were available for the wood anatomical

features recorded here. As such, wood taxa identifications represent a larger data set than the wood anatomical features discussed throughout these results.

Further, while the bulk of analyzed specimens were recovered from general midden contexts, some samples were recovered from more specialized contexts, such as loci, floor middens, or activity areas. In some periods (e.g., III), these floor middens/activity areas constitute the bulk of the analyzed samples. At present, it remains unclear if the inclusion of these non-general midden contexts has systematically biased the results in any significant manner. As will be discussed below, there is variability in the number of taxa identified from the floor middens but without contemporary comparative samples, it is difficult to determine if any other patterns vary significantly and to judge the appropriateness of comparing the floor midden contexts with general midden samples.

Fuelwood Type and Form

Both ubiquity scores and specimen frequencies indicate that hard pine and black mangrove were the two dominant and most often used fuelwoods in the Caloosahatchee region. To a lesser extent, red mangrove and buttonwood were also frequently used as fuel. Live oak ubiquity scores indicate that it too was a preferred fuelwood; it was likely used when available, however, live oak was generally only present in low frequencies within the samples. As such, live oak was not a major constituent of the fuelwood assemblage. Within the analyzed samples, high frequencies of live oak generally indicated historic intrusions or disturbances (e.g., upper levels of Useppa and Citrus Ridge).

Other hardwood taxa were also identified in low frequencies in most of the subperiods analyzed. On average, six wood types were identified in each subperiod by site or site area; greater numbers of identified taxa may be indicative of historic intrusion when seen in deposits

historically exposed (i.e., the modern surface or near surface levels) or disturbed. However, where disturbance can safely be ruled out, greater numbers of identified taxa (e.g., 13-16) signal important differences in fuelwood use because the pattern differs from that demonstrated in the bulk of the analyzed samples. In some cases, deposits which contained a wider array of taxa were likely related to cleanup following severe hurricanes (discussed further below). There may be other contexts, however, where greater numbers of fuel taxa were used. The IIA-late-a floor middens/activity areas from the Brown's Complex contained a greater number of wood taxa (n = 13) than the later floor midden contexts (IIA-late-c; n = 4) within the same deposit. This difference could be the result of small sample sizes for the later floor midden contexts but since an average number of taxa (n = 7) were identified from the III-b floor samples at BCM2, the issue may go beyond sample sizes. The IIA-late-a floor middens at BC may simply have a greater number of fuelwood taxa – the reason for this broader array of wood types is, as yet, unidentified.

Anatomical wood features indicated that branches were the dominant form of pine wood used in the Caloosahatchee region. Conversely, the mangrove fuelwood was predominately stem wood. These findings are consistent with expectations based on taxa ecology (see Chapter 3). The diameters of the roundwood documented here ranged up to 70 mm. Generally, the black mangrove charcoal diameters were small. Additionally, the sizes of the selected black mangrove fuelwood (diameters) differed significantly through time.

Summary – Fuelwood Type and Form

The five preferred fuelwoods (i.e., hard pine, black mangrove, red mangrove, buttonwood, and live oak) are all fairly dense woods (see Chapter 2) – that is, they have a relatively high specific gravity. The value of a fuel is determined by its density and moisture content (Panshin and de Zeeuw 1970:215). Denser woods, typically, burn more slowly because

the outer layers of charcoal insulate and slow the penetration of heat to the wood's interior (Shelton and Shapiro 1976:29). Therefore a number of superior fuelwoods were available and frequently used during the Archaic and Caloosahatchee periods.

Although shifts were documented in the size class distributions of hard pine and black mangrove, the diameters do not linearly decrease through time as might be expected if the resource was overharvested. In fact, during the Caloosahatchee IV period the distribution of pine diameters shifted upward suggesting that larger diameters were used for fuel more frequently than before. Diameter data also suggested that the stem sizes of black mangrove selected for fuel were not randomly chosen from those available in the forest. Since the temporal distributions of black mangrove diameters differed significantly from one another, the sizes selected for black mangrove fuel changed through time.

Hurricane Impacts on Fuel Resources

Since there are numerous disturbance pulses in Florida ecosystems, it was expected that the extant flora would be well adapted to those natural and recurring disturbances. Hurricanes are one such disturbance and the greatest impacts come from severe storms (i.e., category 4 or higher) and with proximity to the eyewall. Prehistoric groups living in Southwest Florida would have dealt with hurricanes and/or tropical storms each year, however, the severity of those storms and their associated impacts would have varied. Based on expectations from modern forest surveys, predictions of severe hurricane impacts on fuelwood resources were tested. In particular, the need to clean up downed, woody debris was expected to increase the array of taxa present and include poor quality fuels, such as palm. Further, following the severe storm event, while seedlings were establishing in storm-induced forest gaps, large-diameter, standing snags were expected to be increasingly used as fuel because larger trees suffer higher rates of mortality.

Two strata met the expectations set out for severe, storm-debris deposits. The first consisted of ST 9-10 from Old Mound, Operation A, and dated to the I-late-f period. The second was located in Excavation B-1 and B-2 deposits from Buck key and dated to the III period. Sixteen wood taxa were identified from these Old Mound strata while 11 were identified from the Buck key deposits. These taxa totals are double the average recorded in the bulk of the examined samples. Both sets of strata also included poor quality fuelwoods and larger diameter fuelwoods were also present in these deposits as was expected.

Summary – Hurricane Impacts on Fuel Resources

It has been proposed that early residents, at least at Pineland, cleared a gap in the mangrove forest to ease shoreline access to the community and increase visibility across the sound. No doubt the forest gap also facilitated land-sea breezes which would have brought relief from the heat and insects (Marquardt and Walker 2013b:876). An unintended consequence of the shoreline clearing, however, was increased susceptibility to severe hurricanes. Mangroves provide numerous ecological services, including buffering shorelines from high winds, storm surges, and flooding (Alongi 2002). When Pineland residents cleared a section of the mangrove forest, the resultant gap allowed severe hurricanes to sweep into the community unimpeded and thus, in at least one of these deposits, there is evidence of storm-surge debris from the barrier islands (Marquardt and Walker 2013b:876).

Not only would the post-storm clean up have provided readily available fuelwood, even if somewhat poor quality, it would also have removed large quantities of downed, woody debris, which could harbor pests, from the immediate vicinity. These materials are locally discrete such that contemporary deposits did not exhibit the greater number of wood types, as might be expected from a short-term event. Following the initial storm clean up, larger-diameter, standing

snags were likely harvested for fuel. Judging from the modern mangrove surveys conducted for this work, standing snags can resist decay and remain in the environment for more than a decade following a major storm event.

The Case for Political Complexity – Differential Access to Pine Resources

The Calusa have long standing anthropological significance as a sedentary, socio-politically complex society because they were not reliant on agriculture – they were fisher-gatherer-hunters. At contact, the Calusa were a stratified society, one in which some persons had differential access to means of production. In other words, not all consumers were producers. Since this socio-political stratification is well documented in the ethnohistoric literature, researchers began to ask at what point in time did the Calusa become a stratified society. How much antiquity did this form of socio-political organization have among the groups of Southwest Florida?

If individuals or a small group of persons had differential access to means of production then it follows that they had greater access to whatever resources resulted from that production. Aside from food and water, shelter and fuel were essential resources and if some consumers had unequal access to the former, might they also have had unequal access to the latter? Since pine fuelwood would have been the more labor intensive to collect, in terms of time and travel away from the settlements examined here, it was targeted during hypothesis testing. In order to test for differential access to pine, percentages of the dominant fuelwood taxa (pine and mangrove taxa in addition to buttonwood) were compared between contemporary but spatially discrete areas at the Pineland Site Complex. Comparisons were available from the IIA-early-c (AD 600 – 650), IIA-late-a (AD 650 – 700), and the IV (AD 1350 – 1500) periods at the Randell Complex Mound 1 and the Brown's Complex.

Sample sizes were small for these RCM1 subperiods and in all cases, greater for the BC samples. During the IIA-early-c and IIA-late-a subperiods, sample sizes at RCM1 were 4 per subperiod while the BC samples ranged from 5 to 21, respectively. As such, the total frequency of specimens was also dramatically different. In addition, the IIA-late-a context at BC included predominately floor middens which were previously discussed as perhaps unusual because of the high number of taxa identified there (i.e., potential storm-related deposits). During these IIA subperiods (see Figure 6.11), the RCM1 frequencies showed slightly greater use of mangrove (66% and 59%, respectively) over pine (31% and 30%, respectively). The IIA subperiod results from BC are less clear cut. The IIA-early-c samples (n = 5) showed a slightly greater use of pine (46%) over mangrove (34%); however, in the subsequent subperiod, mangrove fuel (52%) was used more than pine (38%). If these IIA-late-a floor middens/activity areas are not representative of that subperiod as a whole, however, then this comparison could be misleading and should be tested further.

Caloosahatchee IV period sample sizes for RCM1 were small (n = 6) with the corresponding BC sample size much higher (n = 25 – including samples that were previously analyzed [see Table 6.18]). The use of pine (50%) and mangrove (47%) was split more evenly in these RCM1 samples (see Figure 6.12). The number of BC samples was substantially greater and included two separate excavations, providing additional confirmation of use patterns. Samples from Operation C contained more pine (76%) than mangrove (20%). The situation was similar in the Operation I samples where pine (61%) was identified more frequently than mangrove (36%).

Although the number of RCM1 samples used for these comparisons was small, the patterns of identified pine and mangrove remained fairly consistent with more mangrove woods being identified than pine. The taxa frequency patterns in BC contexts were less straightforward. It is possible that an increased use of pine in BC contexts dated as early as the IIA-early-c subperiod, however, the subsequent IIA-late-a samples did not conform to this pattern.

Alternatively, if these IIA-late-a floor midden samples are not representative of IIA taxa patterns, for whatever reason, then it is possible that BC groups were using more pine fuel as early as the IIA period. Certainly by approximately AD 1350, BC groups appear to be using substantially more pine than mangrove fuelwoods and this pattern was not present in the contemporary RCM1 samples examined. Therefore, these data indicate that BC groups had differential access to pine fuelwood during the Caloosahatchee IV period (AD 1350 – 1500). The roots of this differential fuelwood access may date as early as AD 600, the IIA-early-c subperiod, however, this assertion is less substantiated and will require further work.

Summary – Differential Access to Pine Resources

Marquardt (2014:10-11) argues that deteriorating natural resources (i.e., fishery) fostered increased cooperation at the local and inter-regional scales during the Caloosahatchee IIA (AD 500 – 800) period. Based on archaeological evidence, local groups at this time employed a series of strategies to mitigate the worsening environmental conditions that included shifts from nuclear to co-resident habitations, increased connections with neighboring regions (including trade in exotic items), the creation of water storage/control features, and shifts in diet to include more marine snails, deer, and water fowl (Marquardt 2014:11). Although these shifts may indicate increased socio-political complexity, there are no indications that certain people/groups had differential access to prestige and authority (i.e., a ranked society).

Following a hiatus, Pineland was re-occupied around AD 900 when the availability of dietary resources had significantly improved. The IIB period (AD 800 – 1200) was a dynamic period in the Caloosahatchee region. At Pineland, the settlement orientation shifted from parallel to perpendicular along the shoreline and engineered waterways were constructed, likely as a response to higher water levels (Marquardt 2014:12; Marquardt and Walker 2013b:879). The

middens began to grow vertically as settlement increased. Burial mounds also appeared for the first time during the IIB period, suggesting that certain individuals/groups enjoyed greater prestige and perhaps authority.

At Useppa and Buck Key, Dietler (2008:446-447) documented discrete areas of debris from the manufacture of cutting-edged shell tools (i.e., workshops). Dietler (2008:449-452) further noted that the manufacture of these shell tools were largely standardized, which prompted him to suggest that these items were produced by craft specialists (Dietler 2008:443, 446). Though it seems unlikely that these were full-time, craft specialists, Dietler (2008:442-443) concluded that the production was sponsored by elites because these items are differentially found at elite mound centers.

So for the first time in the IIB period (AD 800 – 1200), clear indications of a chiefdom level of political organization emerges in the Caloosahatchee region – where a group of elites clearly have differential access to prestige and authority, and perhaps resources. If Dietler (2008) is correct and elites were responsible for the increased production of cutting-edged shell tools, then it is reasonable to conclude that elites benefitted from the tool manufacture, likely to obtain canoes to maintain trade/exchange relations.

Given the importance of pine for fuel, construction, and transport, my research examined fuelwood use for differential access to pine resources, at Pineland. The use of pine was compared at two intra-site areas, RCM1 and BC, during the IIA and IV periods. As discussed above, sample sizes were small; however, by at least the Caloosahatchee IV period (AD 1350 – 1500) differences in the use of pine fuelwood between the two midden-mound areas at Pineland were identified. While the use of pine did not appear to be restricted, the increased use of pine documented in the BC deposits may be a result of increased construction and boat building. In other words, the increased use of pine fuelwood may be an unintended consequence of the increased harvesting of pine for non-fuel products.

Summary: Fuel Use through Time

The earliest fuelwood assemblages discussed were from Useppa Island and dated to the Middle and Late Archaic periods. A number of Terminal Archaic period samples were also analyzed from Calusa Island. The Middle Archaic samples differed markedly from the Late and Terminal Archaic samples in that pine was almost exclusively used for fuel. Pine (U, 80-86%) remains ubiquitous in the later Archaic samples, however, the frequency of pine decreases while the frequencies of mangroves and other hardwood taxa increases.

Few samples were available from the early portion of the Caloosahatchee I period; however, limited data from Josslyn Island indicated an increased use of black mangrove over pine. Samples from the I-late period indicate that pine and mangrove taxa were used with nearly equal frequency. Of the mangrove taxa, black mangrove was the dominant fuelwood. Red mangrove was identified in a larger number of samples but its frequency was overall much lower than pine or black mangrove. There were some exceptions to this generalization; the deposits from Low Mound contained more pine and I-late storm-related deposits contained slightly higher frequencies of mangrove taxa.

Although previous analyses (Marquardt and Walker 2013b:878) suggested that the use of mangrove fuelwoods declined in the IIA period, perhaps as a result of drier conditions, this analysis of a large number of samples indicated that the use of black mangrove actually increased in frequency over the use of pine – though the identification of pine remained nearly ubiquitous in the IIA period samples. Red mangrove also had a high ubiquity in the IIA samples but overall the frequency of the specimens was low.

Fuelwood patterns during the IIB period are more difficult to generalize, possibly as a result of low sample sizes. At Pineland, IIB-e/f samples (n = 3) contained more mangrove taxa than pine while the IIB-h samples (n = 3) and IIB samples from BC, Operation B, contained

higher frequencies of pine. At Buck Key during the IIB period, black mangrove was both more ubiquitous and present in greater frequencies than pine.

Patterns of fuel use during the Caloosahatchee III period similarly appeared to differ between contexts. General midden contexts from RCM1 (n = 3) indicated that while pine and black mangrove were ubiquitous, pine was present in lower frequencies than black mangrove. Conversely, in the floor middens of BCM2 (n = 10), pine and black mangrove were again ubiquitous but identified in nearly equal numbers. These differences could have resulted from differing sample sizes or depositional contexts. Finally, as discussed in detail above, both pine and black mangrove were present in the IV period samples but their use appeared to differ spatially at Pineland.

Recommendations for Future Research

Several avenues of future research have been highlighted by this research. In general, secondary midden deposits appeared to have lower frequencies of charcoal than primary midden deposits. If this is indeed a pattern that holds across time and space in the Caloosahatchee region, then an analysis for any systematic biases in recovered taxa would be fruitful. Likewise, the charcoal from feature contexts has received far less analytical attention than general midden contexts. As mentioned above, the IIA-late-a floor midden samples appeared to differ in the number of taxa identified from both contemporary samples and other floor middens/activity areas examined. Future research into more specialized contexts, such as pit features and floor middens, would help to highlight if any differences exist in taxa recovery between these contexts and general midden deposits.

Finally, one additional line of inquiry beyond those summarized above involves the potential use of pine fuelwood as a costly signal by chiefly elites. Although pine fuel may never

have been forbidden to non-elite households, its increased use in the Brown's Mound Complex deposits may function as a form of costly signaling. It has been theorized that costly signals must be differentially costly, be linked to signaler quality, and be effective at signal broadcast (Bliege Bird et al. 2001; see also Bird and O'Connell 2006 and Cronk and Leech 2013). I would speculate that the use of pine fuelwood satisfies these requirements. The collection of pine fuelwood involved a greater labor investment than mangrove collection being located farther from the coast. Since pine wood and black mangrove are both good fuel sources and both create smoke which repels insects, pine fuelwood should not be favored over black mangrove. In fact, pine imparts a distasteful flavor to foods when cooking which black mangrove does not. The burning of pine may be discerned at a distance, it is more labor intensive to acquire, and implies that the residence does less cooking. These factors make pine fuelwood a prime candidate for elite costly signaling reinforcing their control over labor and production, however, further work is needed to test this hypothesis.

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Appendix A

Summary of radio carbon dates obtained.

Beta Sample No.	Sample Name	Material	Date Type	2 Signa Calibration	Isotopes Results	Conventional RC Age
Beta-447112	8LL45ZC21-31	Conifer, Unid hardwood	AMS	Cal BC 900 - 800 (Cal BP 2850 - 2750)	d13C = -23.1	2690 ± 30 BP
Beta-447113	8LL45ZG68-70	Pinus spp.	AMS	Cal BC 790 - 730 (Cal BP 2740 - 2680), Cal BC 690 - 660 (Cal BP 2640 - 2610), Cal BC 690 - 660 (Cal BP 2640 - 2610), Cal BP 650 - 540 (Cal BP 2600 - 2490), Cal BC 650 - 540 (Cal BP 2600 - 2490)	d13C = -25.7	2520 ± 30 BP
Beta-457648	8LL33P-1-098	*Avicennia germinans*	AMS	Cal AD 1265 - 1300 (Cal BP 685 - 650), Cal AD 1370 - 1380 (Cal BP 580 - 570)	d13C = -25.3	700 ± 30 BP
Beta-457649	8LL33P-1-101	*Avicennia germinans*	AMS	Cal AD 1155 - 1255 (Cal BP 795 - 695)	d13C = -24.5	850 ± 30 BP
Beta-471979	8LL27B-1-18-1	*Avicennia germinans*	AMS	Cal AD 574 - 657 (Cal BP 1376 - 1293)	d13C = -24.8	1430 ± 30 BP
	8LL51B-4-13	Wood bark - indet sp.	AMS	Cal AD 1802 - 1938 (Cal BP 148 - 12), Cal AD 1680 - 1739 (Cal BP 270 - 211), Cal AD 1745 - 1763 (Cal BP 205 - 187)	d13C = -27.6	110 ± 30 BP
	8LL722-A1-14	*Avicennia germinans*	AMS	Cal AD 1152 - 1260 (Cal BP 798 - 690), Cal AD 1052 - 1080 (Cal BP 898 - 870)	d13C = -23.2	850 ± 30 BP

Appendix B

Summary of identified wood taxa.

Appendix B: Summary of Wood Taxa Identified.

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
	86-7 A27543	8LL722	Buck Key		A-1-14	IIB ?		4.60
	86-7 A27532	8LL722	Buck Key		B-1-8-1	IV		9.03
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z A, 10-21 cmbs	Terminal Archaic		0.01
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z B, 21-33 cmbs	Terminal Archaic		0.00
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z C, 21-31 cmbs	Terminal Archaic		0.72
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z C, 31-38 cmbs	Terminal Archaic		2.21
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z E, 25-35 cmbs	Terminal Archaic		1.60
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z E, 35-45 cmbs	Terminal Archaic		1.29
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z E/F, 45-56/68 cmbs	Terminal Archaic		3.18
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z F, 58-68 cmbs	Terminal Archaic		0.50

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
	86-7 A27543	8LL722	A-1-14	8	8				1		7
	86-7 A27532	8LL722	B-1-8-1	12	12				12		
		8LL45	Z A, 10-21 cmbs	2	2	2					
		8LL45	Z B, 21-33 cmbs	0	0						
		8LL45	Z C, 21-31 cmbs	92	92			20			
		8LL45	Z C, 31-38 cmbs	175	40	17			2	2	13
		8LL45	Z E, 25-35 cmbs	109	36	7					22
		8LL45	Z E, 35-45 cmbs	78	40	14	4		3		13
		8LL45	Z E/F, 45-56/68 cmbs	166	41	13			1		24
		8LL45	Z F, 58-68 cmbs	38	38	17			1		6

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
	86-7 A27543	8LL722	A-1-14											
	86-7 A27532	8LL722	B-1-8-1											
		8LL45	Z A, 10-21 cmbs											
		8LL45	Z B, 21-33 cmbs											
		8LL45	Z C, 21-31 cmbs											
		8LL45	Z C, 31-38 cmbs	1			3							
		8LL45	Z E, 25-35 cmbs			1					1			
		8LL45	Z E, 35-45 cmbs				4							
		8LL45	Z E/F, 45-56/68 cmbs		2									
		8LL45	Z F, 58-68 cmbs				1							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
	86-7 A27543	8LL722	A-1-14										
	86-7 A27532	8LL722	B-1-8-1										
		8LL45	Z A, 10-21 cmbs										
		8LL45	Z B, 21-33 cmbs										
		8LL45	Z C, 21-31 cmbs										
		8LL45	Z C, 31-38 cmbs										
		8LL45	Z E, 25-35 cmbs										
		8LL45	Z E, 35-45 cmbs										
		8LL45	Z E/F, 45-56/68 cmbs										
		8LL45	Z F, 58-68 cmbs										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
	86-7 A27543	8LL722	A-1-14												
	86-7 A27532	8LL722	B-1-8-1												
		8LL45	Z A, 10-21 cmbs												
		8LL45	Z B, 21-33 cmbs												
		8LL45	Z C, 21-31 cmbs												
		8LL45	Z C, 31-38 cmbs						2						
		8LL45	Z E, 25-35 cmbs												
		8LL45	Z E, 35-45 cmbs												
		8LL45	Z E/F, 45-56/68 cmbs												
		8LL45	Z F, 58-68 cmbs												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
	86-7 A27543	8LL722	A-1-14										
	86-7 A27532	8LL722	B-1-8-1										
		8LL45	Z A, 10-21 cmbs										
		8LL45	Z B, 21-33 cmbs										
		8LL45	Z C, 21-31 cmbs										
		8LL45	Z C, 31-38 cmbs										
		8LL45	Z E, 25-35 cmbs										
		8LL45	Z E, 35-45 cmbs										
		8LL45	Z E/F, 45-56/68 cmbs										
		8LL45	Z F, 58-68 cmbs										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
	86-7 A27543	8LL722	A-1-14									
	86-7 A27532	8LL722	B-1-8-1									
		8LL45	Z A, 10-21 cmbs									
		8LL45	Z B, 21-33 cmbs									
		8LL45	Z C, 21-31 cmbs									
		8LL45	Z C, 31-38 cmbs									
		8LL45	Z E, 25-35 cmbs									
		8LL45	Z E, 35-45 cmbs									
		8LL45	Z E/F, 45-56/68 cmbs									
		8LL45	Z F, 58-68 cmbs									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
	86-7 A27543	8LL722	A-1-14							
	86-7 A27532	8LL722	B-1-8-1							
		8LL45	Z A, 10-21 cmbs							
		8LL45	Z B, 21-33 cmbs							
		8LL45	Z C, 21-31 cmbs	13	59					
		8LL45	Z C, 31-38 cmbs							
		8LL45	Z E, 25-35 cmbs		3			2		
		8LL45	Z E, 35-45 cmbs	2						
		8LL45	Z E/F, 45-56/68 cmbs		1					
		8LL45	Z F, 58-68 cmbs	7	5		1			

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z G, 68-70 cmbs	Terminal Archaic		0.25
		8LL45	Calusa Island	North Beach, Sec. G @ 60 m	Z H, 80-90 cmbs	Terminal Archaic		0.22
	89-19-14	8CH38	Cash Md		A-1-14	I-late		1.12
	89-19-16	8CH38	Cash Md		A-1-16	I-late		8.34
	86-27 A27609	8CH38	Cash Md		A-1-19	I-late		6.45
	87-7-57	8LL27	Galt Island		B-1-17-1	IIA		0.95
	87-72-58	8LL27	Galt Island		B-1-18-1	IIA		1.60
	87-72-59	8LL27	Galt Island		B-1-19-1	IIA		1.16
	87-72-60	8LL27	Galt Island		B-1-20-1	IIA		1.92
	87-72-61	8LL27	Galt Island		B-1-21-1	IIA		0.83
	87-72-68	8LL27	Galt Island		B-1-28	IIA		1.01
	87-72-29	8LL27	Galt Island		B-1-5	IIB/III		11.58
	87-72-29	8LL27	Galt Island		B-1-5	IIB/III		5.95
	87-72-45	8LL27	Galt Island		B-1-6	IIB/III		6.04
	87-72-46	8LL27	Galt Island		B-1-7	IIB/III		2.01
	87-72-47	8LL27	Galt Island		B-1-8	IIB/III		3.92
	87-72-25	8LL27	Galt Island		B-1-2	IV/V		1.90

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
		8LL45	Z G, 68-70 cmbs	17	17	16			1		
		8LL45	Z H, 80-90 cmbs	17	17	7			2		2
	89-19-14	8CH38	A-1-14	9	9	9					
	89-19-16	8CH38	A-1-16	60	40				9		7
	86-27 A27609	8CH38	A-1-19	12	12				12		
	87-7-57	8LL27	B-1-17-1	1	1						1
	87-72-58	8LL27	B-1-18-1	4	4	1			2		
	87-72-59	8LL27	B-1-19-1	2	2	1			1		
	87-72-60	8LL27	B-1-20-1	2	2	1					
	87-72-61	8LL27	B-1-21-1	3	3						
	87-72-68	8LL27	B-1-28	4	4	2			1		
	87-72-29	8LL27	B-1-5	20	20	9			9		1
	87-72-29	8LL27	B-1-5	21	21	5			13		2
	87-72-45	8LL27	B-1-6	20	20	6			7		4
	87-72-46	8LL27	B-1-7	8	8	5			1		2
	87-72-47	8LL27	B-1-8	12	12	8			3		1
	87-72-25	8LL27	B-1-2	11	11	1			9		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
		8LL45	Z G, 68-70 cmbs											
		8LL45	Z H, 80-90 cmbs		3									
	89-19-14	8CH38	A-1-14											
	89-19-16	8CH38	A-1-16				24							
	86-27 A27609	8CH38	A-1-19											
	87-7-57	8LL27	B-1-17-1											
	87-72-58	8LL27	B-1-18-1											
	87-72-59	8LL27	B-1-19-1											
	87-72-60	8LL27	B-1-20-1											
	87-72-61	8LL27	B-1-21-1				3							
	87-72-68	8LL27	B-1-28				1							
	87-72-29	8LL27	B-1-5				1							
	87-72-29	8LL27	B-1-5				1							
	87-72-45	8LL27	B-1-6				1							
	87-72-46	8LL27	B-1-7											
	87-72-47	8LL27	B-1-8											
	87-72-25	8LL27	B-1-2											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
		8LL45	Z G, 68-70 cmbs										
		8LL45	Z H, 80-90 cmbs										
	89-19-14	8CH38	A-1-14										
	89-19-16	8CH38	A-1-16										
	86-27 A27609	8CH38	A-1-19										
	87-7-57	8LL27	B-1-17-1										
	87-72-58	8LL27	B-1-18-1										
	87-72-59	8LL27	B-1-19-1										
	87-72-60	8LL27	B-1-20-1										
	87-72-61	8LL27	B-1-21-1										
	87-72-68	8LL27	B-1-28										
	87-72-29	8LL27	B-1-5										
	87-72-29	8LL27	B-1-5										
	87-72-45	8LL27	B-1-6										
	87-72-46	8LL27	B-1-7										
	87-72-47	8LL27	B-1-8										
	87-72-25	8LL27	B-1-2										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
		8LL45	Z G, 68-70 cmbs												
		8LL45	Z H, 80-90 cmbs												
	89-19-14	8CH38	A-1-14												
	89-19-16	8CH38	A-1-16												
	86-27 A27609	8CH38	A-1-19												
	87-7-57	8LL27	B-1-17-1												
	87-72-58	8LL27	B-1-18-1												
	87-72-59	8LL27	B-1-19-1												
	87-72-60	8LL27	B-1-20-1												
	87-72-61	8LL27	B-1-21-1												
	87-72-68	8LL27	B-1-28												
	87-72-29	8LL27	B-1-5												
	87-72-29	8LL27	B-1-5												
	87-72-45	8LL27	B-1-6												
	87-72-46	8LL27	B-1-7												
	87-72-47	8LL27	B-1-8												
	87-72-25	8LL27	B-1-2												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
		8LL45	Z G, 68-70 cmbs										
		8LL45	Z H, 80-90 cmbs										
	89-19-14	8CH38	A-1-14										
	89-19-16	8CH38	A-1-16										
	86-27 A27609	8CH38	A-1-19										
	87-7-57	8LL27	B-1-17-1										
	87-72-58	8LL27	B-1-18-1										
	87-72-59	8LL27	B-1-19-1										
	87-72-60	8LL27	B-1-20-1										
	87-72-61	8LL27	B-1-21-1										
	87-72-68	8LL27	B-1-28										
	87-72-29	8LL27	B-1-5										
	87-72-29	8LL27	B-1-5										
	87-72-45	8LL27	B-1-6										
	87-72-46	8LL27	B-1-7										
	87-72-47	8LL27	B-1-8										
	87-72-25	8LL27	B-1-2							1			

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
		8LL45	Z G, 68-70 cmbs									
		8LL45	Z H, 80-90 cmbs							1		
	89-19-14	8CH38	A-1-14									
	89-19-16	8CH38	A-1-16									
	86-27 A27609	8CH38	A-1-19									
	87-7-57	8LL27	B-1-17-1									
	87-72-58	8LL27	B-1-18-1									
	87-72-59	8LL27	B-1-19-1									
	87-72-60	8LL27	B-1-20-1			1						
	87-72-61	8LL27	B-1-21-1									
	87-72-68	8LL27	B-1-28									
	87-72-29	8LL27	B-1-5									
	87-72-29	8LL27	B-1-5									
	87-72-45	8LL27	B-1-6									
	87-72-46	8LL27	B-1-7									
	87-72-47	8LL27	B-1-8									
	87-72-25	8LL27	B-1-2									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
		8LL45	Z G, 68-70 cmbs							
		8LL45	Z H, 80-90 cmbs					2		
	89-19-14	8CH38	A-1-14							
	89-19-16	8CH38	A-1-16							
	86-27 A27609	8CH38	A-1-19							
	87-7-57	8LL27	B-1-17-1							
	87-72-58	8LL27	B-1-18-1				1			
	87-72-59	8LL27	B-1-19-1							
	87-72-60	8LL27	B-1-20-1							
	87-72-61	8LL27	B-1-21-1							
	87-72-68	8LL27	B-1-28							
	87-72-29	8LL27	B-1-5							
	87-72-29	8LL27	B-1-5							
	87-72-45	8LL27	B-1-6		2					
	87-72-46	8LL27	B-1-7							
	87-72-47	8LL27	B-1-8							
	87-72-25	8LL27	B-1-2							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
	89-8-24.1-4	8LL32	Josslyn Island		A-1-12	IIB		23.93
	89-8-28	8LL32	Josslyn Island		A-1-22	I-early		18.66
	87-28-14	8LL32	Josslyn Island		A-2-6-1	IIB	Y	62.54
	94-5-3	8LL2	Mound Key		C-1-65	I-late/IIA		0.90
	94-5-4-1	8LL2	Mound Key		C-1-66-1	I-late/IIA		5.40
4744142	90-19-4	8LL1612	Pineland	Low Mound	A-1-75, ST 2	I-late-g/h		1.10
4744143	90-19-5	8LL1612	Pineland	Low Mound	A-1-76, ST 2	I-late-g/h		0.10
4744144	90-19-6	8LL1612	Pineland	Low Mound	A-1-77, ST 2	I-late-g/h		0.20
4744147	90-19-7	8LL1612	Pineland	Low Mound	A-1-78, ST 2	I-late-g/h		0.30
4743773	90-3-44-2/14	8LL33	Pineland	BC	C-5-32[88]-2/14, ST 8	IIA-late-a	Y	1.20

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
	89-8-24.1-4	8LL32	A-1-12	NA	20	10			8		1
	89-8-28	8LL32	A-1-22	NA	20	2			14		2
	87-28-14	8LL32	A-2-6-1	NA	20	16			4		
	94-5-3	8LL2	C-1-65	12	12	9			3		
	94-5-4-1	8LL2	C-1-66-1	23	23	3			18		
4744142	90-19-4	8LL1612	A-1-75, ST 2	13	13	10					
4744143	90-19-5	8LL1612	A-1-76, ST 2	4	4	3					
4744144	90-19-6	8LL1612	A-1-77, ST 2	3	3	1					
4744147	90-19-7	8LL1612	A-1-78, ST 2	3	3	1			2		
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8	1	1						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
	89-8-24.1-4	8LL32	A-1-12											
	89-8-28	8LL32	A-1-22											
	87-28-14	8LL32	A-2-6-1											
	94-5-3	8LL2	C-1-65											
	94-5-4-1	8LL2	C-1-66-1				1							
4744142	90-19-4	8LL1612	A-1-75, ST 2								3			
4744143	90-19-5	8LL1612	A-1-76, ST 2					1						
4744144	90-19-6	8LL1612	A-1-77, ST 2							1				
4744147	90-19-7	8LL1612	A-1-78, ST 2											
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
	89-8-24.1-4	8LL32	A-1-12										
	89-8-28	8LL32	A-1-22										
	87-28-14	8LL32	A-2-6-1										
	94-5-3	8LL2	C-1-65										
	94-5-4-1	8LL2	C-1-66-1										
4744142	90-19-4	8LL161 2	A-1-75, ST 2										
4744143	90-19-5	8LL161 2	A-1-76, ST 2										
4744144	90-19-6	8LL161 2	A-1-77, ST 2										
4744147	90-19-7	8LL161 2	A-1-78, ST 2										
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
	89-8-24.1-4	8LL32	A-1-12												
	89-8-28	8LL32	A-1-22												
	87-28-14	8LL32	A-2-6-1												
	94-5-3	8LL2	C-1-65												
	94-5-4-1	8LL2	C-1-66-1												
4744142	90-19-4	8LL161 2	A-1-75, ST 2												
4744143	90-19-5	8LL161 2	A-1-76, ST 2												
4744144	90-19-6	8LL161 2	A-1-77, ST 2												
4744147	90-19-7	8LL161 2	A-1-78, ST 2												
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8						1						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
	89-8-24.1-4	8LL32	A-1-12										
	89-8-28	8LL32	A-1-22										
	87-28-14	8LL32	A-2-6-1										
	94-5-3	8LL2	C-1-65										
	94-5-4-1	8LL2	C-1-66-1										
4744142	90-19-4	8LL161 2	A-1-75, ST 2										
4744143	90-19-5	8LL161 2	A-1-76, ST 2										
4744144	90-19-6	8LL161 2	A-1-77, ST 2										
4744147	90-19-7	8LL161 2	A-1-78, ST 2										
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
	89-8-24.1-4	8LL32	A-1-12									
	89-8-28	8LL32	A-1-22									
	87-28-14	8LL32	A-2-6-1									
	94-5-3	8LL2	C-1-65									
	94-5-4-1	8LL2	C-1-66-1									
4744142	90-19-4	8LL161 2	A-1-75, ST 2									
4744143	90-19-5	8LL161 2	A-1-76, ST 2									
4744144	90-19-6	8LL161 2	A-1-77, ST 2									
4744147	90-19-7	8LL161 2	A-1-78, ST 2									
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
	89-8-24.1-4	8LL32	A-1-12		1					
	89-8-28	8LL32	A-1-22		2					
	87-28-14	8LL32	A-2-6-1							
	94-5-3	8LL2	C-1-65							
	94-5-4-1	8LL2	C-1-66-1		1					
4744142	90-19-4	8LL1612	A-1-75, ST 2							
4744143	90-19-5	8LL1612	A-1-76, ST 2							
4744144	90-19-6	8LL1612	A-1-77, ST 2		1					
4744147	90-19-7	8LL1612	A-1-78, ST 2							
4743773	90-3-44-2/14	8LL33	C-5-32[88]-2/14, ST 8							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4743776	90-3-45	8LL33	Pineland	BC	C-5-33[89], ST 8	IIA-late-a	Y	3.88
4743781	90-3-45-1	8LL33	Pineland	BC	C-5-33[89]-1, ST 8	IIA-late-a	Y	3.23
4743798	90-3-48/3	8LL33	Pineland	BC	C-5-36[92]/3	IIA-early-c		0.49
4743808	90-3-53-3	8LL33	Pineland	BC	C-5N-33[89]-3	IIA-late-a	Y	0.40
4743813	90-3-55	8LL33	Pineland	BC	C-5N-35[91], ST 18	IIA-early-c		8.53
4743818	90-3-57-1	8LL33	Pineland	BC	C-5N-37[93]-1, ST 13	IIA-early-c		0.46
4744284	92-5-8	8LL33	Pineland	BC	C-6-89 E[88], ST 7, 11	IIA-late-a	Y	1.66
4744318	92-5-18	8LL33	Pineland	BC	C-6-89, ST 7, 11, 21	IIA-late-a	Y	57.80
4744319	92-5-18-1	8LL33	Pineland	BC	C-6-89-1	IIA-late-a	Y	4.50
4744338	92-5-32-3	8LL33	Pineland	BC	C-6-89-3	IIA-late-a	Y	0.50
4744321	92-5-19-1	8LL33	Pineland	BC	C-6-90-1	IIA-late-a	Y	0.10
4744287	92-5-12	8LL33	Pineland	BC	C-6-90W (West ledge), ST 8	IIA-late-a	Y	21.14
4744322	92-5-20	8LL33	Pineland	BC	C-6-91, ST 8, 21, 22	IIA-late-a	Y	1.00
4744323	92-5-20-1	8LL33	Pineland	BC	C-6-91-1	IIA-late-a	Y	1.65
4744325	92-5-20-3	8LL33	Pineland	BC	C-6-91-3	IIA-late-a	Y	0.38
4744326	92-5-20-3	8LL33	Pineland	BC	C-6-91-3	IIA-late-a	Y	0.10
4744327	92-5-20-3	8LL33	Pineland	BC	C-6-91-3	IIA-late-a	Y	0.11
4744329	92-5-20-3	8LL33	Pineland	BC	C-6-91-3	IIA-late-a	Y	6.19

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4743776	90-3-45	8LL33	C-5-33[89], ST 8	12	12	2			6		1
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8	10	10	8			2		
4743798	90-3-48/3	8LL33	C-5-36[92]/3	13	13						
4743808	90-3-53-3	8LL33	C-5N-33[89]-3	3	3				3		
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	19	19	9			6		1
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13	1	1	1					
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11	6	6	2			3		
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21	230	40	20			13		1
4744319	92-5-18-1	8LL33	C-6-89-1	40	40	29			10		
4744338	92-5-32-3	8LL33	C-6-89-3	13	13	11					2
4744321	92-5-19-1	8LL33	C-6-90-1	1	1				1		
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	253	40	8			18		3
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22	7	7				7		
4744323	92-5-20-1	8LL33	C-6-91-1	8	8	5			3		
4744325	92-5-20-3	8LL33	C-6-91-3	2	2	1			1		
4744326	92-5-20-3	8LL33	C-6-91-3	1	1						
4744327	92-5-20-3	8LL33	C-6-91-3	1	1						
4744329	92-5-20-3	8LL33	C-6-91-3	119	40	9	6		13		7

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4743776	90-3-45	8LL33	C-5-33[89], ST 8				2							
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8											
4743798	90-3-48/3	8LL33	C-5-36[92]/3											
4743808	90-3-53-3	8LL33	C-5N-33[89]-3											
4743813	90-3-55	8LL33	C-5N-35[91], ST 18							1				
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13											
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11											
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21		3									
4744319	92-5-18-1	8LL33	C-6-89-1	1										
4744338	92-5-32-3	8LL33	C-6-89-3											
4744321	92-5-19-1	8LL33	C-6-90-1											
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8				2			6				
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22											
4744323	92-5-20-1	8LL33	C-6-91-1											
4744325	92-5-20-3	8LL33	C-6-91-3											
4744326	92-5-20-3	8LL33	C-6-91-3											
4744327	92-5-20-3	8LL33	C-6-91-3											
4744329	92-5-20-3	8LL33	C-6-91-3							1				

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4743776	90-3-45	8LL33	C-5-33[89], ST 8										
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8										
4743798	90-3-48/3	8LL33	C-5-36[92]/3										
4743808	90-3-53-3	8LL33	C-5N-33[89]-3										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18										
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11										
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21										
4744319	92-5-18-1	8LL33	C-6-89-1										
4744338	92-5-32-3	8LL33	C-6-89-3										
4744321	92-5-19-1	8LL33	C-6-90-1										
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8										
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22										
4744323	92-5-20-1	8LL33	C-6-91-1										
4744325	92-5-20-3	8LL33	C-6-91-3										
4744326	92-5-20-3	8LL33	C-6-91-3		1								
4744327	92-5-20-3	8LL33	C-6-91-3										
4744329	92-5-20-3	8LL33	C-6-91-3										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4743776	90-3-45	8LL33	C-5-33[89], ST 8												
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8												
4743798	90-3-48/3	8LL33	C-5-36[92]/3						13						
4743808	90-3-53-3	8LL33	C-5N-33[89]-3												
4743813	90-3-55	8LL33	C-5N-35[91], ST 18						2						
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13												
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11												
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21						3						
4744319	92-5-18-1	8LL33	C-6-89-1												
4744338	92-5-32-3	8LL33	C-6-89-3												
4744321	92-5-19-1	8LL33	C-6-90-1												
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8						1						
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22												
4744323	92-5-20-1	8LL33	C-6-91-1												
4744325	92-5-20-3	8LL33	C-6-91-3												
4744326	92-5-20-3	8LL33	C-6-91-3												
4744327	92-5-20-3	8LL33	C-6-91-3												
4744329	92-5-20-3	8LL33	C-6-91-3					1	1						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4743776	90-3-45	8LL33	C-5-33[89], ST 8										
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8										
4743798	90-3-48/3	8LL33	C-5-36[92]/3										
4743808	90-3-53-3	8LL33	C-5N-33[89]-3										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18										
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11										
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21										
4744319	92-5-18-1	8LL33	C-6-89-1										
4744338	92-5-32-3	8LL33	C-6-89-3										
4744321	92-5-19-1	8LL33	C-6-90-1										
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8		2								
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22										
4744323	92-5-20-1	8LL33	C-6-91-1										
4744325	92-5-20-3	8LL33	C-6-91-3										
4744326	92-5-20-3	8LL33	C-6-91-3										
4744327	92-5-20-3	8LL33	C-6-91-3										
4744329	92-5-20-3	8LL33	C-6-91-3										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4743776	90-3-45	8LL33	C-5-33[89], ST 8									
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8									
4743798	90-3-48/3	8LL33	C-5-36[92]/3									
4743808	90-3-53-3	8LL33	C-5N-33[89]-3									
4743813	90-3-55	8LL33	C-5N-35[91], ST 18									
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13									
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11									
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21									
4744319	92-5-18-1	8LL33	C-6-89-1									
4744338	92-5-32-3	8LL33	C-6-89-3									
4744321	92-5-19-1	8LL33	C-6-90-1									
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8									
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22									
4744323	92-5-20-1	8LL33	C-6-91-1									
4744325	92-5-20-3	8LL33	C-6-91-3									
4744326	92-5-20-3	8LL33	C-6-91-3									
4744327	92-5-20-3	8LL33	C-6-91-3									
4744329	92-5-20-3	8LL33	C-6-91-3									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4743776	90-3-45	8LL33	C-5-33[89], ST 8		1					
4743781	90-3-45-1	8LL33	C-5-33[89]-1, ST 8							
4743798	90-3-48/3	8LL33	C-5-36[92]/3							
4743808	90-3-53-3	8LL33	C-5N-33[89]-3							
4743813	90-3-55	8LL33	C-5N-35[91], ST 18							
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13							
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7, 11	1						
4744318	92-5-18	8LL33	C-6-89, ST 7, 11, 21							
4744319	92-5-18-1	8LL33	C-6-89-1							
4744338	92-5-32-3	8LL33	C-6-89-3							
4744321	92-5-19-1	8LL33	C-6-90-1							
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8							
4744322	92-5-20	8LL33	C-6-91, ST 8, 21, 22							
4744323	92-5-20-1	8LL33	C-6-91-1							
4744325	92-5-20-3	8LL33	C-6-91-3							
4744326	92-5-20-3	8LL33	C-6-91-3							
4744327	92-5-20-3	8LL33	C-6-91-3		1					
4744329	92-5-20-3	8LL33	C-6-91-3		2					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744296	92-5-13	8LL33	Pineland	BC	C-6-91W (West ledge), ST 8	IIA-late-a	Y	4.89
4744297	92-5-13	8LL33	Pineland	BC	C-6-91W (West ledge), ST 8	IIA-late-a	Y	0.38
4744298	92-5-13	8LL33	Pineland	BC	C-6-91W (West ledge), ST 8	IIA-late-a	Y	3.03
4744299	92-5-13	8LL33	Pineland	BC	C-6-91W (West ledge), ST 8	IIA-late-a	Y	5.09
4744300	92-5-13	8LL33	Pineland	BC	C-6-91W (West ledge), ST 8	IIA-late-a	Y	20.60
4744335	92-5-21	8LL33	Pineland	BC	C-6-92, ST 8, 13, 21-23	IIA-late-a	Y	0.32
4744336	92-5-21-1	8LL33	Pineland	BC	C-6-92-1	IIA-late-a	Y	3.10
4744314	92-5-14A	8LL33	Pineland	BC	C-6-92E [91], ST 13	IIA-early-c		19.10
4744337	92-5-22	8LL33	Pineland	BC	C-6-93	IIA-early-c		8.54
4743603	88-8-230	8LL33	Pineland	BC	C-1-11[68,69],ST5-7, 14	III-b		1.47
4743602	88-8-229	8LL33	Pineland	BC	C-1-14[71,72],ST 7, 13-14	III-b		1.08

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	18	18				18		
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8	5	5						
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	10	10	10					
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	45	40	8			20		3
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	217	40	14			24		1
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23	1	1		1				
4744336	92-5-21-1	8LL33	C-6-92-1	44	40	17			10		6
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	192	40	18			18		1
4744337	92-5-22	8LL33	C-6-93	14	14	12			2		
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	5	5	5					
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14	2	2	1			1		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8											
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8											
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8											
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8				6			3				
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8				1							
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23											
4744336	92-5-21-1	8LL33	C-6-92-1						2	3				
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13				1			1				
4744337	92-5-22	8LL33	C-6-93											
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14											
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23										
4744336	92-5-21-1	8LL33	C-6-92-1										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13										
4744337	92-5-22	8LL33	C-6-93										
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14										
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8												
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8												
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8												
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8												
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8												
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23												
4744336	92-5-21-1	8LL33	C-6-92-1												
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13												
4744337	92-5-22	8LL33	C-6-93												
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14												
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8										
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23										
4744336	92-5-21-1	8LL33	C-6-92-1										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13										1
4744337	92-5-22	8LL33	C-6-93										
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14										
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8									
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8									
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8									
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8									
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8									
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23									
4744336	92-5-21-1	8LL33	C-6-92-1									
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13									
4744337	92-5-22	8LL33	C-6-93									
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14									
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8							
4744297	92-5-13	8LL33	C-6-91W (West ledge), ST 8						5	
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8							
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8							
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8							
4744335	92-5-21	8LL33	C-6-92, ST 8, 13, 21-23							
4744336	92-5-21-1	8LL33	C-6-92-1	2						
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13							
4744337	92-5-22	8LL33	C-6-93							
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14							
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4743563	88-8-164	8LL33	Pineland	BCC1	D-1-10[96], ST 8	IIA-late		1.00
4743504	88-8-32	8LL33	Pineland	BCC1	D-1-3[89], ST 2	IIB-c, -d		2.80
4743523	88-8-68	8LL33	Pineland	BCC1	D-1-5[91], ST 3-4	IIA-late		5.40
4743524	88-8-72	8LL33	Pineland	BCC1	D-1-6[92], ST 4	IIA-late		2.08
4743565	88-8-171	8LL33	Pineland	BCC1	D-1-7[93], ST 5-6	IIA-late		4.33
4743562	88-8-163	8LL33	Pineland	BCC1	D-1-8[94], ST 6	IIA-late		2.57
4743554	88-8-105	8LL33	Pineland	BCC1	D-1-9[95], ST 7	IIA-late		7.26
4745038	92-40-4	8LL33	Pineland	BCC1	D-2-79, ST 6,3	III	Y	23.66
4743665	89-7-316	8LL33	Pineland	BCM1	B-1-M[36-40], ST 22-24	IIB		51.37
4743672	89-7-351	8LL33	Pineland	BCM1	B-1-N[38-43], ST 23-25	IIB		8.11
4743659	89-7-309	8LL33	Pineland	BCM1	B-1-P[40-43], ST 24-25	IIB		27.57
4744002	90-7-39	8LL33	Pineland	BCM2	I-1-72, ST 17-20	III-b	Y	37.99
4744014	90-7-41	8LL33	Pineland	BCM2	I-1-73, ST 17-20	III-b	Y	23.11
4744017	90-7-41-2	8LL33	Pineland	BCM2	I-1-73-2, ST 21?	III-b	Y	21.51
4744018	90-7-42-1	8LL33	Pineland	BCM2	I-1-74-1, ST 21?	III-b	Y	13.51

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4743563	88-8-164	8LL33	D-1-10[96], ST 8	2	2				1		1
4743504	88-8-32	8LL33	D-1-3[89], ST 2	19	19				1		1
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	14	14	3			10		1
4743524	88-8-72	8LL33	D-1-6[92], ST 4	8	8	2			5		
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	14	14	3			8		2
4743562	88-8-163	8LL33	D-1-8[94], ST 6	9	9	1			7		1
4743554	88-8-105	8LL33	D-1-9[95], ST 7	50	40	10			16		11
4745038	92-40-4	8LL33	D-2-79, ST 6,3	116	40	10			21		8
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	194	40	32			3		2
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	25	25	21			2		
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	111	40	22			9		
4744002	90-7-39	8LL33	I-1-72, ST 17-20	203	39	11			17		4
4744014	90-7-41	8LL33	I-1-73, ST 17-20	85	40	9			26		5
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?	101	40	17			15		
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?	20	20	17			2		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4743563	88-8-164	8LL33	D-1-10[96], ST 8											
4743504	88-8-32	8LL33	D-1-3[89], ST 2											
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4											
4743524	88-8-72	8LL33	D-1-6[92], ST 4				1							
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6											
4743562	88-8-163	8LL33	D-1-8[94], ST 6											
4743554	88-8-105	8LL33	D-1-9[95], ST 7											
4745038	92-40-4	8LL33	D-2-79, ST 6,3							1				
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24					2		1				
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25				1							
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25				2			3				
4744002	90-7-39	8LL33	I-1-72, ST 17-20				3			3				
4744014	90-7-41	8LL33	I-1-73, ST 17-20											
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?							4				
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?							1				

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4743563	88-8-164	8LL33	D-1-10[96], ST 8										
4743504	88-8-32	8LL33	D-1-3[89], ST 2										
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4										
4743524	88-8-72	8LL33	D-1-6[92], ST 4										
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6										
4743562	88-8-163	8LL33	D-1-8[94], ST 6										
4743554	88-8-105	8LL33	D-1-9[95], ST 7										
4745038	92-40-4	8LL33	D-2-79, ST 6,3										
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24										
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25										
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25										
4744002	90-7-39	8LL33	I-1-72, ST 17-20										
4744014	90-7-41	8LL33	I-1-73, ST 17-20										
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?										
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4743563	88-8-164	8LL33	D-1-10[96], ST 8												
4743504	88-8-32	8LL33	D-1-3[89], ST 2									3			
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4												
4743524	88-8-72	8LL33	D-1-6[92], ST 4												
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6												
4743562	88-8-163	8LL33	D-1-8[94], ST 6												
4743554	88-8-105	8LL33	D-1-9[95], ST 7												
4745038	92-40-4	8LL33	D-2-79, ST 6,3												
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25						1						
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25							2					
4744002	90-7-39	8LL33	I-1-72, ST 17-20												
4744014	90-7-41	8LL33	I-1-73, ST 17-20												
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?												
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4743563	88-8-164	8LL33	D-1-10[96], ST 8										
4743504	88-8-32	8LL33	D-1-3[89], ST 2										
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4										
4743524	88-8-72	8LL33	D-1-6[92], ST 4										
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6										
4743562	88-8-163	8LL33	D-1-8[94], ST 6										
4743554	88-8-105	8LL33	D-1-9[95], ST 7		1								
4745038	92-40-4	8LL33	D-2-79, ST 6,3										
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24										
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25										
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25								1		
4744002	90-7-39	8LL33	I-1-72, ST 17-20				1						
4744014	90-7-41	8LL33	I-1-73, ST 17-20										
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?		1								
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4743563	88-8-164	8LL33	D-1-10[96], ST 8									
4743504	88-8-32	8LL33	D-1-3[89], ST 2	14								
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4									
4743524	88-8-72	8LL33	D-1-6[92], ST 4									
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6									
4743562	88-8-163	8LL33	D-1-8[94], ST 6									
4743554	88-8-105	8LL33	D-1-9[95], ST 7									
4745038	92-40-4	8LL33	D-2-79, ST 6,3									
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24									
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25									
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25									
4744002	90-7-39	8LL33	I-1-72, ST 17-20									
4744014	90-7-41	8LL33	I-1-73, ST 17-20									
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?									
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4743563	88-8-164	8LL33	D-1-10[96], ST 8							
4743504	88-8-32	8LL33	D-1-3[89], ST 2							
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4							
4743524	88-8-72	8LL33	D-1-6[92], ST 4							
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6		1					
4743562	88-8-163	8LL33	D-1-8[94], ST 6							
4743554	88-8-105	8LL33	D-1-9[95], ST 7		2					
4745038	92-40-4	8LL33	D-2-79, ST 6,3							
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24							
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25							
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25		1					
4744002	90-7-39	8LL33	I-1-72, ST 17-20							
4744014	90-7-41	8LL33	I-1-73, ST 17-20							
4744017	90-7-41-2	8LL33	I-1-73-2, ST 21?		3					
4744018	90-7-42-1	8LL33	I-1-74-1, ST 21?							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4743986	90-7-37	8LL33	Pineland	BCM2	I-2-65, ST 9A, 10, 11, 12, 14	IV		67.45
4743994	90-7-38	8LL33	Pineland	BCM2	I-2-66, ST 9, 12, 14, 15	IV		81.28
4744101	90-7-53	8LL33	Pineland	BCM2	I-2-75, ST 19	III-b	Y	26.20
4744346	92-6-2-1	8LL33	Pineland	BCM2	I-3-58-1, ST 1	IV		55.21
4744352	92-6-4-1	8LL33	Pineland	BCM2	I-3-60-1, ST 4	IV		105.79
4744473	92-6-27-1	8LL33	Pineland	BCM2	I-3-68-1, ST 9	IV		78.54
4744109	90-8-9	8LL33	Pineland	Citrus Ridge	N-1-82, ST 2, S616 E800	IIB-c, -d, -e		0.60
4744110	90-8-10	8LL33	Pineland	Citrus Ridge	N-1-83, ST 2, S616 E800	IIB-c, -d, -e		1.70
4744111	90-8-11	8LL33	Pineland	Citrus Ridge	N-1-84, ST 2, S616 E800	IIB-c, -d, -e		2.20
4744112	90-8-12	8LL33	Pineland	Citrus Ridge	N-1-85, ST 3, S616 E800	I-late-g, -h, -i		3.50
4744113	90-8-13	8LL33	Pineland	Citrus Ridge	N-1-86, ST 4, S616 E800	I-late-g		4.40
4744114	90-8-24	8LL33	Pineland	Citrus Ridge	N-2-86, ST 3 A + B, S634 E821	I-late-g, -h, -i		0.40

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14	425	40	31			9		
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15	560	40	20			16		2
4744101	90-7-53	8LL33	I-2-75, ST 19	78	40	11			24		2
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	332	40	25			13		1
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4	408	40	17			17		4
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9	482	40	28			12		
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800	8	8	2			6		
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800	13	14				12		
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800	3	3	1			2		
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800	19	19	2			16		
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800	16	16	8			2		
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821	9	9						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14											
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15											
4744101	90-7-53	8LL33	I-2-75, ST 19				2							
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1								1			
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4							2				
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9											
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800											
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800		1		1							
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800											
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800				1							
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800						5	1				
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821				7							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14										
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15										
4744101	90-7-53	8LL33	I-2-75, ST 19										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1										
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4										
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9										
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800										
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800										
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800										
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800										
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800										
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14												
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15												
4744101	90-7-53	8LL33	I-2-75, ST 19												
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1												
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4												
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9												
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800												
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800												
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800												
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800												
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800												
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14										
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15	1	1								
4744101	90-7-53	8LL33	I-2-75, ST 19										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1										
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4										
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9										
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800										
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800										
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800										
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800										
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800										
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14									
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15									
4744101	90-7-53	8LL33	I-2-75, ST 19									
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1									
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4									
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9									
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800									
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800									
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800									
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800									
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800									
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4743986	90-7-37	8LL33	I-2-65, ST 9A, 10, 11, 12, 14							
4743994	90-7-38	8LL33	I-2-66, ST 9, 12, 14, 15							
4744101	90-7-53	8LL33	I-2-75, ST 19	1						
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1							
4744352	92-6-4-1	8LL33	I-3-60-1, ST 4							
4744473	92-6-27-1	8LL33	I-3-68-1, ST 9							
4744109	90-8-9	8LL33	N-1-82, ST 2, S616 E800							
4744110	90-8-10	8LL33	N-1-83, ST 2, S616 E800							
4744111	90-8-11	8LL33	N-1-84, ST 2, S616 E800							
4744112	90-8-12	8LL33	N-1-85, ST 3, S616 E800							
4744113	90-8-13	8LL33	N-1-86, ST 4, S616 E800							
4744114	90-8-24	8LL33	N-2-86, ST 3 A + B, S634 E821		2					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744115	90-8-25	8LL33	Pineland	Citrus Ridge	N-2-87, ST 4/5, S634 E821	I-late-g, -f		0.20
	2011-3-1	8LL33	Pineland	Citrus Ridge	N-3-81.5, ST 1	I-late-e, -f		1.00
	2011-3-2	8LL33	Pineland	Citrus Ridge	N-3-82, ST 1	I-late-e, -f		19.00
	2011-3-3	8LL33	Pineland	Citrus Ridge	N-3-82.5, ST 1	I-late-e, -f		11.00
	2011-3-4	8LL33	Pineland	Citrus Ridge	N-3-83, ST 1	I-late-e, -f		25.00
	2011-3-5	8LL33	Pineland	Citrus Ridge	N-3-83.5, ST 1	I-late-e, -f		43.00
	2011-3-6	8LL33	Pineland	Citrus Ridge	N-3-84, ST 1	I-late-e, -f		9.00
	2011-3-7	8LL33	Pineland	Citrus Ridge	N-3-84.5, ST 1	I-late-e, -f		2.00
	2011-3-9	8LL33	Pineland	Citrus Ridge	N-4-82, ST 1	I-late-e, -f		1.00
	2011-3-10	8LL33	Pineland	Citrus Ridge	N-4-83, ST 1	I-late-e, -f		3.00
	2011-3-10/2	8LL33	Pineland	Citrus Ridge	N-4-83/2, ST 1	I-late-e, -f		1.00
	2011-3-11	8LL33	Pineland	Citrus Ridge	N-4-84, ST 1	I-late-e, -f		3.00
	2011-3-12	8LL33	Pineland	Citrus Ridge	N-4-84.5, ST 1	I-late-e, -f		1.00
	2011-3-11/6	8LL33	Pineland	Citrus Ridge	N-4-84/6, ST 1	I-late-e, -f		0.10
	2011-3-13	8LL33	Pineland	Citrus Ridge	N-4-85, ST 2	IIB-c, -d, -e		5.00
	2011-3-14	8LL33	Pineland	Citrus Ridge	N-4-85.5, ST 2	IIB-c, -d, -e		6.00
	2011-3-15	8LL33	Pineland	Citrus Ridge	N-4-86, ST 2	IIB-c, -d, -e		4.00
	2011-3-16	8LL33	Pineland	Citrus Ridge	N-4-86.5, ST 2	IIB-c, -d, -e		14.00

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821	5	5	5					
	2011-3-1	8LL33	N-3-81.5, ST 1	14	19	2					2
	2011-3-2	8LL33	N-3-82, ST 1	531	96	6			3		3
	2011-3-3	8LL33	N-3-82.5, ST 1	418	33	3	1				1
	2011-3-4	8LL33	N-3-83, ST 1	1402	37	7					
	2011-3-5	8LL33	N-3-83.5, ST 1	1121	35	7					
	2011-3-6	8LL33	N-3-84, ST 1	465	30	6	1		2		
	2011-3-7	8LL33	N-3-84.5, ST 1	99	20	5	5		6		
	2011-3-9	8LL33	N-4-82, ST 1	13	7						
	2011-3-10	8LL33	N-4-83, ST 1	49	24	6	7	3	1		
	2011-3-10/2	8LL33	N-4-83/2, ST 1	56	15						
	2011-3-11	8LL33	N-4-84, ST 1	46	25	16			4		
	2011-3-12	8LL33	N-4-84.5, ST 1	63	29	12		7	5		1
	2011-3-11/6	8LL33	N-4-84/6, ST 1	3	3	3					
	2011-3-13	8LL33	N-4-85, ST 2	224	31	25			3		1
	2011-3-14	8LL33	N-4-85.5, ST 2	293	30	16	6		4		
	2011-3-15	8LL33	N-4-86, ST 2	185	32	16	7	2	5		
	2011-3-16	8LL33	N-4-86.5, ST 2	526	30	13		1	16		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821											
	2011-3-1	8LL33	N-3-81.5, ST 1				3			2	1		2	
	2011-3-2	8LL33	N-3-82, ST 1				3			14				5
	2011-3-3	8LL33	N-3-82.5, ST 1							16				
	2011-3-4	8LL33	N-3-83, ST 1							17			1	
	2011-3-5	8LL33	N-3-83.5, ST 1							20				
	2011-3-6	8LL33	N-3-84, ST 1				1			19				
	2011-3-7	8LL33	N-3-84.5, ST 1							4				
	2011-3-9	8LL33	N-4-82, ST 1				6							
	2011-3-10	8LL33	N-4-83, ST 1				1			3				
	2011-3-10/2	8LL33	N-4-83/2, ST 1							15				
	2011-3-11	8LL33	N-4-84, ST 1				1			3			1	
	2011-3-12	8LL33	N-4-84.5, ST 1							4				
	2011-3-11/6	8LL33	N-4-84/6, ST 1											
	2011-3-13	8LL33	N-4-85, ST 2				1			1				
	2011-3-14	8LL33	N-4-85.5, ST 2				1			1			1	
	2011-3-15	8LL33	N-4-86, ST 2				1			1				
	2011-3-16	8LL33	N-4-86.5, ST 2											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821										
	2011-3-1	8LL33	N-3-81.5, ST 1								1		
	2011-3-2	8LL33	N-3-82, ST 1				1			1			
	2011-3-3	8LL33	N-3-82.5, ST 1					2					
	2011-3-4	8LL33	N-3-83, ST 1							2		2	2
	2011-3-5	8LL33	N-3-83.5, ST 1							2			
	2011-3-6	8LL33	N-3-84, ST 1	1									
	2011-3-7	8LL33	N-3-84.5, ST 1										
	2011-3-9	8LL33	N-4-82, ST 1										
	2011-3-10	8LL33	N-4-83, ST 1										
	2011-3-10/2	8LL33	N-4-83/2, ST 1										
	2011-3-11	8LL33	N-4-84, ST 1										
	2011-3-12	8LL33	N-4-84.5, ST 1										
	2011-3-11/6	8LL33	N-4-84/6, ST 1										
	2011-3-13	8LL33	N-4-85, ST 2										
	2011-3-14	8LL33	N-4-85.5, ST 2										
	2011-3-15	8LL33	N-4-86, ST 2										
	2011-3-16	8LL33	N-4-86.5, ST 2										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821												
	2011-3-1	8LL33	N-3-81.5, ST 1												
	2011-3-2	8LL33	N-3-82, ST 1	7											
	2011-3-3	8LL33	N-3-82.5, ST 1	6											
	2011-3-4	8LL33	N-3-83, ST 1	6											
	2011-3-5	8LL33	N-3-83.5, ST 1												
	2011-3-6	8LL33	N-3-84, ST 1												
	2011-3-7	8LL33	N-3-84.5, ST 1												
	2011-3-9	8LL33	N-4-82, ST 1												
	2011-3-10	8LL33	N-4-83, ST 1												
	2011-3-10/2	8LL33	N-4-83/2, ST 1												
	2011-3-11	8LL33	N-4-84, ST 1												
	2011-3-12	8LL33	N-4-84.5, ST 1												
	2011-3-11/6	8LL33	N-4-84/6, ST 1												
	2011-3-13	8LL33	N-4-85, ST 2												
	2011-3-14	8LL33	N-4-85.5, ST 2		1										
	2011-3-15	8LL33	N-4-86, ST 2												
	2011-3-16	8LL33	N-4-86.5, ST 2												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821										
	2011-3-1	8LL33	N-3-81.5, ST 1										
	2011-3-2	8LL33	N-3-82, ST 1										
	2011-3-3	8LL33	N-3-82.5, ST 1										
	2011-3-4	8LL33	N-3-83, ST 1										
	2011-3-5	8LL33	N-3-83.5, ST 1										
	2011-3-6	8LL33	N-3-84, ST 1										
	2011-3-7	8LL33	N-3-84.5, ST 1										
	2011-3-9	8LL33	N-4-82, ST 1										
	2011-3-10	8LL33	N-4-83, ST 1										
	2011-3-10/2	8LL33	N-4-83/2, ST 1										
	2011-3-11	8LL33	N-4-84, ST 1										
	2011-3-12	8LL33	N-4-84.5, ST 1										
	2011-3-11/6	8LL33	N-4-84/6, ST 1										
	2011-3-13	8LL33	N-4-85, ST 2										
	2011-3-14	8LL33	N-4-85.5, ST 2										
	2011-3-15	8LL33	N-4-86, ST 2										
	2011-3-16	8LL33	N-4-86.5, ST 2										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821									
	2011-3-1	8LL33	N-3-81.5, ST 1									
	2011-3-2	8LL33	N-3-82, ST 1									
	2011-3-3	8LL33	N-3-82.5, ST 1									
	2011-3-4	8LL33	N-3-83, ST 1									
	2011-3-5	8LL33	N-3-83.5, ST 1									
	2011-3-6	8LL33	N-3-84, ST 1									
	2011-3-7	8LL33	N-3-84.5, ST 1									
	2011-3-9	8LL33	N-4-82, ST 1									
	2011-3-10	8LL33	N-4-83, ST 1									
	2011-3-10/2	8LL33	N-4-83/2, ST 1									
	2011-3-11	8LL33	N-4-84, ST 1									
	2011-3-12	8LL33	N-4-84.5, ST 1									
	2011-3-11/6	8LL33	N-4-84/6, ST 1									
	2011-3-13	8LL33	N-4-85, ST 2									
	2011-3-14	8LL33	N-4-85.5, ST 2									
	2011-3-15	8LL33	N-4-86, ST 2									
	2011-3-16	8LL33	N-4-86.5, ST 2									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744115	90-8-25	8LL33	N-2-87, ST 4/5, S634 E821							
	2011-3-1	8LL33	N-3-81.5, ST 1					1		5
	2011-3-2	8LL33	N-3-82, ST 1							53
	2011-3-3	8LL33	N-3-82.5, ST 1		1					3
	2011-3-4	8LL33	N-3-83, ST 1							
	2011-3-5	8LL33	N-3-83.5, ST 1							6
	2011-3-6	8LL33	N-3-84, ST 1							
	2011-3-7	8LL33	N-3-84.5, ST 1							
	2011-3-9	8LL33	N-4-82, ST 1							1
	2011-3-10	8LL33	N-4-83, ST 1	3						
	2011-3-10/2	8LL33	N-4-83/2, ST 1							
	2011-3-11	8LL33	N-4-84, ST 1							
	2011-3-12	8LL33	N-4-84.5, ST 1							
	2011-3-11/6	8LL33	N-4-84/6, ST 1							
	2011-3-13	8LL33	N-4-85, ST 2							
	2011-3-14	8LL33	N-4-85.5, ST 2							
	2011-3-15	8LL33	N-4-86, ST 2							
	2011-3-16	8LL33	N-4-86.5, ST 2							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
	2011-3-16/1	8LL33	Pineland	Citrus Ridge	N-4-86.5/1, ST 2	IIB-c, -d, -e		1.00
	2011-3-17	8LL33	Pineland	Citrus Ridge	N-4-87, ST 2	IIB-c, -d, -e		13.00
	2011-3-18	8LL33	Pineland	Citrus Ridge	N-4-87.5, ST 3	I-late-g, -h, -i		12.00
	2011-3-18-1	8LL33	Pineland	Citrus Ridge	N-4-87.5-1, ST 3	I-late-g, -h, -i		3.00
	2011-3-17/1	8LL33	Pineland	Citrus Ridge	N-4-87/1, ST 2	IIB-c, -d, -e		1.00
	2011-3-17-1	8LL33	Pineland	Citrus Ridge	N-4-87-1, ST 3	I-late-g, -h, -i		0.50
	2011-3-17-2	8LL33	Pineland	Citrus Ridge	N-4-87-2, ST 3	I-late-g, -h, -i		3.00
	2011-3-17-2/2	8LL33	Pineland	Citrus Ridge	N-4-87-2/2, ST 3	I-late-g, -h, -i		1.00
	2011-3-19	8LL33	Pineland	Citrus Ridge	N-4-88, ST 3	I-late-g, -h, -i		10.00
	2011-3-20	8LL33	Pineland	Citrus Ridge	N-4-88.5, ST 3	I-late-g, -h, -i		15.00
	2011-3-20/6	8LL33	Pineland	Citrus Ridge	N-4-88.5/6, ST 3	I-late-g, -h, -i		1.00
	2011-3-20/8	8LL33	Pineland	Citrus Ridge	N-4-88.5/8, ST 3	I-late-g, -h, -i		1.00
	2011-3-20/9	8LL33	Pineland	Citrus Ridge	N-4-88.5/9, ST 3	I-late-g, -h, -i		5.00
	2011-3-19/5	8LL33	Pineland	Citrus Ridge	N-4-88/5, ST 3	I-late-g, -h, -i		1.00
	2011-3-19-1	8LL33	Pineland	Citrus Ridge	N-4-88-1, ST 3	I-late-g, -h, -i		2.00
	2011-3-19-2	8LL33	Pineland	Citrus Ridge	N-4-88-2, ST 3	I-late-g, -h, -i		3.00
	2011-3-21	8LL33	Pineland	Citrus Ridge	N-4-89, ST 4	I-late-g		38.00
	2011-3-22	8LL33	Pineland	Citrus Ridge	N-4-89.5, ST 4	I-late-g		11.00
	2011-3-21/6	8LL33	Pineland	Citrus Ridge	N-4-89/6, ST 4	I-late-g		2.00

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2	13	4				4		
	2011-3-17	8LL33	N-4-87, ST 2	550	36	14			21		
	2011-3-18	8LL33	N-4-87.5, ST 3	450	30	14			11		
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3	90	30	4			24	1	
	2011-3-17/1	8LL33	N-4-87/1, ST 2	1	1	1					
	2011-3-17-1	8LL33	N-4-87-1, ST 3	33	9	2		3	4		
	2011-3-17-2	8LL33	N-4-87-2, ST 3	96	26	2		10	12		
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3	10	3				3		
	2011-3-19	8LL33	N-4-88, ST 3	470	30	17			11		
	2011-3-20	8LL33	N-4-88.5, ST 3	434	30	15			7		
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3	1	1						1
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3	2	2						
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3	20	12						
	2011-3-19/5	8LL33	N-4-88/5, ST 3	1	1	1					
	2011-3-19-1	8LL33	N-4-88-1, ST 3	57	10	10					
	2011-3-19-2	8LL33	N-4-88-2, ST 3	95	34	2	1		25		4
	2011-3-21	8LL33	N-4-89, ST 4	838	30	5			12		
	2011-3-22	8LL33	N-4-89.5, ST 4	274	30	11		1	13		3
	2011-3-21/6	8LL33	N-4-89/6, ST 4	7	4						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2											
	2011-3-17	8LL33	N-4-87, ST 2											1
	2011-3-18	8LL33	N-4-87.5, ST 3				4			1				
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3							1				
	2011-3-17/1	8LL33	N-4-87/1, ST 2											
	2011-3-17-1	8LL33	N-4-87-1, ST 3											
	2011-3-17-2	8LL33	N-4-87-2, ST 3	1									1	
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3											
	2011-3-19	8LL33	N-4-88, ST 3				1			1				
	2011-3-20	8LL33	N-4-88.5, ST 3				7							
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3											
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3				2							
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3				12							
	2011-3-19/5	8LL33	N-4-88/5, ST 3											
	2011-3-19-1	8LL33	N-4-88-1, ST 3											
	2011-3-19-2	8LL33	N-4-88-2, ST 3				1			1				
	2011-3-21	8LL33	N-4-89, ST 4				13							
	2011-3-22	8LL33	N-4-89.5, ST 4				1			1				
	2011-3-21/6	8LL33	N-4-89/6, ST 4				4							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2										
	2011-3-17	8LL33	N-4-87, ST 2										
	2011-3-18	8LL33	N-4-87.5, ST 3										
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3										
	2011-3-17/1	8LL33	N-4-87/1, ST 2										
	2011-3-17-1	8LL33	N-4-87-1, ST 3										
	2011-3-17-2	8LL33	N-4-87-2, ST 3										
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3										
	2011-3-19	8LL33	N-4-88, ST 3										
	2011-3-20	8LL33	N-4-88.5, ST 3						1				
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3										
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3										
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3										
	2011-3-19/5	8LL33	N-4-88/5, ST 3										
	2011-3-19-1	8LL33	N-4-88-1, ST 3										
	2011-3-19-2	8LL33	N-4-88-2, ST 3										
	2011-3-21	8LL33	N-4-89, ST 4										
	2011-3-22	8LL33	N-4-89.5, ST 4										
	2011-3-21/6	8LL33	N-4-89/6, ST 4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2												
	2011-3-17	8LL33	N-4-87, ST 2												
	2011-3-18	8LL33	N-4-87.5, ST 3												
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3												
	2011-3-17/1	8LL33	N-4-87/1, ST 2												
	2011-3-17-1	8LL33	N-4-87-1, ST 3												
	2011-3-17-2	8LL33	N-4-87-2, ST 3												
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3												
	2011-3-19	8LL33	N-4-88, ST 3												
	2011-3-20	8LL33	N-4-88.5, ST 3												
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3												
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3												
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3												
	2011-3-19/5	8LL33	N-4-88/5, ST 3												
	2011-3-19-1	8LL33	N-4-88-1, ST 3												
	2011-3-19-2	8LL33	N-4-88-2, ST 3												
	2011-3-21	8LL33	N-4-89, ST 4												
	2011-3-22	8LL33	N-4-89.5, ST 4												
	2011-3-21/6	8LL33	N-4-89/6, ST 4												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2										
	2011-3-17	8LL33	N-4-87, ST 2										
	2011-3-18	8LL33	N-4-87.5, ST 3										
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3										
	2011-3-17/1	8LL33	N-4-87/1, ST 2										
	2011-3-17-1	8LL33	N-4-87-1, ST 3										
	2011-3-17-2	8LL33	N-4-87-2, ST 3										
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3										
	2011-3-19	8LL33	N-4-88, ST 3										
	2011-3-20	8LL33	N-4-88.5, ST 3										
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3										
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3										
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3										
	2011-3-19/5	8LL33	N-4-88/5, ST 3										
	2011-3-19-1	8LL33	N-4-88-1, ST 3										
	2011-3-19-2	8LL33	N-4-88-2, ST 3										
	2011-3-21	8LL33	N-4-89, ST 4										
	2011-3-22	8LL33	N-4-89.5, ST 4										
	2011-3-21/6	8LL33	N-4-89/6, ST 4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2									
	2011-3-17	8LL33	N-4-87, ST 2									
	2011-3-18	8LL33	N-4-87.5, ST 3									
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3									
	2011-3-17/1	8LL33	N-4-87/1, ST 2									
	2011-3-17-1	8LL33	N-4-87-1, ST 3									
	2011-3-17-2	8LL33	N-4-87-2, ST 3									
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3									
	2011-3-19	8LL33	N-4-88, ST 3									
	2011-3-20	8LL33	N-4-88.5, ST 3									
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3									
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3									
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3									
	2011-3-19/5	8LL33	N-4-88/5, ST 3									
	2011-3-19-1	8LL33	N-4-88-1, ST 3									
	2011-3-19-2	8LL33	N-4-88-2, ST 3									
	2011-3-21	8LL33	N-4-89, ST 4									
	2011-3-22	8LL33	N-4-89.5, ST 4									
	2011-3-21/6	8LL33	N-4-89/6, ST 4									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
	2011-3-16/1	8LL33	N-4-86.5/1, ST 2							
	2011-3-17	8LL33	N-4-87, ST 2							
	2011-3-18	8LL33	N-4-87.5, ST 3							
	2011-3-18-1	8LL33	N-4-87.5-1, ST 3							
	2011-3-17/1	8LL33	N-4-87/1, ST 2							
	2011-3-17-1	8LL33	N-4-87-1, ST 3							
	2011-3-17-2	8LL33	N-4-87-2, ST 3							
	2011-3-17-2/2	8LL33	N-4-87-2/2, ST 3							
	2011-3-19	8LL33	N-4-88, ST 3							
	2011-3-20	8LL33	N-4-88.5, ST 3							
	2011-3-20/6	8LL33	N-4-88.5/6, ST 3							
	2011-3-20/8	8LL33	N-4-88.5/8, ST 3							
	2011-3-20/9	8LL33	N-4-88.5/9, ST 3							
	2011-3-19/5	8LL33	N-4-88/5, ST 3							
	2011-3-19-1	8LL33	N-4-88-1, ST 3							
	2011-3-19-2	8LL33	N-4-88-2, ST 3							
	2011-3-21	8LL33	N-4-89, ST 4							
	2011-3-22	8LL33	N-4-89.5, ST 4							
	2011-3-21/6	8LL33	N-4-89/6, ST 4							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
	2011-3-23	8LL33	Pineland	Citrus Ridge	N-4-90, ST 5	I-late-f		7.00
	2011-3-25	8LL33	Pineland	Citrus Ridge	N-4-91.5, ST 7	I-late-f		2.00
	2011-3-26	8LL33	Pineland	Citrus Ridge	N-4-92, ST 7	I-late-f		1.00
	3/27/2011	8LL33	Pineland	Citrus Ridge	N-4-92.5, ST 8			4.00
	2011-3-27-1	8LL33	Pineland	Citrus Ridge	N-4-92.5-1, ST 8			2.00
	2011-3-27-1/1	8LL33	Pineland	Citrus Ridge	N-4-92.5-1/1, ST 10			5.00
	2011-3-28	8LL33	Pineland	Citrus Ridge	N-4-93, ST 10			1.00
	2011-3-29	8LL33	Pineland	Citrus Ridge	N-4-93.5, ST 10			1.00
	2011-3-33/7	8LL33	Pineland	Citrus Ridge	N-4-S. Profile #7, , ST 3	I-late-g, -h, -i		1.00
4743551	88-8-98	8LL33	Pineland	RCM1	A-1-10[43], ST 6	IV		14.84
4743604	88-8-239	8LL33	Pineland	RCM1	A-1-11[44], ST 6	IV		12.38
4743601	88-8-227	8LL33	Pineland	RCM1	A-1-12[45], ST 6	IV		7.81
4743564	88-8-170	8LL33	Pineland	RCM1	A-1-13[46], ST 6	IV		8.91
4745076	95-2-6	8LL33	Pineland	RCM1	A-11-48, ST 3A-3B	IIB-h		46.26
4745078	95-2-7	8LL33	Pineland	RCM1	A-11-49, ST 3B	IIB-h		68.25
4745083	95-2-9	8LL33	Pineland	RCM1	A-11-51, ST 3B, 5	IIB-h		67.56
4745126	95-2-30	8LL33	Pineland	RCM1	A-11-66, ST 11	IIB-e/f		38.86
4743511	88-8-37	8LL33	Pineland	RCM1	A-1-6[39], ST 5	IV		31.35

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
	2011-3-23	8LL33	N-4-90, ST 5	125	30	7		2	15		3
	2011-3-25	8LL33	N-4-91.5, ST 7	28	28	23			2		3
	2011-3-26	8LL33	N-4-92, ST 7	31	19	13		3	1		1
	3/27/2011	8LL33	N-4-92.5, ST 8	85	25	4		11	8		
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8	2	2				2		
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10	1	1				1		
	2011-3-28	8LL33	N-4-93, ST 10	35	35	9		3	7		
	2011-3-29	8LL33	N-4-93.5, ST 10	23	10	1			7		
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3	9	7						
4743551	88-8-98	8LL33	A-1-10[43], ST 6	76	40	20			14		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	71	40	14			19		6
4743601	88-8-227	8LL33	A-1-12[45], ST 6	23	23	8			12		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	33	33	20			10		
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	174	40	24			13		1
4745078	95-2-7	8LL33	A-11-49, ST 3B	263	40	15			15		9
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5	323	40	28			6		2
4745126	95-2-30	8LL33	A-11-66, ST 11	329	40	27			10		2
4743511	88-8-37	8LL33	A-1-6[39], ST 5	108	40	22			14		3

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
	2011-3-23	8LL33	N-4-90, ST 5				3							
	2011-3-25	8LL33	N-4-91.5, ST 7											
	2011-3-26	8LL33	N-4-92, ST 7				1							
	3/27/2011	8LL33	N-4-92.5, ST 8				1							
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8											
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10											
	2011-3-28	8LL33	N-4-93, ST 10				1			2				
	2011-3-29	8LL33	N-4-93.5, ST 10				2							
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3				7							
4743551	88-8-98	8LL33	A-1-10[43], ST 6				5							
4743604	88-8-239	8LL33	A-1-11[44], ST 6											
4743601	88-8-227	8LL33	A-1-12[45], ST 6				2							
4743564	88-8-170	8LL33	A-1-13[46], ST 6				1			2				
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B							1				
4745078	95-2-7	8LL33	A-11-49, ST 3B								1			
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5				1			2				
4745126	95-2-30	8LL33	A-11-66, ST 11								1			
4743511	88-8-37	8LL33	A-1-6[39], ST 5											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
	2011-3-23	8LL33	N-4-90, ST 5										
	2011-3-25	8LL33	N-4-91.5, ST 7										
	2011-3-26	8LL33	N-4-92, ST 7										
	3/27/2011	8LL33	N-4-92.5, ST 8										
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8										
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10										
	2011-3-28	8LL33	N-4-93, ST 10										
	2011-3-29	8LL33	N-4-93.5, ST 10										
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3										
4743551	88-8-98	8LL33	A-1-10[43], ST 6										
4743604	88-8-239	8LL33	A-1-11[44], ST 6										
4743601	88-8-227	8LL33	A-1-12[45], ST 6										
4743564	88-8-170	8LL33	A-1-13[46], ST 6										
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B										
4745078	95-2-7	8LL33	A-11-49, ST 3B										
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5										
4745126	95-2-30	8LL33	A-11-66, ST 11										
4743511	88-8-37	8LL33	A-1-6[39], ST 5										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
	2011-3-23	8LL33	N-4-90, ST 5												
	2011-3-25	8LL33	N-4-91.5, ST 7												
	2011-3-26	8LL33	N-4-92, ST 7												
	3/27/2011	8LL33	N-4-92.5, ST 8												
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8												
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10												
	2011-3-28	8LL33	N-4-93, ST 10												
	2011-3-29	8LL33	N-4-93.5, ST 10												
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3												
4743551	88-8-98	8LL33	A-1-10[43], ST 6												
4743604	88-8-239	8LL33	A-1-11[44], ST 6												
4743601	88-8-227	8LL33	A-1-12[45], ST 6												
4743564	88-8-170	8LL33	A-1-13[46], ST 6												
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B												
4745078	95-2-7	8LL33	A-11-49, ST 3B												
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5												
4745126	95-2-30	8LL33	A-11-66, ST 11												
4743511	88-8-37	8LL33	A-1-6[39], ST 5												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
	2011-3-23	8LL33	N-4-90, ST 5										
	2011-3-25	8LL33	N-4-91.5, ST 7										
	2011-3-26	8LL33	N-4-92, ST 7										
	3/27/2011	8LL33	N-4-92.5, ST 8										
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8										
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10										
	2011-3-28	8LL33	N-4-93, ST 10										
	2011-3-29	8LL33	N-4-93.5, ST 10										
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3										
4743551	88-8-98	8LL33	A-1-10[43], ST 6										
4743604	88-8-239	8LL33	A-1-11[44], ST 6										
4743601	88-8-227	8LL33	A-1-12[45], ST 6								1		
4743564	88-8-170	8LL33	A-1-13[46], ST 6										
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B									1	
4745078	95-2-7	8LL33	A-11-49, ST 3B										
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5								1		
4745126	95-2-30	8LL33	A-11-66, ST 11										
4743511	88-8-37	8LL33	A-1-6[39], ST 5										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
	2011-3-23	8LL33	N-4-90, ST 5									
	2011-3-25	8LL33	N-4-91.5, ST 7									
	2011-3-26	8LL33	N-4-92, ST 7									
	3/27/2011	8LL33	N-4-92.5, ST 8									
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8									
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10									
	2011-3-28	8LL33	N-4-93, ST 10									
	2011-3-29	8LL33	N-4-93.5, ST 10									
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3									
4743551	88-8-98	8LL33	A-1-10[43], ST 6		1							
4743604	88-8-239	8LL33	A-1-11[44], ST 6			1						
4743601	88-8-227	8LL33	A-1-12[45], ST 6									
4743564	88-8-170	8LL33	A-1-13[46], ST 6									
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B									
4745078	95-2-7	8LL33	A-11-49, ST 3B									
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5									
4745126	95-2-30	8LL33	A-11-66, ST 11									
4743511	88-8-37	8LL33	A-1-6[39], ST 5									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
	2011-3-23	8LL33	N-4-90, ST 5							
	2011-3-25	8LL33	N-4-91.5, ST 7							
	2011-3-26	8LL33	N-4-92, ST 7							
	3/27/2011	8LL33	N-4-92.5, ST 8		1					
	2011-3-27-1	8LL33	N-4-92.5-1, ST 8							
	2011-3-27-1/1	8LL33	N-4-92.5-1/1, ST 10							
	2011-3-28	8LL33	N-4-93, ST 10		13					
	2011-3-29	8LL33	N-4-93.5, ST 10							
	2011-3-33/7	8LL33	N-4-S. Profile #7, , ST 3							
4743551	88-8-98	8LL33	A-1-10[43], ST 6							
4743604	88-8-239	8LL33	A-1-11[44], ST 6							
4743601	88-8-227	8LL33	A-1-12[45], ST 6							
4743564	88-8-170	8LL33	A-1-13[46], ST 6							
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B							
4745078	95-2-7	8LL33	A-11-49, ST 3B							
4745083	95-2-9	8LL33	A-11-51, ST 3B, 5							
4745126	95-2-30	8LL33	A-11-66, ST 11							
4743511	88-8-37	8LL33	A-1-6[39], ST 5		1					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4743556	88-8-145	8LL33	Pineland	RCM1	A-1-9[42], ST 6	IV		22.10
4743660	89-7-312	8LL33	Pineland	RCM1	A-5-14[82], ST 14	IIA-late-a		21.20
4743671	89-7-350	8LL33	Pineland	RCM1	A-5-17[85], ST 16	IIA-late-a		15.73
4743675	89-7-490	8LL33	Pineland	RCM1	A-5-18[86], ST 16	IIA-late-a		17.58
4743678	89-7-498	8LL33	Pineland	RCM1	A-5-19[87-89], ST 16-17	IIA-late-a		19.58
4743676	89-7-493	8LL33	Pineland	RCM1	A-5-22[92,93], ST 19	IIA-early-c		3.62
4743681	89-7-506	8LL33	Pineland	RCM1	A-5-23[94], ST 22	IIA-early-c		10.24
4743680	89-7-504	8LL33	Pineland	RCM1	A-5-24 [95,96], ST 22	IIA-early-c		2.54
4743679	89-7-503	8LL33	Pineland	RCM1	A-5-25[97,98], ST 22	IIA-early-c		7.37
	2015-16-16	8LL33	Pineland	RCM1	P-1-101, ST 4	III-a		33.13
	2015-16-13	8LL33	Pineland	RCM1	P-1-98, ST 2, 3	III-b		52.73
	2015-16-14	8LL33	Pineland	RCM1	P-1-99, ST 3	III-b		32.41
	2015-16-43	8LL33	Pineland	RCM1	P-3-103, ST 4	IIB-e, f		193.59
	2015-16-47	8LL33	Pineland	RCM1	P-3-104, ST 4, 5	IIB-e, f		127.43
4744504	92-11-65/6	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4	I-late-g		4.00

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4743556	88-8-145	8LL33	A-1-9[42], ST 6	193	40	21			15		1
4743660	89-7-312	8LL33	A-5-14[82], ST 14	114	40	17			17		4
4743671	89-7-350	8LL33	A-5-17[85], ST 16	69	40	9			27		3
4743675	89-7-490	8LL33	A-5-18[86], ST 16	122	40	10			17		3
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17	88	40	12			18		4
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	17	17	7			10		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	55	40	16			20		1
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	13	13	3			9		1
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	19	19	2			16		
	2015-16-16	8LL33	P-1-101, ST 4	120	40	3			25		4
	2015-16-13	8LL33	P-1-98, ST 2, 3	213	40	9			23		4
	2015-16-14	8LL33	P-1-99, ST 3	181	40	1			31		4
	2015-16-43	8LL33	P-3-103, ST 4	609	44	1			32		5
	2015-16-47	8LL33	P-3-104, ST 4, 5	300	40				35		2
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4	6	6	3			3		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4743556	88-8-145	8LL33	A-1-9[42], ST 6											
4743660	89-7-312	8LL33	A-5-14[82], ST 14				1			1				
4743671	89-7-350	8LL33	A-5-17[85], ST 16								1			
4743675	89-7-490	8LL33	A-5-18[86], ST 16							6				
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17				1			3				
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19											
4743681	89-7-506	8LL33	A-5-23[94], ST 22				1			1				
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22											
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22				1							
	2015-16-16	8LL33	P-1-101, ST 4				1			1				
	2015-16-13	8LL33	P-1-98, ST 2, 3				1							
	2015-16-14	8LL33	P-1-99, ST 3				2			2				
	2015-16-43	8LL33	P-3-103, ST 4							2				
	2015-16-47	8LL33	P-3-104, ST 4, 5				1			2				
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4743556	88-8-145	8LL33	A-1-9[42], ST 6										
4743660	89-7-312	8LL33	A-5-14[82], ST 14										
4743671	89-7-350	8LL33	A-5-17[85], ST 16										
4743675	89-7-490	8LL33	A-5-18[86], ST 16										
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17										
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19										
4743681	89-7-506	8LL33	A-5-23[94], ST 22										
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22										
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22										
	2015-16-16	8LL33	P-1-101, ST 4										
	2015-16-13	8LL33	P-1-98, ST 2, 3										
	2015-16-14	8LL33	P-1-99, ST 3										
	2015-16-43	8LL33	P-3-103, ST 4										
	2015-16-47	8LL33	P-3-104, ST 4, 5										
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4743556	88-8-145	8LL33	A-1-9[42], ST 6									2			
4743660	89-7-312	8LL33	A-5-14[82], ST 14												
4743671	89-7-350	8LL33	A-5-17[85], ST 16												
4743675	89-7-490	8LL33	A-5-18[86], ST 16						2						
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17												
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19												
4743681	89-7-506	8LL33	A-5-23[94], ST 22												
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22												
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22												
	2015-16-16	8LL33	P-1-101, ST 4												
	2015-16-13	8LL33	P-1-98, ST 2, 3												1
	2015-16-14	8LL33	P-1-99, ST 3												
	2015-16-43	8LL33	P-3-103, ST 4												
	2015-16-47	8LL33	P-3-104, ST 4, 5												
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4743556	88-8-145	8LL33	A-1-9[42], ST 6										
4743660	89-7-312	8LL33	A-5-14[82], ST 14										
4743671	89-7-350	8LL33	A-5-17[85], ST 16										
4743675	89-7-490	8LL33	A-5-18[86], ST 16								2		
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17								2		
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19										
4743681	89-7-506	8LL33	A-5-23[94], ST 22		1								
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22										
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22										
	2015-16-16	8LL33	P-1-101, ST 4										2
	2015-16-13	8LL33	P-1-98, ST 2, 3										
	2015-16-14	8LL33	P-1-99, ST 3										
	2015-16-43	8LL33	P-3-103, ST 4										
	2015-16-47	8LL33	P-3-104, ST 4, 5										
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4743556	88-8-145	8LL33	A-1-9[42], ST 6									
4743660	89-7-312	8LL33	A-5-14[82], ST 14									
4743671	89-7-350	8LL33	A-5-17[85], ST 16									
4743675	89-7-490	8LL33	A-5-18[86], ST 16									
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17									
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19									
4743681	89-7-506	8LL33	A-5-23[94], ST 22									
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22									
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22									
	2015-16-16	8LL33	P-1-101, ST 4						3			
	2015-16-13	8LL33	P-1-98, ST 2, 3				1	1				
	2015-16-14	8LL33	P-1-99, ST 3									
	2015-16-43	8LL33	P-3-103, ST 4									
	2015-16-47	8LL33	P-3-104, ST 4, 5									
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4743556	88-8-145	8LL33	A-1-9[42], ST 6		1					
4743660	89-7-312	8LL33	A-5-14[82], ST 14							
4743671	89-7-350	8LL33	A-5-17[85], ST 16							
4743675	89-7-490	8LL33	A-5-18[86], ST 16							
4743678	89-7-498	8LL33	A-5-19[87-89], ST 16-17							
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19							
4743681	89-7-506	8LL33	A-5-23[94], ST 22							
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22							
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22							
	2015-16-16	8LL33	P-1-101, ST 4		1					
	2015-16-13	8LL33	P-1-98, ST 2, 3							
	2015-16-14	8LL33	P-1-99, ST 3							
	2015-16-43	8LL33	P-3-103, ST 4					4		
	2015-16-47	8LL33	P-3-104, ST 4, 5							
4744504	92-11-65/6	8LL33	Trench 11A, 3.5-4.0 horizontal, 60-65 cmbs, ST 4							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744505	92-11-65/7	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4	I-late-g		2.00
4744506	92-11-65/8	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4	I-late-g		2.00
4744507	92-11-65/9	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4	I-late-g		3.00
4744508	92-11-65/10	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4	I-late-g		2.00
4744509	92-11-65/11	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4	I-late-g		2.00
4744510	92-11-65/13	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5	I-late-e		2.00

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4	8	8	4			4		
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4	19	19	7		2	8	1	
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4	28	28	16			10		1
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4	22	22	6		2	6		8
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4	23	23	3		2	10	1	
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5	19	19	7		4	4		2

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4											
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4											
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4				1							
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4											
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4				6							
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5				1							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4										
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4										
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4										
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4										
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4										
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5			1							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4												
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4												
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4												
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4												
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4												
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4										
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4										
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4										
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4										
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4										
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4									
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4									
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4									
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4									
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4									
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744505	92-11-65/7	8LL33	Trench 11A, 3.5-4.0 horizontal, 65-70 cmbs, ST 4							
4744506	92-11-65/8	8LL33	Trench 11A, 3.5-4.0 horizontal, 70-75 cmbs, ST 4		1					
4744507	92-11-65/9	8LL33	Trench 11A, 3.5-4.0 horizontal, 75-80 cmbs, ST 4							
4744508	92-11-65/10	8LL33	Trench 11A, 3.5-4.0 horizontal, 80-85 cmbs, ST 4							
4744509	92-11-65/11	8LL33	Trench 11A, 3.5-4.0 horizontal, 85-90 cmbs, ST 4		1					
4744510	92-11-65/13	8LL33	Trench 11A, 3.5-4.0 horizontal, 95-100 cmbs, ST 5							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744503	92-11-65/3	8LL33	Pineland	South Pasture	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5	I-late-e		7.00
4744802	92-28-14	8LL37	Pineland	Old Mound	A-12-100, ST 9	I-late-f		16.60
4744805	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		2.00
4744806	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		18.50
4744807	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		13.40
4744808	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		7.20
4744809	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		6.90
4744810	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		3.10
4744811	92-28-15	8LL37	Pineland	Old Mound	A-12-101, ST 9	I-late-f		65.80
4744817	92-28-16	8LL37	Pineland	Old Mound	A-12-102, ST 9-10	I-late-f		17.60
4744818	92-28-16	8LL37	Pineland	Old Mound	A-12-102, ST 9-10	I-late-f		3.20
4744819	92-28-16	8LL37	Pineland	Old Mound	A-12-102, ST 9-10	I-late-f		51.90
4744819	92-28-16	8LL37	Pineland	Old Mound	A-12-102, ST 9-10	I-late-f		43.50
4744820	92-28-16	8LL37	Pineland	Old Mound	A-12-102, ST 9-10	I-late-f		18.30
4744783	92-28-2	8LL37	Pineland	Old Mound	A-12-90, ST 1-2	IIA-early-a		7.50
4744784	92-28-2-1	8LL37	Pineland	Old Mound	A-12-90-1, ST 2	IIA-early-a		66.05
4744787	92-28-3	8LL37	Pineland	Old Mound	A-12-91, ST 3	IIA-early-a		88.17

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5	110	30	7		1	9		2
4744802	92-28-14	8LL37	A-12-100, ST 9	230	40	17			18		4
4744805	92-28-15	8LL37	A-12-101, ST 9	4	4				1		3
4744806	92-28-15	8LL37	A-12-101, ST 9	21	21	2			9		7
4744807	92-28-15	8LL37	A-12-101, ST 9	210	33	8			17		6
4744808	92-28-15	8LL37	A-12-101, ST 9	27	25	2			12		9
4744809	92-28-15	8LL37	A-12-101, ST 9	17	17	12			4		1
4744810	92-28-15	8LL37	A-12-101, ST 9	10	10	2			4		1
4744811	92-28-15	8LL37	A-12-101, ST 9	521	41	16			10		8
4744817	92-28-16	8LL37	A-12-102, ST 9-10	48	40	5			19		11
4744818	92-28-16	8LL37	A-12-102, ST 9-10	20	20				7		11
4744819	92-28-16	8LL37	A-12-102, ST 9-10	417	40	4			18		11
4744819	92-28-16	8LL37	A-12-102, ST 9-10	175	40	6			14		11
4744820	92-28-16	8LL37	A-12-102, ST 9-10	70	40	3			17		13
4744783	92-28-2	8LL37	A-12-90, ST 1-2	29	29	10			12	1	6
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2	500	40	6			30		1
4744787	92-28-3	8LL37	A-12-91, ST 3	485	40	3			35		2

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5				4	6		1				
4744802	92-28-14	8LL37	A-12-100, ST 9				1							
4744805	92-28-15	8LL37	A-12-101, ST 9											
4744806	92-28-15	8LL37	A-12-101, ST 9				3							
4744807	92-28-15	8LL37	A-12-101, ST 9							2				
4744808	92-28-15	8LL37	A-12-101, ST 9							2				
4744809	92-28-15	8LL37	A-12-101, ST 9											
4744810	92-28-15	8LL37	A-12-101, ST 9				2							
4744811	92-28-15	8LL37	A-12-101, ST 9				4							
4744817	92-28-16	8LL37	A-12-102, ST 9-10				1			1				1
4744818	92-28-16	8LL37	A-12-102, ST 9-10											1
4744819	92-28-16	8LL37	A-12-102, ST 9-10		2		2							1
4744819	92-28-16	8LL37	A-12-102, ST 9-10				1							
4744820	92-28-16	8LL37	A-12-102, ST 9-10				4							
4744783	92-28-2	8LL37	A-12-90, ST 1-2											
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2				3							
4744787	92-28-3	8LL37	A-12-91, ST 3											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5										
4744802	92-28-14	8LL37	A-12-100, ST 9										
4744805	92-28-15	8LL37	A-12-101, ST 9										
4744806	92-28-15	8LL37	A-12-101, ST 9										
4744807	92-28-15	8LL37	A-12-101, ST 9										
4744808	92-28-15	8LL37	A-12-101, ST 9										
4744809	92-28-15	8LL37	A-12-101, ST 9										
4744810	92-28-15	8LL37	A-12-101, ST 9										
4744811	92-28-15	8LL37	A-12-101, ST 9										
4744817	92-28-16	8LL37	A-12-102, ST 9-10										
4744818	92-28-16	8LL37	A-12-102, ST 9-10										
4744819	92-28-16	8LL37	A-12-102, ST 9-10										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	1									
4744820	92-28-16	8LL37	A-12-102, ST 9-10										
4744783	92-28-2	8LL37	A-12-90, ST 1-2										
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2										
4744787	92-28-3	8LL37	A-12-91, ST 3										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5												
4744802	92-28-14	8LL37	A-12-100, ST 9												
4744805	92-28-15	8LL37	A-12-101, ST 9												
4744806	92-28-15	8LL37	A-12-101, ST 9												
4744807	92-28-15	8LL37	A-12-101, ST 9												
4744808	92-28-15	8LL37	A-12-101, ST 9												
4744809	92-28-15	8LL37	A-12-101, ST 9												
4744810	92-28-15	8LL37	A-12-101, ST 9												
4744811	92-28-15	8LL37	A-12-101, ST 9			1									
4744817	92-28-16	8LL37	A-12-102, ST 9-10							2					
4744818	92-28-16	8LL37	A-12-102, ST 9-10						1						
4744819	92-28-16	8LL37	A-12-102, ST 9-10												
4744819	92-28-16	8LL37	A-12-102, ST 9-10												
4744820	92-28-16	8LL37	A-12-102, ST 9-10												
4744783	92-28-2	8LL37	A-12-90, ST 1-2												
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2												
4744787	92-28-3	8LL37	A-12-91, ST 3												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5										
4744802	92-28-14	8LL37	A-12-100, ST 9										
4744805	92-28-15	8LL37	A-12-101, ST 9										
4744806	92-28-15	8LL37	A-12-101, ST 9										
4744807	92-28-15	8LL37	A-12-101, ST 9										
4744808	92-28-15	8LL37	A-12-101, ST 9										
4744809	92-28-15	8LL37	A-12-101, ST 9										
4744810	92-28-15	8LL37	A-12-101, ST 9										
4744811	92-28-15	8LL37	A-12-101, ST 9										
4744817	92-28-16	8LL37	A-12-102, ST 9-10										
4744818	92-28-16	8LL37	A-12-102, ST 9-10										
4744819	92-28-16	8LL37	A-12-102, ST 9-10		1								
4744819	92-28-16	8LL37	A-12-102, ST 9-10	1	3		1						
4744820	92-28-16	8LL37	A-12-102, ST 9-10		1		1						
4744783	92-28-2	8LL37	A-12-90, ST 1-2										
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2										
4744787	92-28-3	8LL37	A-12-91, ST 3										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5									
4744802	92-28-14	8LL37	A-12-100, ST 9									
4744805	92-28-15	8LL37	A-12-101, ST 9									
4744806	92-28-15	8LL37	A-12-101, ST 9									
4744807	92-28-15	8LL37	A-12-101, ST 9									
4744808	92-28-15	8LL37	A-12-101, ST 9									
4744809	92-28-15	8LL37	A-12-101, ST 9									
4744810	92-28-15	8LL37	A-12-101, ST 9									
4744811	92-28-15	8LL37	A-12-101, ST 9									
4744817	92-28-16	8LL37	A-12-102, ST 9-10									
4744818	92-28-16	8LL37	A-12-102, ST 9-10									
4744819	92-28-16	8LL37	A-12-102, ST 9-10									
4744819	92-28-16	8LL37	A-12-102, ST 9-10									
4744820	92-28-16	8LL37	A-12-102, ST 9-10									
4744783	92-28-2	8LL37	A-12-90, ST 1-2									
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2									
4744787	92-28-3	8LL37	A-12-91, ST 3									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744503	92-11-65/3	8LL33	Trench 11A, 3.5-4.0 horizontal, Level 99, ST 5							
4744802	92-28-14	8LL37	A-12-100, ST 9							
4744805	92-28-15	8LL37	A-12-101, ST 9							
4744806	92-28-15	8LL37	A-12-101, ST 9							
4744807	92-28-15	8LL37	A-12-101, ST 9							
4744808	92-28-15	8LL37	A-12-101, ST 9							
4744809	92-28-15	8LL37	A-12-101, ST 9							
4744810	92-28-15	8LL37	A-12-101, ST 9		1					
4744811	92-28-15	8LL37	A-12-101, ST 9		1				1	
4744817	92-28-16	8LL37	A-12-102, ST 9-10							
4744818	92-28-16	8LL37	A-12-102, ST 9-10							
4744819	92-28-16	8LL37	A-12-102, ST 9-10		1					
4744819	92-28-16	8LL37	A-12-102, ST 9-10		2					
4744820	92-28-16	8LL37	A-12-102, ST 9-10		1					
4744783	92-28-2	8LL37	A-12-90, ST 1-2							
4744784	92-28-2-1	8LL37	A-12-90-1, ST 2							
4744787	92-28-3	8LL37	A-12-91, ST 3							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744789	92-28-4	8LL37	Pineland	Old Mound	A-12-92, ST 3	IIA-early-a		55.95
4744790	92-28-5	8LL37	Pineland	Old Mound	A-12-93, ST 4-5	I-late-i/j		174.70
4744791	92-28-6	8LL37	Pineland	Old Mound	A-12-94, ST 6-7	I-late-g/h		124.20
4744795	92-28-9	8LL37	Pineland	Old Mound	A-12-96, ST 8?	I-late-g/h		69.90
4744799	92-28-12	8LL37	Pineland	Old Mound	A-12-98, ST 9	I-late-f		25.00
4744800	92-28-13	8LL37	Pineland	Old Mound	A-12-99, ST 9	I-late-f		86.30
4744998	92-32-18	8LL37	Pineland	Old Mound	A-16-100, ST 9	I-late-f		0.80
4744999	92-32-18	8LL37	Pineland	Old Mound	A-16-100, ST 9	I-late-f		1.80
4745005	92-32-23	8LL37	Pineland	Old Mound	A-16-100, ST 9	I-late-f		25.30
4745012	92-32-24	8LL37	Pineland	Old Mound	A-16-101, ST 9	I-late-f		4.30
4745014	92-32-24	8LL37	Pineland	Old Mound	A-16-101, ST 9	I-late-f		15.50
4745015	92-32-24	8LL37	Pineland	Old Mound	A-16-101, ST 9	I-late-f		41.90
4745020	92-32-25	8LL37	Pineland	Old Mound	A-16-102, ST 9-10	I-late-f		11.90
4745020	92-32-25	8LL37	Pineland	Old Mound	A-16-102, ST 9-10	I-late-f		6.80
4744980	92-32-3	8LL37	Pineland	Old Mound	A-16-91, ST 3	IIA-early-a		13.64
4744981	92-32-4	8LL37	Pineland	Old Mound	A-16-92, ST 3	IIA-early-a		32.56
4744985	92-32-8	8LL37	Pineland	Old Mound	A-16-92, ST 3	IIA-early-a		69.21
4744982	92-32-5	8LL37	Pineland	Old Mound	A-16-93, ST 4	I-late-i/j		32.50
4744987	92-32-9	8LL37	Pineland	Old Mound	A-16-94, ST 5	I-late-i/j		62.50

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744789	92-28-4	8LL37	A-12-92, ST 3	313	40	9			27		
4744790	92-28-5	8LL37	A-12-93, ST 4-5	864	40	9			18		11
4744791	92-28-6	8LL37	A-12-94, ST 6-7	997	40	10			23		3
4744795	92-28-9	8LL37	A-12-96, ST 8?	358	40	1			32		4
4744799	92-28-12	8LL37	A-12-98, ST 9	204	40	13			20		4
4744800	92-28-13	8LL37	A-12-99, ST 9	633	40	8			22		6
4744998	92-32-18	8LL37	A-16-100, ST 9	11	11	1					3
4744999	92-32-18	8LL37	A-16-100, ST 9	40	40	8			15		3
4745005	92-32-23	8LL37	A-16-100, ST 9	197	40	22			9		8
4745012	92-32-24	8LL37	A-16-101, ST 9	6	6	1			1		2
4745014	92-32-24	8LL37	A-16-101, ST 9	59	40	18			16		5
4745015	92-32-24	8LL37	A-16-101, ST 9	339	40	9			17		7
4745020	92-32-25	8LL37	A-16-102, ST 9-10	63	40	4			19		11
4745020	92-32-25	8LL37	A-16-102, ST 9-10	24	24	5			9		4
4744980	92-32-3	8LL37	A-16-91, ST 3	39	39	12			19		2
4744981	92-32-4	8LL37	A-16-92, ST 3	183	40	13			22		3
4744985	92-32-8	8LL37	A-16-92, ST 3	2040	40	14			21		4
4744982	92-32-5	8LL37	A-16-93, ST 4	160	40	7			22		10
4744987	92-32-9	8LL37	A-16-94, ST 5	470	40	8			22		7

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744789	92-28-4	8LL37	A-12-92, ST 3				3							
4744790	92-28-5	8LL37	A-12-93, ST 4-5				1			1				
4744791	92-28-6	8LL37	A-12-94, ST 6-7				1			1				
4744795	92-28-9	8LL37	A-12-96, ST 8?		1									
4744799	92-28-12	8LL37	A-12-98, ST 9		1					1				
4744800	92-28-13	8LL37	A-12-99, ST 9				1							2
4744998	92-32-18	8LL37	A-16-100, ST 9				6							
4744999	92-32-18	8LL37	A-16-100, ST 9							2				
4745005	92-32-23	8LL37	A-16-100, ST 9							1				
4745012	92-32-24	8LL37	A-16-101, ST 9				1							
4745014	92-32-24	8LL37	A-16-101, ST 9		1									
4745015	92-32-24	8LL37	A-16-101, ST 9				2							
4745020	92-32-25	8LL37	A-16-102, ST 9-10				4							
4745020	92-32-25	8LL37	A-16-102, ST 9-10				5							1
4744980	92-32-3	8LL37	A-16-91, ST 3				6							
4744981	92-32-4	8LL37	A-16-92, ST 3								1			
4744985	92-32-8	8LL37	A-16-92, ST 3				1							
4744982	92-32-5	8LL37	A-16-93, ST 4											
4744987	92-32-9	8LL37	A-16-94, ST 5							1				

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744789	92-28-4	8LL37	A-12-92, ST 3										
4744790	92-28-5	8LL37	A-12-93, ST 4-5										
4744791	92-28-6	8LL37	A-12-94, ST 6-7										
4744795	92-28-9	8LL37	A-12-96, ST 8?										
4744799	92-28-12	8LL37	A-12-98, ST 9										
4744800	92-28-13	8LL37	A-12-99, ST 9										
4744998	92-32-18	8LL37	A-16-100, ST 9										
4744999	92-32-18	8LL37	A-16-100, ST 9										
4745005	92-32-23	8LL37	A-16-100, ST 9										
4745012	92-32-24	8LL37	A-16-101, ST 9										
4745014	92-32-24	8LL37	A-16-101, ST 9										
4745015	92-32-24	8LL37	A-16-101, ST 9										
4745020	92-32-25	8LL37	A-16-102, ST 9-10										
4745020	92-32-25	8LL37	A-16-102, ST 9-10										
4744980	92-32-3	8LL37	A-16-91, ST 3										
4744981	92-32-4	8LL37	A-16-92, ST 3										
4744985	92-32-8	8LL37	A-16-92, ST 3										
4744982	92-32-5	8LL37	A-16-93, ST 4										
4744987	92-32-9	8LL37	A-16-94, ST 5										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744789	92-28-4	8LL37	A-12-92, ST 3												
4744790	92-28-5	8LL37	A-12-93, ST 4-5												
4744791	92-28-6	8LL37	A-12-94, ST 6-7												
4744795	92-28-9	8LL37	A-12-96, ST 8?			2									
4744799	92-28-12	8LL37	A-12-98, ST 9												
4744800	92-28-13	8LL37	A-12-99, ST 9												
4744998	92-32-18	8LL37	A-16-100, ST 9												
4744999	92-32-18	8LL37	A-16-100, ST 9												
4745005	92-32-23	8LL37	A-16-100, ST 9												
4745012	92-32-24	8LL37	A-16-101, ST 9												
4745014	92-32-24	8LL37	A-16-101, ST 9												
4745015	92-32-24	8LL37	A-16-101, ST 9					1							
4745020	92-32-25	8LL37	A-16-102, ST 9-10			1					1				
4745020	92-32-25	8LL37	A-16-102, ST 9-10												
4744980	92-32-3	8LL37	A-16-91, ST 3												
4744981	92-32-4	8LL37	A-16-92, ST 3												
4744985	92-32-8	8LL37	A-16-92, ST 3												
4744982	92-32-5	8LL37	A-16-93, ST 4												
4744987	92-32-9	8LL37	A-16-94, ST 5												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744789	92-28-4	8LL37	A-12-92, ST 3										1
4744790	92-28-5	8LL37	A-12-93, ST 4-5										
4744791	92-28-6	8LL37	A-12-94, ST 6-7										
4744795	92-28-9	8LL37	A-12-96, ST 8?										
4744799	92-28-12	8LL37	A-12-98, ST 9										
4744800	92-28-13	8LL37	A-12-99, ST 9										
4744998	92-32-18	8LL37	A-16-100, ST 9			1							
4744999	92-32-18	8LL37	A-16-100, ST 9			1							
4745005	92-32-23	8LL37	A-16-100, ST 9										
4745012	92-32-24	8LL37	A-16-101, ST 9		1								
4745014	92-32-24	8LL37	A-16-101, ST 9										
4745015	92-32-24	8LL37	A-16-101, ST 9		3			1					
4745020	92-32-25	8LL37	A-16-102, ST 9-10										
4745020	92-32-25	8LL37	A-16-102, ST 9-10										
4744980	92-32-3	8LL37	A-16-91, ST 3										
4744981	92-32-4	8LL37	A-16-92, ST 3				1						
4744985	92-32-8	8LL37	A-16-92, ST 3										
4744982	92-32-5	8LL37	A-16-93, ST 4			1							
4744987	92-32-9	8LL37	A-16-94, ST 5								2		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744789	92-28-4	8LL37	A-12-92, ST 3									
4744790	92-28-5	8LL37	A-12-93, ST 4-5									
4744791	92-28-6	8LL37	A-12-94, ST 6-7									
4744795	92-28-9	8LL37	A-12-96, ST 8?									
4744799	92-28-12	8LL37	A-12-98, ST 9									
4744800	92-28-13	8LL37	A-12-99, ST 9									
4744998	92-32-18	8LL37	A-16-100, ST 9									
4744999	92-32-18	8LL37	A-16-100, ST 9									
4745005	92-32-23	8LL37	A-16-100, ST 9									
4745012	92-32-24	8LL37	A-16-101, ST 9									
4745014	92-32-24	8LL37	A-16-101, ST 9									
4745015	92-32-24	8LL37	A-16-101, ST 9									
4745020	92-32-25	8LL37	A-16-102, ST 9-10									
4745020	92-32-25	8LL37	A-16-102, ST 9-10									
4744980	92-32-3	8LL37	A-16-91, ST 3									
4744981	92-32-4	8LL37	A-16-92, ST 3									
4744985	92-32-8	8LL37	A-16-92, ST 3									
4744982	92-32-5	8LL37	A-16-93, ST 4									
4744987	92-32-9	8LL37	A-16-94, ST 5									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744789	92-28-4	8LL37	A-12-92, ST 3							
4744790	92-28-5	8LL37	A-12-93, ST 4-5							
4744791	92-28-6	8LL37	A-12-94, ST 6-7		2					
4744795	92-28-9	8LL37	A-12-96, ST 8?							
4744799	92-28-12	8LL37	A-12-98, ST 9		1					
4744800	92-28-13	8LL37	A-12-99, ST 9		1					
4744998	92-32-18	8LL37	A-16-100, ST 9							
4744999	92-32-18	8LL37	A-16-100, ST 9		11					
4745005	92-32-23	8LL37	A-16-100, ST 9							
4745012	92-32-24	8LL37	A-16-101, ST 9							
4745014	92-32-24	8LL37	A-16-101, ST 9							
4745015	92-32-24	8LL37	A-16-101, ST 9							
4745020	92-32-25	8LL37	A-16-102, ST 9-10							
4745020	92-32-25	8LL37	A-16-102, ST 9-10							
4744980	92-32-3	8LL37	A-16-91, ST 3							
4744981	92-32-4	8LL37	A-16-92, ST 3							
4744985	92-32-8	8LL37	A-16-92, ST 3							
4744982	92-32-5	8LL37	A-16-93, ST 4							
4744987	92-32-9	8LL37	A-16-94, ST 5							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744993	92-32-14	8LL37	Pineland	Old Mound	A-16-96, ST 8	I-late-g/h		92.50
4744995	92-32-16	8LL37	Pineland	Old Mound	A-16-98, ST 8	I-late-g/h		6.10
4744996	92-32-16-1	8LL37	Pineland	Old Mound	A-16-98-1, ST 9	I-late-f		10.30
4744997	92-32-17	8LL37	Pineland	Old Mound	A-16-99, ST 9	I-late-f		5.60
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	Pineland	Old Mound	A-4,8,12,16-101 ST 9	I-late-f		10.70
4744599	92-18-13	8LL37	Pineland	Old Mound	A-4-101 (SW quad), ST 9	I-late-f		18.40
4744598	92-18-13	8LL37	Pineland	Old Mound	A-4-101, ST 9	I-late-f		15.70
4744603	92-18-16	8LL37	Pineland	Old Mound	A-4-101, ST 9	I-late-f		3.40
4744604	92-18-16	8LL37	Pineland	Old Mound	A-4-101, ST 9	I-late-f		2.50
4744605	92-18-16	8LL37	Pineland	Old Mound	A-4-101, ST 9	I-late-f		59.70
4744622	92-18-17	8LL37	Pineland	Old Mound	A-4-102, NE quad, ST 9-10	I-late-f		20.90
4744623	92-18-17	8LL37	Pineland	Old Mound	A-4-102, ST 9-10	I-late-f		48.90
4744630	92-18-18	8LL37	Pineland	Old Mound	A-4-102, ST 9-10	I-late-f		58.20
4744630	92-18-18	8LL37	Pineland	Old Mound	A-4-102, ST 9-10	I-late-f		14.80
4744578	92-18-2	8LL37	Pineland	Old Mound	A-4-90, ST 2	IIA-early-a		20.71

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744993	92-32-14	8LL37	A-16-96, ST 8	679	40	2			34		1
4744995	92-32-16	8LL37	A-16-98, ST 8	29	29	10			6		
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	80	40	9			16		9
4744997	92-32-17	8LL37	A-16-99, ST 9	69	40	8			14		9
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	45	45	7			12		5
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	206	40	7			15		7
4744598	92-18-13	8LL37	A-4-101, ST 9	53	40	8			28		3
4744603	92-18-16	8LL37	A-4-101, ST 9	26	26				19		2
4744604	92-18-16	8LL37	A-4-101, ST 9	18	18	12			2		
4744605	92-18-16	8LL37	A-4-101, ST 9	582	40	9			17		5
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	65	40	8			17		9
4744623	92-18-17	8LL37	A-4-102, ST 9-10	409	40	3			22		14
4744630	92-18-18	8LL37	A-4-102, ST 9-10	268	40	7			19		9
4744630	92-18-18	8LL37	A-4-102, ST 9-10	70	40	1			18		12
4744578	92-18-2	8LL37	A-4-90, ST 2	127	40	19			20		1

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744993	92-32-14	8LL37	A-16-96, ST 8				3							
4744995	92-32-16	8LL37	A-16-98, ST 8				11							
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9		1						4			
4744997	92-32-17	8LL37	A-16-99, ST 9		1		2			2				
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9				1			1				
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9				6			3				
4744598	92-18-13	8LL37	A-4-101, ST 9				1							
4744603	92-18-16	8LL37	A-4-101, ST 9				5							
4744604	92-18-16	8LL37	A-4-101, ST 9				2							
4744605	92-18-16	8LL37	A-4-101, ST 9				5			2	1			
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10				3			2				
4744623	92-18-17	8LL37	A-4-102, ST 9-10											
4744630	92-18-18	8LL37	A-4-102, ST 9-10								2			
4744630	92-18-18	8LL37	A-4-102, ST 9-10				6							
4744578	92-18-2	8LL37	A-4-90, ST 2											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744993	92-32-14	8LL37	A-16-96, ST 8										
4744995	92-32-16	8LL37	A-16-98, ST 8										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9										
4744997	92-32-17	8LL37	A-16-99, ST 9										
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9										
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9										
4744598	92-18-13	8LL37	A-4-101, ST 9										
4744603	92-18-16	8LL37	A-4-101, ST 9										
4744604	92-18-16	8LL37	A-4-101, ST 9										
4744605	92-18-16	8LL37	A-4-101, ST 9										
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10										
4744623	92-18-17	8LL37	A-4-102, ST 9-10										
4744630	92-18-18	8LL37	A-4-102, ST 9-10										
4744630	92-18-18	8LL37	A-4-102, ST 9-10										
4744578	92-18-2	8LL37	A-4-90, ST 2										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744993	92-32-14	8LL37	A-16-96, ST 8												
4744995	92-32-16	8LL37	A-16-98, ST 8												
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9												
4744997	92-32-17	8LL37	A-16-99, ST 9												
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9									1	1		
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9					1		1					
4744598	92-18-13	8LL37	A-4-101, ST 9												
4744603	92-18-16	8LL37	A-4-101, ST 9												
4744604	92-18-16	8LL37	A-4-101, ST 9					2							
4744605	92-18-16	8LL37	A-4-101, ST 9									1			
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10											1	
4744623	92-18-17	8LL37	A-4-102, ST 9-10									1			
4744630	92-18-18	8LL37	A-4-102, ST 9-10									1	2		
4744630	92-18-18	8LL37	A-4-102, ST 9-10												
4744578	92-18-2	8LL37	A-4-90, ST 2												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744993	92-32-14	8LL37	A-16-96, ST 8										
4744995	92-32-16	8LL37	A-16-98, ST 8										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9						1				
4744997	92-32-17	8LL37	A-16-99, ST 9										
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9										
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9										
4744598	92-18-13	8LL37	A-4-101, ST 9										
4744603	92-18-16	8LL37	A-4-101, ST 9										
4744604	92-18-16	8LL37	A-4-101, ST 9										
4744605	92-18-16	8LL37	A-4-101, ST 9										
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10										
4744623	92-18-17	8LL37	A-4-102, ST 9-10										
4744630	92-18-18	8LL37	A-4-102, ST 9-10										
4744630	92-18-18	8LL37	A-4-102, ST 9-10										
4744578	92-18-2	8LL37	A-4-90, ST 2										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744993	92-32-14	8LL37	A-16-96, ST 8									
4744995	92-32-16	8LL37	A-16-98, ST 8									
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9									
4744997	92-32-17	8LL37	A-16-99, ST 9									
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9									
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9									
4744598	92-18-13	8LL37	A-4-101, ST 9									
4744603	92-18-16	8LL37	A-4-101, ST 9									
4744604	92-18-16	8LL37	A-4-101, ST 9									
4744605	92-18-16	8LL37	A-4-101, ST 9									
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10									
4744623	92-18-17	8LL37	A-4-102, ST 9-10									
4744630	92-18-18	8LL37	A-4-102, ST 9-10									
4744630	92-18-18	8LL37	A-4-102, ST 9-10									
4744578	92-18-2	8LL37	A-4-90, ST 2									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744993	92-32-14	8LL37	A-16-96, ST 8							
4744995	92-32-16	8LL37	A-16-98, ST 8		2					
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9							
4744997	92-32-17	8LL37	A-16-99, ST 9		4					
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9		2	15				
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9							
4744598	92-18-13	8LL37	A-4-101, ST 9							
4744603	92-18-16	8LL37	A-4-101, ST 9							
4744604	92-18-16	8LL37	A-4-101, ST 9							
4744605	92-18-16	8LL37	A-4-101, ST 9							
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10							
4744623	92-18-17	8LL37	A-4-102, ST 9-10							
4744630	92-18-18	8LL37	A-4-102, ST 9-10							
4744630	92-18-18	8LL37	A-4-102, ST 9-10					3		
4744578	92-18-2	8LL37	A-4-90, ST 2							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744579	92-18-2	8LL37	Pineland	Old Mound	A-4-90, ST 2	IIA-early-a		0.80
4744580	92-18-2-1	8LL37	Pineland	Old Mound	A-4-90-1, ST 2	IIA-early-a	Y	1.25
4744581	92-18-2-2	8LL37	Pineland	Old Mound	A-4-90-2, ST 2	IIA-early-a	Y	5.52
4744582	92-18-2-3	8LL37	Pineland	Old Mound	A-4-90-3, ST 2	IIA-early-a	Y	10.84
4744583	92-18-3	8LL37	Pineland	Old Mound	A-4-91, ST 3	IIA-early-a		48.16
4744583	92-18-3	8LL37	Pineland	Old Mound	A-4-91, ST 3	IIA-early-a		0.70
4744584	92-18-3-1	8LL37	Pineland	Old Mound	A-4-91-1, ST 3	IIA-early-a	Y	2.54
4744586	92-18-5	8LL37	Pineland	Old Mound	A-4-93, ST 4-5	I-late-i/j		45.90
4744706	92-24-17	8LL37	Pineland	Old Mound	A-8-100, ST 9	I-late-f		1.90
4744707	92-24-17	8LL37	Pineland	Old Mound	A-8-100, ST 9	I-late-f		3.10
4744708	92-24-17	8LL37	Pineland	Old Mound	A-8-100, ST 9	I-late-f		33.60
4744714	92-24-17-1	8LL37	Pineland	Old Mound	A-8-100-1, ST 9	I-late-f		12.70
4744721	92-24-18	8LL37	Pineland	Old Mound	A-8-101, ST 9	I-late-f		20.90
4744721	92-24-18	8LL37	Pineland	Old Mound	A-8-101, ST 9	I-late-f		0.70
4744734	92-24-20	8LL37	Pineland	Old Mound	A-8-101, ST 9	I-late-f		20.30
4744734	92-24-20	8LL37	Pineland	Old Mound	A-8-101, ST 9	I-late-f		1.40
4744746	92-24-21	8LL37	Pineland	Old Mound	A-8-102, ST 9-10	I-late-f		8.80
4744747	92-24-21	8LL37	Pineland	Old Mound	A-8-102, ST 9-10	I-late-f		4.00
4744749	92-24-21	8LL37	Pineland	Old Mound	A-8-102, ST 9-10	I-late-f		18.50

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744579	92-18-2	8LL37	A-4-90, ST 2	2	2		2				
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2	3	3				3		
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	20	20				19		
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	69	40	5			33		2
4744583	92-18-3	8LL37	A-4-91, ST 3	291	40	5			34		1
4744583	92-18-3	8LL37	A-4-91, ST 3	7	7	1			6		
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	9	9	2			6		
4744586	92-18-5	8LL37	A-4-93, ST 4-5	307	40	12			16		4
4744706	92-24-17	8LL37	A-8-100, ST 9	18	18	5			10		2
4744707	92-24-17	8LL37	A-8-100, ST 9	74	74	19			8		4
4744708	92-24-17	8LL37	A-8-100, ST 9	265	40	17			17		2
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	86	40	7			28		2
4744721	92-24-18	8LL37	A-8-101, ST 9	149	40	12			18		5
4744721	92-24-18	8LL37	A-8-101, ST 9	7	7	2			3		1
4744734	92-24-20	8LL37	A-8-101, ST 9	209	40	10			20		5
4744734	92-24-20	8LL37	A-8-101, ST 9	7	7						6
4744746	92-24-21	8LL37	A-8-102, ST 9-10	28	28				18		9
4744747	92-24-21	8LL37	A-8-102, ST 9-10	3	3	1			2		
4744749	92-24-21	8LL37	A-8-102, ST 9-10	58	58	7			16		24

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744579	92-18-2	8LL37	A-4-90, ST 2											
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2											
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2				1							
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2											
4744583	92-18-3	8LL37	A-4-91, ST 3											
4744583	92-18-3	8LL37	A-4-91, ST 3											
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3							1				
4744586	92-18-5	8LL37	A-4-93, ST 4-5				6							
4744706	92-24-17	8LL37	A-8-100, ST 9				1							
4744707	92-24-17	8LL37	A-8-100, ST 9				6				2			
4744708	92-24-17	8LL37	A-8-100, ST 9				1							1
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9				1							
4744721	92-24-18	8LL37	A-8-101, ST 9				2							
4744721	92-24-18	8LL37	A-8-101, ST 9								1			
4744734	92-24-20	8LL37	A-8-101, ST 9				3							
4744734	92-24-20	8LL37	A-8-101, ST 9											
4744746	92-24-21	8LL37	A-8-102, ST 9-10											1
4744747	92-24-21	8LL37	A-8-102, ST 9-10											
4744749	92-24-21	8LL37	A-8-102, ST 9-10				1							2

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744579	92-18-2	8LL37	A-4-90, ST 2										
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2										
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2										
4744583	92-18-3	8LL37	A-4-91, ST 3										
4744583	92-18-3	8LL37	A-4-91, ST 3										
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3										
4744586	92-18-5	8LL37	A-4-93, ST 4-5										
4744706	92-24-17	8LL37	A-8-100, ST 9										
4744707	92-24-17	8LL37	A-8-100, ST 9										
4744708	92-24-17	8LL37	A-8-100, ST 9										
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9										
4744721	92-24-18	8LL37	A-8-101, ST 9										
4744721	92-24-18	8LL37	A-8-101, ST 9										
4744734	92-24-20	8LL37	A-8-101, ST 9										
4744734	92-24-20	8LL37	A-8-101, ST 9										
4744746	92-24-21	8LL37	A-8-102, ST 9-10										
4744747	92-24-21	8LL37	A-8-102, ST 9-10										
4744749	92-24-21	8LL37	A-8-102, ST 9-10										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744579	92-18-2	8LL37	A-4-90, ST 2												
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2												
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2												
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2												
4744583	92-18-3	8LL37	A-4-91, ST 3												
4744583	92-18-3	8LL37	A-4-91, ST 3												
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3												
4744586	92-18-5	8LL37	A-4-93, ST 4-5												
4744706	92-24-17	8LL37	A-8-100, ST 9												
4744707	92-24-17	8LL37	A-8-100, ST 9												
4744708	92-24-17	8LL37	A-8-100, ST 9			1				1					
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9							1			1		
4744721	92-24-18	8LL37	A-8-101, ST 9							3					
4744721	92-24-18	8LL37	A-8-101, ST 9												
4744734	92-24-20	8LL37	A-8-101, ST 9						1						
4744734	92-24-20	8LL37	A-8-101, ST 9												
4744746	92-24-21	8LL37	A-8-102, ST 9-10												
4744747	92-24-21	8LL37	A-8-102, ST 9-10												
4744749	92-24-21	8LL37	A-8-102, ST 9-10			2				1					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744579	92-18-2	8LL37	A-4-90, ST 2										
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2										
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2										
4744583	92-18-3	8LL37	A-4-91, ST 3										
4744583	92-18-3	8LL37	A-4-91, ST 3										
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3										
4744586	92-18-5	8LL37	A-4-93, ST 4-5							2			
4744706	92-24-17	8LL37	A-8-100, ST 9										
4744707	92-24-17	8LL37	A-8-100, ST 9										
4744708	92-24-17	8LL37	A-8-100, ST 9										
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9										
4744721	92-24-18	8LL37	A-8-101, ST 9										
4744721	92-24-18	8LL37	A-8-101, ST 9										
4744734	92-24-20	8LL37	A-8-101, ST 9										
4744734	92-24-20	8LL37	A-8-101, ST 9										
4744746	92-24-21	8LL37	A-8-102, ST 9-10										
4744747	92-24-21	8LL37	A-8-102, ST 9-10										
4744749	92-24-21	8LL37	A-8-102, ST 9-10	1									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744579	92-18-2	8LL37	A-4-90, ST 2									
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2									
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2									
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2									
4744583	92-18-3	8LL37	A-4-91, ST 3									
4744583	92-18-3	8LL37	A-4-91, ST 3									
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3									
4744586	92-18-5	8LL37	A-4-93, ST 4-5									
4744706	92-24-17	8LL37	A-8-100, ST 9									
4744707	92-24-17	8LL37	A-8-100, ST 9									
4744708	92-24-17	8LL37	A-8-100, ST 9									
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9									
4744721	92-24-18	8LL37	A-8-101, ST 9									
4744721	92-24-18	8LL37	A-8-101, ST 9									
4744734	92-24-20	8LL37	A-8-101, ST 9									
4744734	92-24-20	8LL37	A-8-101, ST 9									
4744746	92-24-21	8LL37	A-8-102, ST 9-10									
4744747	92-24-21	8LL37	A-8-102, ST 9-10									
4744749	92-24-21	8LL37	A-8-102, ST 9-10									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744579	92-18-2	8LL37	A-4-90, ST 2							
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2							
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2							
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2							
4744583	92-18-3	8LL37	A-4-91, ST 3							
4744583	92-18-3	8LL37	A-4-91, ST 3							
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3							
4744586	92-18-5	8LL37	A-4-93, ST 4-5							
4744706	92-24-17	8LL37	A-8-100, ST 9							
4744707	92-24-17	8LL37	A-8-100, ST 9		35					
4744708	92-24-17	8LL37	A-8-100, ST 9							
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9							
4744721	92-24-18	8LL37	A-8-101, ST 9							
4744721	92-24-18	8LL37	A-8-101, ST 9							
4744734	92-24-20	8LL37	A-8-101, ST 9		1					
4744734	92-24-20	8LL37	A-8-101, ST 9		1					
4744746	92-24-21	8LL37	A-8-102, ST 9-10							
4744747	92-24-21	8LL37	A-8-102, ST 9-10							
4744749	92-24-21	8LL37	A-8-102, ST 9-10		4					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4744750	92-24-21	8LL37	Pineland	Old Mound	A-8-102, ST 9-10	I-late-f		83.80
4744750	92-24-21	8LL37	Pineland	Old Mound	A-8-102, ST 9-10	I-late-f		46.70
4744677	92-24-2	8LL37	Pineland	Old Mound	A-8-90, ST 2	IIA-early-a		26.11
4744678	92-24-2-1	8LL37	Pineland	Old Mound	A-8-90-1, ST 2	IIA-early-a	Y	37.45
4744679	92-24-2-2	8LL37	Pineland	Old Mound	A-8-90-2, ST 2	IIA-early-a	Y	1.38
4744680	92-24-3	8LL37	Pineland	Old Mound	A-8-91, ST 3	IIA-early-a		9.33
4744680	92-24-3	8LL37	Pineland	Old Mound	A-8-91, ST 3	IIA-early-a		3.73
4744684	92-24-5	8LL37	Pineland	Old Mound	A-8-93, ST 5	I-late-i/j		113.30
4744688	92-24-10	8LL37	Pineland	Old Mound	A-8-95, ST 7?	I-late-g/h		100.10
4744699	92-24-15	8LL37	Pineland	Old Mound	A-8-98, ST 9	I-late-f		34.90
4744700	92-24-16	8LL37	Pineland	Old Mound	A-8-99, ST 9	I-late-f		30.30
4745134	95-3-2	8LL37	Pineland	Old Mound	C-1-73, ST 2	IIA-early-b		0.60
4745135	95-3-3	8LL37	Pineland	Old Mound	C-1-74, ST 2	IIA-early-b		1.50
4745136	95-3-3/1	8LL37	Pineland	Old Mound	C-1-74/1, ST 2-3	IIA-early-b		1.75
4745137	95-3-4	8LL37	Pineland	Old Mound	C-1-75, ST 2-3	IIA-early-b		2.17
4745138	95-3-4-1	8LL37	Pineland	Old Mound	C-1-75-1, ST 2-3	IIA-early-b		0.66
4745139	95-3-5	8LL37	Pineland	Old Mound	C-1-76, ST 3-4	IIA-early-b		1.12
4745140	95-3-5-1	8LL37	Pineland	Old Mound	C-1-76-1, ST 3-4	IIA-early-b		1.21
4745141	95-3-5-2	8LL37	Pineland	Old Mound	C-1-76-2, ST 3-4	IIA-early-b		0.44

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4744750	92-24-21	8LL37	A-8-102, ST 9-10	330	40	10			17		8
4744750	92-24-21	8LL37	A-8-102, ST 9-10	139	40	4			20		13
4744677	92-24-2	8LL37	A-8-90, ST 2	119	40	6			32		
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	206	40	3			36		
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2	4	4				4		
4744680	92-24-3	8LL37	A-8-91, ST 3	32	32	7			25		
4744680	92-24-3	8LL37	A-8-91, ST 3	7	7	1			6		
4744684	92-24-5	8LL37	A-8-93, ST 5	569	40	9			25		4
4744688	92-24-10	8LL37	A-8-95, ST 7?	710	40	10			23		3
4744699	92-24-15	8LL37	A-8-98, ST 9	217	40	14			18		6
4744700	92-24-16	8LL37	A-8-99, ST 9	217	40	10			15		11
4745134	95-3-2	8LL37	C-1-73, ST 2	8	8	8					
4745135	95-3-3	8LL37	C-1-74, ST 2	15	15	12			3		
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3	1	1	1					
4745137	95-3-4	8LL37	C-1-75, ST 2-3	20	20	7			10		
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3	4	4				4		
4745139	95-3-5	8LL37	C-1-76, ST 3-4	6	6				3		2
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4	7	7				5		1
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4	4	4	1			1		2

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4744750	92-24-21	8LL37	A-8-102, ST 9-10							1				2
4744750	92-24-21	8LL37	A-8-102, ST 9-10				2							
4744677	92-24-2	8LL37	A-8-90, ST 2				1			1				
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2							1				
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2											
4744680	92-24-3	8LL37	A-8-91, ST 3											
4744680	92-24-3	8LL37	A-8-91, ST 3											
4744684	92-24-5	8LL37	A-8-93, ST 5							2				
4744688	92-24-10	8LL37	A-8-95, ST 7?				2							
4744699	92-24-15	8LL37	A-8-98, ST 9				1							
4744700	92-24-16	8LL37	A-8-99, ST 9				1							
4745134	95-3-2	8LL37	C-1-73, ST 2											
4745135	95-3-3	8LL37	C-1-74, ST 2											
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3											
4745137	95-3-4	8LL37	C-1-75, ST 2-3		2									
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3											
4745139	95-3-5	8LL37	C-1-76, ST 3-4											
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4											
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4744750	92-24-21	8LL37	A-8-102, ST 9-10										
4744750	92-24-21	8LL37	A-8-102, ST 9-10										
4744677	92-24-2	8LL37	A-8-90, ST 2										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2										
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2										
4744680	92-24-3	8LL37	A-8-91, ST 3										
4744680	92-24-3	8LL37	A-8-91, ST 3										
4744684	92-24-5	8LL37	A-8-93, ST 5										
4744688	92-24-10	8LL37	A-8-95, ST 7?										
4744699	92-24-15	8LL37	A-8-98, ST 9										
4744700	92-24-16	8LL37	A-8-99, ST 9										
4745134	95-3-2	8LL37	C-1-73, ST 2										
4745135	95-3-3	8LL37	C-1-74, ST 2										
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3										
4745137	95-3-4	8LL37	C-1-75, ST 2-3										
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3										
4745139	95-3-5	8LL37	C-1-76, ST 3-4										
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4										
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4744750	92-24-21	8LL37	A-8-102, ST 9-10												
4744750	92-24-21	8LL37	A-8-102, ST 9-10			1									
4744677	92-24-2	8LL37	A-8-90, ST 2												
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2												
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2												
4744680	92-24-3	8LL37	A-8-91, ST 3												
4744680	92-24-3	8LL37	A-8-91, ST 3												
4744684	92-24-5	8LL37	A-8-93, ST 5												
4744688	92-24-10	8LL37	A-8-95, ST 7?												
4744699	92-24-15	8LL37	A-8-98, ST 9												
4744700	92-24-16	8LL37	A-8-99, ST 9					1		2					
4745134	95-3-2	8LL37	C-1-73, ST 2												
4745135	95-3-3	8LL37	C-1-74, ST 2												
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3												
4745137	95-3-4	8LL37	C-1-75, ST 2-3												
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3												
4745139	95-3-5	8LL37	C-1-76, ST 3-4												
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4												
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4744750	92-24-21	8LL37	A-8-102, ST 9-10	2									
4744750	92-24-21	8LL37	A-8-102, ST 9-10										
4744677	92-24-2	8LL37	A-8-90, ST 2										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2										
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2										
4744680	92-24-3	8LL37	A-8-91, ST 3										
4744680	92-24-3	8LL37	A-8-91, ST 3										
4744684	92-24-5	8LL37	A-8-93, ST 5										
4744688	92-24-10	8LL37	A-8-95, ST 7?			2							
4744699	92-24-15	8LL37	A-8-98, ST 9										
4744700	92-24-16	8LL37	A-8-99, ST 9										
4745134	95-3-2	8LL37	C-1-73, ST 2										
4745135	95-3-3	8LL37	C-1-74, ST 2										
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3										
4745137	95-3-4	8LL37	C-1-75, ST 2-3										
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3										
4745139	95-3-5	8LL37	C-1-76, ST 3-4										
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4										
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4744750	92-24-21	8LL37	A-8-102, ST 9-10									
4744750	92-24-21	8LL37	A-8-102, ST 9-10									
4744677	92-24-2	8LL37	A-8-90, ST 2									
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2									
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2									
4744680	92-24-3	8LL37	A-8-91, ST 3									
4744680	92-24-3	8LL37	A-8-91, ST 3									
4744684	92-24-5	8LL37	A-8-93, ST 5									
4744688	92-24-10	8LL37	A-8-95, ST 7?									
4744699	92-24-15	8LL37	A-8-98, ST 9									
4744700	92-24-16	8LL37	A-8-99, ST 9									
4745134	95-3-2	8LL37	C-1-73, ST 2									
4745135	95-3-3	8LL37	C-1-74, ST 2									
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3									
4745137	95-3-4	8LL37	C-1-75, ST 2-3									
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3									
4745139	95-3-5	8LL37	C-1-76, ST 3-4									
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4									
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4744750	92-24-21	8LL37	A-8-102, ST 9-10							
4744750	92-24-21	8LL37	A-8-102, ST 9-10							
4744677	92-24-2	8LL37	A-8-90, ST 2							
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2							
4744679	92-24-2-2	8LL37	A-8-90-2, ST 2							
4744680	92-24-3	8LL37	A-8-91, ST 3							
4744680	92-24-3	8LL37	A-8-91, ST 3							
4744684	92-24-5	8LL37	A-8-93, ST 5							
4744688	92-24-10	8LL37	A-8-95, ST 7?							
4744699	92-24-15	8LL37	A-8-98, ST 9		1					
4744700	92-24-16	8LL37	A-8-99, ST 9							
4745134	95-3-2	8LL37	C-1-73, ST 2							
4745135	95-3-3	8LL37	C-1-74, ST 2							
4745136	95-3-3/1	8LL37	C-1-74/1, ST 2-3							
4745137	95-3-4	8LL37	C-1-75, ST 2-3	1						
4745138	95-3-4-1	8LL37	C-1-75-1, ST 2-3							
4745139	95-3-5	8LL37	C-1-76, ST 3-4		1					
4745140	95-3-5-1	8LL37	C-1-76-1, ST 3-4	1						
4745141	95-3-5-2	8LL37	C-1-76-2, ST 3-4							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4745142	95-3-6	8LL37	Pineland	Old Mound	C-1-77, ST 3-4	IIA-early-b		5.07
4745143	95-3-7	8LL37	Pineland	Old Mound	C-1-78, ST 3-4	IIA-early-b		39.57
4745144	95-3-7-1	8LL37	Pineland	Old Mound	C-1-78-1, ST 3-4	IIA-early-b		0.93
4745145	95-3-7-2	8LL37	Pineland	Old Mound	C-1-78-2, ST 3-4	IIA-early-b		0.59
4745146	95-3-7-3	8LL37	Pineland	Old Mound	C-1-78-3, ST 3-4	IIA-early-b		1.31
4745147	95-3-8	8LL37	Pineland	Old Mound	C-1-79, ST 4-5	IIA-early-b		0.79
4745148	95-3-8-1	8LL37	Pineland	Old Mound	C-1-79-1?, ST 4-5	IIA-early-b		2.71
4745149	95-3-8-3	8LL37	Pineland	Old Mound	C-1-79-3, ST 4/5	IIA-early-b		0.32
4745150	95-3-9	8LL37	Pineland	Old Mound	C-1-80, ST 5	IIA-early-b		0.75
4745151	95-3-9-1	8LL37	Pineland	Old Mound	C-1-80-1, ST 5	IIA-early-b		2.13
4745152	95-3-9-2	8LL37	Pineland	Old Mound	C-1-80-2, ST 5	IIA-early-b		0.75
4745153	95-3-10	8LL37	Pineland	Old Mound	C-1-81, ST 5-8	IIA-early-b		11.44
4745154	95-3-11	8LL37	Pineland	Old Mound	C-1-82, ST 5-8	IIA-early-b		0.32
4745155	95-3-11-2	8LL37	Pineland	Old Mound	C-1-82-2, ST 5-8	IIA-early-b		0.44
4745156	95-3-12	8LL37	Pineland	Old Mound	C-1-83, ST 5-8	IIA-early-b		10.77
4745157	95-3-12-2	8LL37	Pineland	Old Mound	C-1-83-2, ST 5-8	IIA-early-b		0.36
4745158	95-3-13-2	8LL37	Pineland	Old Mound	C-1-84-2, ST 6-8	IIA-early-b		8.36
4745159	95-3-13-6	8LL37	Pineland	Old Mound	C-1-84-6, ST 6-8	IIA-early-b		3.28

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4745142	95-3-6	8LL37	C-1-77, ST 3-4	26	26	13			10		
4745143	95-3-7	8LL37	C-1-78, ST 3-4	267	40	8			32		
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4	1	1				1		
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4	6	6	4			2		
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4	2	2				2		
4745147	95-3-8	8LL37	C-1-79, ST 4-5	7	7	3			4		
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5	23	23	8			9		6
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5	4	4				4		
4745150	95-3-9	8LL37	C-1-80, ST 5	2	2	1			1		
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5	7	7	2			5		
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5	2	2				2		
4745153	95-3-10	8LL37	C-1-81, ST 5-8	67	40	28			11		1
4745154	95-3-11	8LL37	C-1-82, ST 5-8	1	1						
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8	3	3				1		
4745156	95-3-12	8LL37	C-1-83, ST 5-8	44	40	31			2		
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8	6	6	4			1		
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8	74	40	14			21		3
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8	12	12	12					

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4745142	95-3-6	8LL37	C-1-77, ST 3-4				2							
4745143	95-3-7	8LL37	C-1-78, ST 3-4											
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4											
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4											
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4											
4745147	95-3-8	8LL37	C-1-79, ST 4-5											
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5											
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5											
4745150	95-3-9	8LL37	C-1-80, ST 5											
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5											
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5											
4745153	95-3-10	8LL37	C-1-81, ST 5-8											
4745154	95-3-11	8LL37	C-1-82, ST 5-8											
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8											
4745156	95-3-12	8LL37	C-1-83, ST 5-8											
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8											
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8				2							
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8											

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4745142	95-3-6	8LL37	C-1-77, ST 3-4										
4745143	95-3-7	8LL37	C-1-78, ST 3-4										
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4										
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4										
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4										
4745147	95-3-8	8LL37	C-1-79, ST 4-5										
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5										
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5										
4745150	95-3-9	8LL37	C-1-80, ST 5										
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5										
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5										
4745153	95-3-10	8LL37	C-1-81, ST 5-8										
4745154	95-3-11	8LL37	C-1-82, ST 5-8										
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8										
4745156	95-3-12	8LL37	C-1-83, ST 5-8										
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8										
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8										
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4745142	95-3-6	8LL37	C-1-77, ST 3-4												
4745143	95-3-7	8LL37	C-1-78, ST 3-4												
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4												
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4												
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4												
4745147	95-3-8	8LL37	C-1-79, ST 4-5												
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5												
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5												
4745150	95-3-9	8LL37	C-1-80, ST 5												
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5												
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5												
4745153	95-3-10	8LL37	C-1-81, ST 5-8												
4745154	95-3-11	8LL37	C-1-82, ST 5-8												
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8												
4745156	95-3-12	8LL37	C-1-83, ST 5-8												
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8												
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8												
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4745142	95-3-6	8LL37	C-1-77, ST 3-4								1		
4745143	95-3-7	8LL37	C-1-78, ST 3-4										
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4										
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4										
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4										
4745147	95-3-8	8LL37	C-1-79, ST 4-5										
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5										
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5										
4745150	95-3-9	8LL37	C-1-80, ST 5										
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5										
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5										
4745153	95-3-10	8LL37	C-1-81, ST 5-8										
4745154	95-3-11	8LL37	C-1-82, ST 5-8										
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8										
4745156	95-3-12	8LL37	C-1-83, ST 5-8										
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8										
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8										
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4745142	95-3-6	8LL37	C-1-77, ST 3-4									
4745143	95-3-7	8LL37	C-1-78, ST 3-4									
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4									
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4									
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4									
4745147	95-3-8	8LL37	C-1-79, ST 4-5									
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5									
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5									
4745150	95-3-9	8LL37	C-1-80, ST 5									
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5									
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5									
4745153	95-3-10	8LL37	C-1-81, ST 5-8									
4745154	95-3-11	8LL37	C-1-82, ST 5-8									
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8									
4745156	95-3-12	8LL37	C-1-83, ST 5-8									
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8									
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8									
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4745142	95-3-6	8LL37	C-1-77, ST 3-4							
4745143	95-3-7	8LL37	C-1-78, ST 3-4							
4745144	95-3-7-1	8LL37	C-1-78-1, ST 3-4							
4745145	95-3-7-2	8LL37	C-1-78-2, ST 3-4							
4745146	95-3-7-3	8LL37	C-1-78-3, ST 3-4							
4745147	95-3-8	8LL37	C-1-79, ST 4-5							
4745148	95-3-8-1	8LL37	C-1-79-1?, ST 4-5							
4745149	95-3-8-3	8LL37	C-1-79-3, ST 4/5							
4745150	95-3-9	8LL37	C-1-80, ST 5							
4745151	95-3-9-1	8LL37	C-1-80-1, ST 5							
4745152	95-3-9-2	8LL37	C-1-80-2, ST 5							
4745153	95-3-10	8LL37	C-1-81, ST 5-8							
4745154	95-3-11	8LL37	C-1-82, ST 5-8		1					
4745155	95-3-11-2	8LL37	C-1-82-2, ST 5-8		2					
4745156	95-3-12	8LL37	C-1-83, ST 5-8		7					
4745157	95-3-12-2	8LL37	C-1-83-2, ST 5-8		1					
4745158	95-3-13-2	8LL37	C-1-84-2, ST 6-8							
4745159	95-3-13-6	8LL37	C-1-84-6, ST 6-8							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4745179	95-3-30/4	8LL37	Pineland	Old Mound	C-1-85 North Profile, Artifact #4	IIA-early-b		1.10
4745160	95-3-14	8LL37	Pineland	Old Mound	C-1-85, ST 6-10	IIA-early-b		6.52
4745177	95-3-30/1	8LL37	Pineland	Old Mound	C-1-86 West Profile, Artifact #1	IIA-early-b		0.40
4745161	95-3-15	8LL37	Pineland	Old Mound	C-1-86, ST 7-10	IIA-early-b		10.26
4745162	95-3-16	8LL37	Pineland	Old Mound	C-1-87, ST 7-10	IIA-early-b		21.98
4745163	95-3-17	8LL37	Pineland	Old Mound	C-1-88, ST 8-11	IIA-early-b		18.47
4745164	95-3-17/3	8LL37	Pineland	Old Mound	C-1-88/3, ST 8-11	IIA-early-b		1.48
4745165	95-3-17-1	8LL37	Pineland	Old Mound	C-1-88-1, ST 8-11	IIA-early-b		1.04
4745166	95-3-17-2	8LL37	Pineland	Old Mound	C-1-88-2, ST 8-11	IIA-early-b		0.26
4745178	95-3-30/2	8LL37	Pineland	Old Mound	C-1-89 North Profile, Artifact #2	IIA-early-a		0.90
4745167	95-3-18	8LL37	Pineland	Old Mound	C-1-89, ST 11	IIA-early-a		13.06
4745168	95-3-18-2	8LL37	Pineland	Old Mound	C-1-89-2, ST 11	IIA-early-a		10.59
4745169	95-3-18-3	8LL37	Pineland	Old Mound	C-1-89-3, ST 11	IIA-early-a		1.04
4745170	95-3-19	8LL37	Pineland	Old Mound	C-1-90	IIA-early-a		6.32
4745171	95-3-19-3	8LL37	Pineland	Old Mound	C-1-90-3	IIA-early-a		0.08
4745172	95-3-20	8LL37	Pineland	Old Mound	C-1-91	IIA-early-a		0.68

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4	3	3				3		
4745160	95-3-14	8LL37	C-1-85, ST 6-10	32	32	9			16		6
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1	9	9	9					
4745161	95-3-15	8LL37	C-1-86, ST 7-10	34	34	9			21		4
4745162	95-3-16	8LL37	C-1-87, ST 7-10	102	40	18			15		6
4745163	95-3-17	8LL37	C-1-88, ST 8-11	111	40	15			20		1
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11	4	4	1			3		
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11	1	1				1		
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11	3	3				3		
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2	7	7						
4745167	95-3-18	8LL37	C-1-89, ST 11	72	40	7			27		5
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11	26	26	4			21		
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11	7	7	2			4		1
4745170	95-3-19	8LL37	C-1-90	28	28	9			14		
4745171	95-3-19-3	8LL37	C-1-90-3	1	1	1					
4745172	95-3-20	8LL37	C-1-91	12	12				1		3

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4											
4745160	95-3-14	8LL37	C-1-85, ST 6-10				1							
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1											
4745161	95-3-15	8LL37	C-1-86, ST 7-10											
4745162	95-3-16	8LL37	C-1-87, ST 7-10											
4745163	95-3-17	8LL37	C-1-88, ST 8-11				2			1				
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11											
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11											
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11											
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2				7							
4745167	95-3-18	8LL37	C-1-89, ST 11											
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11											
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11											
4745170	95-3-19	8LL37	C-1-90				4			1				
4745171	95-3-19-3	8LL37	C-1-90-3											
4745172	95-3-20	8LL37	C-1-91							8				

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4										
4745160	95-3-14	8LL37	C-1-85, ST 6-10										
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1										
4745161	95-3-15	8LL37	C-1-86, ST 7-10										
4745162	95-3-16	8LL37	C-1-87, ST 7-10										
4745163	95-3-17	8LL37	C-1-88, ST 8-11										
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11										
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11										
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11										
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2										
4745167	95-3-18	8LL37	C-1-89, ST 11										
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11										
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11										
4745170	95-3-19	8LL37	C-1-90										
4745171	95-3-19-3	8LL37	C-1-90-3										
4745172	95-3-20	8LL37	C-1-91										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4												
4745160	95-3-14	8LL37	C-1-85, ST 6-10												
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1												
4745161	95-3-15	8LL37	C-1-86, ST 7-10												
4745162	95-3-16	8LL37	C-1-87, ST 7-10												
4745163	95-3-17	8LL37	C-1-88, ST 8-11						1						
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11												
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11												
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11												
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2												
4745167	95-3-18	8LL37	C-1-89, ST 11												
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11												
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11												
4745170	95-3-19	8LL37	C-1-90												
4745171	95-3-19-3	8LL37	C-1-90-3												
4745172	95-3-20	8LL37	C-1-91												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4										
4745160	95-3-14	8LL37	C-1-85, ST 6-10										
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1										
4745161	95-3-15	8LL37	C-1-86, ST 7-10										
4745162	95-3-16	8LL37	C-1-87, ST 7-10		1								
4745163	95-3-17	8LL37	C-1-88, ST 8-11										
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11										
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11										
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11										
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2										
4745167	95-3-18	8LL37	C-1-89, ST 11										
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11										
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11										
4745170	95-3-19	8LL37	C-1-90										
4745171	95-3-19-3	8LL37	C-1-90-3										
4745172	95-3-20	8LL37	C-1-91										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4									
4745160	95-3-14	8LL37	C-1-85, ST 6-10									
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1									
4745161	95-3-15	8LL37	C-1-86, ST 7-10									
4745162	95-3-16	8LL37	C-1-87, ST 7-10									
4745163	95-3-17	8LL37	C-1-88, ST 8-11									
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11									
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11									
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11									
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2									
4745167	95-3-18	8LL37	C-1-89, ST 11									
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11									
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11									
4745170	95-3-19	8LL37	C-1-90									
4745171	95-3-19-3	8LL37	C-1-90-3									
4745172	95-3-20	8LL37	C-1-91									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4745179	95-3-30/4	8LL37	C-1-85 North Profile, Artifact #4							
4745160	95-3-14	8LL37	C-1-85, ST 6-10							
4745177	95-3-30/1	8LL37	C-1-86 West Profile, Artifact #1							
4745161	95-3-15	8LL37	C-1-86, ST 7-10							
4745162	95-3-16	8LL37	C-1-87, ST 7-10							
4745163	95-3-17	8LL37	C-1-88, ST 8-11							
4745164	95-3-17/3	8LL37	C-1-88/3, ST 8-11							
4745165	95-3-17-1	8LL37	C-1-88-1, ST 8-11							
4745166	95-3-17-2	8LL37	C-1-88-2, ST 8-11							
4745178	95-3-30/2	8LL37	C-1-89 North Profile, Artifact #2							
4745167	95-3-18	8LL37	C-1-89, ST 11		1					
4745168	95-3-18-2	8LL37	C-1-89-2, ST 11		1					
4745169	95-3-18-3	8LL37	C-1-89-3, ST 11							
4745170	95-3-19	8LL37	C-1-90							
4745171	95-3-19-3	8LL37	C-1-90-3							
4745172	95-3-20	8LL37	C-1-91							

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Site_Name	Site_Component	Provenience	Temporal_assoc	Feature_Assoc	Charcoal_wt (g)
4745180	95-3-32	8LL37	Pineland	Old Mound	C-1-91	IIA-early-a		1.41
4745181	95-3-32-2	8LL37	Pineland	Old Mound	C-1-91-2	IIA-early-a		0.43
	89-38-24	8LL51	Useppa Island		B-12-14	V/Early Historic		89.86
	89-38-81/2	8LL51	Useppa Island		B-22-15/2	V/Early Historic		9.01
	89-38-82	8LL51	Useppa Island		B-23-15	V/Early Historic		7.55
	89-38-8	8LL51	Useppa Island		B-4-13	V/Early Historic		141.23
	89-38-17	8LL51	Useppa Island		B-9-12	V/Early Historic		32.65

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Charcoal_ct	Count ID	*Pinus* spp.	cf. *Pinus* spp.	Gymnosperm	*Avicennia germinans*	cf. *Avicennia germinans*	*Rhizophora mangle*
4745180	95-3-32	8LL37	C-1-91	6	6						1
4745181	95-3-32-2	8LL37	C-1-91-2	3	3	1					2
	89-38-24	8LL51	B-12-14	22	22						
	89-38-81/2	8LL51	B-22-15/2	5	5						
	89-38-82	8LL51	B-23-15	4	4						
	89-38-8	8LL51	B-4-13	84	40						
	89-38-17	8LL51	B-9-12	8	8						

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. *Rhizophora mangle*	*Laguncularia racemosa*	cf. *Laguncularia racemosa*	*Conocarpus erectus*	cf. *Conocarpus erectus*	Combretaceae	*Quercus virginiana*	cf. *Quercus virgininana*	*Quercus* spp. (Red/Black Group)	cf. *Quercus* spp.	Palmae
4745180	95-3-32	8LL37	C-1-91				5							
4745181	95-3-32-2	8LL37	C-1-91-2											
	89-38-24	8LL51	B-12-14							10		1		11
	89-38-81/2	8LL51	B-22-15/2							5				
	89-38-82	8LL51	B-23-15							4				
	89-38-8	8LL51	B-4-13							31		4		2
	89-38-17	8LL51	B-9-12							7		1		

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	cf. Palmae	*Celtis* spp.	cf. *Gossypium* spp.	*Caesalpinia* sp.	cf. *Eugenia axillaris*	cf. *Morella cerifera*	Rubiaceae	cf. *Sideroxylon* sp.	cf. *Swietenia mahagoni*	cf. Vitaceae
4745180	95-3-32	8LL37	C-1-91										
4745181	95-3-32-2	8LL37	C-1-91-2										
	89-38-24	8LL51	B-12-14										
	89-38-81/2	8LL51	B-22-15/2										
	89-38-82	8LL51	B-23-15										
	89-38-8	8LL51	B-4-13										
	89-38-17	8LL51	B-9-12										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	*Vitis* spp.	Wood Type 18	Wood Type 21	Wood Type 22	Wood Type 23	cf. Wood Type 23	Wood Type 24	cf. Wood Type 24	Wood Type 25	Wood Type 26	Wood Type 27	Wood Type 28
4745180	95-3-32	8LL37	C-1-91												
4745181	95-3-32-2	8LL37	C-1-91-2												
	89-38-24	8LL51	B-12-14												
	89-38-81/2	8LL51	B-22-15/2												
	89-38-82	8LL51	B-23-15												
	89-38-8	8LL51	B-4-13												
	89-38-17	8LL51	B-9-12												

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 29	Wood Type 30	Wood Type 31	Wood Type 32	cf. Wood Type 32	Wood Type 33	Wood Type 34	Wood Type 35	cf. Wood Type 35	Wood Type 36
4745180	95-3-32	8LL37	C-1-91										
4745181	95-3-32-2	8LL37	C-1-91-2										
	89-38-24	8LL51	B-12-14										
	89-38-81/2	8LL51	B-22-15/2										
	89-38-82	8LL51	B-23-15										
	89-38-8	8LL51	B-4-13										
	89-38-17	8LL51	B-9-12										

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Wood Type 37	Wood Type 38	Wood Type 39	Wood Type 40	Wood Type 41	Wood Type 42	Wood Type 43	Wood Type 44	Wood Type 45
4745180	95-3-32	8LL37	C-1-91									
4745181	95-3-32-2	8LL37	C-1-91-2									
	89-38-24	8LL51	B-12-14									
	89-38-81/2	8LL51	B-22-15/2									
	89-38-82	8LL51	B-23-15									
	89-38-8	8LL51	B-4-13								2	
	89-38-17	8LL51	B-9-12									

Appendix B: Summary of Wood Taxa Identified. (Cont.)

EA Catalog No.	ANT Catalog No.	Site_No	Provenience	Indeterminate Hardwood	Indeterminate	UC *Pinus* spp.	Apical growth	Bark (spp. Unid)	Unidentified Plant	Modern (Partially carbonized)
4745180	95-3-32	8LL37	C-1-91							
4745181	95-3-32-2	8LL37	C-1-91-2							
	89-38-24	8LL51	B-12-14							
	89-38-81/2	8LL51	B-22-15/2							
	89-38-82	8LL51	B-23-15							
	89-38-8	8LL51	B-4-13					1		
	89-38-17	8LL51	B-9-12							

Appendix C

Summary of wood anatomical characters and growth increments.

Appendix C: Wood Anatomical Characters and Growth Increments.

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25 A27601	8CH10	U1_S4_L8b	P01	50	15								0.78	1.13	1.41
	86-25 A27601	8CH10	U1_S4_L8b	P02	40	10								0.51	0.65	
	86-25 A27601	8CH10	U1_S4_L8b	P03	40	15								0.27	0.39	0.29
	86-25 A27601	8CH10	U1_S4_L8b	P04	40	10								0.33	0.6	1.1
	86-25 A27601	8CH10	U1_S4_L8b	P05	40	15								0.47	0.42	0.22
	86-25 A27601	8CH10	U1_S4_L8b	P06										1.05	0.57	
	86-25 A27601	8CH10	U1_S4_L8b	P07	40	20								2.54		
	86-25 A27601	8CH10	U1_S4_L8b	P08											0.76	0.74

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25 A27601	8CH10	0.42	0.78	0.829		86-25 A27601	P01									
86-25 A27601	8CH10					86-25 A27601	P02									
86-25 A27601	8CH10	0.33	0.29	0.787	0.33	86-25 A27601	P03	0.3	0.34	0.3	0.57	0.29	0.17	0.32	0.25	
86-25 A27601	8CH10					86-25 A27601	P04									
86-25 A27601	8CH10					86-25 A27601	P05									
86-25 A27601	8CH10					86-25 A27601	P06									
86-25 A27601	8CH10					86-25 A27601	P07									
86-25 A27601	8CH10	0.36	0.48	0.484	0.62	86-25 A27601	P08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25 A27601	8CH10	U1_S4_L8b	P09	20	20										
	86-25 A27601	8CH10	U1_S4_L8b	P10	20	20								0.61	0.51	0.4
	86-25 A27601	8CH10	U1_S4_L8b	P11	40	10								0.55	0.34	0.26
	86-25 A27601	8CH10	U1_S4_L8b	P12	40	10								0.6	0.89	1.05
	86-25 A27601	8CH10	U1_S4_L8b	P13	20	20								0.64	1.17	
	86-25 A27601	8CH10	U1_S4_L8b	P14										1.36	0.94	
	86-25 A27602	8CH10	U2_S3_L11	A01										1.08	0.84	0.89
	86-25 A27602	8CH10	U2_S3_L11	A02										0.93	0.82	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25 A27601	8CH10					86-25 A27601	P09									
86-25 A27601	8CH10	0.38	0.26	0.281	0.38	86-25 A27601	P10	0.11	0.34							
86-25 A27601	8CH10					86-25 A27601	P11									
86-25 A27601	8CH10	0.2	0.37			86-25 A27601	P12									
86-25 A27601	8CH10					86-25 A27601	P13									
86-25 A27601	8CH10					86-25 A27601	P14									
86-25 A27602	8CH10	0.86				86-25 A27602	A01									
86-25 A27602	8CH10					86-25 A27602	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27601	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25 A27602	8CH10	U2_S3_L11	A03										1.17		
	86-25 A27602	8CH10	U2_S3_L11	A04												
	86-25 A27602	8CH10	U2_S3_L11	A05										0.95	0.66	0.62
	86-25 A27602	8CH10	U2_S3_L11	A06										0.81	1.12	
	86-25 A27602	8CH10	U2_S3_L11	A07										0.83		
	86-25 A27602	8CH10	U2_S3_L11	A08										0.92	0.65	
	86-25 A27602	8CH10	U2_S3_L11	P01	20	25				Y						
	86-25 A27602	8CH10	U2_S3_L11	P02	20	20								1.13		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25 A27602	8CH10					86-25 A27602	A03									
86-25 A27602	8CH10					86-25 A27602	A04									
86-25 A27602	8CH10					86-25 A27602	A05									
86-25 A27602	8CH10					86-25 A27602	A06									
86-25 A27602	8CH10					86-25 A27602	A07									
86-25 A27602	8CH10					86-25 A27602	A08									
86-25 A27602	8CH10					86-25 A27602	P01									
86-25 A27602	8CH10					86-25 A27602	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25 A27602	8CH10	U2_S3_L11	P03										0.48	0.31	0.65
	86-25 A27602	8CH10	U2_S3_L11	P04										0.39	0.51	0.7
	86-25 A27602	8CH10	U2_S3_L11	P05										0.58	0.79	0.52
	86-25.1 A27599	8CH10	U1_S4_L2	P01	40	10								0.67	2.15	
	86-25.1 A27599	8CH10	U1_S4_L2	P02	40	10								1.16	1.06	1.26
	86-25.1 A27599	8CH10	U1_S4_L2	P03										1.75		
	86-25.1 A27599	8CH10	U1_S4_L2	P04	40	10						Y		0.77	0.41	0.28
	86-25.1 A27599	8CH10	U1_S4_L2	P05										0.56	0.49	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25 A27602	8CH10	0.41	1.02	1.133		86-25 A27602	P03									
86-25 A27602	8CH10	1.57	0.7			86-25 A27602	P04									
86-25 A27602	8CH10	0.41				86-25 A27602	P05									
86-25.1 A27599	8CH10					86-25.1 A27599	P01									
86-25.1 A27599	8CH10	0.79	0.36			86-25.1 A27599	P02									
86-25.1 A27599	8CH10					86-25.1 A27599	P03									
86-25.1 A27599	8CH10					86-25.1 A27599	P04									
86-25.1 A27599	8CH10					86-25.1 A27599	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25 A27602	8CH10							
86-25.1 A27599	8CH10							
86-25.1 A27599	8CH10							
86-25.1 A27599	8CH10							
86-25.1 A27599	8CH10							
86-25.1 A27599	8CH10							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25.1 A27600	8CH10	U1_S4_L7	P01	40	10								1.63	0.85	0.74
	86-25.1 A27600	8CH10	U1_S4_L7	P02								Y		1.11	0.73	0.3
	86-25.1 A27600	8CH10	U1_S4_L7	P03										1.44	0.73	0.41
	86-25.1 A27600	8CH10	U1_S4_L7	P04	20	20								0.69	0.81	0.43
	86-25.1 A27600	8CH10	U1_S4_L7	P05										0.5	0.48	
	86-25.1 A27600	8CH10	U1_S4_L7	P06										0.36	0.39	0.72
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P01	20	25			Y					0.52	0.53	0.42
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P02	20	25								0.81	0.55	0.41
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P03	40	10								0.12	0.16	0.27

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25.1 A27600	8CH10					86-25.1 A27600	P01									
86-25.1 A27600	8CH10					86-25.1 A27600	P02									
86-25.1 A27600	8CH10					86-25.1 A27600	P03									
86-25.1 A27600	8CH10	0.66	0.38	0.617	0.32	86-25.1 A27600	P04	0.93								
86-25.1 A27600	8CH10					86-25.1 A27600	P05									
86-25.1 A27600	8CH10	1.2	0.77			86-25.1 A27600	P06									
86-25-2.1	8CH10	0.66				86-25-2.1	P01									
86-25-2.1	8CH10					86-25-2.1	P02									
86-25-2.1	8CH10	0.32	0.6	0.363		86-25-2.1	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25.1 A27600	8CH10							
86-25.1 A27600	8CH10							
86-25.1 A27600	8CH10							
86-25.1 A27600	8CH10							
86-25.1 A27600	8CH10							
86-25.1 A27600	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P04										1.02	0.43	0.55
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P05	20	20								0.7	1.19	0.12
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P06	40	15								0.28	0.23	0.3
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P07	30	25			Y					1	0.99	0.52
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P08										1.16	0.75	0.41
	86-25-2.1	8CH10	SOIL SAMP 1, L6 BOTTOM	P09										1.69	1.19	
	86-27 A27608	8CH38	A-1-17	A01			Y			Y				0.29	0.69	0.9
	86-27 A27608	8CH38	A-1-17	A02										0.85	0.6	0.58
	86-27 A27608	8CH38	A-1-17	A03										0.7	0.62	0.46
	86-27 A27608	8CH38	A-1-17	A04										1.25	0.76	0.81

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-25-2.1	8CH10	0.46	0.3			86-25-2.1	P04									
86-25-2.1	8CH10	0.25	0.21	0.427	0.21	86-25-2.1	P05	0.18								
86-25-2.1	8CH10	0.38	0.32	0.198	0.11	86-25-2.1	P06									
86-25-2.1	8CH10	0.17	0.25	0.168	0.27	86-25-2.1	P07	0.41								
86-25-2.1	8CH10	0.77	0.36	0.603		86-25-2.1	P08									
86-25-2.1	8CH10					86-25-2.1	P09									
86-27 A27608	8CH38	1.27				86-27 A27608	A01									
86-27 A27608	8CH38					86-27 A27608	A02									
86-27 A27608	8CH38	0.83				86-27 A27608	A03									
86-27 A27608	8CH38	0.71				86-27 A27608	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-25-2.1	8CH10							
86-27 A27608	8CH38							
86-27 A27608	8CH38							
86-27 A27608	8CH38							
86-27 A27608	8CH38							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-27 A27608	8CH38	A-1-17	A05										0.52	0.56	0.46
	86-27 A27608	8CH38	A-1-17	A06										0.98	0.78	
	86-27 A27609	8CH38	A-1-19	A01	30	50	Y			Y				0.34	0.56	0.48
	86-27.1 A27606	8CH38	A-1-8	P01	20	25								0.5	0.3	0.42
	86-27.1 A27606	8CH38	A-1-8	P02										0.21	0.27	0.31
	86-27.2 A27605	8CH38	A-1-4	A01										1.03	1.08	1.34
	86-27.2 A27605	8CH38	A-1-4	A02										0.62	0.5	0.36
	86-27.2 A27605	8CH38	A-1-4	A03										0.59	0.6	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-27 A27608	8CH38	0.52				86-27 A27608	A05									
86-27 A27608	8CH38					86-27 A27608	A06									
86-27 A27609	8CH38	0.86	0.74	0.65	0.9	86-27 A27609	A01	0.6	0.97	0.65	0.87	1.06				
86-27.1 A27606	8CH38	0.64				86-27.1 A27606	P01									
86-27.1 A27606	8CH38	0.45				86-27.1 A27606	P02									
86-27.2 A27605	8CH38	0.88				86-27.2 A27605	A01									
86-27.2 A27605	8CH38					86-27.2 A27605	A02									
86-27.2 A27605	8CH38					86-27.2 A27605	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-27 A27608	8CH38							
86-27 A27608	8CH38							
86-27 A27609	8CH38							
86-27.1 A27606	8CH38							
86-27.1 A27606	8CH38							
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-27.2 A27605	8CH38	A-1-4	A04										0.56	0.92	
	86-27.2 A27605	8CH38	A-1-4	A05										1.29	1.14	
	86-27.2 A27605	8CH38	A-1-4	A06										1.62	0.95	
	86-27.2 A27605	8CH38	A-1-4	A07										0.4	0.75	
	86-27.2 A27605	8CH38	A-1-4	A08										0.62	0.52	
	89-19-14	8CH38	A-1-14	P01	20	25				Y						
	89-19-16	8CH38	A-1-16	A01	40	10							Y	0.78	0.59	0.79
	89-19-16	8CH38	A-1-16	A02										1.29	1.43	0.94

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-27.2 A27605	8CH38					86-27.2 A27605	A04									
86-27.2 A27605	8CH38					86-27.2 A27605	A05									
86-27.2 A27605	8CH38					86-27.2 A27605	A06									
86-27.2 A27605	8CH38					86-27.2 A27605	A07									
86-27.2 A27605	8CH38					86-27.2 A27605	A08									
89-19-14	8CH38					89-19-14	P01									
89-19-16	8CH38	1.21	1.08	1.172	1.12	89-19-16	A01	1.06	0.32	0.98						
89-19-16	8CH38					89-19-16	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							
86-27.2 A27605	8CH38							
89-19-14	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-19-16	8CH38	A-1-16	A03	40	10								0.74	0.64	
	89-19-16	8CH38	A-1-16	A04	40	10								1.03	0.92	0.41
	89-19-16	8CH38	A-1-16	A05	40	10								1.29	0.93	1.14
	89-19-16	8CH38	A-1-16	A06	40	10								1.14	0.86	1
	89-19-16	8CH38	A-1-16	A07										1.26	0.8	1.11
	89-19-16	8CH38	A-1-16	A08										0.9	0.86	0.96
	89-19-16	8CH38	A-1-16	A09										0.98	0.9	0.94
4744142	90-19-4	8LL1612	A-1-75, ST 2	cf. Q01-03	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-19-16	8CH38					89-19-16	A03									
89-19-16	8CH38	0.65	1.23	1.057	0.8	89-19-16	A04									
89-19-16	8CH38	0.75	0.85	0.869		89-19-16	A05									
89-19-16	8CH38	0.33				89-19-16	A06									
89-19-16	8CH38	0.84	1.24			89-19-16	A07									
89-19-16	8CH38	1.48				89-19-16	A08									
89-19-16	8CH38	1.3				89-19-16	A09									
90-19-4	8LL1612					90-19-4	cf. Q01-03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-19-16	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							
89-19-16	8CH38							
90-19-4	8LL1612							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744142	90-19-4	8LL1612	A-1-75, ST 2	P01	40	10								0.84		
4744142	90-19-4	8LL1612	A-1-75, ST 2	P02	40	10										
4744142	90-19-4	8LL1612	A-1-75, ST 2	P03	20	20								0.55	0.61	0.7
4744142	90-19-4	8LL1612	A-1-75, ST 2	P04	50	10								0.99	1.61	
4744142	90-19-4	8LL1612	A-1-75, ST 2	P05	40	8								0.37	0.91	1.88
4744142	90-19-4	8LL1612	A-1-75, ST 2	P06-10	0	0										
4744143	90-19-5	8LL1612	A-1-76, ST 2	P01	0	0										
4744143	90-19-5	8LL1612	A-1-76, ST 2	P02	0	0										
4744143	90-19-5	8LL1612	A-1-76, ST 2	P03	20	50								1.21	1.38	
4744144	90-19-6	8LL1612	A-1-77, ST 2	P01	0	0								0.83	1.56	1.17
4744144	90-19-6	8LL1612	A-1-77, ST 2	Q01	0	0										
4744147	90-19-7	8LL1612	A-1-78, ST 2	A01	0	0								0.99		
4744147	90-19-7	8LL1612	A-1-78, ST 2	A02	0	0								0.86	1.01	1.21
4744147	90-19-7	8LL1612	A-1-78, ST 2	P03	0	0										
	87-72-25	8LL27	B-1-2	A01	40	10								0.96	0.9	1.01
	87-72-25	8LL27	B-1-2	A02	20	50	Y			Y				0.54	0.73	0.59
	87-72-25	8LL27	B-1-2	A03										1.28	0.71	0.93

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-19-4	8LL1612					90-19-4	P01									
90-19-4	8LL1612					90-19-4	P02									
90-19-4	8LL1612	0.64				90-19-4	P03									
90-19-4	8LL1612					90-19-4	P04									
90-19-4	8LL1612	0.96	1.05			90-19-4	P05									
90-19-4	8LL1612					90-19-4	P06-10									
90-19-5	8LL1612					90-19-5	P01									
90-19-5	8LL1612					90-19-5	P02									
90-19-5	8LL1612					90-19-5	P03									
90-19-6	8LL1612					90-19-6	P01									
90-19-6	8LL1612					90-19-6	Q01									
90-19-7	8LL1612					90-19-7	A01									
90-19-7	8LL1612	1.01				90-19-7	A02									
90-19-7	8LL1612					90-19-7	P03									
87-72-25	8LL27					87-72-25	A01									
87-72-25	8LL27	0.66	0.72	1.169		87-72-25	A02									
87-72-25	8LL27					87-72-25	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-19-4	8LL1612							
90-19-4	8LL1612							
90-19-4	8LL1612							
90-19-4	8LL1612							
90-19-4	8LL1612							
90-19-4	8LL1612							
90-19-5	8LL1612							
90-19-5	8LL1612							
90-19-5	8LL1612							
90-19-6	8LL1612							
90-19-6	8LL1612							
90-19-7	8LL1612							
90-19-7	8LL1612							
90-19-7	8LL1612							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-25	8LL27	B-1-2	A04										0.61	0.7	0.77
	87-72-25	8LL27	B-1-2	A05										1.06	0.65	1.05
	87-72-25	8LL27	B-1-2	A06										0.81	1.06	0.77
	87-72-25	8LL27	B-1-2	A07										0.69	0.84	
	87-72-25	8LL27	B-1-2	A08										0.74	0.53	
	87-72-25	8LL27	B-1-2	A09										0.51	0.64	
	87-72-25	8LL27	B-1-2	P01										1.53	0.97	
	87-72-29	8LL27	B-1-5	A01	40	10							Y	1.28	0.44	0.73

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-25	8LL27					87-72-25	A04									
87-72-25	8LL27					87-72-25	A05									
87-72-25	8LL27					87-72-25	A06									
87-72-25	8LL27					87-72-25	A07									
87-72-25	8LL27					87-72-25	A08									
87-72-25	8LL27					87-72-25	A09									
87-72-25	8LL27					87-72-25	P01									
87-72-29	8LL27	0.57	1.14			87-72-29	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-25	8LL27							
87-72-29	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-29	8LL27	B-1-5	A01	40	10								0.97	1.21	0.79
	87-72-29	8LL27	B-1-5	A02	40	10								0.6	0.53	0.75
	87-72-29	8LL27	B-1-5	A02	20	15								0.69	0.74	0.99
	87-72-29	8LL27	B-1-5	A03										1.46	0.94	1.15
	87-72-29	8LL27	B-1-5	A03	20	20								1.05	0.98	0.67
	87-72-29	8LL27	B-1-5	A04	40	10								0.97	0.97	1.24
	87-72-29	8LL27	B-1-5	A04									Y	1.73	1.08	1.1
	87-72-29	8LL27	B-1-5	A05	40	10								0.88	1.34	0.62

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-29	8LL27	1.23	0.56			87-72-29	A01									
87-72-29	8LL27	0.68	0.84			87-72-29	A02									
87-72-29	8LL27	0.91	0.73	0.512	0.79	87-72-29	A02	1.08	0.82							
87-72-29	8LL27					87-72-29	A03									
87-72-29	8LL27	1.1	0.84	0.789	0.9	87-72-29	A03									
87-72-29	8LL27	0.67	1.21			87-72-29	A04									
87-72-29	8LL27	1.1				87-72-29	A04									
87-72-29	8LL27	0.87				87-72-29	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-29	8LL27	B-1-5	A05	40	10								1.1	1.15	1.05
	87-72-29	8LL27	B-1-5	A06	40	15								0.95	0.83	0.66
	87-72-29	8LL27	B-1-5	A06												
	87-72-29	8LL27	B-1-5	A07	20	15								1.09	1.02	0.84
	87-72-29	8LL27	B-1-5	A07	40	10										
	87-72-29	8LL27	B-1-5	A08										2.25	1.66	0.98
	87-72-29	8LL27	B-1-5	A08	30	10								0.62	1.36	0.88
	87-72-29	8LL27	B-1-5	A09	10	100	Y			Y				0.36	0.51	0.34

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-29	8LL27					87-72-29	A05									
87-72-29	8LL27	0.55	1.28	0.718		87-72-29	A06									
87-72-29	8LL27					87-72-29	A06									
87-72-29	8LL27	0.96				87-72-29	A07									
87-72-29	8LL27					87-72-29	A07									
87-72-29	8LL27					87-72-29	A08									
87-72-29	8LL27	1.09				87-72-29	A08									
87-72-29	8LL27	0.62	0.37	0.624		87-72-29	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-29	8LL27	B-1-5	A09												
	87-72-29	8LL27	B-1-5	A10												
	87-72-29	8LL27	B-1-5	A11												
	87-72-29	8LL27	B-1-5	A12										1.02	1.45	0.7
	87-72-29	8LL27	B-1-5	A13										0.82	1.26	0.84
	87-72-29	8LL27	B-1-5	P01	60	20								1.39	1.23	1.25
	87-72-29	8LL27	B-1-5	P01	20	20								0.95	1.04	
	87-72-29	8LL27	B-1-5	P02	40	10								1.94	0.74	0.39
	87-72-29	8LL27	B-1-5	P02	20	20								0.67	0.81	1.3
	87-72-29	8LL27	B-1-5	P03												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-29	8LL27					87-72-29	A09									
87-72-29	8LL27					87-72-29	A10									
87-72-29	8LL27					87-72-29	A11									
87-72-29	8LL27	1.11				87-72-29	A12									
87-72-29	8LL27	0.42	0.48	0.272	0.82	87-72-29	A13									
87-72-29	8LL27	1.65	1.46	1.669		87-72-29	P01									
87-72-29	8LL27					87-72-29	P01									
87-72-29	8LL27	0.82	0.95			87-72-29	P02									
87-72-29	8LL27	1.63	0.61	0.754	1.23	87-72-29	P02									
87-72-29	8LL27					87-72-29	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-29	8LL27	B-1-5	P03	40	15										
	87-72-29	8LL27	B-1-5	P04	40	15								1.65	1.29	0.57
	87-72-29	8LL27	B-1-5	P04	30	10								0.67	0.8	1.27
	87-72-29	8LL27	B-1-5	P05										1.25	0.99	1.48
	87-72-29	8LL27	B-1-5	P05	20	10										
	87-72-29	8LL27	B-1-5	P06	40	10								0.74	1.65	
	87-72-29	8LL27	B-1-5	P07												
	87-72-29	8LL27	B-1-5	P08	30	15										
	87-72-29	8LL27	B-1-5	P09												
	87-72-45	8LL27	B-1-6	A01	40	10								0.77	0.72	0.81
	87-72-45	8LL27	B-1-6	A02	40	10								0.65	1.25	1
	87-72-45	8LL27	B-1-6	A03	20	10								1.55	1.01	0.91

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-29	8LL27					87-72-29	P03									
87-72-29	8LL27	0.7	2.02			87-72-29	P04									
87-72-29	8LL27	1.6	0.6			87-72-29	P04									
87-72-29	8LL27					87-72-29	P05									
87-72-29	8LL27					87-72-29	P05									
87-72-29	8LL27					87-72-29	P06									
87-72-29	8LL27					87-72-29	P07									
87-72-29	8LL27					87-72-29	P08									
87-72-29	8LL27					87-72-29	P09									
87-72-45	8LL27	0.79	0.55			87-72-45	A01									
87-72-45	8LL27	1.29				87-72-45	A02									
87-72-45	8LL27					87-72-45	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-29	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-45	8LL27	B-1-6	A04										0.62	0.66	0.63
	87-72-45	8LL27	B-1-6	A05	20	10										
	87-72-45	8LL27	B-1-6	A06	40	10										
	87-72-45	8LL27	B-1-6	A07	40	10										
	87-72-45	8LL27	B-1-6	P01	30	20								0.76	0.96	0.85
	87-72-45	8LL27	B-1-6	P02	30	10								1.42	1.35	
	87-72-45	8LL27	B-1-6	P03	40	10										
	87-72-45	8LL27	B-1-6	P04												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-45	8LL27	0.97	0.7	0.96	0.63	87-72-45	A04	0.93								
87-72-45	8LL27					87-72-45	A05									
87-72-45	8LL27					87-72-45	A06									
87-72-45	8LL27					87-72-45	A07									
87-72-45	8LL27					87-72-45	P01									
87-72-45	8LL27					87-72-45	P02									
87-72-45	8LL27					87-72-45	P03									
87-72-45	8LL27					87-72-45	P04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							
87-72-45	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-45	8LL27	B-1-6	P05	40	10								1.15	0.96	
	87-72-45	8LL27	B-1-6	P06												
	87-72-46	8LL27	B-1-7	A01	7	50	Y			Y				0.32	0.37	0.35
	87-72-46	8LL27	B-1-7	P01	40	10								0.58	1.05	
	87-72-46	8LL27	B-1-7	P02	40	10								1.5	0.84	
	87-72-46	8LL27	B-1-7	P03										1.1	1.58	0.91
	87-72-46	8LL27	B-1-7	P04												
	87-72-46	8LL27	B-1-7	P05	40	10										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-45	8LL27					87-72-45	P05									
87-72-45	8LL27					87-72-45	P06									
87-72-46	8LL27	0.56	0.47	0.386	0.52	87-72-46	A01									
87-72-46	8LL27					87-72-46	P01									
87-72-46	8LL27					87-72-46	P02									
87-72-46	8LL27	1.24				87-72-46	P03									
87-72-46	8LL27					87-72-46	P04									
87-72-46	8LL27					87-72-46	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-45	8LL27							
87-72-45	8LL27							
87-72-46	8LL27							
87-72-46	8LL27							
87-72-46	8LL27							
87-72-46	8LL27							
87-72-46	8LL27							
87-72-46	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-47	8LL27	B-1-8	A01										0.55	0.9	0.95
	87-72-47	8LL27	B-1-8	A02	20	15								0.69	0.38	
	87-72-47	8LL27	B-1-8	A03	20	15								0.6	0.41	0.61
	87-72-47	8LL27	B-1-8	P01	40	20								0.58	0.59	0.58
	87-72-47	8LL27	B-1-8	P02												
	87-72-47	8LL27	B-1-8	P03	40	10								2.82	1.95	
	87-72-47	8LL27	B-1-8	P04	40	15								1.39	0.31	0.39
	87-72-47	8LL27	B-1-8	P05												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-47	8LL27	0.78				87-72-47	A01									
87-72-47	8LL27					87-72-47	A02									
87-72-47	8LL27	0.41	0.5			87-72-47	A03									
87-72-47	8LL27					87-72-47	P01									
87-72-47	8LL27					87-72-47	P02									
87-72-47	8LL27					87-72-47	P03									
87-72-47	8LL27	0.82				87-72-47	P04									
87-72-47	8LL27					87-72-47	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-47	8LL27	B-1-8	P06												
	87-72-47	8LL27	B-1-8	P07												
	87-72-47	8LL27	B-1-8	P08												
	87-72-58	8LL27	B-1-18-1	A01	20	25								0.58	0.7	0.75
	87-72-58	8LL27	B-1-18-1	A02	40	15								0.51	0.9	0.97
	87-72-58	8LL27	B-1-18-1	P01	30	20										
	87-72-59	8LL27	B-1-19-1	A01	11	100				Y				0.61	0.67	0.98
	87-72-59	8LL27	B-1-19-1	P01	50	10	Y							1.01	0.63	0.84

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-47	8LL27					87-72-47	P06									
87-72-47	8LL27					87-72-47	P07									
87-72-47	8LL27					87-72-47	P08									
87-72-58	8LL27	0.63	0.74	0.778		87-72-58	A01									
87-72-58	8LL27	0.99	0.84			87-72-58	A02									
87-72-58	8LL27					87-72-58	P01									
87-72-59	8LL27	0.96	0.83			87-72-59	A01									
87-72-59	8LL27	0.4				87-72-59	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-47	8LL27							
87-72-47	8LL27							
87-72-47	8LL27							
87-72-58	8LL27							
87-72-58	8LL27							
87-72-58	8LL27							
87-72-59	8LL27							
87-72-59	8LL27							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-72-60	8LL27	B-1-20-1	P01	20	40			Y					3.66		
	87-72-61	8LL27	B-1-21-1	A01	40	10								0.49	0.36	0.39
	87-72-61	8LL27	B-1-21-1	P01										1.29	0.92	0.92
	87-72-68	8LL27	B-1-28	P02										1.3	0.86	0.5
	87-28-14	8LL32	A-2-6-1	A01	40	10								0.86	1.21	1.12
	87-28-14	8LL32	A-2-6-1	A02										1.6	0.42	1.04
	87-28-14	8LL32	A-2-6-1	A03	40	10								1.08	1.47	0.69
	87-28-14	8LL32	A-2-6-1	A04										0.9	0.82	0.74
	87-28-14	8LL32	A-2-6-1	A05	20	10								1.51	1.03	
	87-28-14	8LL32	A-2-6-1	A06	40	10								0.93	0.9	0.88

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-72-60	8LL27					87-72-60	P01									
87-72-61	8LL27	0.82	0.79	0.581	0.7	87-72-61	A01									
87-72-61	8LL27					87-72-61	P01									
87-72-68	8LL27	0.73				87-72-68	P02									
87-28-14	8LL32					87-28-14	A01									
87-28-14	8LL32	0.74	0.81			87-28-14	A02									
87-28-14	8LL32	0.74	0.49			87-28-14	A03									
87-28-14	8LL32	1.08	0.84	0.6		87-28-14	A04									
87-28-14	8LL32					87-28-14	A05									
87-28-14	8LL32	0.86	0.94			87-28-14	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-72-60	8LL27							
87-72-61	8LL27							
87-72-61	8LL27							
87-72-68	8LL27							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-28-14	8LL32	A-2-6-1	A07										0.75	0.98	0.63
	87-28-14	8LL32	A-2-6-1	A08										1.64	1.13	
	87-28-14	8LL32	A-2-6-1	A09	20	15								1.12	0.58	
	87-28-14	8LL32	A-2-6-1	A10												
	87-28-14	8LL32	A-2-6-1	P01	40	10										
	87-28-14	8LL32	A-2-6-1	P02												
	87-28-14	8LL32	A-2-6-1	P03												
	87-28-14	8LL32	A-2-6-1	P04										1.03	1.15	
	87-28-14	8LL32	A-2-6-1	P05	40	10								0.76	0.93	0.53
	87-28-14	8LL32	A-2-6-1	P06	20	25								1.33	1.33	
	87-28-14	8LL32	A-2-6-1	P07												
	87-28-14	8LL32	A-2-6-1	P08												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-28-14	8LL32	0.74	0.86			87-28-14	A07									
87-28-14	8LL32					87-28-14	A08									
87-28-14	8LL32					87-28-14	A09									
87-28-14	8LL32					87-28-14	A10									
87-28-14	8LL32					87-28-14	P01									
87-28-14	8LL32					87-28-14	P02									
87-28-14	8LL32					87-28-14	P03									
87-28-14	8LL32					87-28-14	P04									
87-28-14	8LL32					87-28-14	P05									
87-28-14	8LL32					87-28-14	P06									
87-28-14	8LL32					87-28-14	P07									
87-28-14	8LL32					87-28-14	P08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-28-14	8LL32	A-2-6-1	P09	40	10								0.51	0.59	0.34
	87-28-14	8LL32	A-2-6-1	P10												
	87-28-14	8LL32	A-2-6-1	P11												
	87-28-14	8LL32	A-2-6-1	P12												
	87-28-14	8LL32	A-2-6-1	P13												
	87-28-14	8LL32	A-2-6-1	P14										1.01	0.88	
	87-28-14	8LL32	A-2-6-1	P15	20	25								0.68	0.32	
	87-28-14	8LL32	A-2-6-1	P16												
	87-28-14	8LL32	A-2-6-1	P17										1.1	0.57	0.59
	87-28-14	8LL32	A-2-6-1	P18												
	87-28-14	8LL32	A-2-6-1	P19												
	87-28-14	8LL32	A-2-6-1	P20	40	10								0.7	1.08	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-28-14	8LL32	0.24				87-28-14	P09									
87-28-14	8LL32					87-28-14	P10									
87-28-14	8LL32					87-28-14	P11									
87-28-14	8LL32					87-28-14	P12									
87-28-14	8LL32					87-28-14	P13									
87-28-14	8LL32					87-28-14	P14									
87-28-14	8LL32					87-28-14	P15									
87-28-14	8LL32					87-28-14	P16									
87-28-14	8LL32					87-28-14	P17									
87-28-14	8LL32					87-28-14	P18									
87-28-14	8LL32					87-28-14	P19									
87-28-14	8LL32					87-28-14	P20									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							
87-28-14	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	87-28-14	8LL32	A-2-6-1	P21												
	87-28-14	8LL32	A-2-6-1	P22												
	89-8-2	8LL32	A-1-4	A01	20	20								0.85	0.72	0.64
	89-8-2	8LL32	A-1-4	A02										1.21	0.47	1.03
	89-8-2	8LL32	A-1-4	A03	10	25	Y			Y				0.53	0.5	0.62
	89-8-2	8LL32	A-1-4	P01	40	10								0.93	0.46	
	89-8-2	8LL32	A-1-4	P02	40	10										
	89-8-2	8LL32	A-1-4	P03	30	10										
	89-8-2	8LL32	A-1-4	P04										0.63	0.49	0.46
	89-8-2	8LL32	A-1-4	P05												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
87-28-14	8LL32					87-28-14	P21									
87-28-14	8LL32					87-28-14	P22									
89-8-2	8LL32	0.31	0.49			89-8-2	A01									
89-8-2	8LL32	1.02				89-8-2	A02									
89-8-2	8LL32	0.69	0.81	0.804		89-8-2	A03									
89-8-2	8LL32					89-8-2	P01									
89-8-2	8LL32					89-8-2	P02									
89-8-2	8LL32					89-8-2	P03									
89-8-2	8LL32	0.78	0.72	0.615	0.89	89-8-2	P04									
89-8-2	8LL32					89-8-2	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
87-28-14	8LL32							
87-28-14	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-8-2	8LL32	A-1-4	P06												
	89-8-2	8LL32	A-1-4	P07												
	89-8-2	8LL32	A-1-4	P08										2.75	0.56	0.84
	89-8-2	8LL32	A-1-4	P09	30	15										
	89-8-2	8LL32	A-1-4	P10	30	10								0.39	0.49	0.2
	89-8-24.1-4	8LL32	A-1-12	A01	60	10								1.01	0.79	0.84
	89-8-24.1-4	8LL32	A-1-12	A02	60	10								0.7	0.65	1.13
	89-8-24.1-4	8LL32	A-1-12	A03										0.49	0.49	0.88
	89-8-24.1-4	8LL32	A-1-12	A04										1.25	1.4	
	89-8-24.1-4	8LL32	A-1-12	A05										0.98	1.2	1.25
	89-8-24.1-4	8LL32	A-1-12	A06										0.66	0.82	0.72
	89-8-24.1-4	8LL32	A-1-12	A07										1.69	1.01	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-8-2	8LL32					89-8-2	P06									
89-8-2	8LL32					89-8-2	P07									
89-8-2	8LL32					89-8-2	P08									
89-8-2	8LL32					89-8-2	P09									
89-8-2	8LL32	0.16	0.21			89-8-2	P10									
89-8-24.1-4	8LL32	0.76	0.68			89-8-24.1-4	A01									
89-8-24.1-4	8LL32	1.14				89-8-24.1-4	A02									
89-8-24.1-4	8LL32	0.82	0.68	1.054		89-8-24.1-4	A03									
89-8-24.1-4	8LL32					89-8-24.1-4	A04									
89-8-24.1-4	8LL32					89-8-24.1-4	A05									
89-8-24.1-4	8LL32	0.61	0.22	0.891	1.01	89-8-24.1-4	A06									
89-8-24.1-4	8LL32					89-8-24.1-4	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-2	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-8-24.1-4	8LL32	A-1-12	A08										0.57	0.73	0.82
	89-8-24.1-4	8LL32	A-1-12	P01										1.93	1.63	
	89-8-24.1-4	8LL32	A-1-12	P02	40	10								2.35	1.53	
	89-8-24.1-4	8LL32	A-1-12	P03	20	20								0.54	0.41	0.52
	89-8-24.1-4	8LL32	A-1-12	P04	20	25			Y					1.06	0.34	1.03
	89-8-24.1-4	8LL32	A-1-12	P05	40	10								0.95	1.04	1.02
	89-8-24.1-4	8LL32	A-1-12	P06												
	89-8-24.1-4	8LL32	A-1-12	P07												
	89-8-24.1-4	8LL32	A-1-12	P08												
	89-8-24.1-4	8LL32	A-1-12	P09	40	10								1.56		
	89-8-24.1-4	8LL32	A-1-12	P10	20	10								1.34	0.96	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-8-24.1-4	8LL32	0.64				89-8-24.1-4	A08									
89-8-24.1-4	8LL32					89-8-24.1-4	P01									
89-8-24.1-4	8LL32					89-8-24.1-4	P02									
89-8-24.1-4	8LL32	0.48	0.38	0.767		89-8-24.1-4	P03									
89-8-24.1-4	8LL32	1.07				89-8-24.1-4	P04									
89-8-24.1-4	8LL32					89-8-24.1-4	P05									
89-8-24.1-4	8LL32					89-8-24.1-4	P06									
89-8-24.1-4	8LL32					89-8-24.1-4	P07									
89-8-24.1-4	8LL32					89-8-24.1-4	P08									
89-8-24.1-4	8LL32					89-8-24.1-4	P09									
89-8-24.1-4	8LL32					89-8-24.1-4	P10									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							
89-8-24.1-4	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-8-28	8LL32	A-1-22	A01	60	10								1.27	0.93	1.3
	89-8-28	8LL32	A-1-22	A02	60	10								1.2	1.08	0.79
	89-8-28	8LL32	A-1-22	A03	40	10								1.34	1.6	1.1
	89-8-28	8LL32	A-1-22	A04	40	10								0.35	0.35	0.42
	89-8-28	8LL32	A-1-22	A05	40	10								0.83	0.95	0.97
	89-8-28	8LL32	A-1-22	A06										0.7	0.54	0.72
	89-8-28	8LL32	A-1-22	A07										1.27	1.6	
	89-8-28	8LL32	A-1-22	A08										0.97	0.42	1.07

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-8-28	8LL32	0.99	0.65	1.158	0.92	89-8-28	A01	0.82								
89-8-28	8LL32	1	1.35			89-8-28	A02									
89-8-28	8LL32					89-8-28	A03									
89-8-28	8LL32	0.71	0.65	0.56		89-8-28	A04									
89-8-28	8LL32	0.77				89-8-28	A05									
89-8-28	8LL32	0.43				89-8-28	A06									
89-8-28	8LL32					89-8-28	A07									
89-8-28	8LL32					89-8-28	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-8-28	8LL32	A-1-22	A09										0.52	0.77	0.67
	89-8-28	8LL32	A-1-22	A10										0.46	0.76	0.94
	89-8-28	8LL32	A-1-22	A11										1.3	1.5	1.23
	89-8-28	8LL32	A-1-22	A12												
	89-8-28	8LL32	A-1-22	A13										1.28	0.72	1.13
	89-8-28	8LL32	A-1-22	A14												
	89-8-28	8LL32	A-1-22	P01	20	25								0.95	0.5	0.4
	89-8-28	8LL32	A-1-22	P02										0.43	0.51	0.22

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-8-28	8LL32	0.44				89-8-28	A09									
89-8-28	8LL32					89-8-28	A10									
89-8-28	8LL32					89-8-28	A11									
89-8-28	8LL32					89-8-28	A12									
89-8-28	8LL32					89-8-28	A13									
89-8-28	8LL32					89-8-28	A14									
89-8-28	8LL32	0.52	0.49	0.807		89-8-28	P01									
89-8-28	8LL32					89-8-28	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							
89-8-28	8LL32							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-13	8LL33	P-1-98	A01	25	20								1.44	0.93	
	2015-16-13	8LL33	P-1-98	A02	30	25							Y	0.83	0.69	0.57
	2015-16-13	8LL33	P-1-98	A03	40	10							Y	0.73	0.34	0.62
	2015-16-13	8LL33	P-1-98	A04	20	50								0.91	0.6	0.86
	2015-16-13	8LL33	P-1-98	A05	20	20				Y			Y	0.39	0.54	0.57
	2015-16-13	8LL33	P-1-98	A06										1.53	1.3	1.09
	2015-16-13	8LL33	P-1-98	A07	40	10								1.14	0.73	0.45
	2015-16-13	8LL33	P-1-98	A08	10	100	Y			Y				0.41	0.54	0.5

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-13	8LL33					2015-16-13	A01									
2015-16-13	8LL33	0.66	0.76	0.658	0.53	2015-16-13	A02	0.55								
2015-16-13	8LL33	0.64	0.54	0.65	0.93	2015-16-13	A03									
2015-16-13	8LL33	1.19	0.63	1.093	0.86	2015-16-13	A04	1.09								
2015-16-13	8LL33	0.66	0.33	0.811	0.75	2015-16-13	A05									
2015-16-13	8LL33	1.13	1.49			2015-16-13	A06									
2015-16-13	8LL33	0.48	0.66	0.751	0.83	2015-16-13	A07									
2015-16-13	8LL33	0.48				2015-16-13	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-13	8LL33	P-1-98	A09	30	20							Y	0.92	0.83	0.44
	2015-16-13	8LL33	P-1-98	A10	30	20								0.61	0.57	0.48
	2015-16-13	8LL33	P-1-98	A11	20	20	Y			Y				1.03	0.61	0.88
	2015-16-13	8LL33	P-1-98	A12	40	10								1.48	0.71	1.25
	2015-16-13	8LL33	P-1-98	A13	30	20								0.99	0.82	0.98
	2015-16-13	8LL33	P-1-98	A14										1	1.02	0.59
	2015-16-13	8LL33	P-1-98	A15	40	15							Y	0.78	1.2	0.57
	2015-16-13	8LL33	P-1-98	A16										0.82	0.84	1.02

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-13	8LL33	0.5	0.8	0.833	0.56	2015-16-13	A09									
2015-16-13	8LL33	0.55	0.61	0.836	0.77	2015-16-13	A10	0.59	0.65	0.58						
2015-16-13	8LL33	1.13				2015-16-13	A11									
2015-16-13	8LL33	0.57	0.86			2015-16-13	A12									
2015-16-13	8LL33	0.68	0.6			2015-16-13	A13									
2015-16-13	8LL33	0.77	0.98			2015-16-13	A14									
2015-16-13	8LL33	0.48	0.93	0.42	0.62	2015-16-13	A15									
2015-16-13	8LL33	1.03	0.61	0.779		2015-16-13	A16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-13	8LL33	P-1-98	A17									Y	0.62	0.59	0.61
	2015-16-13	8LL33	P-1-98	A18	10	100	Y			Y				0.29	0.25	0.25
	2015-16-13	8LL33	P-1-98	A19										0.84		
	2015-16-13	8LL33	P-1-98	A20	40	10								0.96	0.82	
	2015-16-13	8LL33	P-1-98	A21										0.54	0.53	0.87
	2015-16-13	8LL33	P-1-98	A22	40	10								0.91	1.26	0.34
	2015-16-13	8LL33	P-1-98	A23										1.21	1.22	1.99
	2015-16-13	8LL33	P-1-98	P01	40	15						Y		0.64	1.8	2.59

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-13	8LL33	0.38	0.95	0.738		2015-16-13	A17									
2015-16-13	8LL33					2015-16-13	A18									
2015-16-13	8LL33					2015-16-13	A19									
2015-16-13	8LL33					2015-16-13	A20									
2015-16-13	8LL33	0.57	0.51	0.602		2015-16-13	A21									
2015-16-13	8LL33	0.9	0.77			2015-16-13	A22									
2015-16-13	8LL33					2015-16-13	A23									
2015-16-13	8LL33					2015-16-13	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-13	8LL33	P-1-98	P02	20	25						Y		0.55	0.68	1.52
	2015-16-13	8LL33	P-1-98	P03	40	20								0.32	0.83	0.88
	2015-16-13	8LL33	P-1-98	P04										0.58	1.31	1.12
	2015-16-13	8LL33	P-1-98	P05	60	10								0.78	0.54	0.69
	2015-16-13	8LL33	P-1-98	P06	40	20						Y		0.8	0.39	0.66
	2015-16-13	8LL33	P-1-98	P07	40	20								0.2	0.77	0.78
	2015-16-13	8LL33	P-1-98	P08										0.51	0.75	0.55
	2015-16-13	8LL33	P-1-98	P09	40	15						Y		1.22	0.85	2.94

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-13	8LL33					2015-16-13	P02									
2015-16-13	8LL33	1.15	1.17	1.25		2015-16-13	P03									
2015-16-13	8LL33	1.36	1.51			2015-16-13	P04									
2015-16-13	8LL33	0.82	0.71	0.538	0.42	2015-16-13	P05	0.66	0.51	0.52	0.4					
2015-16-13	8LL33	0.58	0.3	1.8753	1.37	2015-16-13	P06									
2015-16-13	8LL33	1.06	1			2015-16-13	P07									
2015-16-13	8LL33	0.89	0.37	0.53		2015-16-13	P08									
2015-16-13	8LL33					2015-16-13	P09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							
2015-16-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-14	8LL33	P-1-99	A01	40	10								1.35	1.47	1.33
	2015-16-14	8LL33	P-1-99	A02	20	10								1.09		
	2015-16-14	8LL33	P-1-99	A03	20	20								0.83	0.66	0.66
	2015-16-14	8LL33	P-1-99	A04	40	15								1.09	1.37	1.32
	2015-16-14	8LL33	P-1-99	A05	20	25								0.77	0.65	0.81
	2015-16-14	8LL33	P-1-99	A06	40	5								1.17	0.74	0.91
	2015-16-14	8LL33	P-1-99	A07	7	100	Y			Y				0.37	0.35	0.66
	2015-16-14	8LL33	P-1-99	A08	40	10								1.16	0.69	0.49

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-14	8LL33	1.17	1.16	1.269		2015-16-14	A01									
2015-16-14	8LL33					2015-16-14	A02									
2015-16-14	8LL33	0.53	0.48	0.825	0.74	2015-16-14	A03									
2015-16-14	8LL33	1.48				2015-16-14	A04									
2015-16-14	8LL33					2015-16-14	A05									
2015-16-14	8LL33	1.42	1.3			2015-16-14	A06									
2015-16-14	8LL33	0.54	0.38	0.433		2015-16-14	A07									
2015-16-14	8LL33	0.75				2015-16-14	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-14	8LL33	P-1-99	A09										1	0.84	0.61
	2015-16-14	8LL33	P-1-99	A10	40	5								0.66	0.84	0.6
	2015-16-14	8LL33	P-1-99	A11	40	10								0.92	1.24	0.95
	2015-16-14	8LL33	P-1-99	A12	40	25								0.61	0.35	0.47
	2015-16-14	8LL33	P-1-99	A13	20	20								0.54	0.47	0.62
	2015-16-14	8LL33	P-1-99	A14	40	10								1.07	1.19	1.43
	2015-16-14	8LL33	P-1-99	A15	20	50								0.66	0.48	0.52
	2015-16-14	8LL33	P-1-99	A16	20	20								0.76	1.04	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-14	8LL33	0.82	0.81	0.766		2015-16-14	A09									
2015-16-14	8LL33					2015-16-14	A10									
2015-16-14	8LL33	1.65				2015-16-14	A11									
2015-16-14	8LL33					2015-16-14	A12									
2015-16-14	8LL33	0.94	0.73			2015-16-14	A13									
2015-16-14	8LL33	1				2015-16-14	A14									
2015-16-14	8LL33	0.67	0.61	0.598		2015-16-14	A15									
2015-16-14	8LL33					2015-16-14	A16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-14	8LL33	P-1-99	A17										0.83	0.87	1.25
	2015-16-14	8LL33	P-1-99	A18	8	50								0.61	0.76	
	2015-16-14	8LL33	P-1-99	A19	20	25								0.91	0.9	0.83
	2015-16-14	8LL33	P-1-99	A20										0.58		
	2015-16-14	8LL33	P-1-99	A21										0.72	0.17	0.42
	2015-16-14	8LL33	P-1-99	A22										0.76	0.61	0.48
	2015-16-14	8LL33	P-1-99	A23	30	20								0.74	1.15	0.78
	2015-16-14	8LL33	P-1-99	A24	30	20								1.15	0.54	0.88

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-14	8LL33	0.88	0.71			2015-16-14	A17									
2015-16-14	8LL33					2015-16-14	A18									
2015-16-14	8LL33	0.97				2015-16-14	A19									
2015-16-14	8LL33					2015-16-14	A20									
2015-16-14	8LL33					2015-16-14	A21									
2015-16-14	8LL33	0.46	0.64	0.568		2015-16-14	A22									
2015-16-14	8LL33					2015-16-14	A23									
2015-16-14	8LL33	0.74				2015-16-14	A24									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-14	8LL33	P-1-99	A25										0.78	0.65	
	2015-16-14	8LL33	P-1-99	A26	7	100	Y			Y				0.17	0.28	0.35
	2015-16-14	8LL33	P-1-99	A27	20	20										
	2015-16-14	8LL33	P-1-99	A28	20	20								0.61	0.75	0.46
	2015-16-14	8LL33	P-1-99	A29										0.69	0.81	
	2015-16-14	8LL33	P-1-99	A30										0.36	0.65	0.28
	2015-16-14	8LL33	P-1-99	A31	6	100	Y			Y				0.49	0.49	0.35
	2015-16-14	8LL33	P-1-99	P01	40	15								0.7	0.55	0.34

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-14	8LL33					2015-16-14	A25									
2015-16-14	8LL33	0.42	0.35			2015-16-14	A26									
2015-16-14	8LL33					2015-16-14	A27									
2015-16-14	8LL33	0.78	0.78			2015-16-14	A28									
2015-16-14	8LL33					2015-16-14	A29									
2015-16-14	8LL33	0.24				2015-16-14	A30									
2015-16-14	8LL33	0.3	0.35			2015-16-14	A31									
2015-16-14	8LL33	0.71	1.44	0.642	0.27	2015-16-14	P01	0.24	0.65	0.48	0.22	0.33	1.01	0.68		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-14	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-14	8LL33	P-1-99	Q01												
	2015-16-14	8LL33	P-1-99	Q02												
	2015-16-16	8LL33	P-1-101	A01	10	25								0.33	0.57	
	2015-16-16	8LL33	P-1-101	A02												
	2015-16-16	8LL33	P-1-101	A03										0.76	1.11	0.93
	2015-16-16	8LL33	P-1-101	A04	40	50				Y				0.53	0.61	0.98
	2015-16-16	8LL33	P-1-101	A05	40	15								0.81	1.02	1.18
	2015-16-16	8LL33	P-1-101	A06	40	10								0.74	1.08	0.47
	2015-16-16	8LL33	P-1-101	A07	20	25								0.85	1.06	0.99

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-14	8LL33					2015-16-14	Q01									
2015-16-14	8LL33					2015-16-14	Q02									
2015-16-16	8LL33					2015-16-16	A01									
2015-16-16	8LL33					2015-16-16	A02									
2015-16-16	8LL33					2015-16-16	A03									
2015-16-16	8LL33	1.04	1.24	0.952	1.16	2015-16-16	A04	1.16	1.64	1.65	1.25					
2015-16-16	8LL33	1.04	1.29			2015-16-16	A05									
2015-16-16	8LL33					2015-16-16	A06									
2015-16-16	8LL33	1.28				2015-16-16	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-14	8LL33							
2015-16-14	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-16	8LL33	P-1-101	A08	20	50								0.32	0.44	0.61
	2015-16-16	8LL33	P-1-101	A09	20	50			Y				Y	0.59	0.45	0.52
	2015-16-16	8LL33	P-1-101	A10										2.12	1.8	
	2015-16-16	8LL33	P-1-101	A11	40	10								1.31	1.44	
	2015-16-16	8LL33	P-1-101	A12										1.09	0.9	1.08
	2015-16-16	8LL33	P-1-101	A13	30	25								0.81	0.8	1.34
	2015-16-16	8LL33	P-1-101	A14										0.89	0.77	0.9
	2015-16-16	8LL33	P-1-101	A15	10	25								0.62	0.62	0.8

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-16	8LL33	0.52				2015-16-16	A08									
2015-16-16	8LL33	0.64	0.6	0.571	0.54	2015-16-16	A09	0.46								
2015-16-16	8LL33					2015-16-16	A10									
2015-16-16	8LL33					2015-16-16	A11									
2015-16-16	8LL33	0.88	1.14			2015-16-16	A12									
2015-16-16	8LL33	0.89	0.84	1.087	1.11	2015-16-16	A13	1								
2015-16-16	8LL33	0.59	0.69	0.706	0.92	2015-16-16	A14	1.01	0.96	0.76	0.81	0.84	0.79	0.73	0.69	
2015-16-16	8LL33	1.12				2015-16-16	A15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-16	8LL33	P-1-101	A16	40	10								0.88	0.58	0.99
	2015-16-16	8LL33	P-1-101	A17	20	10								0.47	0.86	0.53
	2015-16-16	8LL33	P-1-101	A18	20	25			Y					0.6	0.62	0.63
	2015-16-16	8LL33	P-1-101	A19	10	100	Y		Y					0.34	0.6	0.45
	2015-16-16	8LL33	P-1-101	A20	10	25				Y				0.38	0.35	0.34
	2015-16-16	8LL33	P-1-101	A21	2	100	Y		Y					0.29	0.3	0.31
	2015-16-16	8LL33	P-1-101	A22	40	10								0.82	0.39	0.47
	2015-16-16	8LL33	P-1-101	A23	40	10								0.57	0.72	0.66

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-16	8LL33					2015-16-16	A16									
2015-16-16	8LL33	0.74	0.52	0.808		2015-16-16	A17									
2015-16-16	8LL33	0.49	0.55	0.703		2015-16-16	A18									
2015-16-16	8LL33	0.9	0.48	0.488		2015-16-16	A19									
2015-16-16	8LL33	0.27	0.32	0.412	0.68	2015-16-16	A20									
2015-16-16	8LL33	0.28				2015-16-16	A21									
2015-16-16	8LL33					2015-16-16	A22									
2015-16-16	8LL33	0.87				2015-16-16	A23									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-16	8LL33	P-1-101	A24	20	20								0.66	0.54	0.84
	2015-16-16	8LL33	P-1-101	A25										0.81	0.97	0.7
	2015-16-16	8LL33	P-1-101	P01										2.02		
	2015-16-16	8LL33	P-1-101	P02	20	25				Y						
	2015-16-16	8LL33	P-1-101	P03	20	25								0.43	0.43	0.48
	2015-16-43	8LL33	P-3-103	A01	20	75	Y							0.17	0.13	0.32
	2015-16-43	8LL33	P-3-103	A02	20	20								0.62	0.5	0.81
	2015-16-43	8LL33	P-3-103	A03						Y				0.32	0.27	0.48

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-16	8LL33					2015-16-16	A24									
2015-16-16	8LL33					2015-16-16	A25									
2015-16-16	8LL33					2015-16-16	P01									
2015-16-16	8LL33					2015-16-16	P02									
2015-16-16	8LL33	0.28	0.94	0.686	0.67	2015-16-16	P03									
2015-16-43	8LL33	0.4	0.44	0.297	0.33	2015-16-43	A01	0.25	0.29	0.32	0.12	0.51	0.66	0.59	0.63	
2015-16-43	8LL33	1.12	0.67			2015-16-43	A02									
2015-16-43	8LL33	0.53	0.61	0.659		2015-16-43	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-16	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-43	8LL33	P-3-103	A04										0.68	0.62	0.79
	2015-16-43	8LL33	P-3-103	A05										0.61	0.47	0.5
	2015-16-43	8LL33	P-3-103	A06										1.04	0.84	1.22
	2015-16-43	8LL33	P-3-103	A07	20	20								1.17	1.01	1.1
	2015-16-43	8LL33	P-3-103	A08	30	20								0.88	0.84	0.49
	2015-16-43	8LL33	P-3-103	A09	40	20								0.84	0.85	0.62
	2015-16-43	8LL33	P-3-103	A10										0.87	1.3	0.8
	2015-16-43	8LL33	P-3-103	A11										0.5	0.54	0.3

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-43	8LL33					2015-16-43	A04									
2015-16-43	8LL33	0.94	0.56	0.785	1.18	2015-16-43	A05	0.4								
2015-16-43	8LL33	0.72	0.98	0.876	0.7	2015-16-43	A06									
2015-16-43	8LL33					2015-16-43	A07									
2015-16-43	8LL33	0.65	0.56	0.678		2015-16-43	A08									
2015-16-43	8LL33	0.8	0.64	0.367	0.59	2015-16-43	A09									
2015-16-43	8LL33	1.07	1.1	1.331	1.33	2015-16-43	A10									
2015-16-43	8LL33	0.46	0.6			2015-16-43	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-43	8LL33	P-3-103	A12	9	100	Y		Y					0.7	0.87	0.76
	2015-16-43	8LL33	P-3-103	A13	40	10								0.48	0.49	0.69
	2015-16-43	8LL33	P-3-103	A14	30	20								0.53	0.85	0.63
	2015-16-43	8LL33	P-3-103	A15	8	100	Y		Y					0.25	0.23	0.44
	2015-16-43	8LL33	P-3-103	A16										0.43	0.38	0.37
	2015-16-43	8LL33	P-3-103	A17										1.07	0.61	0.59
	2015-16-43	8LL33	P-3-103	A18	20	20								1.35	1.1	1.16
	2015-16-43	8LL33	P-3-103	A19	10	50	Y			Y				0.38	0.48	0.37

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-43	8LL33	0.8	0.73	0.665		2015-16-43	A12									
2015-16-43	8LL33	0.83	0.85	0.995	0.99	2015-16-43	A13									
2015-16-43	8LL33	0.62	0.59	0.828	0.48	2015-16-43	A14	0.94	0.63	0.74	0.55	0.92	1.5			
2015-16-43	8LL33	0.39	0.39	0.661	0.44	2015-16-43	A15	0.64								
2015-16-43	8LL33	0.51	0.62			2015-16-43	A16									
2015-16-43	8LL33	0.5				2015-16-43	A17									
2015-16-43	8LL33	0.76				2015-16-43	A18									
2015-16-43	8LL33	0.46	0.55	0.722	0.4	2015-16-43	A19	0.69								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-43	8LL33	P-3-103	A20									Y	0.61	0.53	0.69
	2015-16-43	8LL33	P-3-103	A21	40	20								1.02	1.24	
	2015-16-43	8LL33	P-3-103	A22										1.18	1.13	0.61
	2015-16-43	8LL33	P-3-103	A23	10	100	Y		Y					0.31	0.34	0.19
	2015-16-43	8LL33	P-3-103	A24	20	100	Y			Y				0.24	0.47	0.48
	2015-16-43	8LL33	P-3-103	A25	80	5								0.92	1.07	0.5
	2015-16-43	8LL33	P-3-103	A26	40	20								0.63	1.16	0.72
	2015-16-43	8LL33	P-3-103	A27	20	25								0.56	0.46	0.41

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-43	8LL33					2015-16-43	A20									
2015-16-43	8LL33					2015-16-43	A21									
2015-16-43	8LL33	0.41	0.44	0.937	0.78	2015-16-43	A22	0.29	0.75	0.67						
2015-16-43	8LL33	0.34	0.42	0.601	0.28	2015-16-43	A23	0.29								
2015-16-43	8LL33	0.82	0.75	0.61	0.63	2015-16-43	A24	0.58	0.7							
2015-16-43	8LL33	0.67	0.8	0.74		2015-16-43	A25									
2015-16-43	8LL33	1.14	0.38	1.138	0.97	2015-16-43	A26									
2015-16-43	8LL33	0.53	0.59	0.516	0.5	2015-16-43	A27	0.44	0.44	0.57						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-43	8LL33	P-3-103	A28	10	100	Y			Y				0.3	0.29	0.33
	2015-16-43	8LL33	P-3-103	A29	30	50	Y			Y				0.32	0.19	0.33
	2015-16-43	8LL33	P-3-103	A30	30	50								0.63	0.44	0.61
	2015-16-43	8LL33	P-3-103	A31	30	20								0.99	0.55	0.72
	2015-16-43	8LL33	P-3-103	A32										0.94	1.11	0.96
	2015-16-43	8LL33	P-3-103	P01	40	10						Y		1.09	1.95	
	2015-16-47	8LL33	P-3-104	A01	0	0	Y							0.55	0.46	0.53
	2015-16-47	8LL33	P-3-104	A02	30	25								1.25	1.08	1.26

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-43	8LL33	0.33	0.31	0.495	0.91	2015-16-43	A28									
2015-16-43	8LL33	0.25	0.23	0.404	0.63	2015-16-43	A29	0.66	0.73	0.62	0.56	0.43	0.33	0.52	0.66	0.77
2015-16-43	8LL33	0.38	0.69	0.624	0.53	2015-16-43	A30									
2015-16-43	8LL33	0.69	0.74	0.824	0.66	2015-16-43	A31									
2015-16-43	8LL33	0.6	0.56	0.591	0.52	2015-16-43	A32	0.82	1.01	1.23	0.7	0.41				
2015-16-43	8LL33					2015-16-43	P01									
2015-16-47	8LL33	0.32				2015-16-47	A01									
2015-16-47	8LL33					2015-16-47	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-43	8LL33							
2015-16-43	8LL33	1.15	0.9869					
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-43	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-47	8LL33	P-3-104	A03	40	15								0.89	0.98	0.87
	2015-16-47	8LL33	P-3-104	A04	40	10								0.73	0.6	
	2015-16-47	8LL33	P-3-104	A05	30	15								0.57	0.45	0.27
	2015-16-47	8LL33	P-3-104	A06	20	25								0.81		
	2015-16-47	8LL33	P-3-104	A07										0.74	1	0.6
	2015-16-47	8LL33	P-3-104	A08	60	10								0.71	0.65	0.63
	2015-16-47	8LL33	P-3-104	A09										0.48	0.72	0.9
	2015-16-47	8LL33	P-3-104	A10	40	10								0.73	0.75	1.17

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-47	8LL33					2015-16-47	A03									
2015-16-47	8LL33					2015-16-47	A04									
2015-16-47	8LL33	0.59	0.27	0.549	0.45	2015-16-47	A05	0.59	0.46							
2015-16-47	8LL33					2015-16-47	A06									
2015-16-47	8LL33	0.67	0.48			2015-16-47	A07									
2015-16-47	8LL33	0.47	0.54	1.074	0.5	2015-16-47	A08	0.55								
2015-16-47	8LL33	1.05	0.9			2015-16-47	A09									
2015-16-47	8LL33	0.93	0.64	0.489		2015-16-47	A10									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-47	8LL33	P-3-104	A11	20	15	Y			Y			Y	0.6	0.56	0.39
	2015-16-47	8LL33	P-3-104	A12	40	10								1.3	0.74	1.1
	2015-16-47	8LL33	P-3-104	A13	10	100	Y		Y					0.28	0.5	0.45
	2015-16-47	8LL33	P-3-104	A14										1.03	0.63	1.56
	2015-16-47	8LL33	P-3-104	A15										1.01	0.8	0.7
	2015-16-47	8LL33	P-3-104	A16	80	10								1.07	0.88	1.42
	2015-16-47	8LL33	P-3-104	A17	10	25								0.79	0.92	1.17
	2015-16-47	8LL33	P-3-104	A18	10	100	Y		Y					0.37	0.3	0.44

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-47	8LL33	0.3	0.28	0.455	0.6	2015-16-47	A11	0.51	0.71							
2015-16-47	8LL33					2015-16-47	A12									
2015-16-47	8LL33	0.4	0.71	0.865	0.64	2015-16-47	A13	0.77	0.81							
2015-16-47	8LL33	1.04				2015-16-47	A14									
2015-16-47	8LL33	0.68	0.67	0.904	1.1	2015-16-47	A15									
2015-16-47	8LL33	1.09	0.57			2015-16-47	A16									
2015-16-47	8LL33					2015-16-47	A17									
2015-16-47	8LL33	0.49	0.42			2015-16-47	A18									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-47	8LL33	P-3-104	A19	10	100	Y			Y				0.67	0.57	0.45
	2015-16-47	8LL33	P-3-104	A20	20	20								0.98	0.61	0.68
	2015-16-47	8LL33	P-3-104	A21	40	15								0.77	0.91	1.02
	2015-16-47	8LL33	P-3-104	A22	25	30								0.73	0.84	0.74
	2015-16-47	8LL33	P-3-104	A23	30	25								0.82	0.42	0.54
	2015-16-47	8LL33	P-3-104	A24	20	100	Y							0.6	0.5	0.48
	2015-16-47	8LL33	P-3-104	A25	40	20								0.63	0.85	0.8
	2015-16-47	8LL33	P-3-104	A26												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-47	8LL33	0.7	0.62			2015-16-47	A19									
2015-16-47	8LL33	0.79				2015-16-47	A20									
2015-16-47	8LL33					2015-16-47	A21									
2015-16-47	8LL33	0.61	0.64	0.477	0.59	2015-16-47	A22									
2015-16-47	8LL33	0.61	0.66	0.452	0.47	2015-16-47	A23	0.6								
2015-16-47	8LL33					2015-16-47	A24									
2015-16-47	8LL33	0.85	0.43	0.733	0.58	2015-16-47	A25	0.71	0.42	0.59	0.49					
2015-16-47	8LL33					2015-16-47	A26									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-47	8LL33	P-3-104	A27	20	25								0.78	1.02	1.03
	2015-16-47	8LL33	P-3-104	A28	25	100	Y			Y				0.2	0.29	0.36
	2015-16-47	8LL33	P-3-104	A29	40	25			Y					0.94	1.02	0.81
	2015-16-47	8LL33	P-3-104	A30	40	25								0.48	0.39	0.39
	2015-16-47	8LL33	P-3-104	A31	60	15								0.77	1.1	0.9
	2015-16-47	8LL33	P-3-104	A32	10	100	Y			Y				0.78	0.37	0.34
	2015-16-47	8LL33	P-3-104	A33	20	30								0.86	0.91	0.79
	2015-16-47	8LL33	P-3-104	A34	40	20								0.77	0.48	0.56

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-47	8LL33	1.02	0.57	0.368	0.81	2015-16-47	A27	0.81	0.75							
2015-16-47	8LL33	0.31	0.3	0.39	0.51	2015-16-47	A28	0.73	0.4	0.25	0.52	0.81	0.71	0.95	0.71	
2015-16-47	8LL33	0.62	0.82	0.754	1.12	2015-16-47	A29	0.67	0.8	0.64	0.3	0.43				
2015-16-47	8LL33	0.39	0.54	0.768	0.92	2015-16-47	A30	1.04	0.82							
2015-16-47	8LL33	1.02				2015-16-47	A31									
2015-16-47	8LL33	0.77				2015-16-47	A32									
2015-16-47	8LL33	1.1	0.93	0.652	0.68	2015-16-47	A33	0.71								
2015-16-47	8LL33	1	0.59	0.578	0.81	2015-16-47	A34									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							
2015-16-47	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	2015-16-47	8LL33	P-3-104	A35	40	20	Y			Y				0.64	0.56	0.58
	2015-16-47	8LL33	P-3-104	Q01												
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A01	0	0								1.04	0.72	0.91
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A02	30	10								0.74	0.75	0.66
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A03	20	20								0.6	0.58	0.64
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A04	0	0								1.37	0.85	1.33
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A05	0	0								0.84		
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A06	40	10								1.39	0.37	0.63
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A07	0	0								0.76	0.98	0.94
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A08	0	0								0.73	0.73	0.96
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A09	0	0								0.99	0.99	0.84
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A10	40	5								0.62	0.64	0.52
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A11	40	5								1.51	1.09	
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A12	0	0								0.66	0.73	0.89
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A13	0	0								1.03		
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A14	0	0								0.65	0.75	0.54
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A15	0	0										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	A16	0	0								0.91	0.81	
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P01	0	0										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P02	0	0										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P03	30	10										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
2015-16-47	8LL33	0.45	0.45	0.404	0.66	2015-16-47	A35	0.52	0.4	0.46						
2015-16-47	8LL33					2015-16-47	Q01									
88-8-105	8LL33					88-8-105	A01									
88-8-105	8LL33					88-8-105	A02									
88-8-105	8LL33	0.78	0.63			88-8-105	A03									
88-8-105	8LL33	1.51	0.72	1.138		88-8-105	A04									
88-8-105	8LL33					88-8-105	A05									
88-8-105	8LL33	0.38	0.42	0.824		88-8-105	A06									
88-8-105	8LL33					88-8-105	A07									
88-8-105	8LL33	0.55				88-8-105	A08									
88-8-105	8LL33	0.6				88-8-105	A09									
88-8-105	8LL33	0.6	0.59	0.485		88-8-105	A10									
88-8-105	8LL33					88-8-105	A11									
88-8-105	8LL33	0.6				88-8-105	A12									
88-8-105	8LL33					88-8-105	A13									
88-8-105	8LL33	0.73				88-8-105	A14									
88-8-105	8LL33					88-8-105	A15									
88-8-105	8LL33					88-8-105	A16									
88-8-105	8LL33					88-8-105	P01									
88-8-105	8LL33					88-8-105	P02									
88-8-105	8LL33					88-8-105	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
2015-16-47	8LL33							
2015-16-47	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P04	40	10								2.57	1.28	
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P05	40	10										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P06	20	20								0.38	0.25	0.28
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P07	40	10								1.32	1.21	
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P08	0	0										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P09	0	0										
4743554	88-8-105	8LL33	D-1-9[95], ST 7	P10	0	0										
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A01	6	100	Y			Y				0.3	0.27	0.4
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A02	40	10								1.37	0.99	0.87
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A03	20	25								0.35	0.59	0.67
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A04	30	25								0.35	0.47	0.56
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A05	20	50				Y				0.47	0.38	0.58
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A06	20	25	Y			Y				0.52	0.54	0.3
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A07	20	10								0.61	0.63	0.95
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A08	40	10								0.83	0.71	0.57
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A09	20	10								0.83	1.22	
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A10	30	10								1.27	0.73	0.67
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A11										0.69	0.59	0.53
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A12	40	10								0.38	0.5	0.6
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A13	20	10								1.06	0.88	0.75
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A14	20	25								0.71	0.43	0.43
4743556	88-8-145	8LL33	A-1-9[42], ST 6	A15									Y	0.69	0.77	0.97
4743556	88-8-145	8LL33	A-1-9[42], ST 6	OTH1	20	50										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-105	8LL33					88-8-105	P04									
88-8-105	8LL33					88-8-105	P05									
88-8-105	8LL33	0.19	0.13	0.254	0.2	88-8-105	P06	0.23	0.11	0.16	0.13					
88-8-105	8LL33					88-8-105	P07									
88-8-105	8LL33					88-8-105	P08									
88-8-105	8LL33					88-8-105	P09									
88-8-105	8LL33					88-8-105	P10									
88-8-145	8LL33	0.33	0.28			88-8-145	A01									
88-8-145	8LL33	1.06	0.75			88-8-145	A02									
88-8-145	8LL33					88-8-145	A03									
88-8-145	8LL33	0.53	0.62	0.663	0.66	88-8-145	A04	0.65	0.58	0.7	0.5					
88-8-145	8LL33	0.5	0.38	0.488	0.56	88-8-145	A05	0.78	0.59	0.61						
88-8-145	8LL33	0.61	0.29	0.435	0.84	88-8-145	A06	0.7	0.52	0.44	0.57	0.93	0.77	0.51		
88-8-145	8LL33					88-8-145	A07									
88-8-145	8LL33	0.69				88-8-145	A08									
88-8-145	8LL33					88-8-145	A09									
88-8-145	8LL33	0.68	0.36	0.447	1.08	88-8-145	A10									
88-8-145	8LL33	0.6				88-8-145	A11									
88-8-145	8LL33	0.49	0.45	0.418	0.29	88-8-145	A12	0.73								
88-8-145	8LL33	1.02				88-8-145	A13									
88-8-145	8LL33	0.46	0.4	0.694	0.83	88-8-145	A14	0.33								
88-8-145	8LL33	0.42				88-8-145	A15									
88-8-145	8LL33					88-8-145	OTH1									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-105	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743556	88-8-145	8LL33	A-1-9[42], ST 6	OTH2	5	100	Y			Y						
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P01												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P02	40	10								0.7	1.34	0.76
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P03												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P04	20	20								0.89	0.35	0.39
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P05										0.25	0.24	0.57
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P06	40	10								1.56		
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P07	40	10						Y		0.8	0.64	0.98
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P08												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P09	40	10								1.47		
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P10	40	15										
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P11												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P12										1.77		
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P13	20	25										
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P14												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P15	40	10								0.54	0.79	0.87
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P16	40	10								0.64	1.1	
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P17										0.59	0.54	
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P18										0.7	0.67	
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P19												
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P20	40	10								1.73	4.44	1.35

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-145	8LL33					88-8-145	OTH2									
88-8-145	8LL33					88-8-145	P01									
88-8-145	8LL33	0.7				88-8-145	P02									
88-8-145	8LL33					88-8-145	P03									
88-8-145	8LL33					88-8-145	P04									
88-8-145	8LL33	1.01	0.74	0.955	0.69	88-8-145	P05	0.21	0.56							
88-8-145	8LL33					88-8-145	P06									
88-8-145	8LL33	0.58				88-8-145	P07									
88-8-145	8LL33					88-8-145	P08									
88-8-145	8LL33					88-8-145	P09									
88-8-145	8LL33					88-8-145	P10									
88-8-145	8LL33					88-8-145	P11									
88-8-145	8LL33					88-8-145	P12									
88-8-145	8LL33					88-8-145	P13									
88-8-145	8LL33					88-8-145	P14									
88-8-145	8LL33	1.29	0.33	0.339	0.2	88-8-145	P15	0.82	1.02	0.9						
88-8-145	8LL33					88-8-145	P16									
88-8-145	8LL33					88-8-145	P17									
88-8-145	8LL33					88-8-145	P18									
88-8-145	8LL33					88-8-145	P19									
88-8-145	8LL33	0.88	0.57	0.226		88-8-145	P20									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							
88-8-145	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743556	88-8-145	8LL33	A-1-9[42], ST 6	P21										1.04	0.58	
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A01	20	20								0.45	0.51	0.56
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A02	20	25								0.33	0.51	0.67
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A03	20	20								1.08	0.61	0.66
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A04	20	20	Y							0.15	0.19	0.31
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A05	20	20								0.79	0.82	0.86
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A06	0	0								0.99	0.96	1.32
4743562	88-8-163	8LL33	D-1-8[94], ST 6	A07	0	0								1.47		
4743562	88-8-163	8LL33	D-1-8[94], ST 6	P01	40	10										
4743563	88-8-164	8LL33	D-1-10[96], ST 8	A01	30	10								0.65	0.54	0.85
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A01	40	20								1.3	0.86	0.54
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A02	30	25								1.05	1	1.13
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A03	20	20								0.59	0.69	0.61
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A04	10	50	Y			Y				0.33	0.37	0.67
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A05										0.75	0.91	
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A06										0.75	0.98	0.96
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A07	5	50	Y			Y				0.74	0.43	0.61
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A08										0.45	0.87	
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A09												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	A10												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P01	40	25				Y				1.2	1.06	1.13
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P02	30	25			Y					1.24	1.02	1.14
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P03	40	10								0.32	0.56	0.63

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-145	8LL33					88-8-145	P21									
88-8-163	8LL33	0.57	0.58	0.592	0.68	88-8-163	A01	0.58								
88-8-163	8LL33	0.72	0.8	0.561	0.94	88-8-163	A02	0.59	0.9	0.68						
88-8-163	8LL33	0.76	1.08	0.86		88-8-163	A03									
88-8-163	8LL33	0.12	0.42	0.433	0.3	88-8-163	A04	0.48	0.57							
88-8-163	8LL33					88-8-163	A05									
88-8-163	8LL33					88-8-163	A06									
88-8-163	8LL33					88-8-163	A07									
88-8-163	8LL33					88-8-163	P01									
88-8-164	8LL33	0.43	0.94	0.939	0.68	88-8-164	A01	0.71								
88-8-170	8LL33	0.36	0.87	1.129	0.81	88-8-170	A01									
88-8-170	8LL33	0.85	0.99	1.41		88-8-170	A02									
88-8-170	8LL33					88-8-170	A03									
88-8-170	8LL33	0.44	0.66			88-8-170	A04									
88-8-170	8LL33					88-8-170	A05									
88-8-170	8LL33					88-8-170	A06									
88-8-170	8LL33	0.63				88-8-170	A07									
88-8-170	8LL33					88-8-170	A08									
88-8-170	8LL33					88-8-170	A09									
88-8-170	8LL33					88-8-170	A10									
88-8-170	8LL33	0.66	1.25	0.739	0.49	88-8-170	P01	0.5	0.75	0.49						
88-8-170	8LL33	0.65	0.31	0.845		88-8-170	P02									
88-8-170	8LL33	0.52	0.66	0.753	0.56	88-8-170	P03	0.73								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-145	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-163	8LL33							
88-8-164	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P04	40	10								0.38	0.4	0.82
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P05	30	25			Y					1.3	0.92	1.02
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P06	40	10								0.73	0.67	
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P07	40	10								1.18	0.55	0.71
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P08	20	25			Y					1.36	1.05	1.05
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P09	20	20								0.71		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P10	20	20								0.69	0.59	
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P11												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P12										0.81		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P13										0.6		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P14										0.56	0.75	
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P15												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P16										0.41		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P17										0.23		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P18												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P19												
4743564	88-8-170	8LL33	A-1-13[46], ST 6	P20										0.63		
4743564	88-8-170	8LL33	A-1-13[46], ST 6	Q01-2												
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A01	20	10								0.64	0.57	1.08
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A02	40	10								1.06	0.72	0.5
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A03	30	5								0.62	0.9	0.59
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A04	0	0								0.97	0.37	0.6
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A05	0	0								1.03	1.08	0.93

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-170	8LL33	0.46	0.63			88-8-170	P04									
88-8-170	8LL33	0.24	0.73			88-8-170	P05									
88-8-170	8LL33					88-8-170	P06									
88-8-170	8LL33	0.4	0.62	1.278	0.5	88-8-170	P07	0.4	0.86	0.42						
88-8-170	8LL33					88-8-170	P08									
88-8-170	8LL33					88-8-170	P09									
88-8-170	8LL33					88-8-170	P10									
88-8-170	8LL33					88-8-170	P11									
88-8-170	8LL33					88-8-170	P12									
88-8-170	8LL33					88-8-170	P13									
88-8-170	8LL33					88-8-170	P14									
88-8-170	8LL33					88-8-170	P15									
88-8-170	8LL33					88-8-170	P16									
88-8-170	8LL33					88-8-170	P17									
88-8-170	8LL33					88-8-170	P18									
88-8-170	8LL33					88-8-170	P19									
88-8-170	8LL33					88-8-170	P20									
88-8-170	8LL33					88-8-170	Q01-2									
88-8-171	8LL33	0.88	0.61	0.65		88-8-171	A01									
88-8-171	8LL33	0.75	0.48			88-8-171	A02									
88-8-171	8LL33	0.87	0.76			88-8-171	A03									
88-8-171	8LL33					88-8-171	A04									
88-8-171	8LL33					88-8-171	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-170	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A06	40	5								0.99	0.71	0.98
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A07	30	10								0.54	0.41	0.37
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	A08	0	0								0.4	0.71	
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	P01	40	5								1.56	1.76	
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	P02	50	10								0.26	0.24	1.35
4743565	88-8-171	8LL33	D-1-7[93], ST 5-6	P03	0	0										
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	A01	40	10								0.77	1.08	1.08
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	A02										1.4	1.46	1.22
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	A03	40	10								0.81	0.86	0.83
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P01	60	20						Y		0.84	1.1	1.53
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P02										2.01	1.51	0.9
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P03	40	20								0.76	0.14	0.63

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-171	8LL33					88-8-171	A06									
88-8-171	8LL33	0.61	0.56	0.765	0.91	88-8-171	A07									
88-8-171	8LL33					88-8-171	A08									
88-8-171	8LL33					88-8-171	P01									
88-8-171	8LL33					88-8-171	P02									
88-8-171	8LL33					88-8-171	P03									
88-8-186	8LL33	1.38				88-8-186	A01									
88-8-186	8LL33	1.95				88-8-186	A02									
88-8-186	8LL33	0.87				88-8-186	A03									
88-8-186	8LL33	1.12	1.32	1.286	0.97	88-8-186	P01	1.46	1.36	1.12	1.28					
88-8-186	8LL33	1.41				88-8-186	P02									
88-8-186	8LL33	0.58	0.23	0.637	0.37	88-8-186	P03	0.25	0.55	0.27						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-171	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P04	30	25			Y					0.7	0.39	0.85
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P05	40	10								2.03	0.86	1.26
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P06	10	25				Y						
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P07	40	10								0.62	0.63	0.96
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P08	30	10								0.58	1.02	0.98
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P09	40	10								0.95		
4743577	88-8-186	8LL33	C-1-10[67,68], ST 5-7	P10	40	10						Y		1.06	0.63	0.11
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A01	40	10								1.28	1.4	1.78

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-186	8LL33					88-8-186	P04									
88-8-186	8LL33					88-8-186	P05									
88-8-186	8LL33					88-8-186	P06									
88-8-186	8LL33	0.87	0.64	0.153	0.94	88-8-186	P07	1.3	1.07							
88-8-186	8LL33	0.99				88-8-186	P08									
88-8-186	8LL33					88-8-186	P09									
88-8-186	8LL33	0.21				88-8-186	P10									
88-8-227	8LL33					88-8-227	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-186	8LL33							
88-8-227	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A02	7	50	Y		Y					0.46	0.45	0.49
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A03										0.86	1.28	1.16
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A04										0.81	0.85	1.06
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A05	40	10								0.53	0.76	0.67
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A06										1.21	1.05	
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A07	40	10								1.07	2.05	1.07
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A08	20	20								0.73	0.73	1.03
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A09	40	10								1.21	0.98	0.92

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-227	8LL33	0.9	0.6	0.25	0.6	88-8-227	A02	0.71	0.97							
88-8-227	8LL33	1.03				88-8-227	A03									
88-8-227	8LL33	1.17	1.04	1.448		88-8-227	A04									
88-8-227	8LL33	0.56	0.35	0.423		88-8-227	A05									
88-8-227	8LL33					88-8-227	A06									
88-8-227	8LL33	0.37				88-8-227	A07									
88-8-227	8LL33	0.65	0.75	1.026		88-8-227	A08									
88-8-227	8LL33					88-8-227	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A10										0.97	0.91	0.94
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A11										0.84	1.04	0.85
4743601	88-8-227	8LL33	A-1-12[45], ST 6	A12										0.61	0.67	0.6
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P01	40	25			Y					0.79	0.71	0.29
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P02	40	10								2.77	0.56	0.76
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P03	40	10					Y			0.53	0.59	0.6
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P04	40	10								0.46	1	0.46
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P05										0.46	0.57	0.66

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-227	8LL33					88-8-227	A10									
88-8-227	8LL33					88-8-227	A11									
88-8-227	8LL33	0.85				88-8-227	A12									
88-8-227	8LL33	0.57	0.62	0.62	0.61	88-8-227	P01	0.41	0.51	0.69	0.67	0.95	0.61	0.97	0.44	0.65
88-8-227	8LL33	0.43	0.56	0.824	0.6	88-8-227	P02	0.57	0.68	0.69	0.57	1.18	0.99	1.3	0.48	0.31
88-8-227	8LL33	0.58	0.63	1.048	0.86	88-8-227	P03	0.68	0.38	0.54						
88-8-227	8LL33	0.93	0.42			88-8-227	P04									
88-8-227	8LL33	0.39	0.42	0.472	0.44	88-8-227	P05	0.18	0.23	0.48						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33	0.53	0.929	0.51	1.31			
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P06	40	10								1.38	1.02	1.37
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P07	40	10								0.97	0.73	0.61
4743601	88-8-227	8LL33	A-1-12[45], ST 6	P08										0.62	0.28	0.09
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14	A01	20	20								1.3	1.29	
4743602	88-8-229	8LL33	C-1-14[71,72],ST 7, 13-14	P01	40	10								0.84	0.34	0.65
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	P01	60	15						Y		1.11	0.76	0.91
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	P02	40	10								0.28	0.2	0.14
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	P03	20	25				Y				0.78	1.79	1.52

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-227	8LL33	0.88	1.62			88-8-227	P06									
88-8-227	8LL33	1.03	0.98			88-8-227	P07									
88-8-227	8LL33	0.14	0.11	0.428	0.31	88-8-227	P08	0.73								
88-8-229	8LL33					88-8-229	A01									
88-8-229	8LL33					88-8-229	P01									
88-8-230	8LL33	0.82	0.71	0.528	0.99	88-8-230	P01									
88-8-230	8LL33	0.23	0.49	0.538	0.36	88-8-230	P02	0.28								
88-8-230	8LL33	0.15	0.88	0.432		88-8-230	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-227	8LL33							
88-8-227	8LL33							
88-8-227	8LL33							
88-8-229	8LL33							
88-8-229	8LL33							
88-8-230	8LL33							
88-8-230	8LL33							
88-8-230	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	P04												
4743603	88-8-230	8LL33	C-1-11[68,69],ST5-7, 14	P05												
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A01	40	20								1.27	1.46	1.2
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A02	60	10								1.12	1.59	0.98
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A03	40	10								1.23	0.9	0.98
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A04	40	10								1.46		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A05	40	1								0.87	0.41	0.92
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A06	20	20								0.88	0.71	0.62
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A07	40	15								1.12	1.41	0.84
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A08	20	20								1.31		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A09										1.77	1.04	1.3
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A10										1.11	0.86	
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A11	40	10								0.82	0.78	0.68
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A12	40	10								1.17		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A13										1.5	1.35	0.81
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A14	20	10								1.48	0.96	
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A15										0.39	0.6	0.3
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A16	20	20										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-230	8LL33					88-8-230	P04									
88-8-230	8LL33					88-8-230	P05									
88-8-239	8LL33	1	0.98	1.254		88-8-239	A01									
88-8-239	8LL33					88-8-239	A02									
88-8-239	8LL33					88-8-239	A03									
88-8-239	8LL33					88-8-239	A04									
88-8-239	8LL33					88-8-239	A05									
88-8-239	8LL33					88-8-239	A06									
88-8-239	8LL33					88-8-239	A07									
88-8-239	8LL33					88-8-239	A08									
88-8-239	8LL33	1.34				88-8-239	A09									
88-8-239	8LL33					88-8-239	A10									
88-8-239	8LL33	1.43	0.95	0.598		88-8-239	A11									
88-8-239	8LL33					88-8-239	A12									
88-8-239	8LL33	0.6				88-8-239	A13									
88-8-239	8LL33					88-8-239	A14									
88-8-239	8LL33	0.58	0.11	0.164		88-8-239	A15									
88-8-239	8LL33					88-8-239	A16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-230	8LL33							
88-8-230	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A17										0.87	0.94	1.09
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A18	20	10								0.63	1.08	
4743604	88-8-239	8LL33	A-1-11[44], ST 6	A19										0.49	0.74	0.51
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P01	40	20								1.47	0.44	1.59
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P02	40	10								0.43	0.47	0.34
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P03	40	10								0.99	0.6	1.01
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P04												
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P05										3.3		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P06	40	10										
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P07												
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P08	40	10								0.8	0.72	1
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P09	40	10										
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P10	30	20								0.18	0.15	0.16
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P11												
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P12	20	25			Y					0.89		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P13										0.6		
4743604	88-8-239	8LL33	A-1-11[44], ST 6	P14												
4743617	88-8-269	8LL33	C-1-13[70,71], ST 7, 14	A01	20	25								1	0.92	1.08
4743617	88-8-269	8LL33	C-1-13[70,71], ST 7, 14	A02	40	10								1.47	1.16	1.17

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-239	8LL33					88-8-239	A17									
88-8-239	8LL33					88-8-239	A18									
88-8-239	8LL33	0.63				88-8-239	A19									
88-8-239	8LL33	0.24	0.4	0.281	0.44	88-8-239	P01	1.42								
88-8-239	8LL33	0.41	0.57	0.602	0.42	88-8-239	P02	0.58	0.66	0.76	0.92					
88-8-239	8LL33	1.18	0.24	0.657	1.42	88-8-239	P03									
88-8-239	8LL33					88-8-239	P04									
88-8-239	8LL33					88-8-239	P05									
88-8-239	8LL33					88-8-239	P06									
88-8-239	8LL33					88-8-239	P07									
88-8-239	8LL33	1.14				88-8-239	P08									
88-8-239	8LL33					88-8-239	P09									
88-8-239	8LL33	0.44	0.87	0.54		88-8-239	P10									
88-8-239	8LL33					88-8-239	P11									
88-8-239	8LL33					88-8-239	P12									
88-8-239	8LL33					88-8-239	P13									
88-8-239	8LL33					88-8-239	P14									
88-8-269	8LL33	1.18	0.8	1.31	0.77	88-8-269	A01									
88-8-269	8LL33	1.26	1.52			88-8-269	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-239	8LL33							
88-8-269	8LL33							
88-8-269	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743619	88-8-269	8LL33	C-1-13[70,71], ST 7, 14	P01	40	15								0.5	0.44	
4743619	88-8-269	8LL33	C-1-13[70,71], ST 7, 14	P02	40	15								0.75	0.34	1.06
4743504	88-8-32	8LL33	D-1-3[89], ST 2	A01										0.9	0.96	0.49
4743511	88-8-37	8LL33	A-1-6[39], ST5	A01	40	20								1.37	1.55	1.19
4743511	88-8-37	8LL33	A-1-6[39], ST5	A02	40	10								0.95	1.18	0.92
4743511	88-8-37	8LL33	A-1-6[39], ST5	A03	40	10								0.63	0.45	0.69
4743511	88-8-37	8LL33	A-1-6[39], ST5	A04	20	20								1.01	0.52	0.47
4743511	88-8-37	8LL33	A-1-6[39], ST5	A05	20	20								1.13	1.29	1.04
4743511	88-8-37	8LL33	A-1-6[39], ST5	A06	20	25								0.64	0.8	0.83
4743511	88-8-37	8LL33	A-1-6[39], ST5	A07	40	15								0.58	1.25	1.16
4743511	88-8-37	8LL33	A-1-6[39], ST5	A08	40	10								0.99	1.26	
4743511	88-8-37	8LL33	A-1-6[39], ST5	A09	20	25	Y			Y				0.39	0.17	0.56
4743511	88-8-37	8LL33	A-1-6[39], ST5	A10												
4743511	88-8-37	8LL33	A-1-6[39], ST5	A11	10	10								1.07	1.02	
4743511	88-8-37	8LL33	A-1-6[39], ST5	A12	20	20								0.38	0.29	0.37
4743511	88-8-37	8LL33	A-1-6[39], ST5	A13	20	25								0.99	0.6	0.38
4743511	88-8-37	8LL33	A-1-6[39], ST5	A14	40	10							Y	0.78	0.19	0.45
4743511	88-8-37	8LL33	A-1-6[39], ST5	P01	40	15								0.59	0.72	0.26
4743511	88-8-37	8LL33	A-1-6[39], ST5	P02	40	15								0.38	0.83	1.42
4743511	88-8-37	8LL33	A-1-6[39], ST5	P03	40	10								2.1		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-269	8LL33					88-8-269	P01									
88-8-269	8LL33	0.73				88-8-269	P02									
88-8-32	8LL33	0.99				88-8-32	A01									
88-8-37	8LL33	1.44	0.98	1.101		88-8-37	A01									
88-8-37	8LL33	1.54				88-8-37	A02									
88-8-37	8LL33	0.63	0.96	0.667	0.7	88-8-37	A03	0.89	0.85							
88-8-37	8LL33	0.62	0.61	0.814		88-8-37	A04									
88-8-37	8LL33					88-8-37	A05									
88-8-37	8LL33	0.86	0.53	0.996		88-8-37	A06									
88-8-37	8LL33	0.67	0.92	0.77		88-8-37	A07									
88-8-37	8LL33					88-8-37	A08									
88-8-37	8LL33	0.69	0.45	0.7	1.12	88-8-37	A09	1.31	0.73	0.36						
88-8-37	8LL33					88-8-37	A10									
88-8-37	8LL33					88-8-37	A11									
88-8-37	8LL33	0.38	0.43	0.992		88-8-37	A12									
88-8-37	8LL33	0.51	0.58	0.482	0.81	88-8-37	A13									
88-8-37	8LL33	0.72				88-8-37	A14									
88-8-37	8LL33	0.63	0.31	1.442		88-8-37	P01									
88-8-37	8LL33	0.87				88-8-37	P02									
88-8-37	8LL33					88-8-37	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-269	8LL33							
88-8-269	8LL33							
88-8-32	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743511	88-8-37	8LL33	A-1-6[39], ST5	P04										1.03		
4743511	88-8-37	8LL33	A-1-6[39], ST5	P05	40	20								0.91	0.86	0.41
4743511	88-8-37	8LL33	A-1-6[39], ST5	P06												
4743511	88-8-37	8LL33	A-1-6[39], ST5	P07	40	15								0.53	0.48	1.21
4743511	88-8-37	8LL33	A-1-6[39], ST5	P08	20	25			Y					1.8	0.35	
4743511	88-8-37	8LL33	A-1-6[39], ST5	P09	30	25				Y				0.39	0.61	0.6
4743511	88-8-37	8LL33	A-1-6[39], ST5	P10	40	10								0.42	0.6	2.26
4743511	88-8-37	8LL33	A-1-6[39], ST5	P11	40	10								0.98	0.52	0.4
4743511	88-8-37	8LL33	A-1-6[39], ST5	P12	40	10								0.67	0.29	0.57
4743511	88-8-37	8LL33	A-1-6[39], ST5	P13	40	20								1.25	1.69	1.22
4743511	88-8-37	8LL33	A-1-6[39], ST5	P14	30	25				Y				0.39	0.55	0.32
4743511	88-8-37	8LL33	A-1-6[39], ST5	P15	30	50			Y					0.57	0.45	0.29
4743511	88-8-37	8LL33	A-1-6[39], ST5	P16	20	20										
4743511	88-8-37	8LL33	A-1-6[39], ST5	P17	40	15								0.75	0.55	1.11
4743511	88-8-37	8LL33	A-1-6[39], ST5	P18	30	20								0.44	0.8	0.66
4743511	88-8-37	8LL33	A-1-6[39], ST5	P19												
4743511	88-8-37	8LL33	A-1-6[39], ST5	P20	30	10						Y		0.36	0.48	0.53
4743511	88-8-37	8LL33	A-1-6[39], ST5	P21	30	20								0.52	0.54	
4743511	88-8-37	8LL33	A-1-6[39], ST5	P22	40	20								1.65		
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A01	40	20								0.85	0.99	1.18
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A02	40	20								0.69	0.67	0.81
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A03	20	10								0.67	0.67	0.55
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A04	10	50	Y							0.14	0.31	0.48

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-37	8LL33					88-8-37	P04									
88-8-37	8LL33	0.75	0.88	0.614	0.23	88-8-37	P05	0.6	1.27	1.22						
88-8-37	8LL33					88-8-37	P06									
88-8-37	8LL33	1.48	1.18	1.314	0.97	88-8-37	P07	0.49								
88-8-37	8LL33					88-8-37	P08									
88-8-37	8LL33	0.21	1.48	0.67		88-8-37	P09									
88-8-37	8LL33	2.28				88-8-37	P10									
88-8-37	8LL33	0.75	0.44	0.49	0.71	88-8-37	P11	0.82	0.62	0.68						
88-8-37	8LL33	0.33	0.9	0.336	0.72	88-8-37	P12									
88-8-37	8LL33	1.18				88-8-37	P13									
88-8-37	8LL33	0.29	0.21	1.035	0.23	88-8-37	P14	0.18	0.53	0.97	0.61					
88-8-37	8LL33	0.12				88-8-37	P15									
88-8-37	8LL33					88-8-37	P16									
88-8-37	8LL33	1.94	1.24			88-8-37	P17									
88-8-37	8LL33	0.64	0.22	0.295	0.32	88-8-37	P18	0.14	0.79	0.62	0.53					
88-8-37	8LL33					88-8-37	P19									
88-8-37	8LL33	0.22	0.81			88-8-37	P20									
88-8-37	8LL33					88-8-37	P21									
88-8-37	8LL33					88-8-37	P22									
88-8-68	8LL33	0.49	0.47	0.666	0.57	88-8-68	A01	0.26	0.84							
88-8-68	8LL33	0.93	0.46	0.551		88-8-68	A02									
88-8-68	8LL33	0.77	0.8	1.032	0.94	88-8-68	A03									
88-8-68	8LL33	0.32	0.35	0.327	0.4	88-8-68	A04	0.51	0.37	0.63	0.29	0.43	0.54			

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-37	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A05	40	5								1.04	0.98	1.1
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A06	30	10								0.79	0.59	0.84
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A07	40	5								1.21	1.39	0.86
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A08	40	5								1.01	0.9	0.51
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A09	0	0								1	1.05	0.53
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	A10	0	0								1.43	0.63	0.72
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	P01	40	10								3.95		
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	P02	0	0								0.35	0.82	
4743523	88-8-68	8LL33	D-1-5[91], ST 3-4	P03	0	0								1		
4743524	88-8-72	8LL33	D-1-6[92], ST 4	A01	40	10								1.2	0.74	0.54
4743524	88-8-72	8LL33	D-1-6[92], ST 4	A02	40	5								0.64	0.52	0.57
4743524	88-8-72	8LL33	D-1-6[92], ST 4	A03	0	0								1.03	0.82	
4743524	88-8-72	8LL33	D-1-6[92], ST 4	A04	0	0								0.64	0.65	0.75
4743524	88-8-72	8LL33	D-1-6[92], ST 4	A05	0	0								1.19	1.03	0.95
4743524	88-8-72	8LL33	D-1-6[92], ST 4	P01	60	5								2.68	1.74	1.79
4743524	88-8-72	8LL33	D-1-6[92], ST 4	P02	40	5								1.56		
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A01	40	20								0.66	0.65	0.61
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A02	40	15								1.04	1.2	0.73
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A03	20	20								1.06	0.89	0.93
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A04										1.16	1.51	1.22
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A05										1.01	0.98	0.52
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A06	40	10								1.12	0.71	1.06
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A07	20	20								0.92	1.56	0.71
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A08	40	10								0.81	0.63	0.83

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-68	8LL33	1.05				88-8-68	A05									
88-8-68	8LL33	0.77	1.42	1.183		88-8-68	A06									
88-8-68	8LL33	1.31	1.04	1.131		88-8-68	A07									
88-8-68	8LL33	1.25	0.64			88-8-68	A08									
88-8-68	8LL33	0.78				88-8-68	A09									
88-8-68	8LL33	0.65	0.99			88-8-68	A10									
88-8-68	8LL33					88-8-68	P01									
88-8-68	8LL33					88-8-68	P02									
88-8-68	8LL33					88-8-68	P03									
88-8-72	8LL33	0.61	1.28	0.86	0.26	88-8-72	A01	0.72								
88-8-72	8LL33	0.56	0.27	0.466	0.34	88-8-72	A02	0.57								
88-8-72	8LL33					88-8-72	A03									
88-8-72	8LL33					88-8-72	A04									
88-8-72	8LL33					88-8-72	A05									
88-8-72	8LL33					88-8-72	P01									
88-8-72	8LL33					88-8-72	P02									
88-8-98	8LL33	0.67				88-8-98	A01									
88-8-98	8LL33	1.24	1.04	1.209	1.04	88-8-98	A02									
88-8-98	8LL33	0.74	0.71	0.893	0.77	88-8-98	A03									
88-8-98	8LL33	1.1	0.99			88-8-98	A04									
88-8-98	8LL33	0.86				88-8-98	A05									
88-8-98	8LL33	0.86				88-8-98	A06									
88-8-98	8LL33	1.18				88-8-98	A07									
88-8-98	8LL33	0.62	0.91			88-8-98	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-68	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-72	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A09										0.62	0.95	1.14
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A10	40	10								0.77	0.5	0.65
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A11	30	20								0.81	0.72	0.89
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A12										0.9	0.64	0.56
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A13										0.66	0.83	0.36
4743551	88-8-98	8LL33	A-1-10[43], ST 6	A14										0.86	0.72	0.72
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P01	80	10								0.62	0.46	0.43
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P02	20	10						Y		0.77	0.38	1.24
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P03	40	15								0.21	0.4	0.9
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P04	40	10								0.68	0.62	0.58
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P05										0.61	0.58	0.48
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P06	40	15								0.35	0.2	0.12
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P07												
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P08	40	15								0.24	0.33	0.33
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P09	40	10								0.39	0.33	0.4
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P10	20	20								0.8	0.7	0.53
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P11	40	15								0.97	0.94	1.03
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P12												
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P13										1.11	1.34	0.71
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P14	20	15								1.75		
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P15	30	20								0.77	0.52	0.77
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P16										0.67	1.13	
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P17										0.7	1.34	0.58
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P18										0.36	0.24	0.41

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-98	8LL33	0.89	0.97			88-8-98	A09									
88-8-98	8LL33	0.89	0.96			88-8-98	A10									
88-8-98	8LL33					88-8-98	A11									
88-8-98	8LL33	0.73				88-8-98	A12									
88-8-98	8LL33	0.42	0.85	0.45	0.51	88-8-98	A13									
88-8-98	8LL33					88-8-98	A14									
88-8-98	8LL33	0.37	0.55	0.428	0.3	88-8-98	P01									
88-8-98	8LL33	0.46				88-8-98	P02									
88-8-98	8LL33	1.27				88-8-98	P03									
88-8-98	8LL33	0.7	1.42	0.393	0.4	88-8-98	P04	0.61	0.23	0.49	0.54	0.8	0.42			
88-8-98	8LL33	0.31	0.29	0.463	0.36	88-8-98	P05	0.63								
88-8-98	8LL33	0.17	0.2	0.441	0.28	88-8-98	P06	0.24	0.77	0.6	0.54	0.4	0.38			
88-8-98	8LL33					88-8-98	P07									
88-8-98	8LL33	0.19	0.37	0.401	0.65	88-8-98	P08									
88-8-98	8LL33	0.24	0.47	0.807	0.3	88-8-98	P09									
88-8-98	8LL33	0.32	0.11			88-8-98	P10									
88-8-98	8LL33					88-8-98	P11									
88-8-98	8LL33					88-8-98	P12									
88-8-98	8LL33	0.49				88-8-98	P13									
88-8-98	8LL33					88-8-98	P14									
88-8-98	8LL33	0.81	0.57			88-8-98	P15									
88-8-98	8LL33					88-8-98	P16									
88-8-98	8LL33	1.15	0.56			88-8-98	P17									
88-8-98	8LL33	0.42	0.23			88-8-98	P18									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							
88-8-98	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P19												
4743551	88-8-98	8LL33	A-1-10[43], ST 6	P20	30	20								0.76	0.8	0.4
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A01										0.72	0.69	1.48
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A02										0.7	1.22	0.82
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A03										0.5	0.4	0.83
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A04	40	10								1.09	0.66	
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A05	40	10								0.96	1.05	0.88
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A06	20	20								0.47	0.78	0.72
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A07	10	100			Y					0.3	0.31	0.34
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A08	8	100	Y			Y				0.46	0.53	0.38
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	A09	10	50	Y			Y				0.26	0.41	0.43
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P01												
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P02	20	20								0.73	0.99	0.28
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P03	40	10								0.6	0.88	0.71
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P04	40	10								0.83	1	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
88-8-98	8LL33					88-8-98	P19									
88-8-98	8LL33	0.37	0.3			88-8-98	P20									
89-7-309	8LL33	0.52	1.2	0.65	0.89	89-7-309	A01									
89-7-309	8LL33	0.8	0.35	0.709		89-7-309	A02									
89-7-309	8LL33	0.73	0.62			89-7-309	A03									
89-7-309	8LL33					89-7-309	A04									
89-7-309	8LL33	0.81				89-7-309	A05									
89-7-309	8LL33	0.43	0.93			89-7-309	A06									
89-7-309	8LL33	0.47	0.36	0.447		89-7-309	A07									
89-7-309	8LL33	0.41	0.36	0.375	0.39	89-7-309	A08									
89-7-309	8LL33	0.51	0.83			89-7-309	A09									
89-7-309	8LL33					89-7-309	P01									
89-7-309	8LL33	0.35	0.37	0.651	0.27	89-7-309	P02									
89-7-309	8LL33					89-7-309	P03									
89-7-309	8LL33					89-7-309	P04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
88-8-98	8LL33							
88-8-98	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P05	40	5								0.28	0.43	0.42
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P06	40	5						Y		0.5	0.52	1.01
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P07	20	20								0.74	0.67	0.55
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P08												
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P09	40	10								2.53	0.33	1.18
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P10	40	10								2.6	0.5	
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P11										0.67	0.65	1.19
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P12	40	5								1.43	0.83	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-309	8LL33	1.06	1.1	1.028	0.82	89-7-309	P05									
89-7-309	8LL33	0.84	0.81	0.409	0.77	89-7-309	P06	1.69	0.96							
89-7-309	8LL33	0.72				89-7-309	P07									
89-7-309	8LL33					89-7-309	P08									
89-7-309	8LL33					89-7-309	P09									
89-7-309	8LL33					89-7-309	P10									
89-7-309	8LL33	0.47	0.24	0.177	0.25	89-7-309	P11									
89-7-309	8LL33					89-7-309	P12									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P13	40	10										
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P14	40	10								0.97	0.51	
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P15												
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P16	20	10								0.68	0.87	0.74
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P17	40	10								0.27	0.27	0.45
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P18	10	50	Y			Y						
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P19										0.55	0.44	
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P20	30	25			Y					0.88	0.79	0.52

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-309	8LL33					89-7-309	P13									
89-7-309	8LL33					89-7-309	P14									
89-7-309	8LL33					89-7-309	P15									
89-7-309	8LL33	1.53	1.91	0.29	0.33	89-7-309	P16	0.54	0.25							
89-7-309	8LL33	0.21	0.31	1.554		89-7-309	P17									
89-7-309	8LL33					89-7-309	P18									
89-7-309	8LL33					89-7-309	P19									
89-7-309	8LL33	0.89	0.96			89-7-309	P20									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P21												
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	P22	30	20								0.7	0.58	0.86
4743659	89-7-309	8LL33	B-1-P[40-43], ST 24-25	Q01-3												
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A01	40	10								2.03	0.87	1.38
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A02	0	0								0.82	0.7	0.74
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A03	20	10								0.67	0.47	0.41
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A04	0	0								0.81	0.68	0.96
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A05	40	10								0.87	0.82	0.84
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A06	40	10								0.56	0.96	0.87
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A07	40	5							Y	0.79	0.68	0.74
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A08	40	10							Y	0.66	1.07	0.58
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A09	40	5								1.88	0.99	0.86
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A10	0	0								1.08	0.72	0.92
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A11	20	20								0.77	0.72	1.15
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A12	40	10								1.58	1.01	1.19
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A13	40	10								0.58	0.89	0.61
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A14	10	20	Y			Y				0.58	0.44	0.42
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A15	40	5								0.3	0.78	0.47
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A16	20	20								0.76	0.98	0.92
4743660	89-7-312	8LL33	A-5-14[82], ST 14	A17	0	0								0.82	0.75	0.6
4743660	89-7-312	8LL33	A-5-14[82], ST 14	C01	10	50	Y			Y						
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P01	0	0										
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P02	40	20								0.33	1.21	0.4

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-309	8LL33					89-7-309	P21									
89-7-309	8LL33					89-7-309	P22									
89-7-309	8LL33					89-7-309	Q01-3									
89-7-312	8LL33	1.44				89-7-312	A01									
89-7-312	8LL33	0.95				89-7-312	A02									
89-7-312	8LL33	0.75	1.34	0.609	0.71	89-7-312	A03									
89-7-312	8LL33					89-7-312	A04									
89-7-312	8LL33	0.85	1.07	0.919		89-7-312	A05									
89-7-312	8LL33	0.48	0.83			89-7-312	A06									
89-7-312	8LL33	0.89	0.81	0.798	0.5	89-7-312	A07									
89-7-312	8LL33	1.05				89-7-312	A08									
89-7-312	8LL33	1.19	0.82			89-7-312	A09									
89-7-312	8LL33					89-7-312	A10									
89-7-312	8LL33	1.08	0.94			89-7-312	A11									
89-7-312	8LL33					89-7-312	A12									
89-7-312	8LL33	0.66	0.52	0.578		89-7-312	A13									
89-7-312	8LL33	0.28	0.72	0.653	0.61	89-7-312	A14									
89-7-312	8LL33	0.88	0.7			89-7-312	A15									
89-7-312	8LL33	1.04				89-7-312	A16									
89-7-312	8LL33	0.54	0.31	0.457	0.73	89-7-312	A17	0.98								
89-7-312	8LL33					89-7-312	C01									
89-7-312	8LL33					89-7-312	P01									
89-7-312	8LL33	0.34	0.41	0.442	0.31	89-7-312	P02	0.81	0.89	0.29	0.55	1.03	0.8	0.57		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-309	8LL33							
89-7-309	8LL33							
89-7-309	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P03	40	20								1.2	1.24	0.89
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P04	40	10								0.4	1	0.7
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P05	30	50			Y					0.3	0.73	0.73
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P06	20	20								0.73	0.35	1.03
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P07	20	25			Y					0.87	1.6	
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P08	0	0										
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P09	40	10								3.66	0.87	
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P10	40	10								0.72	0.37	0.21
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P11	40	10								0.73	0.47	0.64
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P12	40	10								0.54	0.44	0.45
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P13	40	10								2.37	0.67	0.88
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P14	20	20								1.62	0.23	0.41
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P15	40	10								0.73	0.52	0.34
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P16	20	25			Y					0.95	0.28	0.44
4743660	89-7-312	8LL33	A-5-14[82], ST 14	P17	40	10								0.3	0.83	0.98
4743660	89-7-312	8LL33	A-5-14[82], ST 14	Q01	0	0										
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	A01	40	10								0.81	0.68	1.05
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	A02	40	10								0.73	0.39	0.52
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	A03	30	25								0.44	0.76	0.76
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P01	30	50			Y			Y		0.51	0.59	0.26
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P02	40	20								0.83	0.71	1.2
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P03	50	25			Y					1.34	0.56	0.9
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P04	40	10								1.4		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-312	8LL33	1.29	1.47	0.915		89-7-312	P03									
89-7-312	8LL33	1.08	0.89			89-7-312	P04									
89-7-312	8LL33	0.71	0.26	0.187	0.32	89-7-312	P05	0.33	0.37	0.25	0.48					
89-7-312	8LL33	0.26	1.07	0.839		89-7-312	P06									
89-7-312	8LL33					89-7-312	P07									
89-7-312	8LL33					89-7-312	P08									
89-7-312	8LL33					89-7-312	P09									
89-7-312	8LL33	0.57	0.39	0.585	0.62	89-7-312	P10									
89-7-312	8LL33	0.87				89-7-312	P11									
89-7-312	8LL33	0.99	0.4	0.281	0.24	89-7-312	P12	0.45	0.56	1.59						
89-7-312	8LL33					89-7-312	P13									
89-7-312	8LL33	0.32	0.31	0.235	0.46	89-7-312	P14	0.69								
89-7-312	8LL33	0.9				89-7-312	P15									
89-7-312	8LL33	1.09	0.65	0.736	0.91	89-7-312	P16	0.84	0.62							
89-7-312	8LL33					89-7-312	P17									
89-7-312	8LL33					89-7-312	Q01									
89-7-316	8LL33	0.75				89-7-316	A01									
89-7-316	8LL33	0.79	0.79			89-7-316	A02									
89-7-316	8LL33	0.33	0.41	0.765	0.68	89-7-316	A03	0.69	0.4							
89-7-316	8LL33	0.22	0.52	0.542	0.26	89-7-316	P01	0.7	0.29							
89-7-316	8LL33	0.32	0.58	0.988	0.56	89-7-316	P02	0.3	0.79	0.68						
89-7-316	8LL33	1.25	0.52	0.753	1.35	89-7-316	P03									
89-7-316	8LL33					89-7-316	P04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-312	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P05	60	20								0.66	0.53	0.54
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P06	30	25			Y					0.18	0.29	0.14
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P07	40	25								0.72	0.41	0.46
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P08												
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P09	80	10								0.62	0.58	0.56
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P10	40	10								1.57	1.21	0.47
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P11	30	25			Y					1.2	0.95	0.62
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P12	40	10								0.57	0.86	1.1
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P13	30	20								2.03		
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P14	30	25			Y					0.99	0.7	1.12
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P15	40	5										
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P16	30	10								0.15	0.13	0.32
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P17	20	20								1.46		
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P18												
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P19	20	100	Y		Y							
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P20	30	15								2.82	0.84	
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P21										0.33		
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P22	40	15								0.46	0.65	0.81
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P23	40	15								1.43	1.36	1.99
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P24	30	20								0.18	0.72	0.86
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P25	40	10										
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P26	40	10								1.7		
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P27										0.66	0.58	0.61
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P28	40	10								0.84	2.43	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-316	8LL33	0.34	0.51	0.901	0.67	89-7-316	P05	0.39	0.97	0.92	1.78	1.52	1.25	1.53	0.99	
89-7-316	8LL33	0.12	0.68	0.275	0.37	89-7-316	P06	0.64	0.29	0.41	0.81	0.67	0.26	0.39	0.26	0.56
89-7-316	8LL33	0.36	0.42	0.491	0.48	89-7-316	P07	0.27	0.15	0.17	0.63	0.49	0.27			
89-7-316	8LL33					89-7-316	P08									
89-7-316	8LL33	0.34				89-7-316	P09									
89-7-316	8LL33	1.43	0.7			89-7-316	P10									
89-7-316	8LL33	0.57	0.64	0.789		89-7-316	P11									
89-7-316	8LL33					89-7-316	P12									
89-7-316	8LL33					89-7-316	P13									
89-7-316	8LL33					89-7-316	P14									
89-7-316	8LL33					89-7-316	P15									
89-7-316	8LL33	0.33	0.36	0.342	0.85	89-7-316	P16	1.02	0.56	0.38	0.32	0.33	0.21	0.19	0.22	0.42
89-7-316	8LL33					89-7-316	P17									
89-7-316	8LL33					89-7-316	P18									
89-7-316	8LL33					89-7-316	P19									
89-7-316	8LL33					89-7-316	P20									
89-7-316	8LL33					89-7-316	P21									
89-7-316	8LL33	0.5				89-7-316	P22									
89-7-316	8LL33					89-7-316	P23									
89-7-316	8LL33	0.37	0.55	0.123	0.33	89-7-316	P24	0.16								
89-7-316	8LL33					89-7-316	P25									
89-7-316	8LL33					89-7-316	P26									
89-7-316	8LL33	0.56	0.48	0.524	0.72	89-7-316	P27	0.6	0.38	0.35	0.44	0.32	0.48			
89-7-316	8LL33					89-7-316	P28									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-316	8LL33							
89-7-316	8LL33	0.09	0.1449					
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33	0.35	0.537	0.76				
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P29	40	10								0.39	0.16	0.47
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P30	40	15								0.86	1.32	1.22
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P31	30	25			Y					1.02	0.8	0.88
4743665	89-7-316	8LL33	B-1-M[36-40], ST 22-24	P32										0.72	0.64	0.18
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	A01	20	20								0.63	0.71	0.64
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	A02										0.71	0.8	0.79
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P01												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P02	20	20								0.97	0.88	0.66
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P03	40	15								0.75	1.25	1.39
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P04	50	20								0.25	0.67	0.4
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P05	40	10								1.18		
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P06	30	25								0.87	1.22	
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P07	40	10								0.43	1.32	
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P08												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P09												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P10												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P11								Y		0.86	0.8	0.75
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P12	30	25								0.74	0.43	0.19
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P13												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P14	40	20								0.66	0.29	0.21
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P15	40	10								0.69	0.72	0.51
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P16										0.48	0.48	1.11

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-316	8LL33	0.49	0.74	0.962	1.35	89-7-316	P29									
89-7-316	8LL33	1.63	0.51			89-7-316	P30									
89-7-316	8LL33	1.02	1.32			89-7-316	P31									
89-7-316	8LL33	0.34	0.3	0.344	0.48	89-7-316	P32									
89-7-351	8LL33	0.71				89-7-351	A01									
89-7-351	8LL33					89-7-351	A02									
89-7-351	8LL33					89-7-351	P01									
89-7-351	8LL33	0.73	0.43			89-7-351	P02									
89-7-351	8LL33	0.35	0.91	0.429		89-7-351	P03									
89-7-351	8LL33	0.84	0.9			89-7-351	P04									
89-7-351	8LL33					89-7-351	P05									
89-7-351	8LL33					89-7-351	P06									
89-7-351	8LL33					89-7-351	P07									
89-7-351	8LL33					89-7-351	P08									
89-7-351	8LL33					89-7-351	P09									
89-7-351	8LL33					89-7-351	P10									
89-7-351	8LL33	0.64	0.54	0.479	0.34	89-7-351	P11	0.68								
89-7-351	8LL33	0.67	0.54	0.345	0.53	89-7-351	P12									
89-7-351	8LL33					89-7-351	P13									
89-7-351	8LL33	0.49	0.51	0.314	0.3	89-7-351	P14									
89-7-351	8LL33	0.38				89-7-351	P15									
89-7-351	8LL33					89-7-351	P16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-316	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P17												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P18	40	10								0.57	0.18	0.29
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P19												
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P20	40	10								1.09	1.07	
4743672	89-7-351	8LL33	B-1-N[38-43], ST 23-25	P21												
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A01	40	10								1.24	0.95	0.95
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A02	40	5										
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A03	0	0								0.78		
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A04	0	0								0.87		
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A05	0	0								0.47	0.54	0.61
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A06	0	0								0.83	0.74	0.76
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A07	20	20								1.29		
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A08	20	20								0.66	0.8	0.77
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A09	20	10								1.29	1.13	0.57
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	A10	0	0								1.22		
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P01	0	0								0.92	0.84	
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P02	20	10						Y		0.94	1.44	1.15
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P03	40	20								0.55	0.26	0.71
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P04	0	0										
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P05	60	10								0.46	1.95	
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P06	40	10								1.52	0.84	0.47
4743676	89-7-493	8LL33	A-5-22[92,93], ST 19	P07	0	0										
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A01	40	20								0.8	0.99	0.84
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A02	30	10								0.37	0.39	0.42

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-351	8LL33					89-7-351	P17									
89-7-351	8LL33	0.62				89-7-351	P18									
89-7-351	8LL33					89-7-351	P19									
89-7-351	8LL33					89-7-351	P20									
89-7-351	8LL33					89-7-351	P21									
89-7-493	8LL33	1.2				89-7-493	A01									
89-7-493	8LL33					89-7-493	A02									
89-7-493	8LL33					89-7-493	A03									
89-7-493	8LL33					89-7-493	A04									
89-7-493	8LL33					89-7-493	A05									
89-7-493	8LL33					89-7-493	A06									
89-7-493	8LL33					89-7-493	A07									
89-7-493	8LL33	0.41	0.61			89-7-493	A08									
89-7-493	8LL33	0.93				89-7-493	A09									
89-7-493	8LL33					89-7-493	A10									
89-7-493	8LL33					89-7-493	P01									
89-7-493	8LL33					89-7-493	P02									
89-7-493	8LL33	0.64	1.55			89-7-493	P03									
89-7-493	8LL33					89-7-493	P04									
89-7-493	8LL33					89-7-493	P05									
89-7-493	8LL33					89-7-493	P06									
89-7-493	8LL33					89-7-493	P07									
89-7-503	8LL33	0.57	0.47	0.988	1.09	89-7-503	A01	0.56	0.34	0.47	0.62	1.05	0.6			
89-7-503	8LL33	0.53	0.86	0.744	0.71	89-7-503	A02	1.19	0.96	0.92	0.66					

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-351	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-493	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A03	40	15								1.13	0.79	1.01
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A04	20	20								1.42		
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A05	40	10								0.67	0.47	0.47
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A06	40	10								0.99	1.1	1.08
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A07	40	15							Y	0.49	0.4	0.24
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A08	0	0								0.56	0.55	0.47
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A09	40	10								0.94	0.92	1.07
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A10	20	20								0.77	0.63	0.52
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A11	0	0								1.12	1.2	1.41
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A12	10	20										
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A13	0	0								0.7	0.73	0.65
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A14	0	0								0.91	0.97	1.1
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A15	0	0								1.26		
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	A16	0	0								0.7	1.09	1.12
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	P01	20	25								0.34	0.71	0.34
4743679	89-7-503	8LL33	A-5-25[97,98], ST 22	P02	0	0								1.72	2.16	
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A01	20	20	Y			Y				0.36	0.28	0.37
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A02	40	20								1.67	0.89	1.09
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A03	40	5								0.79	0.94	1.19
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A04	0	0							Y	1.55	1.09	
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A05	0	0							Y	1.16	0.94	
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A06	20	20								0.62	0.98	0.91
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A07	0	0								1.33		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-503	8LL33	0.86	0.85	1.115		89-7-503	A03									
89-7-503	8LL33					89-7-503	A04									
89-7-503	8LL33	0.6	0.71	0.604		89-7-503	A05									
89-7-503	8LL33	1.22	0.97	1.063	0.99	89-7-503	A06									
89-7-503	8LL33	0.72	0.23	0.312	1.01	89-7-503	A07	0.74	0.72							
89-7-503	8LL33	0.88	0.72			89-7-503	A08									
89-7-503	8LL33	1.51	1.29			89-7-503	A09									
89-7-503	8LL33	0.64	0.38	0.763		89-7-503	A10									
89-7-503	8LL33	0.95	1.22			89-7-503	A11									
89-7-503	8LL33					89-7-503	A12									
89-7-503	8LL33	0.64				89-7-503	A13									
89-7-503	8LL33					89-7-503	A14									
89-7-503	8LL33					89-7-503	A15									
89-7-503	8LL33					89-7-503	A16									
89-7-503	8LL33	0.25	0.95	0.274	0.4	89-7-503	P01	0.16	0.39	0.56						
89-7-503	8LL33					89-7-503	P02									
89-7-504	8LL33	0.59	0.48	0.401	0.67	89-7-504	A01	0.53	0.48							
89-7-504	8LL33	1.13				89-7-504	A02									
89-7-504	8LL33					89-7-504	A03									
89-7-504	8LL33					89-7-504	A04									
89-7-504	8LL33					89-7-504	A05									
89-7-504	8LL33	0.8	0.58			89-7-504	A06									
89-7-504	8LL33					89-7-504	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-503	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A08	0	0								1.52	1.41	
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	A09	0	0								0.9	0.96	0.78
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	P01	0	0										
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	P02	0	0										
4743680	89-7-504	8LL33	A-5-24 [95,96], ST 22	P03	40	10								1.66	0.49	0.75
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A01	60	10								1.21	0.83	0.78
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A02	60	10								1.07	1.45	1
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A03	20	15								0.97	0.89	0.73
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A04	40	10								1.2	1.39	1.14
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A05	0	0								0.85	0.93	0.96
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A06	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A07	40	10								0.93	0.51	0.79
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A08	30	10								0.53	0.5	0.55
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A09	0	0								1.46	0.91	1.51
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A10	40	5								1.56		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A11	0	0								1.43		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A12	0	0								1.26	1	1.45
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A13	0	0								1.01	1.06	1.19
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A14	0	0							Y	1.07	1.03	1.2
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A15	0	0								0.96	0.57	0.52
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A16	0	0								0.98	0.41	0.69
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A17	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A18	0	0								0.99	1.01	
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A19	0	0								0.88	0.64	0.96

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-504	8LL33					89-7-504	A08									
89-7-504	8LL33					89-7-504	A09									
89-7-504	8LL33					89-7-504	P01									
89-7-504	8LL33					89-7-504	P02									
89-7-504	8LL33	1.09	0.93	0.747	0.53	89-7-504	P03									
89-7-506	8LL33	1.15	0.72	0.933	0.82	89-7-506	A01									
89-7-506	8LL33	0.96	1.15	0.914	0.82	89-7-506	A02	1.18								
89-7-506	8LL33	0.56	0.66			89-7-506	A03									
89-7-506	8LL33	1.26	1.1	1.623		89-7-506	A04									
89-7-506	8LL33	0.81	1.02			89-7-506	A05									
89-7-506	8LL33					89-7-506	A06									
89-7-506	8LL33	0.58	0.96	0.63		89-7-506	A07									
89-7-506	8LL33	0.55	0.5	0.632	1.09	89-7-506	A08	0.85								
89-7-506	8LL33	0.7				89-7-506	A09									
89-7-506	8LL33					89-7-506	A10									
89-7-506	8LL33					89-7-506	A11									
89-7-506	8LL33	0.98	0.81	1.912		89-7-506	A12									
89-7-506	8LL33					89-7-506	A13									
89-7-506	8LL33					89-7-506	A14									
89-7-506	8LL33	0.63	1.01	0.869	1.04	89-7-506	A15	0.83								
89-7-506	8LL33	1.08				89-7-506	A16									
89-7-506	8LL33					89-7-506	A17									
89-7-506	8LL33					89-7-506	A18									
89-7-506	8LL33					89-7-506	A19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-504	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743681	89-7-506	8LL33	A-5-23[94], ST 22	A20	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P01	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P02	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P03	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P04	0	0								1.45		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P05	60	10								0.77	0.86	0.49
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P06	60	10								0.66	0.69	1.41
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P07	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P08	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P09	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P10	40	10								0.81	0.75	0.39
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P11	20	20								1.25		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P12	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P13	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P14	0	0						Y		1.08		
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P15	0	0										
4743681	89-7-506	8LL33	A-5-23[94], ST 22	P16	0	0								0.4	0.4	0.31
4743681	89-7-506	8LL33	A-5-23[94], ST 22	Q01	0	0										
4743776	90-3-45	8LL33	C-5-33[89]	A01	60	10								0.88	0.81	0.84
4743776	90-3-45	8LL33	C-5-33[89]	A02	40	20								0.76	0.85	0.67
4743776	90-3-45	8LL33	C-5-33[89]	A03	40	10								0.85	1.01	1.14
4743776	90-3-45	8LL33	C-5-33[89]	A04	40	10								1.05	0.94	0.75
4743776	90-3-45	8LL33	C-5-33[89]	A05	0	0								1.31		
4743776	90-3-45	8LL33	C-5-33[89]	A06	0	0								1.5		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-7-506	8LL33					89-7-506	A20									
89-7-506	8LL33					89-7-506	P01									
89-7-506	8LL33					89-7-506	P02									
89-7-506	8LL33					89-7-506	P03									
89-7-506	8LL33					89-7-506	P04									
89-7-506	8LL33	0.52	0.87	0.827	1.09	89-7-506	P05	1.01	0.76	0.71						
89-7-506	8LL33	1.1	0.85	0.806	0.7	89-7-506	P06									
89-7-506	8LL33					89-7-506	P07									
89-7-506	8LL33					89-7-506	P08									
89-7-506	8LL33					89-7-506	P09									
89-7-506	8LL33	0.44				89-7-506	P10									
89-7-506	8LL33					89-7-506	P11									
89-7-506	8LL33					89-7-506	P12									
89-7-506	8LL33					89-7-506	P13									
89-7-506	8LL33					89-7-506	P14									
89-7-506	8LL33					89-7-506	P15									
89-7-506	8LL33					89-7-506	P16									
89-7-506	8LL33					89-7-506	Q01									
90-3-45	8LL33	0.86	0.88	0.643	1.08	90-3-45	A01									
90-3-45	8LL33	1.22	0.9	0.991	0.95	90-3-45	A02									
90-3-45	8LL33					90-3-45	A03									
90-3-45	8LL33	0.96	0.86	0.611		90-3-45	A04									
90-3-45	8LL33					90-3-45	A05									
90-3-45	8LL33					90-3-45	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
89-7-506	8LL33							
90-3-45	8LL33							
90-3-45	8LL33							
90-3-45	8LL33							
90-3-45	8LL33							
90-3-45	8LL33							
90-3-45	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743776	90-3-45	8LL33	C-5-33[89]	P01	0	0								0.8		
4743776	90-3-45	8LL33	C-5-33[89]	P02	0	0										
4743781	90-3-45-1	8LL33	C-5-33[89]-1	A01	40	5								0.82	0.83	0.72
4743781	90-3-45-1	8LL33	C-5-33[89]-1	A02	20	10								0.48	0.72	0.77
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P01	60	10								3.45	1.94	
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P02	30	10								0.49	0.43	0.44
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P03	60	10								1.17	0.62	0.33
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P04	40	10								2.37	0.72	0.46
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P05	40	5								0.45	0.4	0.62
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P06	40	10								1.3	0.93	1.22
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P07	60	10								1.11	0.85	1.1
4743781	90-3-45-1	8LL33	C-5-33[89]-1	P08	100	8						Y		4.27		
4743808	90-3-53-3	8LL33	C-5N-33[89]-3	A01	40	10								1.03	0.58	1.02
4743808	90-3-53-3	8LL33	C-5N-33[89]-3	A02	0	0								0.91	0.88	0.64
4743808	90-3-53-3	8LL33	C-5N-33[89]-3	A03	0	0								0.72	0.78	0.67
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A01	40	10								1.17	0.81	1.35
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A02	10	100	Y			Y				0.45	0.53	0.48
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A03	40	10								0.44	1.09	
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A04	0	0								0.96	1.4	0.67
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A05	0	0										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	A06	0	0										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P01	0	0										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P02	40	10										
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P03	40	15								0.46	0.87	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-3-45	8LL33					90-3-45	P01									
90-3-45	8LL33					90-3-45	P02									
90-3-45-1	8LL33	0.55				90-3-45-1	A01									
90-3-45-1	8LL33	0.51	0.95			90-3-45-1	A02									
90-3-45-1	8LL33					90-3-45-1	P01									
90-3-45-1	8LL33					90-3-45-1	P02									
90-3-45-1	8LL33	1.04	0.74			90-3-45-1	P03									
90-3-45-1	8LL33					90-3-45-1	P04									
90-3-45-1	8LL33					90-3-45-1	P05									
90-3-45-1	8LL33	1.15	0.85			90-3-45-1	P06									
90-3-45-1	8LL33	1.05	0.91	0.895		90-3-45-1	P07									
90-3-45-1	8LL33					90-3-45-1	P08									
90-3-53-3	8LL33	0.8	0.83			90-3-53-3	A01									
90-3-53-3	8LL33	0.87				90-3-53-3	A02									
90-3-53-3	8LL33	1.01				90-3-53-3	A03									
90-3-55	8LL33	0.9	0.58	1.226	1.24	90-3-55	A01	1.07								
90-3-55	8LL33	0.52	0.82			90-3-55	A02									
90-3-55	8LL33					90-3-55	A03									
90-3-55	8LL33	1.05				90-3-55	A04									
90-3-55	8LL33					90-3-55	A05									
90-3-55	8LL33					90-3-55	A06									
90-3-55	8LL33					90-3-55	P01									
90-3-55	8LL33					90-3-55	P02									
90-3-55	8LL33					90-3-55	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-3-45	8LL33							
90-3-45	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-45-1	8LL33							
90-3-53-3	8LL33							
90-3-53-3	8LL33							
90-3-53-3	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P04	40	10								1.51		
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P05	30	10								0.81	0.47	
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P06	30	10								5.77	1.07	1.38
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P07	40	10								3.4	1.99	
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P08	40	10								0.46	0.84	
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	P09	40	5								0.33		
4743813	90-3-55	8LL33	C-5N-35[91], ST 18	Q01	0	0										
4743818	90-3-57-1	8LL33	C-5N-37[93]-1, ST 13	P01	60	15										
4743986	90-7-37	8LL33	I-2-65	A01	40	10								0.86	0.9	0.73
4743986	90-7-37	8LL33	I-2-65	A02										0.71	0.5	0.49
4743986	90-7-37	8LL33	I-2-65	A03	30	20								0.61	0.65	0.83
4743986	90-7-37	8LL33	I-2-65	A04	10	50	Y									
4743986	90-7-37	8LL33	I-2-65	A05	20	20								1.5	1.42	1.66
4743986	90-7-37	8LL33	I-2-65	A06	40	10								0.66	0.98	0.47
4743986	90-7-37	8LL33	I-2-65	A07	40	15								0.7	0.68	0.92
4743986	90-7-37	8LL33	I-2-65	A08										0.81		
4743986	90-7-37	8LL33	I-2-65	A09	40	20								0.3	0.32	1.11
4743986	90-7-37	8LL33	I-2-65	P01	30	20								1.51	1.98	
4743986	90-7-37	8LL33	I-2-65	P02										1.13	1.03	0.9
4743986	90-7-37	8LL33	I-2-65	P03	40	20								0.63	1.47	0.78
4743986	90-7-37	8LL33	I-2-65	P04										0.37	0.31	0.24
4743986	90-7-37	8LL33	I-2-65	P05	40	10								2.43		
4743986	90-7-37	8LL33	I-2-65	P06	40	20								0.63	0.3	0.65
4743986	90-7-37	8LL33	I-2-65	P07	30	10								0.74	0.44	0.62

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-3-55	8LL33					90-3-55	P04									
90-3-55	8LL33					90-3-55	P05									
90-3-55	8LL33	0.78	0.53	0.867		90-3-55	P06									
90-3-55	8LL33					90-3-55	P07									
90-3-55	8LL33					90-3-55	P08									
90-3-55	8LL33					90-3-55	P09									
90-3-55	8LL33					90-3-55	Q01									
90-3-57-1	8LL33					90-3-57-1	P01									
90-7-37	8LL33	0.56				90-7-37	A01									
90-7-37	8LL33					90-7-37	A02									
90-7-37	8LL33	0.95	0.62	0.69	1.25	90-7-37	A03									
90-7-37	8LL33					90-7-37	A04									
90-7-37	8LL33	1.74	1.39			90-7-37	A05									
90-7-37	8LL33	0.87				90-7-37	A06									
90-7-37	8LL33	0.7	0.65	0.721	0.69	90-7-37	A07	0.44	0.48							
90-7-37	8LL33					90-7-37	A08									
90-7-37	8LL33	1.26	0.84	0.679	0.78	90-7-37	A09	1.05								
90-7-37	8LL33					90-7-37	P01									
90-7-37	8LL33	0.93	0.81	0.638	0.93	90-7-37	P02	0.86	0.85	0.94						
90-7-37	8LL33	1.19	1.34			90-7-37	P03									
90-7-37	8LL33	0.36	0.62	0.848	0.71	90-7-37	P04	1.01	0.95							
90-7-37	8LL33					90-7-37	P05									
90-7-37	8LL33	0.12	0.24	0.132		90-7-37	P06									
90-7-37	8LL33	0.5	0.62	0.337	0.33	90-7-37	P07	0.91	0.41							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-55	8LL33							
90-3-57-1	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743986	90-7-37	8LL33	I-2-65	P08	40	20								0.69	0.75	0.85
4743986	90-7-37	8LL33	I-2-65	P09	30	25								2.1	0.41	
4743986	90-7-37	8LL33	I-2-65	P10												
4743986	90-7-37	8LL33	I-2-65	P11	40	10								0.47	0.52	0.29
4743986	90-7-37	8LL33	I-2-65	P12	20	20								1.78	0.73	
4743986	90-7-37	8LL33	I-2-65	P13	40	10								1.5		
4743986	90-7-37	8LL33	I-2-65	P14	40	10								1.12		
4743986	90-7-37	8LL33	I-2-65	P15	40	10								0.45	0.61	0.36
4743986	90-7-37	8LL33	I-2-65	P16												
4743986	90-7-37	8LL33	I-2-65	P17										0.41	0.57	
4743986	90-7-37	8LL33	I-2-65	P18	20	20								0.83		
4743986	90-7-37	8LL33	I-2-65	P19	40	10								0.96	0.47	0.53
4743986	90-7-37	8LL33	I-2-65	P20	40	10										
4743986	90-7-37	8LL33	I-2-65	P21	40	15								0.62	1.63	
4743986	90-7-37	8LL33	I-2-65	P22	40	10								0.5	0.63	0.35
4743986	90-7-37	8LL33	I-2-65	P23	30	10								1.15	1.29	0.59
4743986	90-7-37	8LL33	I-2-65	P24	40	10								0.72		
4743986	90-7-37	8LL33	I-2-65	P25	4	10								0.91	1.38	1.04
4743986	90-7-37	8LL33	I-2-65	P26	40	10								2.45		
4743986	90-7-37	8LL33	I-2-65	P27	40	10								0.43	0.19	0.41
4743986	90-7-37	8LL33	I-2-65	P28	40	10								0.78	0.98	
4743986	90-7-37	8LL33	I-2-65	P29	30	25								0.72	1	
4743986	90-7-37	8LL33	I-2-65	P30	20	15								0.57	0.64	0.5
4743986	90-7-37	8LL33	I-2-65	P31	40	10										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-37	8LL33					90-7-37	P08									
90-7-37	8LL33					90-7-37	P09									
90-7-37	8LL33					90-7-37	P10									
90-7-37	8LL33	0.4	0.22	0.547		90-7-37	P11									
90-7-37	8LL33					90-7-37	P12									
90-7-37	8LL33					90-7-37	P13									
90-7-37	8LL33					90-7-37	P14									
90-7-37	8LL33	0.55				90-7-37	P15									
90-7-37	8LL33					90-7-37	P16									
90-7-37	8LL33					90-7-37	P17									
90-7-37	8LL33					90-7-37	P18									
90-7-37	8LL33					90-7-37	P19									
90-7-37	8LL33					90-7-37	P20									
90-7-37	8LL33					90-7-37	P21									
90-7-37	8LL33	0.5	0.83	0.445	0.6	90-7-37	P22	0.31								
90-7-37	8LL33	1.4	0.61			90-7-37	P23									
90-7-37	8LL33					90-7-37	P24									
90-7-37	8LL33	1.27	0.88	0.813	0.87	90-7-37	P25									
90-7-37	8LL33					90-7-37	P26									
90-7-37	8LL33	0.18	0.4	0.523	0.68	90-7-37	P27	0.85								
90-7-37	8LL33					90-7-37	P28									
90-7-37	8LL33					90-7-37	P29									
90-7-37	8LL33					90-7-37	P30									
90-7-37	8LL33					90-7-37	P31									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							
90-7-37	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743994	90-7-38	8LL33	I-2-66	A01	0	0								0.65	0.91	0.86
4743994	90-7-38	8LL33	I-2-66	A02	0	0								1.05	0.86	
4743994	90-7-38	8LL33	I-2-66	A03	40	10								0.94	1.37	1.08
4743994	90-7-38	8LL33	I-2-66	A04	20	20								0.75	0.75	0.64
4743994	90-7-38	8LL33	I-2-66	A05	0	0							Y	0.97	0.56	0.8
4743994	90-7-38	8LL33	I-2-66	A06	0	0								0.99	0.83	1.08
4743994	90-7-38	8LL33	I-2-66	A07	40	10								1.38	0.69	1.53
4743994	90-7-38	8LL33	I-2-66	A08	20	25								0.99	0.94	0.65
4743994	90-7-38	8LL33	I-2-66	A09	0	0								0.96	0.93	1.23
4743994	90-7-38	8LL33	I-2-66	A10	0	0								0.78	0.97	1.07
4743994	90-7-38	8LL33	I-2-66	A11	0	0								1.64	0.71	1.02
4743994	90-7-38	8LL33	I-2-66	A12	20	50							Y	0.43	0.69	0.5
4743994	90-7-38	8LL33	I-2-66	A13	40	10							Y	0.73	0.51	0.73
4743994	90-7-38	8LL33	I-2-66	A14	40	15								1.06	1.38	0.98
4743994	90-7-38	8LL33	I-2-66	A15	40	10							Y	1.21	0.85	1.54
4743994	90-7-38	8LL33	I-2-66	A16	20	25								1.08	0.96	
4743994	90-7-38	8LL33	I-2-66	P01	40	25								0.62	0.54	0.42
4743994	90-7-38	8LL33	I-2-66	P02	40	10										
4743994	90-7-38	8LL33	I-2-66	P03	50	20								0.42	0.38	0.34
4743994	90-7-38	8LL33	I-2-66	P04	0	0						Y		0.64	1.21	0.27
4743994	90-7-38	8LL33	I-2-66	P05	60	10								0.41	0.34	0.47
4743994	90-7-38	8LL33	I-2-66	P06	0	0										
4743994	90-7-38	8LL33	I-2-66	P07	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-38	8LL33	0.68				90-7-38	A01									
90-7-38	8LL33					90-7-38	A02									
90-7-38	8LL33	0.85	1.3	0.973	1.47	90-7-38	A03									
90-7-38	8LL33	0.71				90-7-38	A04									
90-7-38	8LL33	0.96	0.68	0.773		90-7-38	A05									
90-7-38	8LL33	0.8	1.04	0.865	0.83	90-7-38	A06									
90-7-38	8LL33					90-7-38	A07									
90-7-38	8LL33	0.76	0.69	0.833		90-7-38	A08									
90-7-38	8LL33	1.82				90-7-38	A09									
90-7-38	8LL33	0.85	1.22	1.103		90-7-38	A10									
90-7-38	8LL33					90-7-38	A11									
90-7-38	8LL33	0.35	0.72	0.895	0.63	90-7-38	A12	0.9								
90-7-38	8LL33	0.56	1.35	1.017	1.48	90-7-38	A13	1.05								
90-7-38	8LL33	1.34	1.4	0.958		90-7-38	A14									
90-7-38	8LL33					90-7-38	A15									
90-7-38	8LL33					90-7-38	A16									
90-7-38	8LL33	0.76	0.37	0.19	0.78	90-7-38	P01	1.45	0.31	0.5	0.7	0.51				
90-7-38	8LL33					90-7-38	P02									
90-7-38	8LL33					90-7-38	P03									
90-7-38	8LL33	0.59	2.75			90-7-38	P04									
90-7-38	8LL33	0.59	1.07	0.429	0.43	90-7-38	P05	0.64	0.36							
90-7-38	8LL33					90-7-38	P06									
90-7-38	8LL33					90-7-38	P07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4743994	90-7-38	8LL33	I-2-66	P08	20	20								0.47	0.51	0.21
4743994	90-7-38	8LL33	I-2-66	P09	40	15								0.89	0.73	0.41
4743994	90-7-38	8LL33	I-2-66	P10	0	0										
4743994	90-7-38	8LL33	I-2-66	P11	40	10								0.77	0.82	0.24
4743994	90-7-38	8LL33	I-2-66	P12	40	10								0.37	0.77	0.69
4743994	90-7-38	8LL33	I-2-66	P13	0	0								0.61	0.27	0.37
4743994	90-7-38	8LL33	I-2-66	P14	30	10								2.14		
4743994	90-7-38	8LL33	I-2-66	P15	0	0								1.41		
4743994	90-7-38	8LL33	I-2-66	P16	20	20								0.71	0.49	0.62
4743994	90-7-38	8LL33	I-2-66	P17	0	0								0.37	0.71	0.49
4743994	90-7-38	8LL33	I-2-66	P18	0	0								0.22	0.29	0.34
4743994	90-7-38	8LL33	I-2-66	P19	0	0								0.49	0.58	0.61
4743994	90-7-38	8LL33	I-2-66	P20	0	0								0.29	0.44	0.28
4744002	90-7-39	8LL33	I-1-72	A01	0	0								0.89	1.24	0.86
4744002	90-7-39	8LL33	I-1-72	A02	20	25								0.85	0.97	0.74
4744002	90-7-39	8LL33	I-1-72	A03	40	10								0.72	0.6	0.94
4744002	90-7-39	8LL33	I-1-72	A04	0	0							Y	1.05	1.2	0.93
4744002	90-7-39	8LL33	I-1-72	A05	20	25	Y			Y				0.82	0.96	1.01
4744002	90-7-39	8LL33	I-1-72	A06	20	25								0.65	0.67	0.52
4744002	90-7-39	8LL33	I-1-72	A07	40	10							Y	0.54	0.46	0.76
4744002	90-7-39	8LL33	I-1-72	A08	0	0								0.84	0.59	0.77
4744002	90-7-39	8LL33	I-1-72	A09	40	10								0.53	0.73	0.55
4744002	90-7-39	8LL33	I-1-72	A10	20	20								0.96	0.6	0.77
4744002	90-7-39	8LL33	I-1-72	A11	20	25								1.18	0.58	1.3

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-38	8LL33	0.41	1.46	0.709		90-7-38	P08									
90-7-38	8LL33	0.3	0.18	0.291	0.26	90-7-38	P09	0.32	0.46	0.28	0.19					
90-7-38	8LL33					90-7-38	P10									
90-7-38	8LL33	0.58				90-7-38	P11									
90-7-38	8LL33	1.05				90-7-38	P12									
90-7-38	8LL33	0.33	0.28	0.6	0.74	90-7-38	P13									
90-7-38	8LL33					90-7-38	P14									
90-7-38	8LL33					90-7-38	P15									
90-7-38	8LL33	0.65	0.61	0.771	0.45	90-7-38	P16	0.5	0.79	0.4						
90-7-38	8LL33					90-7-38	P17									
90-7-38	8LL33	0.11	0.29	0.208	0.37	90-7-38	P18	1.21	0.55							
90-7-38	8LL33					90-7-38	P19									
90-7-38	8LL33	0.19	0.58	0.895	0.52	90-7-38	P20									
90-7-39	8LL33					90-7-39	A01									
90-7-39	8LL33	0.77				90-7-39	A02									
90-7-39	8LL33	0.62	0.77	0.527	0.77	90-7-39	A03	0.68								
90-7-39	8LL33	0.97				90-7-39	A04									
90-7-39	8LL33	0.56	1.3			90-7-39	A05									
90-7-39	8LL33	0.48	0.71	0.54	0.93	90-7-39	A06	0.84								
90-7-39	8LL33	1.17				90-7-39	A07									
90-7-39	8LL33	0.76	1.06			90-7-39	A08									
90-7-39	8LL33	0.73	0.81	0.552		90-7-39	A09									
90-7-39	8LL33	0.82	1.19			90-7-39	A10									
90-7-39	8LL33	0.89				90-7-39	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-38	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744002	90-7-39	8LL33	I-1-72	A12	10	50	Y		Y					0.33	0.35	0.42
4744002	90-7-39	8LL33	I-1-72	A13	40	5								0.84	0.95	1.44
4744002	90-7-39	8LL33	I-1-72	A14	40	10								1.37	0.82	
4744002	90-7-39	8LL33	I-1-72	A15	0	0								1.02	0.71	1.35
4744002	90-7-39	8LL33	I-1-72	A16	0	0								0.8	0.99	1.05
4744002	90-7-39	8LL33	I-1-72	A17	40	5								0.8	0.78	0.79
4744002	90-7-39	8LL33	I-1-72	P01	0	0										
4744002	90-7-39	8LL33	I-1-72	P02	40	10								0.35	0.35	0.98
4744002	90-7-39	8LL33	I-1-72	P03	40	10								0.33	0.52	0.37
4744002	90-7-39	8LL33	I-1-72	P04	0	0								1.01	0.74	
4744002	90-7-39	8LL33	I-1-72	P05	20	25			Y					0.72	0.88	0.73
4744002	90-7-39	8LL33	I-1-72	P06	40	10								1.45	0.96	
4744002	90-7-39	8LL33	I-1-72	P07	20	25			Y			Y		1.33	0.25	0.79
4744002	90-7-39	8LL33	I-1-72	P08	40	10								1.02	1.4	1.18
4744002	90-7-39	8LL33	I-1-72	P09	30	50			Y			Y		0.64	1.86	0.34
4744002	90-7-39	8LL33	I-1-72	P10	40	10								0.42	0.41	0.59
4744002	90-7-39	8LL33	I-1-72	P11	60	15								0.38	0.49	1.53
4744014	90-7-41	8LL33	I-1-73	A01	40	15								0.89	0.37	0.6
4744014	90-7-41	8LL33	I-1-73	A02	0	0								0.97	1.07	1.75
4744014	90-7-41	8LL33	I-1-73	A03	40	20								0.52	0.67	0.78
4744014	90-7-41	8LL33	I-1-73	A04	40	10								0.59	0.59	0.51
4744014	90-7-41	8LL33	I-1-73	A05	0	0								0.81	0.96	0.82
4744014	90-7-41	8LL33	I-1-73	A06	20	20							Y			
4744014	90-7-41	8LL33	I-1-73	A07	20	50				Y				1	1.03	1.26

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-39	8LL33	0.48	0.59	0.639	0.51	90-7-39	A12	0.64	0.97	1.02						
90-7-39	8LL33	0.87				90-7-39	A13									
90-7-39	8LL33					90-7-39	A14									
90-7-39	8LL33					90-7-39	A15									
90-7-39	8LL33	0.93	1.05			90-7-39	A16									
90-7-39	8LL33	0.96	0.61			90-7-39	A17									
90-7-39	8LL33					90-7-39	P01									
90-7-39	8LL33	0.92	0.45			90-7-39	P02									
90-7-39	8LL33	0.67				90-7-39	P03									
90-7-39	8LL33					90-7-39	P04									
90-7-39	8LL33	0.72				90-7-39	P05									
90-7-39	8LL33					90-7-39	P06									
90-7-39	8LL33	0.97				90-7-39	P07									
90-7-39	8LL33					90-7-39	P08									
90-7-39	8LL33	0.44	0.63	0.976	2.7	90-7-39	P09									
90-7-39	8LL33	0.65	0.3	1.702		90-7-39	P10									
90-7-39	8LL33	2.72				90-7-39	P11									
90-7-41	8LL33	0.7	0.47	0.857	0.58	90-7-41	A01	0.82	0.58							
90-7-41	8LL33	1.79	1.81			90-7-41	A02									
90-7-41	8LL33		0.79	0.89	0.94	90-7-41	A03	0.9	0.94							
90-7-41	8LL33	0.48	0.5	0.893	0.48	90-7-41	A04	0.61	0.72							
90-7-41	8LL33	0.91	1.45	0.926		90-7-41	A05									
90-7-41	8LL33					90-7-41	A06									
90-7-41	8LL33	0.95	0.57	0.754	0.64	90-7-41	A07	0.75								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-39	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744014	90-7-41	8LL33	I-1-73	A08	0	0								1.03	1.13	
4744014	90-7-41	8LL33	I-1-73	A09	20	25				Y				0.71	0.76	0.8
4744014	90-7-41	8LL33	I-1-73	A10	20	20								1.01	0.84	0.58
4744014	90-7-41	8LL33	I-1-73	A11	0	0							Y	1.62	1.51	1.4
4744014	90-7-41	8LL33	I-1-73	A12	20	20				Y						
4744014	90-7-41	8LL33	I-1-73	A13	0	0								1.17	1.19	1.52
4744014	90-7-41	8LL33	I-1-73	A14	40	15								0.71	0.48	1.15
4744014	90-7-41	8LL33	I-1-73	A15	20	25			Y					0.64	1.13	0.7
4744014	90-7-41	8LL33	I-1-73	A16	20	25	Y			Y				0.44	0.51	0.68
4744014	90-7-41	8LL33	I-1-73	A17	40	10								1.04	1.21	0.56
4744014	90-7-41	8LL33	I-1-73	A18	10	50								0.82	0.83	0.55
4744014	90-7-41	8LL33	I-1-73	A19	40	5								1.15	0.72	1.31
4744014	90-7-41	8LL33	I-1-73	A20	0	0								0.79	1.22	
4744014	90-7-41	8LL33	I-1-73	A21	0	0								0.77	0.55	0.32
4744014	90-7-41	8LL33	I-1-73	A22	40	10								0.63	0.61	0.77
4744014	90-7-41	8LL33	I-1-73	A23	0	0								0.67	0.82	0.87
4744014	90-7-41	8LL33	I-1-73	A24	0	0								1.03	1.01	0.61
4744014	90-7-41	8LL33	I-1-73	A25	20	20								0.94	0.93	1.2
4744014	90-7-41	8LL33	I-1-73	A26	0	0										
4744014	90-7-41	8LL33	I-1-73	P01	40	10								0.43	0.84	1.03
4744014	90-7-41	8LL33	I-1-73	P02	0	0										
4744014	90-7-41	8LL33	I-1-73	P03	0	0								1.23	2.39	0.92
4744014	90-7-41	8LL33	I-1-73	P04	0	0								1.16	1.08	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-41	8LL33					90-7-41	A08									
90-7-41	8LL33	0.76	0.69	1.147		90-7-41	A09									
90-7-41	8LL33	0.83	0.71	1.305	1.36	90-7-41	A10	1.08								
90-7-41	8LL33	1.06	1.45			90-7-41	A11									
90-7-41	8LL33					90-7-41	A12									
90-7-41	8LL33	1.49	1.22			90-7-41	A13									
90-7-41	8LL33	0.68	1.49	1.012	0.79	90-7-41	A14									
90-7-41	8LL33					90-7-41	A15									
90-7-41	8LL33	1.14	0.78	0.755	0.69	90-7-41	A16	0.58								
90-7-41	8LL33	1.21	0.64	0.484	0.46	90-7-41	A17	0.67								
90-7-41	8LL33	0.72				90-7-41	A18									
90-7-41	8LL33	1	1.29			90-7-41	A19									
90-7-41	8LL33					90-7-41	A20									
90-7-41	8LL33	0.61	0.89			90-7-41	A21									
90-7-41	8LL33	0.85	0.52	0.441		90-7-41	A22									
90-7-41	8LL33					90-7-41	A23									
90-7-41	8LL33					90-7-41	A24									
90-7-41	8LL33	1.3	0.82			90-7-41	A25									
90-7-41	8LL33					90-7-41	A26									
90-7-41	8LL33	1	1.3			90-7-41	P01									
90-7-41	8LL33					90-7-41	P02									
90-7-41	8LL33	0.83				90-7-41	P03									
90-7-41	8LL33					90-7-41	P04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744014	90-7-41	8LL33	I-1-73	P05	40	5								0.65	0.42	0.47
4744014	90-7-41	8LL33	I-1-73	P06	0	0										
4744014	90-7-41	8LL33	I-1-73	P07	40	5								0.94	0.9	1.24
4744014	90-7-41	8LL33	I-1-73	P08	0	0										
4744014	90-7-41	8LL33	I-1-73	P09	0	0										
4744017	90-7-41-2	8LL33	I-1-73-2	A01	40	10								0.92	1.03	0.96
4744017	90-7-41-2	8LL33	I-1-73-2	A02	30	20								0.5	0.72	0.72
4744017	90-7-41-2	8LL33	I-1-73-2	A03	30	50								1.28	0.89	0.76
4744017	90-7-41-2	8LL33	I-1-73-2	A04	40	10								0.82	0.66	1.14
4744017	90-7-41-2	8LL33	I-1-73-2	A05	10	50								0.84	1.16	
4744017	90-7-41-2	8LL33	I-1-73-2	A06	40	10								0.6	0.48	1.02

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-41	8LL33					90-7-41	P05									
90-7-41	8LL33					90-7-41	P06									
90-7-41	8LL33	0.58	1.12	0.961		90-7-41	P07									
90-7-41	8LL33					90-7-41	P08									
90-7-41	8LL33					90-7-41	P09									
90-7-41-2	8LL33	1.08				90-7-41-2	A01									
90-7-41-2	8LL33	0.65				90-7-41-2	A02									
90-7-41-2	8LL33	0.91	0.88	0.956		90-7-41-2	A03									
90-7-41-2	8LL33					90-7-41-2	A04									
90-7-41-2	8LL33					90-7-41-2	A05									
90-7-41-2	8LL33	0.7	1.01	0.754		90-7-41-2	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744017	90-7-41-2	8LL33	I-1-73-2	A07	40	5								0.64	0.57	0.57
4744017	90-7-41-2	8LL33	I-1-73-2	A08	10	100	Y			Y				0.44	0.42	0.5
4744017	90-7-41-2	8LL33	I-1-73-2	A09	0	0							Y	0.43	0.41	0.64
4744017	90-7-41-2	8LL33	I-1-73-2	A10		100	Y		Y					0.67	0.73	
4744017	90-7-41-2	8LL33	I-1-73-2	A11	40	5								0.83	1.08	0.85
4744017	90-7-41-2	8LL33	I-1-73-2	A12	30	20								1.08	0.97	0.64
4744017	90-7-41-2	8LL33	I-1-73-2	A13	10	50				Y				0.4	0.39	0.42
4744017	90-7-41-2	8LL33	I-1-73-2	A14	0	0								0.71	0.89	0.95

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-41-2	8LL33	0.74	0.56			90-7-41-2	A07									
90-7-41-2	8LL33	0.29	0.65	1.035	0.56	90-7-41-2	A08	0.64								
90-7-41-2	8LL33	0.46	0.64	0.656	0.36	90-7-41-2	A09	1.12								
90-7-41-2	8LL33					90-7-41-2	A10									
90-7-41-2	8LL33					90-7-41-2	A11									
90-7-41-2	8LL33					90-7-41-2	A12									
90-7-41-2	8LL33	0.33	0.44	0.415	0.56	90-7-41-2	A13									
90-7-41-2	8LL33	0.75				90-7-41-2	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744017	90-7-41-2	8LL33	I-1-73-2	A15	10	90	Y			Y				0.48	0.81	
4744017	90-7-41-2	8LL33	I-1-73-2	P01	40	10						Y		1.47	1.69	1.08
4744017	90-7-41-2	8LL33	I-1-73-2	P02	40	10										
4744017	90-7-41-2	8LL33	I-1-73-2	P03	20	20								0.31	0.52	0.8
4744017	90-7-41-2	8LL33	I-1-73-2	P04	20	25			Y					0.54	0.31	0.28
4744017	90-7-41-2	8LL33	I-1-73-2	P05	30	15										
4744017	90-7-41-2	8LL33	I-1-73-2	P06	40	10										
4744017	90-7-41-2	8LL33	I-1-73-2	P07	40	10								2.17	1.48	0.79
4744017	90-7-41-2	8LL33	I-1-73-2	P08	0	0						Y		0.19	0.71	0.13
4744017	90-7-41-2	8LL33	I-1-73-2	P09	0	0								0.45	0.22	0.71
4744017	90-7-41-2	8LL33	I-1-73-2	P10	40	10								2.48		
4744017	90-7-41-2	8LL33	I-1-73-2	P11	0	0										
4744017	90-7-41-2	8LL33	I-1-73-2	P12	30	5								0.33	0.74	0.21
4744017	90-7-41-2	8LL33	I-1-73-2	P13	40	10								1.22	0.77	1.17
4744017	90-7-41-2	8LL33	I-1-73-2	P14	40	20								0.56	0.99	0.41
4744017	90-7-41-2	8LL33	I-1-73-2	P15	40	10								0.58	0.56	0.8
4744017	90-7-41-2	8LL33	I-1-73-2	P16	0	0										
4744017	90-7-41-2	8LL33	I-1-73-2	P17	20	10										
4744018	90-7-42-1	8LL33	I-1-74-1	A01	40	20								1.22	0.51	0.55
4744018	90-7-42-1	8LL33	I-1-74-1	A02	20	40				Y				0.41	0.56	0.39
4744018	90-7-42-1	8LL33	I-1-74-1	P02	60	10						Y		3.46	2.33	2.37
4744018	90-7-42-1	8LL33	I-1-74-1	P03	40	10						Y		3.55	1.7	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-41-2	8LL33					90-7-41-2	A15									
90-7-41-2	8LL33					90-7-41-2	P01									
90-7-41-2	8LL33					90-7-41-2	P02									
90-7-41-2	8LL33	0.72	0.5	0.598	0.37	90-7-41-2	P03									
90-7-41-2	8LL33	0.69	0.49	0.588	0.45	90-7-41-2	P04									
90-7-41-2	8LL33					90-7-41-2	P05									
90-7-41-2	8LL33					90-7-41-2	P06									
90-7-41-2	8LL33	1.27	0.93			90-7-41-2	P07									
90-7-41-2	8LL33	0.16				90-7-41-2	P08									
90-7-41-2	8LL33	0.56	0.27	0.381	0.35	90-7-41-2	P09	0.32								
90-7-41-2	8LL33					90-7-41-2	P10									
90-7-41-2	8LL33					90-7-41-2	P11									
90-7-41-2	8LL33	0.18	0.36	0.399		90-7-41-2	P12									
90-7-41-2	8LL33	1.02	0.4			90-7-41-2	P13									
90-7-41-2	8LL33	0.35	0.42	1.287		90-7-41-2	P14									
90-7-41-2	8LL33					90-7-41-2	P15									
90-7-41-2	8LL33					90-7-41-2	P16									
90-7-41-2	8LL33					90-7-41-2	P17									
90-7-42-1	8LL33	0.98	1.01			90-7-42-1	A01									
90-7-42-1	8LL33	0.39	0.62	0.386	0.41	90-7-42-1	A02	0.64	0.33	0.74	0.72	0.45	0.4	0.55		
90-7-42-1	8LL33					90-7-42-1	P02									
90-7-42-1	8LL33					90-7-42-1	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-41-2	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744018	90-7-42-1	8LL33	I-1-74-1	P04	0	0								0.98	1.32	1.81
4744018	90-7-42-1	8LL33	I-1-74-1	P05	40	10								1.26		
4744018	90-7-42-1	8LL33	I-1-74-1	P06	40	5						Y		3.45		
4744018	90-7-42-1	8LL33	I-1-74-1	P07	40	10								1.32	3.09	
4744018	90-7-42-1	8LL33	I-1-74-1	P08	0	0								1.49		
4744018	90-7-42-1	8LL33	I-1-74-1	P09	0	0								1.63		
4744018	90-7-42-1	8LL33	I-1-74-1	P10	0	0								1.48	3.63	
4744018	90-7-42-1	8LL33	I-1-74-1	P11	0	0								0.95	1.57	1.89
4744018	90-7-42-1	8LL33	I-1-74-1	P12	40	5										
4744018	90-7-42-1	8LL33	I-1-74-1	P13	0	0										
4744018	90-7-42-1	8LL33	I-1-74-1	P14	0	0										
4744018	90-7-42-1	8LL33	I-1-74-1	P15	0	0								0.86	1.35	1.4
4744018	90-7-42-1	8LL33	I-1-74-1	P16	0	0										
4744018	90-7-42-1	8LL33	I-1-74-1	P17	0	0								0.77	0.77	
4744018	90-7-42-1	8LL33	I-1-74-1	Q01	40	10								1.61		
4744101	90-7-53	8LL33	I-2-75	A01	0	0										
4744101	90-7-53	8LL33	I-2-75	A02	40	5								0.74	1.26	0.62
4744101	90-7-53	8LL33	I-2-75	A03	0	0								0.93	0.41	0.37
4744101	90-7-53	8LL33	I-2-75	A04	20	50				Y				0.55	0.58	0.62
4744101	90-7-53	8LL33	I-2-75	A05	40	10								1.36	0.76	0.89
4744101	90-7-53	8LL33	I-2-75	A06	0	0										
4744101	90-7-53	8LL33	I-2-75	A07	40	5								1.2	0.68	0.67
4744101	90-7-53	8LL33	I-2-75	A08	20	20								0.78	0.56	0.77
4744101	90-7-53	8LL33	I-2-75	A09	0	0							Y			

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-42-1	8LL33	1.08	0.59	1.459		90-7-42-1	P04									
90-7-42-1	8LL33					90-7-42-1	P05									
90-7-42-1	8LL33					90-7-42-1	P06									
90-7-42-1	8LL33					90-7-42-1	P07									
90-7-42-1	8LL33					90-7-42-1	P08									
90-7-42-1	8LL33					90-7-42-1	P09									
90-7-42-1	8LL33					90-7-42-1	P10									
90-7-42-1	8LL33	1.01	0.59			90-7-42-1	P11									
90-7-42-1	8LL33					90-7-42-1	P12									
90-7-42-1	8LL33					90-7-42-1	P13									
90-7-42-1	8LL33					90-7-42-1	P14									
90-7-42-1	8LL33					90-7-42-1	P15									
90-7-42-1	8LL33					90-7-42-1	P16									
90-7-42-1	8LL33					90-7-42-1	P17									
90-7-42-1	8LL33					90-7-42-1	Q01									
90-7-53	8LL33					90-7-53	A01									
90-7-53	8LL33	0.55	0.39	1.004	0.84	90-7-53	A02	0.95								
90-7-53	8LL33	0.74	0.48			90-7-53	A03									
90-7-53	8LL33	0.57	0.56	0.993	1.51	90-7-53	A04	0.91	1.4							
90-7-53	8LL33	1.21	1.64	1.417		90-7-53	A05									
90-7-53	8LL33					90-7-53	A06									
90-7-53	8LL33	1	0.89	0.82	0.88	90-7-53	A07	1.06	0.92	0.94						
90-7-53	8LL33	0.72				90-7-53	A08									
90-7-53	8LL33					90-7-53	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-42-1	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744101	90-7-53	8LL33	I-2-75	A10	20	20								0.75	0.7	0.68
4744101	90-7-53	8LL33	I-2-75	A11	20	20							Y	0.82	0.8	0.77
4744101	90-7-53	8LL33	I-2-75	A12	20	10								1.02	1.24	0.74
4744101	90-7-53	8LL33	I-2-75	A13	40	10								0.75	0.82	0.57
4744101	90-7-53	8LL33	I-2-75	A14	20	20							Y	1.14	1.08	
4744101	90-7-53	8LL33	I-2-75	A15	0	0										
4744101	90-7-53	8LL33	I-2-75	A16	0	0								1.1	1.62	
4744101	90-7-53	8LL33	I-2-75	A17	20	15								0.82	0.96	0.66
4744101	90-7-53	8LL33	I-2-75	A18	20	25								1.6	1.26	
4744101	90-7-53	8LL33	I-2-75	A19	30	25										
4744101	90-7-53	8LL33	I-2-75	A20	0	0								0.94	1.26	
4744101	90-7-53	8LL33	I-2-75	A21	20	20								0.82	0.66	0.7
4744101	90-7-53	8LL33	I-2-75	A22	0	0								1.35	1.06	
4744101	90-7-53	8LL33	I-2-75	A24	0	0								1.61	0.96	
4744101	90-7-53	8LL33	I-2-75	P01	30	25								1.49	0.32	1.05
4744101	90-7-53	8LL33	I-2-75	P01	30	25			Y					1	2.52	1.7
4744101	90-7-53	8LL33	I-2-75	P02	30	25				Y						
4744101	90-7-53	8LL33	I-2-75	P03	40	5								0.6	0.6	0.76
4744101	90-7-53	8LL33	I-2-75	P04	20	20								0.56	0.27	0.75
4744101	90-7-53	8LL33	I-2-75	P05	0	0								1.22		
4744101	90-7-53	8LL33	I-2-75	P06	0	0										
4744101	90-7-53	8LL33	I-2-75	P07	40	10										
4744101	90-7-53	8LL33	I-2-75	P08	0	0								0.79	0.45	1.45
4744101	90-7-53	8LL33	I-2-75	P09	50	10								0.47	1	1.01

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-53	8LL33	0.83	0.8	0.649		90-7-53	A10									
90-7-53	8LL33	0.9				90-7-53	A11									
90-7-53	8LL33	0.52	1.2	0.534		90-7-53	A12									
90-7-53	8LL33					90-7-53	A13									
90-7-53	8LL33					90-7-53	A14									
90-7-53	8LL33					90-7-53	A15									
90-7-53	8LL33					90-7-53	A16									
90-7-53	8LL33	0.75	0.88	1.464		90-7-53	A17									
90-7-53	8LL33					90-7-53	A18									
90-7-53	8LL33					90-7-53	A19									
90-7-53	8LL33					90-7-53	A20									
90-7-53	8LL33	0.81	0.6			90-7-53	A21									
90-7-53	8LL33					90-7-53	A22									
90-7-53	8LL33					90-7-53	A24									
90-7-53	8LL33	1.17	0.81			90-7-53	P01									
90-7-53	8LL33	0.53	2.05	2.514		90-7-53	P01									
90-7-53	8LL33					90-7-53	P02									
90-7-53	8LL33	0.57	0.25	0.391		90-7-53	P03									
90-7-53	8LL33					90-7-53	P04									
90-7-53	8LL33					90-7-53	P05									
90-7-53	8LL33					90-7-53	P06									
90-7-53	8LL33					90-7-53	P07									
90-7-53	8LL33					90-7-53	P08									
90-7-53	8LL33	0.82				90-7-53	P09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							
90-7-53	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744101	90-7-53	8LL33	I-2-75	P10	20	25			Y					0.98	0.7	1.12
4744101	90-7-53	8LL33	I-2-75	P11	0	0								1.12	0.97	1.06
4744110	90-8-10	8LL33	S616 E800 Level 83, STR 2	A01	40	5								0.75	0.98	1.09
4744110	90-8-10	8LL33	S616 E800 Level 83, STR 2	A02	20	10								0.71	0.38	
4744110	90-8-10	8LL33	S616 E800 Level 83, STR 2	A03	0	0								0.9		
4744110	90-8-10	8LL33	S616 E800 Level 83, STR 2	A04	0	0								1	0.82	
4744110	90-8-10	8LL33	S616 E800 Level 83, STR 2	A05-12	0	0										
4744111	90-8-11	8LL33	S616 E800 Level 84, STR2	A01	40	5								1.02	1.16	0.66
4744111	90-8-11	8LL33	S616 E800 Level 84, STR2	A02	50	20								0.6	0.64	0.61
4744111	90-8-11	8LL33	S616 E800 Level 84, STR2	P01	40	5								0.63	0.78	
4744112	90-8-12	8LL33	S616 E800 Level 85, STR 3	A01	0									1.43	0.94	1.85
4744112	90-8-12	8LL33	S616 E800 Level 85, STR 3	A02	10									0.78	0.88	0.78

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-7-53	8LL33	0.77				90-7-53	P10									
90-7-53	8LL33					90-7-53	P11									
90-8-10	8LL33					90-8-10	A01									
90-8-10	8LL33					90-8-10	A02									
90-8-10	8LL33					90-8-10	A03									
90-8-10	8LL33					90-8-10	A04									
90-8-10	8LL33					90-8-10	A05-12									
90-8-11	8LL33	0.8				90-8-11	A01									
90-8-11	8LL33	0.69	1.1	1.068	1.38	90-8-11	A02									
90-8-11	8LL33					90-8-11	P01									
90-8-12	8LL33					90-8-12	A01									
90-8-12	8LL33	0.65	0.7			90-8-12	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-7-53	8LL33							
90-7-53	8LL33							
90-8-10	8LL33							
90-8-10	8LL33							
90-8-10	8LL33							
90-8-10	8LL33							
90-8-10	8LL33							
90-8-11	8LL33							
90-8-11	8LL33							
90-8-11	8LL33							
90-8-12	8LL33							
90-8-12	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744112	90-8-12	8LL33	S616 E800 Level 85, STR 3	A03	17									0.73	0.72	0.72
4744112	90-8-12	8LL33	S616 E800 Level 85, STR 3	P01	40											
4744113	90-8-13	8LL33	S616 E800 Level 86, STR 4	A01	10									0.93	0.72	
4744113	90-8-13	8LL33	S616 E800 Level 86, STR 4	A02	10		Y			Y				0.68	0.57	0.57
4744113	90-8-13	8LL33	S616 E800 Level 86, STR 4	P01	20											
4744114	90-8-24	8LL33	S634 E821 Level 86, STR 3 A + B	NA	0											
4744115	90-8-25	8LL33	S634 E821 Level 87, STR 4/5	NA	0											
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A01	40	5							Y	0.97	0.76	0.88
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A02	40	5							Y	0.75	0.89	0.74
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A03	40	5								0.55	0.61	0.89

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-8-12	8LL33					90-8-12	A03									
90-8-12	8LL33					90-8-12	P01									
90-8-13	8LL33					90-8-13	A01									
90-8-13	8LL33	0.88	1.52	1.803		90-8-13	A02									
90-8-13	8LL33					90-8-13	P01									
90-8-24	8LL33					90-8-24	NA									
90-8-25	8LL33					90-8-25	NA									
90-8-9	8LL33	0.7	0.59			90-8-9	A01									
90-8-9	8LL33	0.66	0.47			90-8-9	A02									
90-8-9	8LL33	0.94				90-8-9	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-8-12	8LL33							
90-8-12	8LL33							
90-8-13	8LL33							
90-8-13	8LL33							
90-8-13	8LL33							
90-8-24	8LL33							
90-8-25	8LL33							
90-8-9	8LL33							
90-8-9	8LL33							
90-8-9	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A04	20	10								0.95	0.65	0.7
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A05	20	10								0.92	0.95	
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	A06	0	0								0.85	0.94	0.48
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	P01	0	0										
4744109	90-8-9	8LL33	S616 E800 Level 82, STR2	P02	0	0										
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A01	20	10								0.9	1.43	1.22
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A02	20	15								0.34	0.35	0.26
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A03	40	10								0.5	0.62	0.79
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A04	40	10								1.02	0.85	0.65
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A05	30	20								0.84	1.25	0.78
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A06	0	0								0.82	1.37	0.84
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A07	0	0								1.23	1.11	0.86
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A08	0	0								1.32	1.1	0.76
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A09	40	5								0.46	0.6	0.68
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A10	50	10							Y	0.73	0.72	0.67
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A11	0	0								0.73	0.51	0.88
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A12	0	0								1.58	1.06	
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A13	0	0								1.04	0.94	1.28
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A14	20	20								1.01	1.49	0.95

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
90-8-9	8LL33					90-8-9	A04									
90-8-9	8LL33					90-8-9	A05									
90-8-9	8LL33					90-8-9	A06									
90-8-9	8LL33					90-8-9	P01									
90-8-9	8LL33					90-8-9	P02									
92-40-4	8LL33	1.04				92-40-4	A01									
92-40-4	8LL33	0.22	0.67	1.083	0.61	92-40-4	A02									
92-40-4	8LL33	0.66	0.87	0.735	0.65	92-40-4	A03	0.5	0.75	1.15	1.38					
92-40-4	8LL33	0.77	0.98			92-40-4	A04									
92-40-4	8LL33	0.89				92-40-4	A05									
92-40-4	8LL33	0.91				92-40-4	A06									
92-40-4	8LL33	1.13	0.8			92-40-4	A07									
92-40-4	8LL33	1.19	0.91	1.392	1.14	92-40-4	A08									
92-40-4	8LL33	0.66	0.56	0.567		92-40-4	A09									
92-40-4	8LL33	0.65	0.84	0.931	0.83	92-40-4	A10									
92-40-4	8LL33	0.56				92-40-4	A11									
92-40-4	8LL33					92-40-4	A12									
92-40-4	8LL33	0.65				92-40-4	A13									
92-40-4	8LL33					92-40-4	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
90-8-9	8LL33							
90-8-9	8LL33							
90-8-9	8LL33							
90-8-9	8LL33							
90-8-9	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A15	20	10								1.02	1.08	1
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A16	0	0								1.13	1.29	0.79
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A17	20	25								0.48	0.36	0.49
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A18	20	10								0.55	0.54	0.63
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A19	0	0								0.66	0.64	0.62
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A20	0	0								0.72	0.94	0.47
4745038	92-40-4	8LL33	D-2-79, ST 6,3	A21	0	0								0.66	0.96	1.18
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P01	0	0										
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P02	20	10								0.28	0.34	0.69
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P03	0	0										
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P04	0	0								0.25	0.78	
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P05	20	10								0.95		
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P06	0	0										
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P07	20	20								0.68	0.42	
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P08	60	10								0.58	0.5	0.21
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P09	40	5						Y		0.34	0.73	0.15
4745038	92-40-4	8LL33	D-2-79, ST 6,3	P10	0	0										
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A01	40	5								1.04	1.36	0.73
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A01	60	10								0.73	1.09	1.05
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A02	40	15								0.72	1.12	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-40-4	8LL33					92-40-4	A15									
92-40-4	8LL33					92-40-4	A16									
92-40-4	8LL33	0.61	0.59			92-40-4	A17									
92-40-4	8LL33	0.49	0.8	1.13	0.77	92-40-4	A18	1.11								
92-40-4	8LL33	0.49	0.41	0.5		92-40-4	A19									
92-40-4	8LL33	0.28				92-40-4	A20									
92-40-4	8LL33					92-40-4	A21									
92-40-4	8LL33					92-40-4	P01									
92-40-4	8LL33	1.62	0.3			92-40-4	P02									
92-40-4	8LL33					92-40-4	P03									
92-40-4	8LL33					92-40-4	P04									
92-40-4	8LL33					92-40-4	P05									
92-40-4	8LL33					92-40-4	P06									
92-40-4	8LL33					92-40-4	P07									
92-40-4	8LL33	0.2	0.51	0.5	0.38	92-40-4	P08	0.76	0.35	0.45	0.36	0.53	0.17	0.25	0.45	0.5
92-40-4	8LL33					92-40-4	P09									
92-40-4	8LL33					92-40-4	P10									
92-5-12	8LL33					92-5-12	A01									
92-5-12	8LL33	0.94	0.88	0.924	0.83	92-5-12	A01	1	0.58	0.53	0.85	1	0.73	0.64	0.74	1.02
92-5-12	8LL33					92-5-12	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33							
92-40-4	8LL33	0.39	0.6179					
92-40-4	8LL33							
92-40-4	8LL33							
92-5-12	8LL33							
92-5-12	8LL33	0.83	0.6809	0.82	1.05	0.94	0.63	
92-5-12	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A02	40	25								0.95	0.72	0.72
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A03	40	15								0.73	0.61	0.85
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A03	40	20								0.68	0.67	0.7
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A04	20	25								1.19	1.15	1.29
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A04	40	25	Y			Y				0.52	0.66	0.56
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A05	0	0								0.73	0.92	0.79
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A05	40	20								1.3	0.81	0.71
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A06	40	5								0.86	1.11	1.12
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A06	0	0								0.75	1	0.88
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A07	0	0								1.02	0.72	1
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A07	40	15								0.65	0.37	0.55
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A08	0	0								0.78	1.13	0.99

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-12	8LL33	0.68	1.1	0.609	0.91	92-5-12	A02	0.96	0.95	0.85	1.21	0.95	1.19	0.5	1.35	1.11
92-5-12	8LL33	0.84				92-5-12	A03									
92-5-12	8LL33	0.68	0.59	0.632	1.16	92-5-12	A03	0.79	0.69	0.78	0.98	1.19	1.2	0.97	1.16	1.08
92-5-12	8LL33	0.76	1.16	1.057	1.07	92-5-12	A04	0.99	0.92	0.76						
92-5-12	8LL33	0.71	0.8	0.63	0.61	92-5-12	A04	0.68	0.93	0.88	1.17	1.09	1.27	1.22	0.94	1.13
92-5-12	8LL33					92-5-12	A05									
92-5-12	8LL33	1.25	0.91	1.393	0.81	92-5-12	A05	1.32	0.94	1.39						
92-5-12	8LL33	1.12	0.71	1.272	1.1	92-5-12	A06									
92-5-12	8LL33	0.82	0.88	1.605	1.23	92-5-12	A06	0.99	1.38	0.53	1.3	0.9	1.25	1.05	0.75	0.89
92-5-12	8LL33	0.82	0.85	1.033	0.92	92-5-12	A07	1.62								
92-5-12	8LL33	0.47	0.27	0.326	0.67	92-5-12	A07	0.84	0.66	0.77	0.26	0.73	1.31	1.07	1.05	1.06
92-5-12	8LL33	1.57				92-5-12	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-12	8LL33	1.14	0.634	1.01				
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33	0.88	1.2489	0.72	0.88			
92-5-12	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A08	0	0								1.12	1.31	1.07
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A09	20	10								1.32	0.98	1.45
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A09	0	0								0.55	0.8	0.86
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A10	0	0								1.25	0.72	1.34
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A10	0	0								0.84	0.72	0.85
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A11	20	20								0.8	1.21	1.15
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A11	0	0								0.84	1.25	0.65
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A12	40	5								1.01	0.6	1.07
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A12	0	0								0.47	0.63	1.42
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A13	40	5								1.4	1.06	0.73
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A13	0	0								1.14	0.87	0.88
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A14	0	0								1.03	1.1	0.97

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-12	8LL33	0.87	0.87			92-5-12	A08									
92-5-12	8LL33					92-5-12	A09									
92-5-12	8LL33	0.84	1.01	1.093	1.18	92-5-12	A09	1.03								
92-5-12	8LL33	0.72	1.19			92-5-12	A10									
92-5-12	8LL33	0.61	0.83	0.511	0.81	92-5-12	A10	0.84								
92-5-12	8LL33					92-5-12	A11									
92-5-12	8LL33	1.22	1.03	0.82	1.31	92-5-12	A11									
92-5-12	8LL33					92-5-12	A12									
92-5-12	8LL33	0.74	0.49	0.652	1.07	92-5-12	A12	0.88								
92-5-12	8LL33	0.65	0.82			92-5-12	A13									
92-5-12	8LL33	1.4	0.61	0.583		92-5-12	A13									
92-5-12	8LL33	0.96	0.67			92-5-12	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A14	0	0								0.44	1.02	0.91
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A15	0	0								1.16	1.26	0.9
4744289	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A15	0	0								0.49	0.47	0.86
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A16	40	5								0.81	0.85	0.69
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A17	0	0								1.8		
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	A18	0	0								1.62	0.84	
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P01	20	20								0.78	0.36	0.48
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P02	40	15								0.51	0.64	0.49
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P03	20	15								0.47	0.45	0.65
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P04	60	10								1.98		
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P05	40	10								0.86	0.61	0.33
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P06	0	0								0.37	0.22	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-12	8LL33	0.69	0.92	1.02		92-5-12	A14									
92-5-12	8LL33	0.77				92-5-12	A15									
92-5-12	8LL33	1.13	0.8			92-5-12	A15									
92-5-12	8LL33	0.76	0.6	1.22		92-5-12	A16									
92-5-12	8LL33					92-5-12	A17									
92-5-12	8LL33					92-5-12	A18									
92-5-12	8LL33	0.3	0.25			92-5-12	P01									
92-5-12	8LL33	0.52	0.32	0.292	0.35	92-5-12	P02	0.35	0.46	0.62	0.55	0.94	0.57			
92-5-12	8LL33	0.83				92-5-12	P03									
92-5-12	8LL33					92-5-12	P04									
92-5-12	8LL33	0.71	0.55	1.155	0.65	92-5-12	P05	0.82	0.64	0.41						
92-5-12	8LL33					92-5-12	P06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							
92-5-12	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P07	40	10								0.24	0.46	0.18
4744287	92-5-12	8LL33	C-6-90W (West ledge), ST 8	P08	0	0										
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A01	40	15								1.12	1.14	0.97
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A01	30	20								1	0.64	0.79
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A01	20	10	Y							0.43	0.59	0.72
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A02	20	20	Y			Y			Y	0.55	0.49	1
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A02	20	25								0.48	0.47	0.67
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A02	40	5								1.27	0.88	1.11
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A03	40	10								0.27	0.35	0.47
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A03	20	20								0.85	0.56	0.75
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A03	0	0								0.89		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-12	8LL33	0.29	0.3			92-5-12	P07									
92-5-12	8LL33					92-5-12	P08									
92-5-13	8LL33	1.02	0.8	0.881		92-5-13	A01									
92-5-13	8LL33	0.89				92-5-13	A01									
92-5-13	8LL33	0.63	0.56	0.567	0.79	92-5-13	A01									
92-5-13	8LL33	0.57	0.46			92-5-13	A02									
92-5-13	8LL33	0.54	1.13	1.117		92-5-13	A02									
92-5-13	8LL33					92-5-13	A02									
92-5-13	8LL33	0.34	0.31	0.589		92-5-13	A03									
92-5-13	8LL33	0.72				92-5-13	A03									
92-5-13	8LL33					92-5-13	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-12	8LL33							
92-5-12	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A04	40	10								0.63	0.58	0.63
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A04	20	20								0.71	0.99	0.72
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A04	20	5								1.03		
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A05	40	10								0.56	0.72	0.68
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A05	0	0								0.94	0.62	0.77
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A05	40	5								1.19	0.98	
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A06	40	5								1.05	1.53	1.13
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A06	20	20										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A06	0	0										
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A07	40	10							Y	1.05	0.99	0.79
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A07	0	0								0.76	0.59	0.24
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A07	20	20								1.17		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33	0.8	0.66	1.03		92-5-13	A04									
92-5-13	8LL33	1.05	0.44	0.503		92-5-13	A04									
92-5-13	8LL33					92-5-13	A04									
92-5-13	8LL33	0.88	0.64	0.752	0.52	92-5-13	A05	0.57	0.7							
92-5-13	8LL33					92-5-13	A05									
92-5-13	8LL33					92-5-13	A05									
92-5-13	8LL33	1.46	1.66	1.395		92-5-13	A06									
92-5-13	8LL33					92-5-13	A06									
92-5-13	8LL33					92-5-13	A06									
92-5-13	8LL33	1.38	1.26			92-5-13	A07									
92-5-13	8LL33	0.65	0.7	0.434	0.72	92-5-13	A07									
92-5-13	8LL33					92-5-13	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A08	40	10							Y	1.24	0.9	0.86
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A08	0	0								0.99	0.58	0.58
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A08	0	0								1.35	0.79	1
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A09	40	5								1.27	1.04	0.99
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A09	0	0								0.99	0.85	
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A09	20	20								0.98	0.88	0.96
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A10	30	20								0.94	0.67	0.89
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A10	0	0								0.98	0.77	0.74
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A10	40	10								1.05	1.02	0.65
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A11	40	10								0.96	0.64	0.55
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A11	0	0								0.56	0.67	0.78
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A11	40	20								0.85	0.92	0.67

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33	0.88	0.98	0.504	0.56	92-5-13	A08									
92-5-13	8LL33	0.67	0.62	0.822		92-5-13	A08									
92-5-13	8LL33	1.3				92-5-13	A08									
92-5-13	8LL33	0.86	0.63	0.851		92-5-13	A09									
92-5-13	8LL33					92-5-13	A09									
92-5-13	8LL33					92-5-13	A09									
92-5-13	8LL33	0.29	0.9			92-5-13	A10									
92-5-13	8LL33	0.84				92-5-13	A10									
92-5-13	8LL33					92-5-13	A10									
92-5-13	8LL33	0.42	0.78	0.556	0.37	92-5-13	A11	1.02	0.73	0.7						
92-5-13	8LL33					92-5-13	A11									
92-5-13	8LL33	0.69	0.71	0.822		92-5-13	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A12	0	0								1.54	1.53	1.19
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A12	0	0								0.76	0.57	0.99
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A12	10	50	Y							0.6	0.52	0.53
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A13	0	0								0.72	1.21	0.96
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A13	0	0								0.51	0.61	0.92
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A13	40	10								0.6	0.92	1.02
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A14	0	0								1.28	0.79	
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A14	0	0								1.02	0.46	0.62
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A14	10	20	Y							0.7	0.78	0.79
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A15	0	0								0.8	0.67	0.81
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A15	0	0							Y	0.73	0.44	0.76
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A15	10	25								0.97	0.75	0.64

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33					92-5-13	A12									
92-5-13	8LL33					92-5-13	A12									
92-5-13	8LL33	0.88	0.38	0.642	0.67	92-5-13	A12									
92-5-13	8LL33	0.87				92-5-13	A13									
92-5-13	8LL33					92-5-13	A13									
92-5-13	8LL33					92-5-13	A13									
92-5-13	8LL33					92-5-13	A14									
92-5-13	8LL33					92-5-13	A14									
92-5-13	8LL33	0.88				92-5-13	A14									
92-5-13	8LL33					92-5-13	A15									
92-5-13	8LL33					92-5-13	A15									
92-5-13	8LL33	0.7	0.46			92-5-13	A15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A16	0	0							Y	1.17	1.22	0.95
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A16	0	0								0.39	0.87	
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A16	40	10								0.81	0.99	
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A17	0	0								0.99	1.4	0.54
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A17	50	10								0.82	0.73	0.97
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A17	10	70	Y							0.56	0.79	0.95
4744296	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A18	0	0								1.12	0.88	0.81
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A18	0	0								1.31	0.43	0.48
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A18-A20	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A19	0	0								1.11	1.01	1
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A20	20	20								0.53	0.84	1.18
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A21	0	0								0.86	0.84	0.65

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33					92-5-13	A16									
92-5-13	8LL33					92-5-13	A16									
92-5-13	8LL33					92-5-13	A16									
92-5-13	8LL33	0.48	0.68			92-5-13	A17									
92-5-13	8LL33	0.78	0.75			92-5-13	A17									
92-5-13	8LL33	0.68				92-5-13	A17									
92-5-13	8LL33	0.98	0.44			92-5-13	A18									
92-5-13	8LL33	0.65	0.67	0.569		92-5-13	A18									
92-5-13	8LL33					92-5-13	A18-A20									
92-5-13	8LL33					92-5-13	A19									
92-5-13	8LL33					92-5-13	A20									
92-5-13	8LL33	1.06	1.03			92-5-13	A21									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A22	40	10								1.26	1.05	0.87
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A23	20	20								0.9	1.07	0.86
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	A24	0	0								1.73	1.28	
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P01	30	25			Y			Y		0.78	0.2	0.32
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P01	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P01	0	0										
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P02	20	20								1.33	0.7	0.72
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P02	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P02	10	25	Y			Y						
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P03	0	0										
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P03	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P03	5	100	Y			Y						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33					92-5-13	A22									
92-5-13	8LL33					92-5-13	A23									
92-5-13	8LL33					92-5-13	A24									
92-5-13	8LL33	0.18	0.52	1.12	0.17	92-5-13	P01	0.29	0.47	0.53	0.84					
92-5-13	8LL33					92-5-13	P01									
92-5-13	8LL33					92-5-13	P01									
92-5-13	8LL33					92-5-13	P02									
92-5-13	8LL33					92-5-13	P02									
92-5-13	8LL33					92-5-13	P02									
92-5-13	8LL33					92-5-13	P03									
92-5-13	8LL33					92-5-13	P03									
92-5-13	8LL33					92-5-13	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P04	20	20										
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P04	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P04	30	10								0.82	0.44	0.66
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P05	40	10						Y		1	1.05	0.77
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P05	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P05	20	10										
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P06	0	0										
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P06	20	20								0.46	1.68	
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P06	0	0										
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P07	40	10								0.72	0.65	0.34
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P07	0	0								1.68		
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P07	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33					92-5-13	P04									
92-5-13	8LL33					92-5-13	P04									
92-5-13	8LL33	0.64	0.79	0.628	0.67	92-5-13	P04									
92-5-13	8LL33	0.9				92-5-13	P05									
92-5-13	8LL33					92-5-13	P05									
92-5-13	8LL33					92-5-13	P05									
92-5-13	8LL33					92-5-13	P06									
92-5-13	8LL33					92-5-13	P06									
92-5-13	8LL33					92-5-13	P06									
92-5-13	8LL33	0.87	0.83			92-5-13	P07									
92-5-13	8LL33					92-5-13	P07									
92-5-13	8LL33					92-5-13	P07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P08	40	5								0.85	0.73	1.12
4744299	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P08	40	20								0.78	0.67	
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P08	0	0								1	0.71	0.92
4744298	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P09	0	0								0.23	0.17	0.25
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P09	40	10										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P10	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P11	0	0										
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P12	0	0								1.03		
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P13	40	10								1.74	0.87	
4744300	92-5-13	8LL33	C-6-91W (West ledge), ST 8	P14	40	10										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A01	40	10							Y	1.01	0.52	0.33
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A02	50	10								0.83	1.21	0.54
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A03	40	5								1.37	0.58	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-13	8LL33	0.68	1.05	0.567	1.25	92-5-13	P08									
92-5-13	8LL33					92-5-13	P08									
92-5-13	8LL33	0.59	0.46			92-5-13	P08									
92-5-13	8LL33	0.88	0.3	0.282		92-5-13	P09									
92-5-13	8LL33					92-5-13	P09									
92-5-13	8LL33					92-5-13	P10									
92-5-13	8LL33					92-5-13	P11									
92-5-13	8LL33					92-5-13	P12									
92-5-13	8LL33					92-5-13	P13									
92-5-13	8LL33					92-5-13	P14									
92-5-14A	8LL33	0.57	0.22	0.325	0.85	92-5-14A	A01	0.71	0.95							
92-5-14A	8LL33	0.64	0.81	0.888	0.89	92-5-14A	A02	0.98								
92-5-14A	8LL33					92-5-14A	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-13	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A04	40	10								0.23	0.23	0.49
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A05	20	25								0.55	0.52	0.65
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A06	40	5								1.03	0.94	0.56
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A07	40	15							Y	1.1	0.67	0.57
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A08	40	5							Y	1.2	0.84	0.52
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A09	20	20								0.42	0.59	0.82
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A10	40	10							Y	1.37	1.27	1.05
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A11	0	0								0.82	0.89	0.31
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A12	40	10								0.89	1.91	0.78
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A13	40	10								0.97	1.07	0.79
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A14	0	0								1.09	0.83	1.1
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A15	0	0								1.31		
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A16	40	10								1.17	0.64	0.96
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A17	0	0								0.39	0.29	
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	A18	40	15								0.91	0.9	0.72
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P01	0	0										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P02	60	10								1.04	1	0.86
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P03	20	25			Y					3.04	1.84	
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P04	40	5								0.21	0.61	0.48
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P05	40	5								0.83	0.68	0.98
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P06	40	10								0.93	1.16	
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P07	40	10								0.78	0.59	0.32
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P08	20	25			Y					1.33		
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P09	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-14A	8LL33	0.61	0.45	0.245	0.58	92-5-14A	A04	0.74	0.66	0.63	0.73	0.7				
92-5-14A	8LL33	0.76	0.64	0.51	0.66	92-5-14A	A05	1.1	0.89	0.92						
92-5-14A	8LL33	1.27	0.54			92-5-14A	A06									
92-5-14A	8LL33	0.64	0.4	0.786	0.84	92-5-14A	A07	1.07								
92-5-14A	8LL33	0.63	0.93	0.686	0.43	92-5-14A	A08									
92-5-14A	8LL33	0.75	0.79			92-5-14A	A09									
92-5-14A	8LL33					92-5-14A	A10									
92-5-14A	8LL33	0.34	0.93			92-5-14A	A11									
92-5-14A	8LL33	0.85	0.53			92-5-14A	A12									
92-5-14A	8LL33	0.83	0.89			92-5-14A	A13									
92-5-14A	8LL33					92-5-14A	A14									
92-5-14A	8LL33					92-5-14A	A15									
92-5-14A	8LL33	0.68	0.68	0.912		92-5-14A	A16									
92-5-14A	8LL33					92-5-14A	A17									
92-5-14A	8LL33	0.47	0.48	0.528		92-5-14A	A18									
92-5-14A	8LL33					92-5-14A	P01									
92-5-14A	8LL33	0.65				92-5-14A	P02									
92-5-14A	8LL33					92-5-14A	P03									
92-5-14A	8LL33					92-5-14A	P04									
92-5-14A	8LL33					92-5-14A	P05									
92-5-14A	8LL33					92-5-14A	P06									
92-5-14A	8LL33	0.37				92-5-14A	P07									
92-5-14A	8LL33					92-5-14A	P08									
92-5-14A	8LL33					92-5-14A	P09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P10	40	10								0.77		
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P11	0	0								0.72	0.7	0.91
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P12	0	0										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P13	20	20								0.43	0.35	
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P14	0	0										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P15	40	5								0.93	0.29	0.62
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P16	0	0										
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P17	0	0								2.17	1.23	
4744314	92-5-14A	8LL33	C-6-92E [91], ST 13	P18	0	0										
4744318	92-5-18	8LL33	C-6-89	A01	0	0								1.13	1.32	1.29
4744318	92-5-18	8LL33	C-6-89	A02	40	10								0.77	0.94	1.22
4744318	92-5-18	8LL33	C-6-89	A03	40	5								1.16	0.9	1.26
4744318	92-5-18	8LL33	C-6-89	A04	30	5							Y	1.17	1.18	1.25
4744318	92-5-18	8LL33	C-6-89	A05	40	10								1.18	0.98	1.08
4744318	92-5-18	8LL33	C-6-89	A06	40	5								1.51	1.1	1.3
4744318	92-5-18	8LL33	C-6-89	A07	60	5								0.88	0.99	1.08
4744318	92-5-18	8LL33	C-6-89	A08	20	10								0.89	1.07	1.32
4744318	92-5-18	8LL33	C-6-89	A09	20	25	Y							0.56	0.59	0.8
4744318	92-5-18	8LL33	C-6-89	A10	40	20								0.67	0.82	0.8
4744318	92-5-18	8LL33	C-6-89	A11	40	15								1.43	1.42	1.85
4744318	92-5-18	8LL33	C-6-89	A12	0	0								1.25	1.37	0.98
4744318	92-5-18	8LL33	C-6-89	A13	30	15								1.5	1.47	1.32
4744318	92-5-18	8LL33	C-6-89	P01	30	15						Y		0.7	1.01	0.85
4744318	92-5-18	8LL33	C-6-89	P02	20	25			Y			Y		0.67	0.68	0.74

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-14A	8LL33					92-5-14A	P10									
92-5-14A	8LL33	0.82				92-5-14A	P11									
92-5-14A	8LL33					92-5-14A	P12									
92-5-14A	8LL33					92-5-14A	P13									
92-5-14A	8LL33					92-5-14A	P14									
92-5-14A	8LL33	0.35	0.58			92-5-14A	P15									
92-5-14A	8LL33					92-5-14A	P16									
92-5-14A	8LL33					92-5-14A	P17									
92-5-14A	8LL33					92-5-14A	P18									
92-5-18	8LL33					92-5-18	A01									
92-5-18	8LL33	0.65	0.92	0.59	0.61	92-5-18	A02	0.74								
92-5-18	8LL33					92-5-18	A03									
92-5-18	8LL33	1.24	0.83	0.972	0.81	92-5-18	A04	1.17								
92-5-18	8LL33					92-5-18	A05									
92-5-18	8LL33	1.06				92-5-18	A06									
92-5-18	8LL33	1.3	0.75			92-5-18	A07									
92-5-18	8LL33					92-5-18	A08									
92-5-18	8LL33	0.49	0.64	0.692	0.59	92-5-18	A09	1.16	0.95	1.03						
92-5-18	8LL33	0.7	0.7	0.652	0.7	92-5-18	A10	1.28								
92-5-18	8LL33	0.85	0.62	0.929		92-5-18	A11									
92-5-18	8LL33	1.06				92-5-18	A12									
92-5-18	8LL33	1.89	1.7			92-5-18	A13									
92-5-18	8LL33	0.28	2.26	1.609	0.87	92-5-18	P01	0.36	0.69	1.23	0.56					
92-5-18	8LL33					92-5-18	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-14A	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744318	92-5-18	8LL33	C-6-89	P03	20	25								0.83	0.98	1.85
4744318	92-5-18	8LL33	C-6-89	P04	60	5								0.5	0.46	0.48
4744318	92-5-18	8LL33	C-6-89	P05	80	5								0.29	0.51	1.63
4744318	92-5-18	8LL33	C-6-89	P06	40	10								0.15	0.32	1.04
4744318	92-5-18	8LL33	C-6-89	P07	50	10								0.83	0.54	0.41
4744318	92-5-18	8LL33	C-6-89	P08	50	5								0.58	0.96	
4744318	92-5-18	8LL33	C-6-89	P09	20	20						Y		0.22	0.26	0.17
4744318	92-5-18	8LL33	C-6-89	P10	0	0								0.61	0.36	0.86
4744318	92-5-18	8LL33	C-6-89	P11	40	20						Y		0.38	1.34	0.37
4744318	92-5-18	8LL33	C-6-89	P12	20	30								0.76	0.34	0.43
4744318	92-5-18	8LL33	C-6-89	P13	40	10								0.71	0.78	0.62
4744318	92-5-18	8LL33	C-6-89	P14	20	25						Y		0.32	0.18	0.51
4744318	92-5-18	8LL33	C-6-89	P15	40	20						Y		0.93	0.28	0.39
4744318	92-5-18	8LL33	C-6-89	P16	40	20								0.55	2.04	1.48
4744318	92-5-18	8LL33	C-6-89	P17	50	10								0.42	0.12	0.44
4744318	92-5-18	8LL33	C-6-89	P18	60	10								0.43	0.26	0.33
4744318	92-5-18	8LL33	C-6-89	P19	30	25								0.24	0.18	0.32
4744318	92-5-18	8LL33	C-6-89	P20	60	25								0.57	0.45	0.72
4744319	92-5-18-1	8LL33	C-6-89-1	A01	0	0								0.54	0.63	0.8
4744319	92-5-18-1	8LL33	C-6-89-1	A02	0	0								0.67	0.66	0.71
4744319	92-5-18-1	8LL33	C-6-89-1	A03	0	0								0.76	0.65	
4744319	92-5-18-1	8LL33	C-6-89-1	A04	10	50	Y			Y				0.44	0.47	0.67
4744319	92-5-18-1	8LL33	C-6-89-1	A05	40	5								1.62	1.57	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-18	8LL33	0.97	0.24	1.135	0.87	92-5-18	P03	0.65	0.69	0.87						
92-5-18	8LL33	0.18	0.87			92-5-18	P04									
92-5-18	8LL33	0.23	0.61	0.425	0.89	92-5-18	P05	1.16								
92-5-18	8LL33	0.18	0.15	0.193	0.29	92-5-18	P06	0.16	0.62							
92-5-18	8LL33	0.53	0.62	0.449	2.12	92-5-18	P07	0.19	0.23	0.29	0.25	0.39	0.68			
92-5-18	8LL33					92-5-18	P08									
92-5-18	8LL33	0.45	0.49	0.378	0.35	92-5-18	P09	0.36	0.49	1.05	0.8	0.65	0.64	0.13	0.42	0.18
92-5-18	8LL33					92-5-18	P10									
92-5-18	8LL33	0.39	0.61			92-5-18	P11									
92-5-18	8LL33	0.85	0.75	0.433		92-5-18	P12									
92-5-18	8LL33	0.96				92-5-18	P13									
92-5-18	8LL33	0.47	0.21	0.476	0.79	92-5-18	P14	0.4	0.77							
92-5-18	8LL33	0.48	0.39	0.633	0.93	92-5-18	P15	0.62	0.57	0.45	0.61	1.06	0.28	0.38	0.48	0.3
92-5-18	8LL33					92-5-18	P16									
92-5-18	8LL33	0.29	0.26	0.323	0.96	92-5-18	P17	0.53	0.51	0.33	0.37	0.34				
92-5-18	8LL33	0.95				92-5-18	P18									
92-5-18	8LL33	0.32	0.27	0.383	0.18	92-5-18	P19	0.62	0.94	0.22	0.61	0.48	0.55	1.21	0.95	0.65
92-5-18	8LL33	0.44	0.18	0.646	0.32	92-5-18	P20	0.47	0.43	0.44	0.4					
92-5-18-1	8LL33					92-5-18-1	A01									
92-5-18-1	8LL33					92-5-18-1	A02									
92-5-18-1	8LL33					92-5-18-1	A03									
92-5-18-1	8LL33	0.97	0.94			92-5-18-1	A04									
92-5-18-1	8LL33					92-5-18-1	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33	0.26	0.623	0.62	0.18	0.5	0.27	0.39
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33							
92-5-18	8LL33	0.58						
92-5-18	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744319	92-5-18-1	8LL33	C-6-89-1	A06	50	5								0.51	0.95	0.57
4744319	92-5-18-1	8LL33	C-6-89-1	A07-08	0	0										
4744319	92-5-18-1	8LL33	C-6-89-1	A09	0	0								0.95	0.51	
4744319	92-5-18-1	8LL33	C-6-89-1	A10	0	0										
4744319	92-5-18-1	8LL33	C-6-89-1	P01	60	5								0.95		
4744319	92-5-18-1	8LL33	C-6-89-1	P02	0	0								1.34	0.95	0.98
4744319	92-5-18-1	8LL33	C-6-89-1	P03	40	10								0.53	1.44	1.15
4744319	92-5-18-1	8LL33	C-6-89-1	P04	0	0										
4744319	92-5-18-1	8LL33	C-6-89-1	P05	40	5										
4744319	92-5-18-1	8LL33	C-6-89-1	P06	40	5								0.68	0.88	0.98
4744319	92-5-18-1	8LL33	C-6-89-1	P07	40	5								1.73		
4744319	92-5-18-1	8LL33	C-6-89-1	P08	0	0								2.65		
4744319	92-5-18-1	8LL33	C-6-89-1	P09-10	0	0										
4744319	92-5-18-1	8LL33	C-6-89-1	P11-28	0	0										
4744321	92-5-19-1	8LL33	C-6-90-1	A01	40	10								1.07	0.91	1.28
4744322	92-5-20	8LL33	C-6-91	A01	0	0								1.02		
4744322	92-5-20	8LL33	C-6-91	A02	0	0								1.05		
4744322	92-5-20	8LL33	C-6-91	A03	0	0								0.92	1.17	
4744322	92-5-20	8LL33	C-6-91	A04	80	10								1.01	0.95	0.91
4744322	92-5-20	8LL33	C-6-91	A05-07	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-18-1	8LL33	0.71	0.55	0.617	0.68	92-5-18-1	A06									
92-5-18-1	8LL33					92-5-18-1	A07-08									
92-5-18-1	8LL33					92-5-18-1	A09									
92-5-18-1	8LL33					92-5-18-1	A10									
92-5-18-1	8LL33					92-5-18-1	P01									
92-5-18-1	8LL33					92-5-18-1	P02									
92-5-18-1	8LL33	2.09	0.61	0.958		92-5-18-1	P03									
92-5-18-1	8LL33					92-5-18-1	P04									
92-5-18-1	8LL33					92-5-18-1	P05									
92-5-18-1	8LL33					92-5-18-1	P06									
92-5-18-1	8LL33					92-5-18-1	P07									
92-5-18-1	8LL33					92-5-18-1	P08									
92-5-18-1	8LL33					92-5-18-1	P09-10									
92-5-18-1	8LL33					92-5-18-1	P11-28									
92-5-19-1	8LL33	1.21				92-5-19-1	A01									
92-5-20	8LL33					92-5-20	A01									
92-5-20	8LL33					92-5-20	A02									
92-5-20	8LL33					92-5-20	A03									
92-5-20	8LL33	1.24	1.72	0.72		92-5-20	A04									
92-5-20	8LL33					92-5-20	A05-07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-18-1	8LL33							
92-5-19-1	8LL33							
92-5-20	8LL33							
92-5-20	8LL33							
92-5-20	8LL33							
92-5-20	8LL33							
92-5-20	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744323	92-5-20-1	8LL33	C-6-91-1	A01	40	15								1.09	1.18	1.37
4744323	92-5-20-1	8LL33	C-6-91-1	A02	40	10								0.6	0.8	0.9
4744323	92-5-20-1	8LL33	C-6-91-1	A03	0	0								0.54	0.67	
4744323	92-5-20-1	8LL33	C-6-91-1	P01	60	5								0.5	0.85	1.29
4744323	92-5-20-1	8LL33	C-6-91-1	P02	40	10								0.57		
4744323	92-5-20-1	8LL33	C-6-91-1	P03-05	0	0										
4744325	92-5-20-3	8LL33	C-6-91-3	A01	0	0								1.1	0.78	
4744329	92-5-20-3	8LL33	C-6-91-3	A01	0	0								1.1	1.03	
4744329	92-5-20-3	8LL33	C-6-91-3	A02	20	10								0.92	0.92	
4744329	92-5-20-3	8LL33	C-6-91-3	A03	40	5								0.78	1.37	
4744329	92-5-20-3	8LL33	C-6-91-3	A04	0	0								1.36	0.92	
4744329	92-5-20-3	8LL33	C-6-91-3	A05	40	5								0.98	0.98	1.03
4744329	92-5-20-3	8LL33	C-6-91-3	A06	40	5								1.07		
4744329	92-5-20-3	8LL33	C-6-91-3	A07	40	5								1.12	1.01	
4744329	92-5-20-3	8LL33	C-6-91-3	A08	20	10								1.5		
4744329	92-5-20-3	8LL33	C-6-91-3	A09	20	20								0.87	0.8	0.86
4744329	92-5-20-3	8LL33	C-6-91-3	A10	20	5								1.1		
4744329	92-5-20-3	8LL33	C-6-91-3	A11	40	5								0.52		
4744329	92-5-20-3	8LL33	C-6-91-3	A12	20	20								0.91	0.57	0.57
4744329	92-5-20-3	8LL33	C-6-91-3	A13	20	5								0.6		
4744326	92-5-20-3	8LL33	C-6-91-3	CELTIS	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-20-1	8LL33	1.31	1.28			92-5-20-1	A01									
92-5-20-1	8LL33	0.64	0.66	0.98		92-5-20-1	A02									
92-5-20-1	8LL33					92-5-20-1	A03									
92-5-20-1	8LL33					92-5-20-1	P01									
92-5-20-1	8LL33					92-5-20-1	P02									
92-5-20-1	8LL33					92-5-20-1	P03-05									
92-5-20-3	8LL33					92-5-20-3	A01									
92-5-20-3	8LL33					92-5-20-3	A01									
92-5-20-3	8LL33					92-5-20-3	A02									
92-5-20-3	8LL33					92-5-20-3	A03									
92-5-20-3	8LL33					92-5-20-3	A04									
92-5-20-3	8LL33	0.74				92-5-20-3	A05									
92-5-20-3	8LL33					92-5-20-3	A06									
92-5-20-3	8LL33					92-5-20-3	A07									
92-5-20-3	8LL33					92-5-20-3	A08									
92-5-20-3	8LL33	0.86				92-5-20-3	A09									
92-5-20-3	8LL33					92-5-20-3	A10									
92-5-20-3	8LL33					92-5-20-3	A11									
92-5-20-3	8LL33					92-5-20-3	A12									
92-5-20-3	8LL33					92-5-20-3	A13									
92-5-20-3	8LL33					92-5-20-3	CELTIS									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-20-1	8LL33							
92-5-20-1	8LL33							
92-5-20-1	8LL33							
92-5-20-1	8LL33							
92-5-20-1	8LL33							
92-5-20-1	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744329	92-5-20-3	8LL33	C-6-91-3	cf. P10-15	0	0										
4744325	92-5-20-3	8LL33	C-6-91-3	P01	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P01	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P02	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P03	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P04	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P05	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P06	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P07	40	5										
4744329	92-5-20-3	8LL33	C-6-91-3	P08	0	0										
4744329	92-5-20-3	8LL33	C-6-91-3	P09	40	10								0.82	0.41	0.27
4744335	92-5-21	8LL33	C-6-92	cf. P01	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	A01	0	0								0.93	0.88	1.1
4744336	92-5-21-1	8LL33	C-6-92-1	A02	0	0								0.93	0.76	0.94
4744336	92-5-21-1	8LL33	C-6-92-1	A03	0	0								0.88	1.1	
4744336	92-5-21-1	8LL33	C-6-92-1	A04	0	0								1.24	0.83	0.77
4744336	92-5-21-1	8LL33	C-6-92-1	A05	0	0								0.83	0.75	0.51
4744336	92-5-21-1	8LL33	C-6-92-1	A06	20	10								1.06	0.93	0.54
4744336	92-5-21-1	8LL33	C-6-92-1	A07	0	0								0.75	0.49	0.72
4744336	92-5-21-1	8LL33	C-6-92-1	A08	50	15								0.85	1.07	0.69
4744336	92-5-21-1	8LL33	C-6-92-1	A09	0	0								1.12		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-20-3	8LL33					92-5-20-3	cf. P10-15									
92-5-20-3	8LL33					92-5-20-3	P01									
92-5-20-3	8LL33					92-5-20-3	P01									
92-5-20-3	8LL33					92-5-20-3	P02									
92-5-20-3	8LL33					92-5-20-3	P03									
92-5-20-3	8LL33					92-5-20-3	P04									
92-5-20-3	8LL33					92-5-20-3	P05									
92-5-20-3	8LL33					92-5-20-3	P06									
92-5-20-3	8LL33					92-5-20-3	P07									
92-5-20-3	8LL33					92-5-20-3	P08									
92-5-20-3	8LL33	0.27	1.04	0.51	0.32	92-5-20-3	P09	0.24	0.19							
92-5-21	8LL33					92-5-21	cf. P01									
92-5-21-1	8LL33	0.78				92-5-21-1	A01									
92-5-21-1	8LL33	0.87	0.83			92-5-21-1	A02									
92-5-21-1	8LL33					92-5-21-1	A03									
92-5-21-1	8LL33	0.89	0.98			92-5-21-1	A04									
92-5-21-1	8LL33	0.6				92-5-21-1	A05									
92-5-21-1	8LL33	0.56	0.68			92-5-21-1	A06									
92-5-21-1	8LL33	0.81	0.46			92-5-21-1	A07									
92-5-21-1	8LL33	0.61	0.43	0.678	0.94	92-5-21-1	A08	0.75								
92-5-21-1	8LL33					92-5-21-1	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-20-3	8LL33							
92-5-21	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744336	92-5-21-1	8LL33	C-6-92-1	A10	0	0								0.62		
4744336	92-5-21-1	8LL33	C-6-92-1	P01	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P02	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P03	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P04	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P05	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P06	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P07	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P08	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P09	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P10	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P11	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P12	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P13	0	0										
4744336	92-5-21-1	8LL33	C-6-92-1	P14-17	0	0										
4744337	92-5-22	8LL33	C-6-93	A01	60	10								1.05	0.76	0.9
4744337	92-5-22	8LL33	C-6-93	A02	40	5								1.07	0.96	0.91
4744337	92-5-22	8LL33	C-6-93	P01	60	20								1.31	1.35	0.23
4744337	92-5-22	8LL33	C-6-93	P02	60	10								0.66	0.87	1.34
4744337	92-5-22	8LL33	C-6-93	P03	0	0										
4744337	92-5-22	8LL33	C-6-93	P04	0	0										
4744337	92-5-22	8LL33	C-6-93	P05	40	10								0.36	0.39	0.42
4744337	92-5-22	8LL33	C-6-93	P06	40	20								1.21	1.69	1.96

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-21-1	8LL33					92-5-21-1	A10									
92-5-21-1	8LL33					92-5-21-1	P01									
92-5-21-1	8LL33					92-5-21-1	P02									
92-5-21-1	8LL33					92-5-21-1	P03									
92-5-21-1	8LL33					92-5-21-1	P04									
92-5-21-1	8LL33					92-5-21-1	P05									
92-5-21-1	8LL33					92-5-21-1	P06									
92-5-21-1	8LL33					92-5-21-1	P07									
92-5-21-1	8LL33					92-5-21-1	P08									
92-5-21-1	8LL33					92-5-21-1	P09									
92-5-21-1	8LL33					92-5-21-1	P10									
92-5-21-1	8LL33					92-5-21-1	P11									
92-5-21-1	8LL33					92-5-21-1	P12									
92-5-21-1	8LL33					92-5-21-1	P13									
92-5-21-1	8LL33					92-5-21-1	P14-17									
92-5-22	8LL33	0.86	0.94	1.178		92-5-22	A01									
92-5-22	8LL33	0.91				92-5-22	A02									
92-5-22	8LL33	0.29	0.22	0.548	0.37	92-5-22	P01	0.37	0.46	1.28	0.37	0.78	1.09	0.65	0.72	1.25
92-5-22	8LL33	2.06	1.25	0.571		92-5-22	P02									
92-5-22	8LL33					92-5-22	P03									
92-5-22	8LL33					92-5-22	P04									
92-5-22	8LL33	1.52	0.41	0.878	0.57	92-5-22	P05									
92-5-22	8LL33	1.1				92-5-22	P06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-21-1	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33	1.81						
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744337	92-5-22	8LL33	C-6-93	P07	40	10								1.36		
4744337	92-5-22	8LL33	C-6-93	P08	0	0										
4744337	92-5-22	8LL33	C-6-93	P09	40	10								1.74	2.91	1.59
4744337	92-5-22	8LL33	C-6-93	P10	20	25			Y					1.51		
4744337	92-5-22	8LL33	C-6-93	P11	0	0								1.22		
4744337	92-5-22	8LL33	C-6-93	P12	20	25			Y					0.26	0.63	0.28
4744338	92-5-32-3	8LL33	C-6-89-3	P01	20	10								0.21	0.37	0.38
4744338	92-5-32-3	8LL33	C-6-89-3	P02	0	0								1.46		
4744338	92-5-32-3	8LL33	C-6-89-3	P03	0	0								0.42		
4744338	92-5-32-3	8LL33	C-6-89-3	P04	20	10								0.31	0.26	0.45
4744338	92-5-32-3	8LL33	C-6-89-3	P05-10	0	0										
4744338	92-5-32-3	8LL33	C-6-89-3	P11	0	0										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7,11	A01	40	5								1.13		
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7,11	A02	0	0										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7,11	A03	0	0										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7,11	P01	0	0										
4744284	92-5-8	8LL33	C-6-89 E[88], ST 7,11	P02	40	20										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A01	40	10								0.8	0.53	0.67
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A02	20	25								0.5	0.75	0.61
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A03	20	20								0.64	0.48	0.71
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A04	0	0								1.28	0.9	0.71
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A05	20	20								0.6	0.7	0.55

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-5-22	8LL33					92-5-22	P07									
92-5-22	8LL33					92-5-22	P08									
92-5-22	8LL33					92-5-22	P09									
92-5-22	8LL33					92-5-22	P10									
92-5-22	8LL33					92-5-22	P11									
92-5-22	8LL33	0.51	0.45			92-5-22	P12									
92-5-32-3	8LL33					92-5-32-3	P01									
92-5-32-3	8LL33					92-5-32-3	P02									
92-5-32-3	8LL33					92-5-32-3	P03									
92-5-32-3	8LL33	0.18				92-5-32-3	P04									
92-5-32-3	8LL33					92-5-32-3	P05-10									
92-5-32-3	8LL33					92-5-32-3	P11									
92-5-8	8LL33					92-5-8	A01									
92-5-8	8LL33					92-5-8	A02									
92-5-8	8LL33					92-5-8	A03									
92-5-8	8LL33					92-5-8	P01									
92-5-8	8LL33					92-5-8	P02									
92-6-2-1	8LL33	0.64	0.76	0.721	0.82	92-6-2-1	A01	0.97	0.58							
92-6-2-1	8LL33	0.53	0.49			92-6-2-1	A02									
92-6-2-1	8LL33	0.78	0.79	0.397	0.98	92-6-2-1	A03									
92-6-2-1	8LL33	0.59				92-6-2-1	A04									
92-6-2-1	8LL33	0.95	0.6	0.552	1.04	92-6-2-1	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-22	8LL33							
92-5-32-3	8LL33							
92-5-32-3	8LL33							
92-5-32-3	8LL33							
92-5-32-3	8LL33							
92-5-32-3	8LL33							
92-5-32-3	8LL33							
92-5-8	8LL33							
92-5-8	8LL33							
92-5-8	8LL33							
92-5-8	8LL33							
92-5-8	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A06	10	100				Y				0.84	0.7	0.47
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A07	0	0								0.89	0.74	0.53
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A08	20	20								0.94	1.23	1.17
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A09	20	10								0.57	0.45	0.6
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A10	20	25								0.85	1.07	0.71
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A11	0	0								0.68	0.59	
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A12	20	25								0.75	0.82	0.69
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	A13	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P01	0	0								1.68	1.49	0.75
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P02	30	25			Y					0.66	1.02	0.78
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P03	40	10								0.64	1.41	1.52
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P04	20	20								0.95	0.65	0.92
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P05	40	10								1.02	1.2	
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P06	40	10								0.44	0.74	0.83
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P07	0	0								0.54	0.4	0.77
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P08	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P09	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P10	40	5								1.4		
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P11	0	0								0.87	1.61	0.56
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P12	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P13	40	10								0.6	0.66	
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P14	20	50			Y					0.66	0.97	0.6
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P15	40	10								0.76	1.24	
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P16	40	10								1.41		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-6-2-1	8LL33	0.51				92-6-2-1	A06									
92-6-2-1	8LL33	0.54				92-6-2-1	A07									
92-6-2-1	8LL33	0.66				92-6-2-1	A08									
92-6-2-1	8LL33	0.62	0.51	0.541		92-6-2-1	A09									
92-6-2-1	8LL33	1.07	0.62	0.627		92-6-2-1	A10									
92-6-2-1	8LL33					92-6-2-1	A11									
92-6-2-1	8LL33	0.4	0.55			92-6-2-1	A12									
92-6-2-1	8LL33					92-6-2-1	A13									
92-6-2-1	8LL33	0.69				92-6-2-1	P01									
92-6-2-1	8LL33					92-6-2-1	P02									
92-6-2-1	8LL33	0.47	0.81	1.058		92-6-2-1	P03									
92-6-2-1	8LL33	0.51	0.4	0.575	0.57	92-6-2-1	P04									
92-6-2-1	8LL33					92-6-2-1	P05									
92-6-2-1	8LL33	0.48	0.69			92-6-2-1	P06									
92-6-2-1	8LL33					92-6-2-1	P07									
92-6-2-1	8LL33					92-6-2-1	P08									
92-6-2-1	8LL33					92-6-2-1	P09									
92-6-2-1	8LL33					92-6-2-1	P10									
92-6-2-1	8LL33	1.2	0.96	0.517	0.61	92-6-2-1	P11									
92-6-2-1	8LL33					92-6-2-1	P12									
92-6-2-1	8LL33					92-6-2-1	P13									
92-6-2-1	8LL33					92-6-2-1	P14									
92-6-2-1	8LL33					92-6-2-1	P15									
92-6-2-1	8LL33					92-6-2-1	P16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P17	0	0								0.32	0.92	0.5
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P18	40	10								0.68		
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P19	40	10										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P20	20	20					Y	Y		0.91		
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P21	0	0								0.56	0.24	0.47
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P22	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P23	0	0										
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P24	20	20								0.58	0.87	0.35
4744346	92-6-2-1	8LL33	I-3-58-1, ST 1	P25	0	0								0.76	0.28	1.13
4744473	92-6-27-1	8LL33	I-3-68-1	A01	40	15								1.44	0.98	1
4744473	92-6-27-1	8LL33	I-3-68-1	A02	50	20								0.94	1.21	1.06
4744473	92-6-27-1	8LL33	I-3-68-1	A03	40	10								0.92	0.78	0.69
4744473	92-6-27-1	8LL33	I-3-68-1	A04	30	20								0.6	0.33	0.28
4744473	92-6-27-1	8LL33	I-3-68-1	A05	20	50	Y			Y				0.47	0.34	0.45
4744473	92-6-27-1	8LL33	I-3-68-1	A06	20	20								0.76	0.96	0.56
4744473	92-6-27-1	8LL33	I-3-68-1	A07	40	10								0.94	1.09	0.79
4744473	92-6-27-1	8LL33	I-3-68-1	A08	20	20								1.24	1.2	0.52
4744473	92-6-27-1	8LL33	I-3-68-1	A09										0.61	0.9	0.92
4744473	92-6-27-1	8LL33	I-3-68-1	A10										0.59	0.46	0.26
4744473	92-6-27-1	8LL33	I-3-68-1	A11	40	10								1.03	0.66	1.01
4744473	92-6-27-1	8LL33	I-3-68-1	A12	20	25				Y				0.88	0.51	0.71
4744473	92-6-27-1	8LL33	I-3-68-1	P01	60	10								0.23	0.31	0.46
4744473	92-6-27-1	8LL33	I-3-68-1	P02	60	10						Y		0.18	0.54	0.34

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-6-2-1	8LL33	0.56	0.15	0.52	0.59	92-6-2-1	P17									
92-6-2-1	8LL33					92-6-2-1	P18									
92-6-2-1	8LL33					92-6-2-1	P19									
92-6-2-1	8LL33					92-6-2-1	P20									
92-6-2-1	8LL33					92-6-2-1	P21									
92-6-2-1	8LL33					92-6-2-1	P22									
92-6-2-1	8LL33					92-6-2-1	P23									
92-6-2-1	8LL33	0.36	0.31	0.324	0.42	92-6-2-1	P24	0.4	0.27	0.27	1.01	0.37	0.24			
92-6-2-1	8LL33	1.03				92-6-2-1	P25									
92-6-27-1	8LL33	0.86	0.68	0.854		92-6-27-1	A01									
92-6-27-1	8LL33	1.11	0.71	1.135	1.05	92-6-27-1	A02	0.97								
92-6-27-1	8LL33	0.75	1.08	0.621	0.56	92-6-27-1	A03	0.54	1.18	0.65						
92-6-27-1	8LL33	0.54	0.41	0.434	0.43	92-6-27-1	A04	0.47	0.33	0.66						
92-6-27-1	8LL33	0.46	0.43			92-6-27-1	A05									
92-6-27-1	8LL33	0.84	0.74			92-6-27-1	A06									
92-6-27-1	8LL33	0.59				92-6-27-1	A07									
92-6-27-1	8LL33	0.57				92-6-27-1	A08									
92-6-27-1	8LL33	0.91				92-6-27-1	A09									
92-6-27-1	8LL33	0.55				92-6-27-1	A10									
92-6-27-1	8LL33	0.76	0.84	0.701		92-6-27-1	A11									
92-6-27-1	8LL33	0.84	0.88			92-6-27-1	A12									
92-6-27-1	8LL33	0.27	0.25	0.296	0.71	92-6-27-1	P01	0.34	0.18	0.27						
92-6-27-1	8LL33	0.55	0.42	0.297	0.45	92-6-27-1	P02	0.51	0.37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-2-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744473	92-6-27-1	8LL33	I-3-68-1	P03	60	15								0.52	1.64	1.58
4744473	92-6-27-1	8LL33	I-3-68-1	P04	40	10						Y		1.09	0.77	0.76
4744473	92-6-27-1	8LL33	I-3-68-1	P05	20	20						Y		1.68	0.89	1.49
4744473	92-6-27-1	8LL33	I-3-68-1	P06	30	10						Y		0.69	0.65	1.28
4744473	92-6-27-1	8LL33	I-3-68-1	P07										1.02	1.3	1.49
4744473	92-6-27-1	8LL33	I-3-68-1	P08	30	20						Y		2.42		
4744473	92-6-27-1	8LL33	I-3-68-1	P09	30	25								1.13	0.5	0.52
4744473	92-6-27-1	8LL33	I-3-68-1	P10	50	20						Y		3.3	1.45	
4744473	92-6-27-1	8LL33	I-3-68-1	P11										0.62	0.81	0.36
4744473	92-6-27-1	8LL33	I-3-68-1	P12	30	20										
4744473	92-6-27-1	8LL33	I-3-68-1	P13												
4744473	92-6-27-1	8LL33	I-3-68-1	P14	20	10					Y	Y		1.86		
4744473	92-6-27-1	8LL33	I-3-68-1	P15	40	10								0.89	0.24	0.27
4744473	92-6-27-1	8LL33	I-3-68-1	P16	30	20					Y	Y		3.06	0.7	2.16
4744473	92-6-27-1	8LL33	I-3-68-1	P17	20	20								0.62	0.5	1.22
4744473	92-6-27-1	8LL33	I-3-68-1	P18	50	10								0.58	0.46	0.5
4744473	92-6-27-1	8LL33	I-3-68-1	P19										0.41	0.56	0.35
4744473	92-6-27-1	8LL33	I-3-68-1	P20										1.14	0.96	1.03
4744473	92-6-27-1	8LL33	I-3-68-1	P21										1.29	1.31	0.19
4744473	92-6-27-1	8LL33	I-3-68-1	P22	40	10								2.96		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-6-27-1	8LL33	0.56	0.6			92-6-27-1	P03									
92-6-27-1	8LL33	0.75	0.36	0.79	0.5	92-6-27-1	P04	1.46								
92-6-27-1	8LL33	0.43	0.9			92-6-27-1	P05									
92-6-27-1	8LL33	1.35	0.61			92-6-27-1	P06									
92-6-27-1	8LL33	1.12	1.29			92-6-27-1	P07									
92-6-27-1	8LL33					92-6-27-1	P08									
92-6-27-1	8LL33	0.35	0.47			92-6-27-1	P09									
92-6-27-1	8LL33					92-6-27-1	P10									
92-6-27-1	8LL33	0.68	0.54	0.322	0.57	92-6-27-1	P11	0.33	0.24	0.49	0.5	0.62	0.54	0.36	0.57	
92-6-27-1	8LL33					92-6-27-1	P12									
92-6-27-1	8LL33					92-6-27-1	P13									
92-6-27-1	8LL33					92-6-27-1	P14									
92-6-27-1	8LL33	0.62	0.42	0.448	0.4	92-6-27-1	P15	0.77	0.84	0.88	0.43					
92-6-27-1	8LL33	0.61				92-6-27-1	P16									
92-6-27-1	8LL33	1.07	1.51			92-6-27-1	P17									
92-6-27-1	8LL33	0.78	0.42	0.806	0.51	92-6-27-1	P18	0.54	0.47	0.34	0.35	0.46	0.39	0.42	0.56	0.74
92-6-27-1	8LL33	0.56	0.35	0.392	0.41	92-6-27-1	P19	0.46								
92-6-27-1	8LL33					92-6-27-1	P20									
92-6-27-1	8LL33	0.83	1.55			92-6-27-1	P21									
92-6-27-1	8LL33					92-6-27-1	P22									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33	0.46	0.9539	0.34	0.63	0.58		
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744473	92-6-27-1	8LL33	I-3-68-1	P23										0.44	0.6	0.65
4744473	92-6-27-1	8LL33	I-3-68-1	P24	40	10								0.53	0.22	0.21
4744473	92-6-27-1	8LL33	I-3-68-1	P25										0.47	0.26	0.96
4744473	92-6-27-1	8LL33	I-3-68-1	P26										0.89	0.76	0.95
4744473	92-6-27-1	8LL33	I-3-68-1	P27										1.07		
4744473	92-6-27-1	8LL33	I-3-68-1	P28	40	10								0.28	0.24	0.85
4744352	92-6-4-1	8LL33	I-3-60-1	A01	0	0								1.48	2.1	1.11
4744352	92-6-4-1	8LL33	I-3-60-1	A02	20	10								0.68	1.28	0.81
4744352	92-6-4-1	8LL33	I-3-60-1	A03	40	20								0.84	0.59	0.74
4744352	92-6-4-1	8LL33	I-3-60-1	A04	40	15								0.53	1.27	0.61
4744352	92-6-4-1	8LL33	I-3-60-1	A05	40	15								1	1.53	0.84
4744352	92-6-4-1	8LL33	I-3-60-1	A06	50	15								0.97	0.5	0.53
4744352	92-6-4-1	8LL33	I-3-60-1	A07	0	0								1.23	0.86	1.18
4744352	92-6-4-1	8LL33	I-3-60-1	A08	0	0								0.88	0.49	0.81
4744352	92-6-4-1	8LL33	I-3-60-1	A09	40	10								0.58	0.52	0.47
4744352	92-6-4-1	8LL33	I-3-60-1	A10	0	0								0.84	0.78	1.24
4744352	92-6-4-1	8LL33	I-3-60-1	A11	50	10								1.11	0.78	0.91
4744352	92-6-4-1	8LL33	I-3-60-1	A12	30	10								1	0.54	0.48
4744352	92-6-4-1	8LL33	I-3-60-1	A13	40	10								0.8	0.79	0.73
4744352	92-6-4-1	8LL33	I-3-60-1	A14	0	0								0.56	0.75	0.54
4744352	92-6-4-1	8LL33	I-3-60-1	A15	0	0								0.93	0.7	0.78
4744352	92-6-4-1	8LL33	I-3-60-1	A16	0	0										
4744352	92-6-4-1	8LL33	I-3-60-1	A17	40	15										
4744352	92-6-4-1	8LL33	I-3-60-1	P01	0	0								0.83	0.39	0.54

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-6-27-1	8LL33	0.77	1.59			92-6-27-1	P23									
92-6-27-1	8LL33	0.65	0.17	0.165		92-6-27-1	P24									
92-6-27-1	8LL33					92-6-27-1	P25									
92-6-27-1	8LL33	0.58	0.93	0.901		92-6-27-1	P26									
92-6-27-1	8LL33					92-6-27-1	P27									
92-6-27-1	8LL33	0.26	0.29	0.7	1.28	92-6-27-1	P28	1.16	0.27	0.87						
92-6-4-1	8LL33	1.36	0.99			92-6-4-1	A01									
92-6-4-1	8LL33	0.61	1.15	0.511		92-6-4-1	A02									
92-6-4-1	8LL33	0.97	0.83	0.683	0.89	92-6-4-1	A03									
92-6-4-1	8LL33	1.14	0.82	1.126	0.84	92-6-4-1	A04									
92-6-4-1	8LL33	1.02	1.14	1.252		92-6-4-1	A05									
92-6-4-1	8LL33	0.95	0.69	0.635	0.78	92-6-4-1	A06	0.87	0.68	0.79	0.77					
92-6-4-1	8LL33	0.82	1.1	1.171		92-6-4-1	A07									
92-6-4-1	8LL33	0.92	0.69	0.818		92-6-4-1	A08									
92-6-4-1	8LL33	0.76	0.74	0.633	0.85	92-6-4-1	A09	0.65	0.5	0.48	0.5	0.44				
92-6-4-1	8LL33	0.66	0.64	0.732		92-6-4-1	A10									
92-6-4-1	8LL33	0.76				92-6-4-1	A11									
92-6-4-1	8LL33	0.92	0.91	0.635		92-6-4-1	A12									
92-6-4-1	8LL33	0.8	0.96	0.85	1.13	92-6-4-1	A13	0.77	0.88							
92-6-4-1	8LL33					92-6-4-1	A14									
92-6-4-1	8LL33	0.92				92-6-4-1	A15									
92-6-4-1	8LL33					92-6-4-1	A16									
92-6-4-1	8LL33					92-6-4-1	A17									
92-6-4-1	8LL33					92-6-4-1	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-27-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744352	92-6-4-1	8LL33	I-3-60-1	P02	40	15								0.86	1.34	1.25
4744352	92-6-4-1	8LL33	I-3-60-1	P03	40	15								0.74	0.52	1.09
4744352	92-6-4-1	8LL33	I-3-60-1	P04	40	15								4.35		
4744352	92-6-4-1	8LL33	I-3-60-1	P05	0	0										
4744352	92-6-4-1	8LL33	I-3-60-1	P06	40	10								0.81	0.41	0.43
4744352	92-6-4-1	8LL33	I-3-60-1	P07	0	0								0.28	0.27	0.35
4744352	92-6-4-1	8LL33	I-3-60-1	P08	0	0										
4744352	92-6-4-1	8LL33	I-3-60-1	P09	50	20								0.19	1.19	0.28
4744352	92-6-4-1	8LL33	I-3-60-1	P10	0	0								0.67		
4744352	92-6-4-1	8LL33	I-3-60-1	P11	0	0								0.6	0.33	0.43
4744352	92-6-4-1	8LL33	I-3-60-1	P12	0	0								1.53	1.54	
4744352	92-6-4-1	8LL33	I-3-60-1	P13	30	25								0.79	0.48	0.53
4744352	92-6-4-1	8LL33	I-3-60-1	P14	0	0								0.95	0.71	0.34
4744352	92-6-4-1	8LL33	I-3-60-1	P15	0	0								0.34	0.52	1.14
4744352	92-6-4-1	8LL33	I-3-60-1	P16	0	0										
4744352	92-6-4-1	8LL33	I-3-60-1	P17	0	0										
4744352	92-6-4-1	8LL33	I-3-60-1	Q01	0	0								0.89	0.69	2.01
4744352	92-6-4-1	8LL33	I-3-60-1	Q02	0	0										
4745126	95-2-30	8LL33	A-11-66, ST 11	A01	20	50	Y		Y					0.36	0.41	0.45
4745126	95-2-30	8LL33	A-11-66, ST 11	A02	20	20								0.79	0.66	0.93
4745126	95-2-30	8LL33	A-11-66, ST 11	A03	30	25								0.48	0.53	0.49
4745126	95-2-30	8LL33	A-11-66, ST 11	A04	40	10								0.84	0.46	0.71
4745126	95-2-30	8LL33	A-11-66, ST 11	A05										1.05	0.83	
4745126	95-2-30	8LL33	A-11-66, ST 11	A06	20	10								0.84	0.85	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-6-4-1	8LL33	1.06				92-6-4-1	P02									
92-6-4-1	8LL33	1.76	0.78			92-6-4-1	P03									
92-6-4-1	8LL33					92-6-4-1	P04									
92-6-4-1	8LL33					92-6-4-1	P05									
92-6-4-1	8LL33	1.11	1.85			92-6-4-1	P06									
92-6-4-1	8LL33	0.36	0.28	0.437	0.5	92-6-4-1	P07	0.5	0.54							
92-6-4-1	8LL33					92-6-4-1	P08									
92-6-4-1	8LL33	0.8	0.7	1.321	0.75	92-6-4-1	P09	0.28	0.35	0.68	0.44	0.57				
92-6-4-1	8LL33					92-6-4-1	P10									
92-6-4-1	8LL33	0.4	0.53	0.232	0.5	92-6-4-1	P11	0.71	0.62	0.19	0.58	0.55	0.86	0.85	0.71	
92-6-4-1	8LL33					92-6-4-1	P12									
92-6-4-1	8LL33	0.56	0.16			92-6-4-1	P13									
92-6-4-1	8LL33	0.74				92-6-4-1	P14									
92-6-4-1	8LL33	0.3	0.35			92-6-4-1	P15									
92-6-4-1	8LL33					92-6-4-1	P16									
92-6-4-1	8LL33					92-6-4-1	P17									
92-6-4-1	8LL33	1.28	1.2			92-6-4-1	Q01									
92-6-4-1	8LL33					92-6-4-1	Q02									
95-2-30	8LL33	0.49	0.56	0.587	0.73	95-2-30	A01	0.74	0.72	0.82						
95-2-30	8LL33	0.76	0.58	0.404	0.59	95-2-30	A02	0.27	0.74	0.6	0.77					
95-2-30	8LL33	0.71	0.56			95-2-30	A03									
95-2-30	8LL33	0.54				95-2-30	A04									
95-2-30	8LL33					95-2-30	A05									
95-2-30	8LL33					95-2-30	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
92-6-4-1	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745126	95-2-30	8LL33	A-11-66, ST 11	A07	20	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	A08	40	10								0.62	0.73	0.89
4745126	95-2-30	8LL33	A-11-66, ST 11	A09	20	20								0.88	0.74	0.97
4745126	95-2-30	8LL33	A-11-66, ST 11	A10	10	25								0.7	0.92	0.98
4745126	95-2-30	8LL33	A-11-66, ST 11	P01												
4745126	95-2-30	8LL33	A-11-66, ST 11	P02	60	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P03	40	20										
4745126	95-2-30	8LL33	A-11-66, ST 11	P04	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P05	20	20										
4745126	95-2-30	8LL33	A-11-66, ST 11	P06	20	20										
4745126	95-2-30	8LL33	A-11-66, ST 11	P07	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P08	30	25										
4745126	95-2-30	8LL33	A-11-66, ST 11	P09	30	25			Y							
4745126	95-2-30	8LL33	A-11-66, ST 11	P10	20	50										
4745126	95-2-30	8LL33	A-11-66, ST 11	P11	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P12	30	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P13	30	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P14	30	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P15	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P16	20	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P17												
4745126	95-2-30	8LL33	A-11-66, ST 11	P18	20	20										
4745126	95-2-30	8LL33	A-11-66, ST 11	P19												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-30	8LL33					95-2-30	A07									
95-2-30	8LL33	0.7	0.71	0.954	0.62	95-2-30	A08	0.72								
95-2-30	8LL33					95-2-30	A09									
95-2-30	8LL33	0.95	1.18	1.181		95-2-30	A10									
95-2-30	8LL33					95-2-30	P01									
95-2-30	8LL33					95-2-30	P02									
95-2-30	8LL33					95-2-30	P03									
95-2-30	8LL33					95-2-30	P04									
95-2-30	8LL33					95-2-30	P05									
95-2-30	8LL33					95-2-30	P06									
95-2-30	8LL33					95-2-30	P07									
95-2-30	8LL33					95-2-30	P08									
95-2-30	8LL33					95-2-30	P09									
95-2-30	8LL33					95-2-30	P10									
95-2-30	8LL33					95-2-30	P11									
95-2-30	8LL33					95-2-30	P12									
95-2-30	8LL33					95-2-30	P13									
95-2-30	8LL33					95-2-30	P14									
95-2-30	8LL33					95-2-30	P15									
95-2-30	8LL33					95-2-30	P16									
95-2-30	8LL33					95-2-30	P17									
95-2-30	8LL33					95-2-30	P18									
95-2-30	8LL33					95-2-30	P19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745126	95-2-30	8LL33	A-11-66, ST 11	P20	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P21	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P23	30	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P23	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P24												
4745126	95-2-30	8LL33	A-11-66, ST 11	P25	40	10										
4745126	95-2-30	8LL33	A-11-66, ST 11	P26												
4745126	95-2-30	8LL33	A-11-66, ST 11	P27	40	10										
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A01												
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A02	30	20								0.65	0.68	0.67
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A03	30	25								1.21	0.78	0.88
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A04	40	10								1.72	0.87	1.38
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A05	40	10							Y	0.46	0.76	0.78
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A06									Y	0.89	0.77	1.33
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A07										1.07	1.19	0.93
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A08	40	10								0.89	1.12	1.32
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A09										0.87	0.94	1.07
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A10	40	10								0.83	0.65	0.91
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A11	40	10								1.19	1.2	1.16
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A12	40	10								0.65	1.14	0.94
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	A13										0.89	0.7	0.68
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P01	40	20								1.37	0.22	0.3
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P02	40	20								0.59	0.42	0.77
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P03										0.32	0.39	0.39

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-30	8LL33					95-2-30	P20									
95-2-30	8LL33					95-2-30	P21									
95-2-30	8LL33					95-2-30	P23									
95-2-30	8LL33					95-2-30	P23									
95-2-30	8LL33					95-2-30	P24									
95-2-30	8LL33					95-2-30	P25									
95-2-30	8LL33					95-2-30	P26									
95-2-30	8LL33					95-2-30	P27									
95-2-6	8LL33					95-2-6	A01									
95-2-6	8LL33	0.97	1.24	0.735	0.87	95-2-6	A02	0.7	0.79	0.92						
95-2-6	8LL33	0.79	1.05	0.954	1	95-2-6	A03	0.67	0.73	1.28	1.18	0.97				
95-2-6	8LL33	2.12	2.23	0.594	1.27	95-2-6	A04									
95-2-6	8LL33	0.68				95-2-6	A05									
95-2-6	8LL33	0.85				95-2-6	A06									
95-2-6	8LL33	0.88				95-2-6	A07									
95-2-6	8LL33					95-2-6	A08									
95-2-6	8LL33	1.16	1.06	1.138		95-2-6	A09									
95-2-6	8LL33	1.02				95-2-6	A10									
95-2-6	8LL33					95-2-6	A11									
95-2-6	8LL33					95-2-6	A12									
95-2-6	8LL33	0.73				95-2-6	A13									
95-2-6	8LL33	0.95	1.12	0.422	0.39	95-2-6	P01	1.58	0.39	0.33	0.97	0.32	0.33	0.69	1.24	
95-2-6	8LL33	0.65				95-2-6	P02									
95-2-6	8LL33	0.35	0.49	0.382	0.45	95-2-6	P03	0.47	0.44	0.28	0.46	0.33				

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-30	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P04	30	25			Y					0.96	1.29	0.47
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P05	20	25			Y					0.57	1.23	1.77
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P06	20	25								0.35	0.6	
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P07	20	25								0.23	1.12	0.46
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P08	40	15								0.63	1.03	0.62
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P09	30	25								0.49	0.49	0.24
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P10	40	10								0.94	0.85	0.53
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P11										1.33	0.82	0.33
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P12	30	20								1.06	0.91	0.84
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P13	30	25			Y					0.35	0.49	0.46
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P14												
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P15	20	20								0.5	0.79	0.93
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P16												
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P17										0.66	1.52	0.52
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P18	20	20								1.04	0.94	0.68
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P19	40	10								1.68		
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P20	40	10										
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P21												
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P22	20	20								0.6	1.03	0.28
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P23	40	10								0.87	0.68	0.17

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-6	8LL33					95-2-6	P04									
95-2-6	8LL33					95-2-6	P05									
95-2-6	8LL33					95-2-6	P06									
95-2-6	8LL33	0.15	0.4	0.434	0.25	95-2-6	P07	0.38	0.64							
95-2-6	8LL33	0.73	0.94	0.441	0.66	95-2-6	P08									
95-2-6	8LL33	0.76	0.97			95-2-6	P09									
95-2-6	8LL33	0.92				95-2-6	P10									
95-2-6	8LL33	0.5	1.39			95-2-6	P11									
95-2-6	8LL33	0.27	0.3	1.044	0.76	95-2-6	P12	1.08								
95-2-6	8LL33	1.01	0.94	0.486	0.46	95-2-6	P13									
95-2-6	8LL33					95-2-6	P14									
95-2-6	8LL33	1.09				95-2-6	P15									
95-2-6	8LL33					95-2-6	P16									
95-2-6	8LL33	0.42				95-2-6	P17									
95-2-6	8LL33	0.86	0.46	0.362	0.57	95-2-6	P18	0.21	0.7							
95-2-6	8LL33					95-2-6	P19									
95-2-6	8LL33					95-2-6	P20									
95-2-6	8LL33					95-2-6	P21									
95-2-6	8LL33	0.44	0.68	0.896		95-2-6	P22									
95-2-6	8LL33	0.45	0.8	0.725	0.88	95-2-6	P23	0.33								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							
95-2-6	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745076	95-2-6	8LL33	A-11-48, ST 3A-3B	P24												
4745078	95-2-7	8LL33	A-11-49, ST 3B	A01	40	15								1.07	0.74	0.95
4745078	95-2-7	8LL33	A-11-49, ST 3B	A02	40	10								0.8	0.91	0.89
4745078	95-2-7	8LL33	A-11-49, ST 3B	A03	40	10								0.73	0.64	0.79
4745078	95-2-7	8LL33	A-11-49, ST 3B	A04	40	10								1.12	0.74	0.91
4745078	95-2-7	8LL33	A-11-49, ST 3B	A05										0.56	0.64	0.63
4745078	95-2-7	8LL33	A-11-49, ST 3B	A06	20	25								0.5	0.64	0.6
4745078	95-2-7	8LL33	A-11-49, ST 3B	A07	30	25								0.51	0.36	0.49
4745078	95-2-7	8LL33	A-11-49, ST 3B	A08	30	25								0.53	0.76	0.72
4745078	95-2-7	8LL33	A-11-49, ST 3B	A09	8	50				Y				0.24	0.21	0.18
4745078	95-2-7	8LL33	A-11-49, ST 3B	A10	20	25								1.05	0.89	0.76
4745078	95-2-7	8LL33	A-11-49, ST 3B	A11	40	10								1	0.99	1.11
4745078	95-2-7	8LL33	A-11-49, ST 3B	A12	40	15								1.16	0.93	1.03
4745078	95-2-7	8LL33	A-11-49, ST 3B	A13										0.82	0.78	0.33
4745078	95-2-7	8LL33	A-11-49, ST 3B	A14	40	20								0.47	0.57	0.9
4745078	95-2-7	8LL33	A-11-49, ST 3B	A15	40	10								1.21	0.56	0.83
4745078	95-2-7	8LL33	A-11-49, ST 3B	P01										0.7	0.7	
4745078	95-2-7	8LL33	A-11-49, ST 3B	P02	70	25			Y							
4745078	95-2-7	8LL33	A-11-49, ST 3B	P03	40	10								1.61	1.54	1.3
4745078	95-2-7	8LL33	A-11-49, ST 3B	P04	80	10								0.74	0.7	1.06
4745078	95-2-7	8LL33	A-11-49, ST 3B	P05	40	10								2.96		
4745078	95-2-7	8LL33	A-11-49, ST 3B	P06	40	10								1.36		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-6	8LL33					95-2-6	P24									
95-2-7	8LL33	0.88	0.7			95-2-7	A01									
95-2-7	8LL33	1.11	0.82	1.071	0.6	95-2-7	A02									
95-2-7	8LL33	0.65	0.61			95-2-7	A03									
95-2-7	8LL33	0.88	0.87			95-2-7	A04									
95-2-7	8LL33	0.74				95-2-7	A05									
95-2-7	8LL33	0.73	0.68	0.472		95-2-7	A06									
95-2-7	8LL33	0.48	0.51	0.703	0.69	95-2-7	A07	0.45	0.98	0.68	0.97	0.91	0.87	0.52	0.71	
95-2-7	8LL33	0.89				95-2-7	A08									
95-2-7	8LL33	0.16	0.31	0.549	0.4	95-2-7	A09	0.48								
95-2-7	8LL33	0.88	0.81			95-2-7	A10									
95-2-7	8LL33					95-2-7	A11									
95-2-7	8LL33					95-2-7	A12									
95-2-7	8LL33	0.89	0.33	0.439	0.52	95-2-7	A13	0.61	0.82							
95-2-7	8LL33	1.01	0.63	0.778	1.08	95-2-7	A14	1.08								
95-2-7	8LL33	1.14				95-2-7	A15									
95-2-7	8LL33					95-2-7	P01									
95-2-7	8LL33					95-2-7	P02									
95-2-7	8LL33					95-2-7	P03									
95-2-7	8LL33	0.62	0.56	0.406		95-2-7	P04									
95-2-7	8LL33					95-2-7	P05									
95-2-7	8LL33					95-2-7	P06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-6	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745078	95-2-7	8LL33	A-11-49, ST 3B	P07	30	10					Y			1.44	1.05	1.12
4745078	95-2-7	8LL33	A-11-49, ST 3B	P08	40	10								0.5	0.86	0.33
4745078	95-2-7	8LL33	A-11-49, ST 3B	P09	20	25			Y					0.59	0.74	0.51
4745078	95-2-7	8LL33	A-11-49, ST 3B	P10	40	15								1.1	1.6	
4745078	95-2-7	8LL33	A-11-49, ST 3B	P11	40	10								1.08	0.67	0.45
4745078	95-2-7	8LL33	A-11-49, ST 3B	P12	30	10					Y			0.49	1.31	0.93
4745078	95-2-7	8LL33	A-11-49, ST 3B	P13												
4745078	95-2-7	8LL33	A-11-49, ST 3B	P14	40	10								0.97	0.76	0.51
4745078	95-2-7	8LL33	A-11-49, ST 3B	P15												
4745083	95-2-9	8LL33	A-11-51	A01	40	10								0.71	0.54	0.89
4745083	95-2-9	8LL33	A-11-51	A02	40	10							Y	1.01	0.9	0.7
4745083	95-2-9	8LL33	A-11-51	A03	20	50	Y							0.4	0.42	0.42
4745083	95-2-9	8LL33	A-11-51	A04	40	10								0.89	0.48	0.44
4745083	95-2-9	8LL33	A-11-51	A05	20	20								1.68	1.04	
4745083	95-2-9	8LL33	A-11-51	A06	30	20								0.98	0.42	0.41
4745083	95-2-9	8LL33	A-11-51	P01												
4745083	95-2-9	8LL33	A-11-51	P02	40	10										
4745083	95-2-9	8LL33	A-11-51	P03	40	10										
4745083	95-2-9	8LL33	A-11-51	P04												
4745083	95-2-9	8LL33	A-11-51	P05												
4745083	95-2-9	8LL33	A-11-51	P06	40	15										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-7	8LL33	0.55	0.7	0.221	0.52	95-2-7	P07	0.45	1.14	0.29	0.5					
95-2-7	8LL33	0.79	0.92			95-2-7	P08									
95-2-7	8LL33	0.52	0.78	0.472		95-2-7	P09									
95-2-7	8LL33					95-2-7	P10									
95-2-7	8LL33	1.37				95-2-7	P11									
95-2-7	8LL33	0.19	0.33	0.394	0.08	95-2-7	P12	0.12	0.29	0.1	0.39	0.08	0.32	0.47	0.66	0.4
95-2-7	8LL33					95-2-7	P13									
95-2-7	8LL33					95-2-7	P14									
95-2-7	8LL33					95-2-7	P15									
95-2-9	8LL33	0.82	0.72			95-2-9	A01									
95-2-9	8LL33					95-2-9	A02									
95-2-9	8LL33	0.56	0.47	0.476		95-2-9	A03									
95-2-9	8LL33	0.62				95-2-9	A04									
95-2-9	8LL33					95-2-9	A05									
95-2-9	8LL33	1.2	0.9	1.167	1.26	95-2-9	A06	1.64	1.56							
95-2-9	8LL33					95-2-9	P01									
95-2-9	8LL33					95-2-9	P02									
95-2-9	8LL33					95-2-9	P03									
95-2-9	8LL33					95-2-9	P04									
95-2-9	8LL33					95-2-9	P05									
95-2-9	8LL33					95-2-9	P06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33	0.36						
95-2-7	8LL33							
95-2-7	8LL33							
95-2-7	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745083	95-2-9	8LL33	A-11-51	P07												
4745083	95-2-9	8LL33	A-11-51	P08	30	20										
4745083	95-2-9	8LL33	A-11-51	P09												
4745083	95-2-9	8LL33	A-11-51	P10												
4745083	95-2-9	8LL33	A-11-51	P11	40	10										
4745083	95-2-9	8LL33	A-11-51	P12	40	10										
4745083	95-2-9	8LL33	A-11-51	P13	40	15										
4745083	95-2-9	8LL33	A-11-51	P14	40	10										
4745083	95-2-9	8LL33	A-11-51	P15	20	25			Y							
4745083	95-2-9	8LL33	A-11-51	P16	40	15										
4745083	95-2-9	8LL33	A-11-51	P17	40	10										
4745083	95-2-9	8LL33	A-11-51	P18												
4745083	95-2-9	8LL33	A-11-51	P19	60	10										
4745083	95-2-9	8LL33	A-11-51	P20	20	25	Y		Y							
4745083	95-2-9	8LL33	A-11-51	P21												
4745083	95-2-9	8LL33	A-11-51	P22	40	10										
4745083	95-2-9	8LL33	A-11-51	P23	40	10										
4745083	95-2-9	8LL33	A-11-51	P24	20	25			Y							
4745083	95-2-9	8LL33	A-11-51	P25	40	10										
4745083	95-2-9	8LL33	A-11-51	P26	40	15										
4745083	95-2-9	8LL33	A-11-51	P27												
4745083	95-2-9	8LL33	A-11-51	P28	30	20	Y		Y							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-2-9	8LL33					95-2-9	P07									
95-2-9	8LL33					95-2-9	P08									
95-2-9	8LL33					95-2-9	P09									
95-2-9	8LL33					95-2-9	P10									
95-2-9	8LL33					95-2-9	P11									
95-2-9	8LL33					95-2-9	P12									
95-2-9	8LL33					95-2-9	P13									
95-2-9	8LL33					95-2-9	P14									
95-2-9	8LL33					95-2-9	P15									
95-2-9	8LL33					95-2-9	P16									
95-2-9	8LL33					95-2-9	P17									
95-2-9	8LL33					95-2-9	P18									
95-2-9	8LL33					95-2-9	P19									
95-2-9	8LL33					95-2-9	P20									
95-2-9	8LL33					95-2-9	P21									
95-2-9	8LL33					95-2-9	P22									
95-2-9	8LL33					95-2-9	P23									
95-2-9	8LL33					95-2-9	P24									
95-2-9	8LL33					95-2-9	P25									
95-2-9	8LL33					95-2-9	P26									
95-2-9	8LL33					95-2-9	P27									
95-2-9	8LL33					95-2-9	P28									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							
95-2-9	8LL33							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744598	92-18-13	8LL37	A-4-101, ST 9	A01	43									1	1.36	1.13
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A01	20										0.7	0.58
4744598	92-18-13	8LL37	A-4-101, ST 9	A02	20									0.8	1	0.52
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A02	20									1.6		
4744598	92-18-13	8LL37	A-4-101, ST 9	A03	7		Y			Y				0.67	0.78	0.59
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A03	20									1.15	0.86	0.52
4744598	92-18-13	8LL37	A-4-101, ST 9	A04	40									1.18	0.92	
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A04	20									0.76	0.61	
4744598	92-18-13	8LL37	A-4-101, ST 9	A05	40									0.9	0.68	0.88

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37	1.01	0.89	1.31	1.33	92-18-13	A01	1.5	0.91							
92-18-13	8LL37	0.6				92-18-13	A01									
92-18-13	8LL37					92-18-13	A02									
92-18-13	8LL37					92-18-13	A02									
92-18-13	8LL37	0.52	0.62	0.59		92-18-13	A03									
92-18-13	8LL37					92-18-13	A03									
92-18-13	8LL37					92-18-13	A04									
92-18-13	8LL37					92-18-13	A04									
92-18-13	8LL37	0.8	0.88			92-18-13	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A05	40									0.68	0.55	0.94
4744598	92-18-13	8LL37	A-4-101, ST 9	A06	40									0.83	1.05	1.31
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A06	30									0.71	0.84	
4744598	92-18-13	8LL37	A-4-101, ST 9	A07	30									1.1	0.88	1.2
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A07	7		Y			Y				0.5	0.56	0.51
4744598	92-18-13	8LL37	A-4-101, ST 9	A08	9		Y			Y				0.38	0.4	0.48
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A08	20									0.68	1	
4744598	92-18-13	8LL37	A-4-101, ST 9	A09	60									0.71	0.75	0.49
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A09	0									1.08	0.75	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37					92-18-13	A05									
92-18-13	8LL37	0.88				92-18-13	A06									
92-18-13	8LL37					92-18-13	A06									
92-18-13	8LL37					92-18-13	A07									
92-18-13	8LL37	0.58	0.49			92-18-13	A07									
92-18-13	8LL37	0.55	0.67			92-18-13	A08									
92-18-13	8LL37					92-18-13	A08									
92-18-13	8LL37	0.72	0.74	0.485		92-18-13	A09									
92-18-13	8LL37					92-18-13	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744598	92-18-13	8LL37	A-4-101, ST 9	A10	16		Y	Y	Y					1.22	0.67	0.61
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A10	20									0.97	1.4	1.17
4744598	92-18-13	8LL37	A-4-101, ST 9	A11	11		Y		Y					0.35	0.48	0.51
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A11	20									0.55	0.97	0.95
4744598	92-18-13	8LL37	A-4-101, ST 9	A12	40									0.84	0.7	0.7
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A12	0									0.85	0.87	0.85
4744598	92-18-13	8LL37	A-4-101, ST 9	A13	40									0.59	1.03	0.28
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	A13	5		Y	Y		Y				0.45	0.31	0.48
4744598	92-18-13	8LL37	A-4-101, ST 9	A14	15		Y			Y				0.73	0.65	1.16

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37	0.95	0.74	0.555	0.81	92-18-13	A10									
92-18-13	8LL37					92-18-13	A10									
92-18-13	8LL37	0.51	0.5	0.595	0.66	92-18-13	A11	0.48								
92-18-13	8LL37					92-18-13	A11									
92-18-13	8LL37	1.06	1.39	1.545	1.25	92-18-13	A12	1.28	1.85	1.14						
92-18-13	8LL37	1.15				92-18-13	A12									
92-18-13	8LL37	0.83	0.94	0.745		92-18-13	A13									
92-18-13	8LL37	0.37				92-18-13	A13									
92-18-13	8LL37	0.6	0.67			92-18-13	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744598	92-18-13	8LL37	A-4-101, ST 9	A15	0									0.98	0.99	1.3
4744598	92-18-13	8LL37	A-4-101, ST 9	A16	0									1.43	1.42	
4744598	92-18-13	8LL37	A-4-101, ST 9	A17	40									0.79	0.67	0.6
4744598	92-18-13	8LL37	A-4-101, ST 9	A18	50									0.63	0.67	0.79
4744598	92-18-13	8LL37	A-4-101, ST 9	A19	20									0.86	1.06	0.74
4744598	92-18-13	8LL37	A-4-101, ST 9	A20	10					Y				0.34	0.49	0.38
4744598	92-18-13	8LL37	A-4-101, ST 9	A21	0									0.68	0.32	0.46
4744598	92-18-13	8LL37	A-4-101, ST 9	A22	0									1.26	1.32	0.98

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37	0.47				92-18-13	A15									
92-18-13	8LL37					92-18-13	A16									
92-18-13	8LL37	0.73	0.58			92-18-13	A17									
92-18-13	8LL37	0.61	0.7			92-18-13	A18									
92-18-13	8LL37	0.8				92-18-13	A19									
92-18-13	8LL37	0.43	0.51	0.545	0.57	92-18-13	A20	0.45								
92-18-13	8LL37	1.04	1.33	0.625		92-18-13	A21									
92-18-13	8LL37					92-18-13	A22									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744598	92-18-13	8LL37	A-4-101, ST 9	A23	0									1.01		
4744598	92-18-13	8LL37	A-4-101, ST 9	A24	16									0.74	0.73	0.42
4744598	92-18-13	8LL37	A-4-101, ST 9	A25	10					Y				0.49	0.6	0.63
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	L01	10		Y			Y				1.52		
4744598	92-18-13	8LL37	A-4-101, ST 9	P01	0											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P01	6									0.6	0.63	0.53
4744598	92-18-13	8LL37	A-4-101, ST 9	P02	20											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P02	12											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P03	86									1.45		
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P04	20									2.11	1.6	
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P05	41									0.28	0.59	0.26

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37					92-18-13	A23									
92-18-13	8LL37	0.79	0.58	0.625	0.76	92-18-13	A24	0.64	0.77							
92-18-13	8LL37	0.62				92-18-13	A25									
92-18-13	8LL37					92-18-13	L01									
92-18-13	8LL37					92-18-13	P01									
92-18-13	8LL37	0.52				92-18-13	P01									
92-18-13	8LL37					92-18-13	P02									
92-18-13	8LL37					92-18-13	P02									
92-18-13	8LL37					92-18-13	P03									
92-18-13	8LL37					92-18-13	P04									
92-18-13	8LL37	0.26	0.2	0.422		92-18-13	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P06	467									1.31	0.49	0.22
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P07	8									0.64		
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P08	154									0.2	0.35	0.2
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P09	0											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P10	13									0.27	0.37	
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P11	10									0.45		
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	P12	111									0.27		
4744598	92-18-13	8LL37	A-4-101, ST 9	R01	10											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	R01	7											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	R01	7		Y	Y								
4744598	92-18-13	8LL37	A-4-101, ST 9	R02	10											
4744599	92-18-13	8LL37	A-4-101 (SW quad), ST 9	R02	5											

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-13	8LL37	1.07	0.33	0.541	0.56	92-18-13	P06									
92-18-13	8LL37					92-18-13	P07									
92-18-13	8LL37					92-18-13	P08									
92-18-13	8LL37					92-18-13	P09									
92-18-13	8LL37					92-18-13	P10									
92-18-13	8LL37					92-18-13	P11									
92-18-13	8LL37					92-18-13	P12									
92-18-13	8LL37					92-18-13	R01									
92-18-13	8LL37					92-18-13	R01									
92-18-13	8LL37					92-18-13	R01									
92-18-13	8LL37					92-18-13	R02									
92-18-13	8LL37					92-18-13	R02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							
92-18-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744603	92-18-16	8LL37	A-4-101, ST 9	A01	10		Y			Y				0.37	0.55	0.63
4744604	92-18-16	8LL37	A-4-101, ST 9	A01	9									0.69	0.64	0.89
4744605	92-18-16	8LL37	A-4-101, ST 9	A01	20	25								0.94	0.6	0.69
4744603	92-18-16	8LL37	A-4-101, ST 9	A02	11		Y			Y				0.96	0.79	0.54
4744604	92-18-16	8LL37	A-4-101, ST 9	A02	10		Y		Y					0.42	0.56	0.42
4744605	92-18-16	8LL37	A-4-101, ST 9	A02	0											
4744603	92-18-16	8LL37	A-4-101, ST 9	A03	9		Y			Y				0.32	0.57	0.52
4744605	92-18-16	8LL37	A-4-101, ST 9	A03	40	20								0.91	0.77	0.72
4744603	92-18-16	8LL37	A-4-101, ST 9	A04	60									0.55	0.77	0.44
4744605	92-18-16	8LL37	A-4-101, ST 9	A04	40	10								1.21	1.7	1.28
4744603	92-18-16	8LL37	A-4-101, ST 9	A05	15		Y			Y				0.56	0.78	0.7
4744605	92-18-16	8LL37	A-4-101, ST 9	A05	20	20								0.6	0.52	0.74

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16	8LL37	0.44	0.56	0.75		92-18-16	A01									
92-18-16	8LL37	0.7				92-18-16	A01									
92-18-16	8LL37	0.47				92-18-16	A01									
92-18-16	8LL37					92-18-16	A02									
92-18-16	8LL37	0.48	0.62	0.775		92-18-16	A02									
92-18-16	8LL37					92-18-16	A02									
92-18-16	8LL37					92-18-16	A03									
92-18-16	8LL37					92-18-16	A03									
92-18-16	8LL37					92-18-16	A04									
92-18-16	8LL37					92-18-16	A04									
92-18-16	8LL37	0.6				92-18-16	A05									
92-18-16	8LL37					92-18-16	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744603	92-18-16	8LL37	A-4-101, ST 9	A06	15									0.57	0.72	0.32
4744605	92-18-16	8LL37	A-4-101, ST 9	A06	40	10								0.85	1.32	0.8
4744603	92-18-16	8LL37	A-4-101, ST 9	A07	40									1.33	1.07	
4744605	92-18-16	8LL37	A-4-101, ST 9	A07	40	10								0.85	0.89	0.85
4744603	92-18-16	8LL37	A-4-101, ST 9	A08	15		Y			Y				0.59	0.82	0.58
4744605	92-18-16	8LL37	A-4-101, ST 9	A08	40	10								1.36	0.97	
4744603	92-18-16	8LL37	A-4-101, ST 9	A09	80									2.31		
4744605	92-18-16	8LL37	A-4-101, ST 9	A09	40	12								0.43	0.79	0.57
4744603	92-18-16	8LL37	A-4-101, ST 9	A10	60									1.71		
4744605	92-18-16	8LL37	A-4-101, ST 9	A10	9		Y		Y					0.56	0.61	0.56
4744603	92-18-16	8LL37	A-4-101, ST 9	A11	0									1.11	1.32	
4744605	92-18-16	8LL37	A-4-101, ST 9	A11	40	10								0.9	0.76	0.8
4744603	92-18-16	8LL37	A-4-101, ST 9	A12	10									1.12	0.89	
4744605	92-18-16	8LL37	A-4-101, ST 9	A12	20	25	Y		Y					0.77	0.84	0.7
4744603	92-18-16	8LL37	A-4-101, ST 9	A13	20		Y			Y				0.49	0.78	0.49
4744605	92-18-16	8LL37	A-4-101, ST 9	A13	10	50	Y			Y				0.34	0.44	0.39
4744603	92-18-16	8LL37	A-4-101, ST 9	A14	15									0.57	0.58	0.72
4744605	92-18-16	8LL37	A-4-101, ST 9	A14	30	25								1.15	0.87	0.95
4744603	92-18-16	8LL37	A-4-101, ST 9	A15	0									1.13		
4744605	92-18-16	8LL37	A-4-101, ST 9	A15	10	25	Y			Y				0.46	0.58	0.4
4744603	92-18-16	8LL37	A-4-101, ST 9	A16	20									0.65	0.82	
4744605	92-18-16	8LL37	A-4-101, ST 9	A16	15	25	Y			Y				0.29	0.35	0.54
4744605	92-18-16	8LL37	A-4-101, ST 9	A17	30	10								1.35	1.09	0.86
4744604	92-18-16	8LL37	A-4-101, ST 9	P01	80											

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16	8LL37	0.81				92-18-16	A06									
92-18-16	8LL37	1.48				92-18-16	A06									
92-18-16	8LL37					92-18-16	A07									
92-18-16	8LL37	0.63				92-18-16	A07									
92-18-16	8LL37	0.5				92-18-16	A08									
92-18-16	8LL37					92-18-16	A08									
92-18-16	8LL37					92-18-16	A09									
92-18-16	8LL37	0.43	0.78			92-18-16	A09									
92-18-16	8LL37					92-18-16	A10									
92-18-16	8LL37	0.62	0.46	0.475		92-18-16	A10									
92-18-16	8LL37					92-18-16	A11									
92-18-16	8LL37	0.53				92-18-16	A11									
92-18-16	8LL37					92-18-16	A12									
92-18-16	8LL37	0.69				92-18-16	A12									
92-18-16	8LL37	0.5	0.52	0.605		92-18-16	A13									
92-18-16	8LL37	0.49	0.69	0.449	0.47	92-18-16	A13	0.65								
92-18-16	8LL37					92-18-16	A14									
92-18-16	8LL37	0.92	0.97			92-18-16	A14									
92-18-16	8LL37					92-18-16	A15									
92-18-16	8LL37	0.66				92-18-16	A15									
92-18-16	8LL37					92-18-16	A16									
92-18-16	8LL37	0.76	0.97	0.99		92-18-16	A16									
92-18-16	8LL37	0.83				92-18-16	A17									
92-18-16	8LL37					92-18-16	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744605	92-18-16	8LL37	A-4-101, ST 9	P01	40	20								1.04	0.79	
4744604	92-18-16	8LL37	A-4-101, ST 9	P02	60											
4744605	92-18-16	8LL37	A-4-101, ST 9	P02	40	20								1.75	1.93	
4744604	92-18-16	8LL37	A-4-101, ST 9	P03	20											
4744605	92-18-16	8LL37	A-4-101, ST 9	P03	20	25			Y					3.44	1.42	0.8
4744604	92-18-16	8LL37	A-4-101, ST 9	P04	20											
4744605	92-18-16	8LL37	A-4-101, ST 9	P04	0									2.95	2.7	
4744604	92-18-16	8LL37	A-4-101, ST 9	P05	20											
4744605	92-18-16	8LL37	A-4-101, ST 9	P05	0											
4744604	92-18-16	8LL37	A-4-101, ST 9	P06	60											
4744605	92-18-16	8LL37	A-4-101, ST 9	P06	40	15								0.96	1.13	0.39
4744604	92-18-16	8LL37	A-4-101, ST 9	P07	40											
4744605	92-18-16	8LL37	A-4-101, ST 9	P07	40	8								1.45		
4744604	92-18-16	8LL37	A-4-101, ST 9	P08	40											
4744605	92-18-16	8LL37	A-4-101, ST 9	P08	20	25			Y					0.54	0.59	0.84
4744604	92-18-16	8LL37	A-4-101, ST 9	P09	60											
4744605	92-18-16	8LL37	A-4-101, ST 9	P09	0											
4744604	92-18-16	8LL37	A-4-101, ST 9	P10	20											
4744605	92-18-16	8LL37	A-4-101, ST 9	R01	7	50	Y			Y						
4744605	92-18-16	8LL37	A-4-101, ST 9	R02	20	100	Y			Y						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16	8LL37					92-18-16	P01									
92-18-16	8LL37					92-18-16	P02									
92-18-16	8LL37					92-18-16	P02									
92-18-16	8LL37					92-18-16	P03									
92-18-16	8LL37					92-18-16	P03									
92-18-16	8LL37					92-18-16	P04									
92-18-16	8LL37					92-18-16	P04									
92-18-16	8LL37					92-18-16	P05									
92-18-16	8LL37					92-18-16	P05									
92-18-16	8LL37					92-18-16	P06									
92-18-16	8LL37					92-18-16	P06									
92-18-16	8LL37					92-18-16	P07									
92-18-16	8LL37					92-18-16	P07									
92-18-16	8LL37					92-18-16	P08									
92-18-16	8LL37	0.65	0.59			92-18-16	P08									
92-18-16	8LL37					92-18-16	P09									
92-18-16	8LL37					92-18-16	P09									
92-18-16	8LL37					92-18-16	P10									
92-18-16	8LL37					92-18-16	R01									
92-18-16	8LL37					92-18-16	R02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							
92-18-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A01	40									0.61	0.81	0.83
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A02	0									0.9	1.02	1.34
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A03	20					Y				0.64	0.86	0.71
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A04	35									0.97	0.56	0.69
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A05	7		Y			Y				0.48	0.5	0.49
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A06	6		Y			Y				0.38	0.54	0.29

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.8	0.83			92-18-16, 92-24-18, 92-28-15, 92-32-24	A01									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	A02									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.64				92-18-16, 92-24-18, 92-28-15, 92-32-24	A03									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.67	0.95	0.615	0.74	92-18-16, 92-24-18, 92-28-15, 92-32-24	A04	0.62	0.7	0.65	0.84					
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.35				92-18-16, 92-24-18, 92-28-15, 92-32-24	A05									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.28	0.65			92-18-16, 92-24-18, 92-28-15, 92-32-24	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A07	7		Y			Y				0.29	0.37	
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A08	10					Y				0.54	0.72	0.4
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	A09	10					Y				0.58	0.38	0.55
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	L01	20									0.72	0.53	
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	P01	60									1.03	1.07	
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	P02	0											

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	A07									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.5				92-18-16, 92-24-18, 92-28-15, 92-32-24	A08									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	0.46	0.86	0.765		92-18-16, 92-24-18, 92-28-15, 92-32-24	A09									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	L01									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	P01									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	P03	0											
4744609	92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37	A-4,8,12,16-101 ST 9	P04	0									3.24		
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A01	13		Y			Y				0.18	0.21	0.21
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A01	20	15								1.37	0.44	0.79
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A02	15		Y			Y				0.44	0.55	0.49
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A02	10	25	Y			Y				0.28	0.51	0.43
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A03	40									0.56	1.63	0.51
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A03	15	25				Y				0.72	0.64	0.73
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A04	30	25	Y			Y			Y	0.75	0.6	0.75
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A04	40	10								0.43	0.76	1.02
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A05	20	25	Y			Y				0.66	0.63	0.54
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A05	40	20								0.64	0.66	0.68

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	P03									
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37					92-18-16, 92-24-18, 92-28-15, 92-32-24	P04									
92-18-17	8LL37	0.19	0.2	0.235	0.25	92-18-17	A01									
92-18-17	8LL37	0.65				92-18-17	A01									
92-18-17	8LL37	0.38	0.72	0.64	0.67	92-18-17	A02	0.82	0.67							
92-18-17	8LL37	0.3	0.27	0.327		92-18-17	A02									
92-18-17	8LL37	1.02	1.4	1.825		92-18-17	A03									
92-18-17	8LL37	0.71				92-18-17	A03									
92-18-17	8LL37	0.77	0.72	0.6	0.91	92-18-17	A04									
92-18-17	8LL37					92-18-17	A04									
92-18-17	8LL37	0.83	0.62	0.857		92-18-17	A05									
92-18-17	8LL37	0.9	1.13	1.009		92-18-17	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-16, 92-24-18, 92-28-15, 92-32-24	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A06	0									0.91	0.83	0.57
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A06	20	25				Y				0.6	0.82	0.61
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A07	40									1.6	0.62	0.64
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A07	5		Y			Y				0.42	0.42	0.7
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A08	40	10							Y	1.21	1.31	1.28
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A08	15	25				Y				0.45	0.7	0.75
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A09	20	25	Y			Y				0.66	0.6	0.47
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A09	40	5								0.93	0.88	0.87
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A10	20	25	Y			Y				0.86	0.66	0.94
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A10	40	5				Y				1.31	1.2	0.91
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A11	60									0.88	1.01	0.6
4744623	92-18-17	8LL37	A-4-102, ST 9-10	A11	40	5							Y	1.13	1.1	0.9
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A12	10	10							Y	1.32	1.41	0.85
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A13	20	25				Y				0.54	0.46	0.56
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A14	20	30				Y				0.64	0.73	0.66

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-17	8LL37	0.71	1.06	0.501	0.99	92-18-17	A06	1.14								
92-18-17	8LL37	0.68	0.45	0.417		92-18-17	A06									
92-18-17	8LL37	1.44				92-18-17	A07									
92-18-17	8LL37					92-18-17	A07									
92-18-17	8LL37	0.86				92-18-17	A08									
92-18-17	8LL37	0.79	0.67			92-18-17	A08									
92-18-17	8LL37	0.59	0.4	0.716		92-18-17	A09									
92-18-17	8LL37					92-18-17	A09									
92-18-17	8LL37	0.86				92-18-17	A10									
92-18-17	8LL37	1.29	1.05			92-18-17	A10									
92-18-17	8LL37	0.4	0.93	1.168		92-18-17	A11									
92-18-17	8LL37	1.09	0.8			92-18-17	A11									
92-18-17	8LL37	1.14				92-18-17	A12									
92-18-17	8LL37	0.86	0.59			92-18-17	A13									
92-18-17	8LL37	0.96	0.82	0.974		92-18-17	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A15	40	10								1.01	0.79	0.79
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A16	40	10							Y	0.88	0.81	0.53
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	A17	20	25				Y				0.63	0.87	0.76
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P01	40									0.98	1.56	0.98
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P02	80									1.2	0.73	1.16
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P03	40									0.71	0.87	0.77
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P04	40									0.99	1.5	0.92
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P05	40									0.87	0.75	0.2
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P06	40									0.98	1.23	0.44
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	P07	40									1.25	0.82	
4744623	92-18-17	8LL37	A-4-102, ST 9-10	P1	60	15								0.6		
4744623	92-18-17	8LL37	A-4-102, ST 9-10	P2	60	15								0.14	0.19	0.25
4744623	92-18-17	8LL37	A-4-102, ST 9-10	P3	60	10								0.34		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-17	8LL37	0.96	1.06			92-18-17	A15									
92-18-17	8LL37	0.98	0.67	0.91		92-18-17	A16									
92-18-17	8LL37	1.19	1			92-18-17	A17									
92-18-17	8LL37					92-18-17	P01									
92-18-17	8LL37	1.77	1.04			92-18-17	P02									
92-18-17	8LL37	0.55	0.31	0.284		92-18-17	P03									
92-18-17	8LL37					92-18-17	P04									
92-18-17	8LL37	0.08	0.2	0.319	0.25	92-18-17	P05									
92-18-17	8LL37					92-18-17	P06									
92-18-17	8LL37					92-18-17	P07									
92-18-17	8LL37					92-18-17	P1									
92-18-17	8LL37					92-18-17	P2									
92-18-17	8LL37					92-18-17	P3									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							
92-18-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744622	92-18-17	8LL37	A-4-102, NE quad, ST 9-10	R01	15											
4744623	92-18-17	8LL37	A-4-102, ST 9-10	R1	15	15										
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A01	10		Y			Y				0.52	0.52	0.49
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A01	11	50	Y			Y				0.4	0.36	0.66
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A02	40								Y	0.9	0.53	0.77
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A02	12	100	Y			Y				0.79	0.62	0.35
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A03	20									0.82	0.89	0.48
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A03	20	5								1.21	0.97	1.07
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A04	13		Y			Y				0.46	0.54	0.44
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A04	40	12								0.9	0.94	0.85
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A05	0									0.96	1.16	1.17
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A05	0								Y	0.67	0.68	0.83
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A06	20					Y				0.67	0.59	0.61

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-17	8LL37					92-18-17	R01									
92-18-17	8LL37					92-18-17	R1									
92-18-18	8LL37	0.5	0.5	0.663	0.44	92-18-18	A01									
92-18-18	8LL37	0.65				92-18-18	A01									
92-18-18	8LL37	0.89	0.48	0.746	0.73	92-18-18	A02	0.71								
92-18-18	8LL37	0.6	0.52	0.533	0.5	92-18-18	A02	0.53								
92-18-18	8LL37	0.61	0.71	0.47	0.5	92-18-18	A03									
92-18-18	8LL37	0.98	0.84			92-18-18	A03									
92-18-18	8LL37	0.37				92-18-18	A04									
92-18-18	8LL37	0.77	1	0.879	1.35	92-18-18	A04	0.74								
92-18-18	8LL37	1				92-18-18	A05									
92-18-18	8LL37	0.77				92-18-18	A05									
92-18-18	8LL37	0.69	0.76	0.624		92-18-18	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-17	8LL37							
92-18-17	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A06	40	10										
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A07	15		Y		Y					0.29	0.45	0.28
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A07	40	12							Y	0.71	0.52	0.48
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A08	10		Y			Y				0.45	0.49	0.46
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A08	20	25				Y				0.66	0.67	0.9
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A09	40									0.55	0.66	0.67
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A09	20	25			Y					0.7	0.63	0.76
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A10	40									0.67	0.74	0.55
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A10	0									0.9	1.02	0.8
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A11	8		Y							0.47	0.4	0.63
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A11	0									0.75	0.95	1.29
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A12	3		Y			Y				0.46	0.39	0.26

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-18	8LL37					92-18-18	A06									
92-18-18	8LL37	0.37	0.47	0.562	0.55	92-18-18	A07									
92-18-18	8LL37	0.44	0.81	0.543	0.65	92-18-18	A07	0.87								
92-18-18	8LL37	0.53	0.52			92-18-18	A08									
92-18-18	8LL37					92-18-18	A08									
92-18-18	8LL37	0.7	1.12			92-18-18	A09									
92-18-18	8LL37	1	0.93			92-18-18	A09									
92-18-18	8LL37	0.52	0.58			92-18-18	A10									
92-18-18	8LL37	0.84				92-18-18	A10									
92-18-18	8LL37					92-18-18	A11									
92-18-18	8LL37					92-18-18	A11									
92-18-18	8LL37					92-18-18	A12									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A12	30	10								1.38	1.27	1.09
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A13	40									0.88	1.07	1.2
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A13	20	30				Y				0.78	0.81	0.43
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A14	20					Y				0.75	0.8	0.83
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A14	13	100	Y		Y					0.57	0.73	0.67
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A15	20								Y	0.81	0.75	
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A15	8	100	Y		Y					0.49	0.35	0.5
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A16	15									0.49	0.44	0.49
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A16	0									0.79	0.98	
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A17	55									0.94	1.21	0.65
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A17	20	25				Y				1.24	0.82	0.66

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-18	8LL37	1.82	0.71	0.87	0.99	92-18-18	A12									
92-18-18	8LL37	0.82	0.68			92-18-18	A13									
92-18-18	8LL37	0.36	0.46	0.787	0.48	92-18-18	A13	1.04								
92-18-18	8LL37	1.05				92-18-18	A14									
92-18-18	8LL37	0.84	0.76	0.297	0.42	92-18-18	A14									
92-18-18	8LL37					92-18-18	A15									
92-18-18	8LL37					92-18-18	A15									
92-18-18	8LL37	0.54	0.27			92-18-18	A16									
92-18-18	8LL37					92-18-18	A16									
92-18-18	8LL37	1.12	0.84	0.869	1.13	92-18-18	A17	0.78	0.59	0.61	0.64					
92-18-18	8LL37	0.62	0.75			92-18-18	A17									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744630	92-18-18	8LL37	A-4-102, ST 9-10	A18	0									0.96	0.96	
4744630	92-18-18	8LL37	A-4-102, ST 9-10	P01	8		Y									
4744630	92-18-18	8LL37	A-4-102, ST 9-10	P01	40	10								0.42	0.44	0.83
4744630	92-18-18	8LL37	A-4-102, ST 9-10	P02	40	10								0.69	1.05	0.89
4744630	92-18-18	8LL37	A-4-102, ST 9-10	P03	40	5								0.91	1.58	0.83
4744630	92-18-18	8LL37	A-4-102, ST 9-10	P04	60	10								3	0.45	2.34
4744630	92-18-18	8LL37	A-4-102, ST 9-10	R01	5		Y			NA						
4744630	92-18-18	8LL37	A-4-102, ST 9-10	R02	12		Y			NA						
4744630	92-18-18	8LL37	A-4-102, ST 9-10	R03	15											
4744630	92-18-18	8LL37	A-4-102, ST 9-10	R04	5		Y			Y						
4744630	92-18-18	8LL37	A-4-102, ST 9-10	R1	14	70				Y						
4744578	92-18-2	8LL37	A-4-90, ST 2	A01	40	5								1	1.57	1.26
4744578	92-18-2	8LL37	A-4-90, ST 2	A02	6	100	Y		Y					0.35	0.39	0.51
4744578	92-18-2	8LL37	A-4-90, ST 2	A03	20	5								0.59	0.65	0.53
4744578	92-18-2	8LL37	A-4-90, ST 2	A04	40	5								0.97	0.86	1.54
4744578	92-18-2	8LL37	A-4-90, ST 2	A05	40	10								0.42	0.64	0.78
4744578	92-18-2	8LL37	A-4-90, ST 2	A06	40	10								1.1	0.71	
4744578	92-18-2	8LL37	A-4-90, ST 2	A07	40	10								0.89	1.12	1.35

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-18	8LL37					92-18-18	A18									
92-18-18	8LL37					92-18-18	P01									
92-18-18	8LL37	0.93	0.72	0.328	0.43	92-18-18	P01									
92-18-18	8LL37	0.28				92-18-18	P02									
92-18-18	8LL37	1.04	0.28	0.63	0.7	92-18-18	P03	0.65								
92-18-18	8LL37	1.53	0.57	0.435		92-18-18	P04									
92-18-18	8LL37					92-18-18	R01									
92-18-18	8LL37					92-18-18	R02									
92-18-18	8LL37					92-18-18	R03									
92-18-18	8LL37					92-18-18	R04									
92-18-18	8LL37					92-18-18	R1									
92-18-2	8LL37	1.36	1.18			92-18-2	A01									
92-18-2	8LL37	0.51	0.71			92-18-2	A02									
92-18-2	8LL37	0.68				92-18-2	A03									
92-18-2	8LL37	1.16	1.22			92-18-2	A04									
92-18-2	8LL37	0.41	0.72	0.612		92-18-2	A05									
92-18-2	8LL37					92-18-2	A06									
92-18-2	8LL37	0.77				92-18-2	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-18	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744578	92-18-2	8LL37	A-4-90, ST 2	A08	6	100	Y		Y					0.36	0.35	0.36
4744578	92-18-2	8LL37	A-4-90, ST 2	A09	30	10								1.24	1.23	1.05
4744578	92-18-2	8LL37	A-4-90, ST 2	A10	50	5								0.56	0.9	0.66
4744578	92-18-2	8LL37	A-4-90, ST 2	A11	40	10								0.75	1.04	0.73
4744578	92-18-2	8LL37	A-4-90, ST 2	A12	20	20								0.96	1.29	
4744578	92-18-2	8LL37	A-4-90, ST 2	A13	40	10								0.42	0.69	0.87
4744578	92-18-2	8LL37	A-4-90, ST 2	A14	40	10							Y	1.04	1.19	1.46
4744578	92-18-2	8LL37	A-4-90, ST 2	A15	40	5							Y	0.4	1.38	1.22
4744578	92-18-2	8LL37	A-4-90, ST 2	A16	0	0								1.05	1.05	0.93
4744578	92-18-2	8LL37	A-4-90, ST 2	A17	0	0								1.14	0.76	0.66
4744578	92-18-2	8LL37	A-4-90, ST 2	A18	40	10								0.89	0.44	0.64
4744578	92-18-2	8LL37	A-4-90, ST 2	A19	40	10								0.63	0.87	0.54
4744578	92-18-2	8LL37	A-4-90, ST 2	A20	30	10								1.16	1.13	0.98
4744579	92-18-2	8LL37	A-4-90, ST 2	cf. P01-02	0	0										
4744578	92-18-2	8LL37	A-4-90, ST 2	P01	40	5								1.48	1.23	
4744578	92-18-2	8LL37	A-4-90, ST 2	P02	0	0										
4744578	92-18-2	8LL37	A-4-90, ST 2	P03	0	0										
4744578	92-18-2	8LL37	A-4-90, ST 2	P04	40	10								0.91	1.22	
4744578	92-18-2	8LL37	A-4-90, ST 2	P05	40	5						Y		0.32	0.31	0.31
4744578	92-18-2	8LL37	A-4-90, ST 2	P06	30	20								1.27		
4744578	92-18-2	8LL37	A-4-90, ST 2	P07	0	0										
4744578	92-18-2	8LL37	A-4-90, ST 2	P08	30	10								0.27	0.36	0.41

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-2	8LL37	0.39	0.38			92-18-2	A08									
92-18-2	8LL37					92-18-2	A09									
92-18-2	8LL37					92-18-2	A10									
92-18-2	8LL37					92-18-2	A11									
92-18-2	8LL37					92-18-2	A12									
92-18-2	8LL37	1.19	0.77			92-18-2	A13									
92-18-2	8LL37					92-18-2	A14									
92-18-2	8LL37					92-18-2	A15									
92-18-2	8LL37	0.91				92-18-2	A16									
92-18-2	8LL37	0.57	0.83			92-18-2	A17									
92-18-2	8LL37	0.53				92-18-2	A18									
92-18-2	8LL37	0.53				92-18-2	A19									
92-18-2	8LL37	1.31				92-18-2	A20									
92-18-2	8LL37					92-18-2	cf. P01-02									
92-18-2	8LL37					92-18-2	P01									
92-18-2	8LL37					92-18-2	P02									
92-18-2	8LL37					92-18-2	P03									
92-18-2	8LL37					92-18-2	P04									
92-18-2	8LL37	1.12				92-18-2	P05									
92-18-2	8LL37					92-18-2	P06									
92-18-2	8LL37					92-18-2	P07									
92-18-2	8LL37	0.19	0.31	0.397	0.45	92-18-2	P08	0.2	0.24	0.31	0.27	0.5	0.19	0.13		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744578	92-18-2	8LL37	A-4-90, ST 2	P09	40	5								0.82	0.72	
4744578	92-18-2	8LL37	A-4-90, ST 2	P10	40	5								2.88		
4744578	92-18-2	8LL37	A-4-90, ST 2	P11	40	5								0.5	0.22	0.38
4744578	92-18-2	8LL37	A-4-90, ST 2	P12	40	10										
4744578	92-18-2	8LL37	A-4-90, ST 2	P13	40	10								0.4	0.3	0.21
4744578	92-18-2	8LL37	A-4-90, ST 2	P14	40	5										
4744578	92-18-2	8LL37	A-4-90, ST 2	P15	30	20								1.44		
4744578	92-18-2	8LL37	A-4-90, ST 2	P16	20	10						Y		0.36	0.53	0.33
4744578	92-18-2	8LL37	A-4-90, ST 2	P17	30	20								0.8	0.85	0.79
4744578	92-18-2	8LL37	A-4-90, ST 2	P18	30	20						Y		0.4	0.26	0.19
4744578	92-18-2	8LL37	A-4-90, ST 2	P19	40	5										
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2	A01	40	15								0.92	1.2	1.02
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2	A02	40	10								1.02	0.78	1.38
4744580	92-18-2-1	8LL37	A-4-90-1, ST 2	A03	40	5								0.93	0.92	
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A01	40	20								0.75	1.05	0.88
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A02	20	25								1.12	0.97	1.17
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A03	40	10								1.14	0.84	0.98
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A04	40	10								0.83	0.85	0.59
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A05	40	10								0.88	0.57	1
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A06	0	0								0.87	1.18	0.56
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A07	40	10								0.94	0.56	0.91
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A08	0	0								1.01	0.88	0.86
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A09	40	10								1.28	1.2	1.11
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A10	0	0								0.97	0.6	0.92

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-2	8LL37					92-18-2	P09									
92-18-2	8LL37					92-18-2	P10									
92-18-2	8LL37	0.4	0.64			92-18-2	P11									
92-18-2	8LL37					92-18-2	P12									
92-18-2	8LL37	0.34	0.24	0.651	0.17	92-18-2	P13	0.46	0.67							
92-18-2	8LL37					92-18-2	P14									
92-18-2	8LL37					92-18-2	P15									
92-18-2	8LL37	0.49	0.57	0.118	0.12	92-18-2	P16	0.42	0.17	0.67	0.47					
92-18-2	8LL37					92-18-2	P17									
92-18-2	8LL37	0.11	0.53	0.743		92-18-2	P18									
92-18-2	8LL37					92-18-2	P19									
92-18-2-1	8LL37	1.61	0.87			92-18-2-1	A01									
92-18-2-1	8LL37	0.57	1.2			92-18-2-1	A02									
92-18-2-1	8LL37					92-18-2-1	A03									
92-18-2-2	8LL37	0.67	0.88	1.048		92-18-2-2	A01									
92-18-2-2	8LL37	0.95	0.86			92-18-2-2	A02									
92-18-2-2	8LL37	0.95	0.52	0.707		92-18-2-2	A03									
92-18-2-2	8LL37	0.44	0.63			92-18-2-2	A04									
92-18-2-2	8LL37	1.14	0.47	0.572		92-18-2-2	A05									
92-18-2-2	8LL37	0.5	1.11			92-18-2-2	A06									
92-18-2-2	8LL37	1.29				92-18-2-2	A07									
92-18-2-2	8LL37					92-18-2-2	A08									
92-18-2-2	8LL37					92-18-2-2	A09									
92-18-2-2	8LL37	1.16				92-18-2-2	A10									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2	8LL37							
92-18-2-1	8LL37							
92-18-2-1	8LL37							
92-18-2-1	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A11	40	5								1.33	1.05	1.21
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A12	0	0								0.48	0.32	0.39
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A13	0	0								0.91	0.84	0.64
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A14	40	5								0.85	0.99	0.53
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A15	20	10								0.38	0.47	0.46
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A16	0	0								1.1	0.96	
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A17	0	0								0.97	0.59	0.48
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A18	0	0								0.64	0.6	0.58
4744581	92-18-2-2	8LL37	A-4-90-2, ST 2	A19	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A01	40	5								1	1.02	
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A02	40	10								0.87	1.15	0.91
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A03	50	10								1.26	0.87	1.05
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A04	40	10								1.09	1.41	1.26
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A05	40	10								1.02	0.7	0.48
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A06	40	5								0.94	1.05	0.93
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A07	60	5								0.73	0.66	1.13
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A08	40	5								1.17	1.12	1.27
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A09	30	5								1.27	0.83	0.82
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A10	30	5								0.97	0.79	1.35
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A11	40	10								0.79	0.59	0.77
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A12	40	5								0.93	0.99	0.9
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A13	40	5								0.97	0.56	0.64
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A14	20	10								1.03	0.9	1.04
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A15	40	5								0.77	0.78	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-2-2	8LL37	1.15				92-18-2-2	A11									
92-18-2-2	8LL37	0.62	0.52	0.667		92-18-2-2	A12									
92-18-2-2	8LL37	1.09	0.65			92-18-2-2	A13									
92-18-2-2	8LL37	0.82	0.87			92-18-2-2	A14									
92-18-2-2	8LL37	0.57	0.62	0.509	0.62	92-18-2-2	A15	0.71								
92-18-2-2	8LL37					92-18-2-2	A16									
92-18-2-2	8LL37	0.47				92-18-2-2	A17									
92-18-2-2	8LL37					92-18-2-2	A18									
92-18-2-2	8LL37					92-18-2-2	A19									
92-18-2-3	8LL37					92-18-2-3	A01									
92-18-2-3	8LL37	0.42	0.58			92-18-2-3	A02									
92-18-2-3	8LL37	1.12	0.77	0.958	1.16	92-18-2-3	A03									
92-18-2-3	8LL37	0.8	1.06			92-18-2-3	A04									
92-18-2-3	8LL37	0.46	0.8	0.377		92-18-2-3	A05									
92-18-2-3	8LL37	0.84				92-18-2-3	A06									
92-18-2-3	8LL37	0.41				92-18-2-3	A07									
92-18-2-3	8LL37					92-18-2-3	A08									
92-18-2-3	8LL37					92-18-2-3	A09									
92-18-2-3	8LL37					92-18-2-3	A10									
92-18-2-3	8LL37	0.73				92-18-2-3	A11									
92-18-2-3	8LL37	1.01				92-18-2-3	A12									
92-18-2-3	8LL37	0.35				92-18-2-3	A13									
92-18-2-3	8LL37	0.71	0.51	0.714		92-18-2-3	A14									
92-18-2-3	8LL37					92-18-2-3	A15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-2	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A16	20	25								0.58	0.96	0.83
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A17	40	2								0.75	1.16	0.6
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A18	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A19	30	10								0.75	1	0.74
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A20	40	10								1.13	1.09	1.29
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A21	40	5								1.77		
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A22	0	0								0.86	0.67	0.69
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A23	40	10								1.22	0.93	0.68
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A24	40	10								1.32	0.97	
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A25	0	0								0.62	0.57	0.43
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A26	40	5								0.9	0.92	0.58
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A27	40	5								1.05	1.25	
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A28	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A29	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A30	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A31	40	5								1.39	1.22	1.01
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A32	30	5								0.82	1.02	
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	A33	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	P01	20	10								0.98		
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	P02	20	10								0.87		
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	P03	60	5										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	P04	0	0										
4744582	92-18-2-3	8LL37	A-4-90-3, ST 2	P05	0	0										
4744583	92-18-3	8LL37	A-4-91, ST 3	A01	40	10								0.75	1.37	1.13

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-2-3	8LL37					92-18-2-3	A16									
92-18-2-3	8LL37	0.83	0.91	0.901		92-18-2-3	A17									
92-18-2-3	8LL37					92-18-2-3	A18									
92-18-2-3	8LL37	0.81				92-18-2-3	A19									
92-18-2-3	8LL37	0.72				92-18-2-3	A20									
92-18-2-3	8LL37					92-18-2-3	A21									
92-18-2-3	8LL37	0.76	0.88			92-18-2-3	A22									
92-18-2-3	8LL37	0.77				92-18-2-3	A23									
92-18-2-3	8LL37					92-18-2-3	A24									
92-18-2-3	8LL37	0.8	0.56			92-18-2-3	A25									
92-18-2-3	8LL37	1.08				92-18-2-3	A26									
92-18-2-3	8LL37					92-18-2-3	A27									
92-18-2-3	8LL37					92-18-2-3	A28									
92-18-2-3	8LL37					92-18-2-3	A29									
92-18-2-3	8LL37					92-18-2-3	A30									
92-18-2-3	8LL37	1.14				92-18-2-3	A31									
92-18-2-3	8LL37					92-18-2-3	A32									
92-18-2-3	8LL37					92-18-2-3	A33									
92-18-2-3	8LL37					92-18-2-3	P01									
92-18-2-3	8LL37					92-18-2-3	P02									
92-18-2-3	8LL37					92-18-2-3	P03									
92-18-2-3	8LL37					92-18-2-3	P04									
92-18-2-3	8LL37					92-18-2-3	P05									
92-18-3	8LL37	1.21	1.06	0.495	0.64	92-18-3	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-2-3	8LL37							
92-18-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744583	92-18-3	8LL37	A-4-91, ST 3	A01	0	0								1.27	1.11	1.33
4744583	92-18-3	8LL37	A-4-91, ST 3	A02	40	5								1.11	1.05	
4744583	92-18-3	8LL37	A-4-91, ST 3	A02	60	10								0.88	0.55	0.89
4744583	92-18-3	8LL37	A-4-91, ST 3	A03	40	5								1.06	0.55	
4744583	92-18-3	8LL37	A-4-91, ST 3	A03	20	25			Y					1.17	0.77	0.94
4744583	92-18-3	8LL37	A-4-91, ST 3	A04	40	5								1.26	0.52	1.1
4744583	92-18-3	8LL37	A-4-91, ST 3	A04	20	10								0.93	0.72	0.83
4744583	92-18-3	8LL37	A-4-91, ST 3	A05	0	0								1.1	1.23	
4744583	92-18-3	8LL37	A-4-91, ST 3	A05	50	15								0.82	0.76	1.04
4744583	92-18-3	8LL37	A-4-91, ST 3	A06	0	0										
4744583	92-18-3	8LL37	A-4-91, ST 3	A06	40	5								0.94	0.77	1.08

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-3	8LL37	1.6				92-18-3	A01									
92-18-3	8LL37					92-18-3	A02									
92-18-3	8LL37	0.86	0.93	0.982		92-18-3	A02									
92-18-3	8LL37					92-18-3	A03									
92-18-3	8LL37	0.93				92-18-3	A03									
92-18-3	8LL37	1.17	0.89			92-18-3	A04									
92-18-3	8LL37	0.59				92-18-3	A04									
92-18-3	8LL37					92-18-3	A05									
92-18-3	8LL37	0.74	0.83	0.888		92-18-3	A05									
92-18-3	8LL37					92-18-3	A06									
92-18-3	8LL37	0.77	0.99			92-18-3	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744583	92-18-3	8LL37	A-4-91, ST 3	A07	40	20							Y	1.2	0.9	1.22
4744583	92-18-3	8LL37	A-4-91, ST 3	A08	30	10								1.21	1.21	1
4744583	92-18-3	8LL37	A-4-91, ST 3	A09	60	10								0.78	0.99	0.9
4744583	92-18-3	8LL37	A-4-91, ST 3	A10	30	10								1.1	1.22	0.56
4744583	92-18-3	8LL37	A-4-91, ST 3	A11	40	10								1.11	0.89	0.83
4744583	92-18-3	8LL37	A-4-91, ST 3	A12	0	0								0.99	0.71	
4744583	92-18-3	8LL37	A-4-91, ST 3	A13	40	5								1.38	0.8	1.23
4744583	92-18-3	8LL37	A-4-91, ST 3	A14	40	5								1.06	1.15	1.07

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-3	8LL37	0.7	1.18	0.839	0.45	92-18-3	A07	0.98	0.71							
92-18-3	8LL37	1.25	0.74	1.027		92-18-3	A08									
92-18-3	8LL37	1.15				92-18-3	A09									
92-18-3	8LL37	1.57				92-18-3	A10									
92-18-3	8LL37	0.69	0.81	0.524		92-18-3	A11									
92-18-3	8LL37					92-18-3	A12									
92-18-3	8LL37	1.25				92-18-3	A13									
92-18-3	8LL37	0.95	1.33			92-18-3	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744583	92-18-3	8LL37	A-4-91, ST 3	A15	40	10								0.65	0.82	0.93
4744583	92-18-3	8LL37	A-4-91, ST 3	A16	40	5								1.09	0.77	1.3
4744583	92-18-3	8LL37	A-4-91, ST 3	A17	0	0							Y	1.02	1.25	
4744583	92-18-3	8LL37	A-4-91, ST 3	A18	40	10								1.28	1.2	0.74
4744583	92-18-3	8LL37	A-4-91, ST 3	A19	0	0							Y	1.15	0.97	1.23
4744583	92-18-3	8LL37	A-4-91, ST 3	A20	40	10								1.51	0.87	0.71
4744583	92-18-3	8LL37	A-4-91, ST 3	A21	40	5								1.17	0.66	0.77
4744583	92-18-3	8LL37	A-4-91, ST 3	A22	0	0							Y	0.6	0.76	0.59

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-3	8LL37	0.87				92-18-3	A15									
92-18-3	8LL37	0.9				92-18-3	A16									
92-18-3	8LL37					92-18-3	A17									
92-18-3	8LL37	1.13	0.99			92-18-3	A18									
92-18-3	8LL37	0.82	0.93			92-18-3	A19									
92-18-3	8LL37	1.01	0.94	0.858		92-18-3	A20									
92-18-3	8LL37	0.76	0.84	0.533	1.22	92-18-3	A21									
92-18-3	8LL37	0.93	0.44	0.255	0.58	92-18-3	A22									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744583	92-18-3	8LL37	A-4-91, ST 3	A23	60	5								1.41	0.89	0.96
4744583	92-18-3	8LL37	A-4-91, ST 3	A24	20	20								0.93	0.65	0.7
4744583	92-18-3	8LL37	A-4-91, ST 3	A25	20	25	Y			Y				0.54	0.43	0.73
4744583	92-18-3	8LL37	A-4-91, ST 3	A26	40	10								1.18	0.73	0.64
4744583	92-18-3	8LL37	A-4-91, ST 3	A27	20	25								0.65	1	1.2
4744583	92-18-3	8LL37	A-4-91, ST 3	A28	40	5								0.59	0.91	0.87
4744583	92-18-3	8LL37	A-4-91, ST 3	A29	40	10								0.81	1.11	
4744583	92-18-3	8LL37	A-4-91, ST 3	A30	10	100	Y		Y					0.56	0.63	0.53

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-3	8LL37	0.52	1.29	0.8	0.92	92-18-3	A23									
92-18-3	8LL37	0.77	0.74	0.752		92-18-3	A24									
92-18-3	8LL37	0.76	0.83	0.726	0.55	92-18-3	A25	0.63	0.8							
92-18-3	8LL37	0.68	0.56	1.012		92-18-3	A26									
92-18-3	8LL37					92-18-3	A27									
92-18-3	8LL37					92-18-3	A28									
92-18-3	8LL37					92-18-3	A29									
92-18-3	8LL37	0.5				92-18-3	A30									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744583	92-18-3	8LL37	A-4-91, ST 3	A31	40	20							Y	0.93	0.76	0.68
4744583	92-18-3	8LL37	A-4-91, ST 3	A32	0	0										
4744583	92-18-3	8LL37	A-4-91, ST 3	A33	20	50	Y			Y				0.27	0.29	0.43
4744583	92-18-3	8LL37	A-4-91, ST 3	A34	20	100	Y			Y				0.26	0.35	0.27
4744583	92-18-3	8LL37	A-4-91, ST 3	P01	0	0										
4744583	92-18-3	8LL37	A-4-91, ST 3	P01	0	0								0.27	0.37	0.35
4744583	92-18-3	8LL37	A-4-91, ST 3	P02	40	10						Y		2.57	0.54	
4744583	92-18-3	8LL37	A-4-91, ST 3	P03	40	10								0.47	0.35	0.37
4744583	92-18-3	8LL37	A-4-91, ST 3	P04	30	20								0.9		
4744583	92-18-3	8LL37	A-4-91, ST 3	P05	40	10								0.99	2.31	0.77
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A01	0	0								0.86	1.24	
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A02	0	0								0.99		
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A03	10	50	Y		Y					0.18	0.51	0.7
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A04	20	5								1.1	1.2	1.01
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A05	30	20								0.88	1.07	0.8
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	A06	0	0								1.15	0.63	0.51
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	P01	40	5										
4744584	92-18-3-1	8LL37	A-4-91-1, ST 3	P02	30	10						Y		0.88	2.07	2.38

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-3	8LL37	0.51	0.83	1.134	1.29	92-18-3	A31	1.24								
92-18-3	8LL37					92-18-3	A32									
92-18-3	8LL37	0.62	0.42	0.533	0.2	92-18-3	A33	0.95	0.88	1.11	0.69	1.22	1.06	0.93		
92-18-3	8LL37	0.29	0.31	0.557	0.4	92-18-3	A34	0.38	0.48	0.82	0.94	1.01	1	1.38	0.8	0.65
92-18-3	8LL37					92-18-3	P01									
92-18-3	8LL37	0.85				92-18-3	P01									
92-18-3	8LL37					92-18-3	P02									
92-18-3	8LL37	0.53	0.89			92-18-3	P03									
92-18-3	8LL37					92-18-3	P04									
92-18-3	8LL37	1.04				92-18-3	P05									
92-18-3-1	8LL37					92-18-3-1	A01									
92-18-3-1	8LL37					92-18-3-1	A02									
92-18-3-1	8LL37	0.45	0.39	0.63	0.63	92-18-3-1	A03	1	0.68	0.83						
92-18-3-1	8LL37					92-18-3-1	A04									
92-18-3-1	8LL37	0.85	0.76			92-18-3-1	A05									
92-18-3-1	8LL37					92-18-3-1	A06									
92-18-3-1	8LL37					92-18-3-1	P01									
92-18-3-1	8LL37					92-18-3-1	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							
92-18-3-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A01	40	20								0.76	1.01	0.9
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A02	60	5								0.9	0.5	0.7
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A03	60	7							Y	0.6	0.42	0.47
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A04	40	10								0.83	1.08	0.92
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A05	20	10								1.27	1.33	
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A06	40	10								0.79	1.23	0.71
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A07	0	0								1.21	0.64	0.62
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A08	30	5								1.26	0.92	0.98
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A09	60	10								0.94	1.3	0.65
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A10	20	20								0.68	0.73	0.53
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A11	0	0								0.72	0.42	0.93
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A12	60	5							Y	0.78	1.1	0.8
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A13	0	0										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A14	40	10							Y	0.7	0.96	0.43
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A15	0	0								0.92	1.13	0.72
4744586	92-18-5	8LL37	A-4-93, ST 4-5	A16	40	5								0.7	0.7	1.03
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P01	30	20										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P02	0	0										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P03	40	5								1.21	0.67	
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P04	0	0										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P05	40	10								0.85	0.42	0.61
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P06	40	10										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P07	30	20										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-5	8LL37					92-18-5	A01									
92-18-5	8LL37	0.76				92-18-5	A02									
92-18-5	8LL37	0.78	0.7	0.388	0.59	92-18-5	A03									
92-18-5	8LL37					92-18-5	A04									
92-18-5	8LL37					92-18-5	A05									
92-18-5	8LL37	1.45	0.8			92-18-5	A06									
92-18-5	8LL37	0.85	0.91	0.815	0.76	92-18-5	A07	0.31								
92-18-5	8LL37	1.13				92-18-5	A08									
92-18-5	8LL37					92-18-5	A09									
92-18-5	8LL37	0.95	0.91	0.799	0.55	92-18-5	A10	0.99	0.85							
92-18-5	8LL37					92-18-5	A11									
92-18-5	8LL37	1	0.82			92-18-5	A12									
92-18-5	8LL37					92-18-5	A13									
92-18-5	8LL37	0.65	1.2	0.778	0.46	92-18-5	A14	0.67	0.54							
92-18-5	8LL37	1.07				92-18-5	A15									
92-18-5	8LL37					92-18-5	A16									
92-18-5	8LL37					92-18-5	P01									
92-18-5	8LL37					92-18-5	P02									
92-18-5	8LL37					92-18-5	P03									
92-18-5	8LL37					92-18-5	P04									
92-18-5	8LL37	0.51				92-18-5	P05									
92-18-5	8LL37					92-18-5	P06									
92-18-5	8LL37					92-18-5	P07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P08	40	10								2.75		
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P09	20	20								1.12	1.41	0.83
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P10	0	0										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P11	0	0										
4744586	92-18-5	8LL37	A-4-93, ST 4-5	P12	60	10								1.21	1.04	0.2
4744688	92-24-10	8LL37	A-8-95, ST 7?	A01	40	10								0.59	0.72	0.83
4744688	92-24-10	8LL37	A-8-95, ST 7?	A02	0	0								1.29	1.1	0.82
4744688	92-24-10	8LL37	A-8-95, ST 7?	A03	0	0										
4744688	92-24-10	8LL37	A-8-95, ST 7?	A04	40	10								0.65	1.04	1
4744688	92-24-10	8LL37	A-8-95, ST 7?	A05	40	20								1.31	1.02	1.7
4744688	92-24-10	8LL37	A-8-95, ST 7?	A06	40	5								1.03	0.24	0.56
4744688	92-24-10	8LL37	A-8-95, ST 7?	A07	30	5								1.01	0.85	0.65
4744688	92-24-10	8LL37	A-8-95, ST 7?	A08	30	10								0.71	0.76	0.65
4744688	92-24-10	8LL37	A-8-95, ST 7?	A09	0	0								1.05	0.95	1.3
4744688	92-24-10	8LL37	A-8-95, ST 7?	A10	20	20								1.6	0.6	1.06
4744688	92-24-10	8LL37	A-8-95, ST 7?	A11	40	15								0.67	0.7	0.61
4744688	92-24-10	8LL37	A-8-95, ST 7?	A12	20	20								0.78	0.61	0.78
4744688	92-24-10	8LL37	A-8-95, ST 7?	A13	0	0								0.96	1.27	0.9
4744688	92-24-10	8LL37	A-8-95, ST 7?	A14	0	0								1	0.58	0.62
4744688	92-24-10	8LL37	A-8-95, ST 7?	A15	30	15								0.84	0.94	0.74
4744688	92-24-10	8LL37	A-8-95, ST 7?	A16	0	0								1.41	1.27	1.34
4744688	92-24-10	8LL37	A-8-95, ST 7?	A17	0	0								0.77	0.7	0.99
4744688	92-24-10	8LL37	A-8-95, ST 7?	A18	0	0								1.2	0.94	0.84
4744688	92-24-10	8LL37	A-8-95, ST 7?	A19	40	15								0.67	0.69	0.41

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-18-5	8LL37					92-18-5	P08									
92-18-5	8LL37					92-18-5	P09									
92-18-5	8LL37					92-18-5	P10									
92-18-5	8LL37					92-18-5	P11									
92-18-5	8LL37	0.46				92-18-5	P12									
92-24-10	8LL37	0.73	0.51	0.646		92-24-10	A01									
92-24-10	8LL37	1.03	1.4	1.192		92-24-10	A02									
92-24-10	8LL37					92-24-10	A03									
92-24-10	8LL37	0.77				92-24-10	A04									
92-24-10	8LL37	0.81	1.37			92-24-10	A05									
92-24-10	8LL37	1.16				92-24-10	A06									
92-24-10	8LL37	0.64	0.76	0.863	0.88	92-24-10	A07									
92-24-10	8LL37	0.96	0.53			92-24-10	A08									
92-24-10	8LL37	0.86	1.35			92-24-10	A09									
92-24-10	8LL37	0.74	1.13			92-24-10	A10									
92-24-10	8LL37	0.57	1.12	0.82	0.61	92-24-10	A11	0.67								
92-24-10	8LL37	0.32	0.78	0.766	0.57	92-24-10	A12	0.64	0.56							
92-24-10	8LL37	1.28				92-24-10	A13									
92-24-10	8LL37					92-24-10	A14									
92-24-10	8LL37					92-24-10	A15									
92-24-10	8LL37					92-24-10	A16									
92-24-10	8LL37	0.79	0.97			92-24-10	A17									
92-24-10	8LL37	1.19	0.65	1.009	0.91	92-24-10	A18									
92-24-10	8LL37	0.76	0.94	0.495	0.93	92-24-10	A19	1.5								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-18-5	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744688	92-24-10	8LL37	A-8-95, ST 7?	A20	40	20								1	0.77	0.9
4744688	92-24-10	8LL37	A-8-95, ST 7?	A21	0	0								0.69	1	0.57
4744688	92-24-10	8LL37	A-8-95, ST 7?	A22	40	10							Y	0.69	0.5	0.73
4744688	92-24-10	8LL37	A-8-95, ST 7?	A23	0	0								0.85	0.81	0.64
4744688	92-24-10	8LL37	A-8-95, ST 7?	P01	0	0										
4744688	92-24-10	8LL37	A-8-95, ST 7?	P02	0	0										
4744688	92-24-10	8LL37	A-8-95, ST 7?	P03	20	20								1.01	1.28	1.08
4744688	92-24-10	8LL37	A-8-95, ST 7?	P04	40	10								0.55	0.87	
4744688	92-24-10	8LL37	A-8-95, ST 7?	P05	0	0										
4744688	92-24-10	8LL37	A-8-95, ST 7?	P06	20	20								0.97	1.51	
4744688	92-24-10	8LL37	A-8-95, ST 7?	P07	10	5					Y			0.37	0.64	0.24
4744688	92-24-10	8LL37	A-8-95, ST 7?	P08	0	0										
4744688	92-24-10	8LL37	A-8-95, ST 7?	P09	0	0								1.58	1.12	1.04
4744688	92-24-10	8LL37	A-8-95, ST 7?	P10	0	0								1.86		
4744699	92-24-15	8LL37	A-8-98, ST 9	A01	40	10								1.13	1.26	0.65
4744699	92-24-15	8LL37	A-8-98, ST 9	A02	20	20								1.42	1.09	
4744699	92-24-15	8LL37	A-8-98, ST 9	A03	0									1.15	1.27	
4744699	92-24-15	8LL37	A-8-98, ST 9	A04	20	25				Y				0.75	0.75	0.82
4744699	92-24-15	8LL37	A-8-98, ST 9	A05	20	12								1.22	0.59	0.78
4744699	92-24-15	8LL37	A-8-98, ST 9	A06	0									0.75		
4744699	92-24-15	8LL37	A-8-98, ST 9	A07	40	5								0.68	1.29	0.89
4744699	92-24-15	8LL37	A-8-98, ST 9	A08	0								Y	1.02	0.83	
4744699	92-24-15	8LL37	A-8-98, ST 9	A09	40	5								0.54	0.67	0.71

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-10	8LL37	0.84	0.6	0.995	1.28	92-24-10	A20	0.84								
92-24-10	8LL37	1.35				92-24-10	A21									
92-24-10	8LL37	0.46	0.82	0.768	0.85	92-24-10	A22	0.72								
92-24-10	8LL37	0.6	0.81	0.853	0.48	92-24-10	A23	0.97	1.32	1.24	0.97					
92-24-10	8LL37					92-24-10	P01									
92-24-10	8LL37					92-24-10	P02									
92-24-10	8LL37					92-24-10	P03									
92-24-10	8LL37					92-24-10	P04									
92-24-10	8LL37					92-24-10	P05									
92-24-10	8LL37					92-24-10	P06									
92-24-10	8LL37	0.54				92-24-10	P07									
92-24-10	8LL37					92-24-10	P08									
92-24-10	8LL37					92-24-10	P09									
92-24-10	8LL37					92-24-10	P10									
92-24-15	8LL37	0.64	0.5	0.593	0.63	92-24-15	A01									
92-24-15	8LL37					92-24-15	A02									
92-24-15	8LL37					92-24-15	A03									
92-24-15	8LL37	0.83	1.3			92-24-15	A04									
92-24-15	8LL37					92-24-15	A05									
92-24-15	8LL37					92-24-15	A06									
92-24-15	8LL37					92-24-15	A07									
92-24-15	8LL37					92-24-15	A08									
92-24-15	8LL37	0.55				92-24-15	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-10	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744699	92-24-15	8LL37	A-8-98, ST 9	A10	10	25	Y			Y				0.65	0.52	0.82
4744699	92-24-15	8LL37	A-8-98, ST 9	A11	0									0.94	1.12	1.14
4744699	92-24-15	8LL37	A-8-98, ST 9	A12	20	20								0.87	0.6	
4744699	92-24-15	8LL37	A-8-98, ST 9	P01	30	12								1.09	0.39	0.72
4744699	92-24-15	8LL37	A-8-98, ST 9	P02	0									0.48	0.37	0.52
4744699	92-24-15	8LL37	A-8-98, ST 9	P03	20	12								1.03	1.11	
4744699	92-24-15	8LL37	A-8-98, ST 9	P04	40	10								0.71	0.42	0.51
4744700	92-24-16	8LL37	A-8-99, ST 9	A01	20	25			Y					0.65	0.8	
4744700	92-24-16	8LL37	A-8-99, ST 9	A02	0									1.19	0.96	
4744700	92-24-16	8LL37	A-8-99, ST 9	A03	0									1.03	0.76	
4744700	92-24-16	8LL37	A-8-99, ST 9	A04	40	10							Y	1.04	0.59	0.54
4744700	92-24-16	8LL37	A-8-99, ST 9	A05	40	10								1.61	0.89	
4744700	92-24-16	8LL37	A-8-99, ST 9	A06	6		Y		Y					0.68		
4744700	92-24-16	8LL37	A-8-99, ST 9	A07	20	10								1.22	1.26	1.49
4744700	92-24-16	8LL37	A-8-99, ST 9	A08	20	25			Y					1.11	0.97	0.82
4744700	92-24-16	8LL37	A-8-99, ST 9	A09	40	10								1	1.54	
4744700	92-24-16	8LL37	A-8-99, ST 9	A10	40	20								1.02	0.48	0.57
4744700	92-24-16	8LL37	A-8-99, ST 9	A11	0									0.62	0.54	0.9
4744700	92-24-16	8LL37	A-8-99, ST 9	A12	0									0.64	0.75	0.51
4744700	92-24-16	8LL37	A-8-99, ST 9	A13	40	5								1.06	0.99	
4744700	92-24-16	8LL37	A-8-99, ST 9	P1	0									0.5	0.37	
4744700	92-24-16	8LL37	A-8-99, ST 9	P2	30	20								0.38	0.18	0.63
4744700	92-24-16	8LL37	A-8-99, ST 9	P3	0						Y			0.28	0.3	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-15	8LL37	0.88				92-24-15	A10									
92-24-15	8LL37					92-24-15	A11									
92-24-15	8LL37					92-24-15	A12									
92-24-15	8LL37	0.76	0.47			92-24-15	P01									
92-24-15	8LL37					92-24-15	P02									
92-24-15	8LL37					92-24-15	P03									
92-24-15	8LL37	0.59	0.43	0.89		92-24-15	P04									
92-24-16	8LL37					92-24-16	A01									
92-24-16	8LL37					92-24-16	A02									
92-24-16	8LL37					92-24-16	A03									
92-24-16	8LL37	0.36	0.48			92-24-16	A04									
92-24-16	8LL37					92-24-16	A05									
92-24-16	8LL37					92-24-16	A06									
92-24-16	8LL37					92-24-16	A07									
92-24-16	8LL37					92-24-16	A08									
92-24-16	8LL37					92-24-16	A09									
92-24-16	8LL37	0.6				92-24-16	A10									
92-24-16	8LL37	0.55				92-24-16	A11									
92-24-16	8LL37					92-24-16	A12									
92-24-16	8LL37					92-24-16	A13									
92-24-16	8LL37					92-24-16	P1									
92-24-16	8LL37	0.4				92-24-16	P2									
92-24-16	8LL37					92-24-16	P3									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-15	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							
92-24-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744706	92-24-17	8LL37	A-8-100, ST 9	A01	0									0.34	0.28	0.42
4744707	92-24-17	8LL37	A-8-100, ST 9	A01	40	5								0.83	0.84	
4744708	92-24-17	8LL37	A-8-100, ST 9	A01	6	100	Y		Y					0.22	0.28	0.45
4744706	92-24-17	8LL37	A-8-100, ST 9	A02	0									0.27	0.24	0.25
4744707	92-24-17	8LL37	A-8-100, ST 9	A02	0									1.06		
4744708	92-24-17	8LL37	A-8-100, ST 9	A02	7	50	Y		Y					0.66	0.64	
4744706	92-24-17	8LL37	A-8-100, ST 9	A03	0									0.35		
4744708	92-24-17	8LL37	A-8-100, ST 9	A03	40	5								1.37	1.41	
4744706	92-24-17	8LL37	A-8-100, ST 9	A04	0									0.23		
4744708	92-24-17	8LL37	A-8-100, ST 9	A04	20	25				Y				0.6	0.45	0.62
4744706	92-24-17	8LL37	A-8-100, ST 9	A05	0									0.43	0.17	0.26
4744708	92-24-17	8LL37	A-8-100, ST 9	A05	40	10								0.57	0.79	0.51
4744706	92-24-17	8LL37	A-8-100, ST 9	A06	0									0.39	0.27	
4744708	92-24-17	8LL37	A-8-100, ST 9	A06	10	25	Y			Y				0.35	0.33	0.38
4744708	92-24-17	8LL37	A-8-100, ST 9	A07	40	10				Y				2.37	1.23	
4744708	92-24-17	8LL37	A-8-100, ST 9	A08	50	15								1.78	1.02	
4744708	92-24-17	8LL37	A-8-100, ST 9	A09												
4744708	92-24-17	8LL37	A-8-100, ST 9	A10	40	5								1.27	1.05	1.07
4744708	92-24-17	8LL37	A-8-100, ST 9	A11	40	10								0.55	0.79	0.72
4744708	92-24-17	8LL37	A-8-100, ST 9	A12	40	10								0.57	0.83	0.73
4744708	92-24-17	8LL37	A-8-100, ST 9	A13	20	25							Y	0.74	0.81	0.73
4744708	92-24-17	8LL37	A-8-100, ST 9	A14	0									0.65	0.65	0.75
4744708	92-24-17	8LL37	A-8-100, ST 9	A15	30	25								0.75	0.98	0.98

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-17	8LL37	0.19				92-24-17	A01									
92-24-17	8LL37					92-24-17	A01									
92-24-17	8LL37	0.43	0.39			92-24-17	A01									
92-24-17	8LL37					92-24-17	A02									
92-24-17	8LL37					92-24-17	A02									
92-24-17	8LL37					92-24-17	A02									
92-24-17	8LL37					92-24-17	A03									
92-24-17	8LL37					92-24-17	A03									
92-24-17	8LL37					92-24-17	A04									
92-24-17	8LL37					92-24-17	A04									
92-24-17	8LL37					92-24-17	A05									
92-24-17	8LL37	0.55				92-24-17	A05									
92-24-17	8LL37					92-24-17	A06									
92-24-17	8LL37	0.55	0.38			92-24-17	A06									
92-24-17	8LL37					92-24-17	A07									
92-24-17	8LL37					92-24-17	A08									
92-24-17	8LL37					92-24-17	A09									
92-24-17	8LL37					92-24-17	A10									
92-24-17	8LL37	0.47				92-24-17	A11									
92-24-17	8LL37	0.38	0.98			92-24-17	A12									
92-24-17	8LL37	0.49				92-24-17	A13									
92-24-17	8LL37	0.62	0.49	0.864		92-24-17	A14									
92-24-17	8LL37	1.36				92-24-17	A15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744708	92-24-17	8LL37	A-8-100, ST 9	A16	0									1.1		
4744708	92-24-17	8LL37	A-8-100, ST 9	A17	12	100				Y				0.79	0.56	
4744707	92-24-17	8LL37	A-8-100, ST 9	P01	40	5						Y		0.66	0.33	
4744708	92-24-17	8LL37	A-8-100, ST 9	P01	40	10								0.19	0.56	0.33
4744707	92-24-17	8LL37	A-8-100, ST 9	P02	40	5								0.59	0.59	0.87
4744708	92-24-17	8LL37	A-8-100, ST 9	P02	60	5								1.06		
4744707	92-24-17	8LL37	A-8-100, ST 9	P03	0											
4744708	92-24-17	8LL37	A-8-100, ST 9	P03	40	5								0.65	1.37	1.02
4744707	92-24-17	8LL37	A-8-100, ST 9	P04	0									0.55	0.88	
4744708	92-24-17	8LL37	A-8-100, ST 9	P04	0									0.75	0.69	0.74
4744708	92-24-17	8LL37	A-8-100, ST 9	P05	0									1.64	1.69	0.95
4744708	92-24-17	8LL37	A-8-100, ST 9	P06	40	5								0.99	0.59	0.68
4744708	92-24-17	8LL37	A-8-100, ST 9	P07	40	5								0.99	0.48	0.63
4744708	92-24-17	8LL37	A-8-100, ST 9	P08	40	10										
4744708	92-24-17	8LL37	A-8-100, ST 9	P09	35	20								0.98	1.6	1.15
4744706	92-24-17	8LL37	A-8-100, ST 9	P1	0									0.12	0.15	0.21
4744708	92-24-17	8LL37	A-8-100, ST 9	P10	60	5								1.04	0.26	0.46
4744708	92-24-17	8LL37	A-8-100, ST 9	P11	20	12								1.11	1.11	
4744708	92-24-17	8LL37	A-8-100, ST 9	P12	30	12								0.85	0.86	1.12
4744708	92-24-17	8LL37	A-8-100, ST 9	P13	40	10								0.78	0.59	0.24
4744708	92-24-17	8LL37	A-8-100, ST 9	P14	7		Y			Y				0.36	0.49	
4744708	92-24-17	8LL37	A-8-100, ST 9	P15	20	25			Y					2.07	0.55	0.98

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-17	8LL37					92-24-17	A16									
92-24-17	8LL37					92-24-17	A17									
92-24-17	8LL37					92-24-17	P01									
92-24-17	8LL37	0.67				92-24-17	P01									
92-24-17	8LL37					92-24-17	P02									
92-24-17	8LL37					92-24-17	P02									
92-24-17	8LL37					92-24-17	P03									
92-24-17	8LL37	0.56				92-24-17	P03									
92-24-17	8LL37					92-24-17	P04									
92-24-17	8LL37	0.76	0.88	0.869		92-24-17	P04									
92-24-17	8LL37	0.48	0.48	0.328		92-24-17	P05									
92-24-17	8LL37	0.64	0.36	0.373	0.34	92-24-17	P06									
92-24-17	8LL37	0.52	0.39	0.607	0.54	92-24-17	P07	0.5								
92-24-17	8LL37					92-24-17	P08									
92-24-17	8LL37					92-24-17	P09									
92-24-17	8LL37					92-24-17	P1									
92-24-17	8LL37	0.24				92-24-17	P10									
92-24-17	8LL37					92-24-17	P11									
92-24-17	8LL37	0.94				92-24-17	P12									
92-24-17	8LL37	0.29	0.74			92-24-17	P13									
92-24-17	8LL37					92-24-17	P14									
92-24-17	8LL37					92-24-17	P15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744706	92-24-17	8LL37	A-8-100, ST 9	P2	60	5								0.25	0.09	0.16
4744706	92-24-17	8LL37	A-8-100, ST 9	P3	20	20								0.32	0.2	0.32
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A01	16	100	Y		Y	Y				0.39	0.67	0.6
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A02	30	50				Y				0.63	0.79	0.85
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A03	60	15								1.09	0.85	1.32
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A04	40	15								0.94	1.1	0.72
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A05	13	50	Y			Y				0.37	0.51	0.82
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A06	20	50				Y				0.43	0.48	0.39
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A07	15	25	Y			Y				0.47	0.45	0.33
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A08	15	25	Y			Y				0.47	0.58	
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A09	0									0.49	0.44	0.71
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A10	20	20								0.81	0.67	
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A11	20	20								1.05	0.72	0.9

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-17	8LL37	0.25	0.09			92-24-17	P2									
92-24-17	8LL37					92-24-17	P3									
92-24-17-1	8LL37	0.75	0.53	0.809	0.77	92-24-17-1	A01	0.83	0.59							
92-24-17-1	8LL37	0.91	0.73			92-24-17-1	A02									
92-24-17-1	8LL37	0.86	1.32	0.887	1.63	92-24-17-1	A03									
92-24-17-1	8LL37	0.68				92-24-17-1	A04									
92-24-17-1	8LL37	0.53	0.56	0.807		92-24-17-1	A05									
92-24-17-1	8LL37	0.68	0.55	0.444	0.88	92-24-17-1	A06	0.64								
92-24-17-1	8LL37					92-24-17-1	A07									
92-24-17-1	8LL37					92-24-17-1	A08									
92-24-17-1	8LL37	0.79				92-24-17-1	A09									
92-24-17-1	8LL37					92-24-17-1	A10									
92-24-17-1	8LL37					92-24-17-1	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-17	8LL37							
92-24-17	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A12	20	20								0.77	0.65	0.79
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A13	10	25	Y			Y						
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A14	15	50				Y				0.73	0.49	0.41
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A15	30	15								1.01	1.39	
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A16	20	20								1		
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	A17	10	20								0.4	0.5	0.24
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P01	40	5								0.77	1	0.4
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P02	40	5										
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P03	40	5								2.53	1.77	2.21
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P04	40	5								0.71	0.98	0.47
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P05	0									0.55	0.52	0.86
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P06	20	15								0.64	0.8	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-17-1	8LL37					92-24-17-1	A12									
92-24-17-1	8LL37					92-24-17-1	A13									
92-24-17-1	8LL37	0.85	0.59			92-24-17-1	A14									
92-24-17-1	8LL37					92-24-17-1	A15									
92-24-17-1	8LL37					92-24-17-1	A16									
92-24-17-1	8LL37	0.4	0.55	0.491		92-24-17-1	A17									
92-24-17-1	8LL37					92-24-17-1	P01									
92-24-17-1	8LL37					92-24-17-1	P02									
92-24-17-1	8LL37					92-24-17-1	P03									
92-24-17-1	8LL37					92-24-17-1	P04									
92-24-17-1	8LL37	0.82				92-24-17-1	P05									
92-24-17-1	8LL37					92-24-17-1	P06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							
92-24-17-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744714	92-24-17-1	8LL37	A-8-100-1, ST 9	P07	0									1.27		
4744721	92-24-18	8LL37	A-8-101, ST 9	A01	0								Y	0.67	0.78	
4744721	92-24-18	8LL37	A-8-101, ST 9	A01	20	12								0.57	0.77	
4744721	92-24-18	8LL37	A-8-101, ST 9	A02	60	20								1.1	0.75	0.88
4744721	92-24-18	8LL37	A-8-101, ST 9	A02	30	20								0.8	1.04	1.14
4744721	92-24-18	8LL37	A-8-101, ST 9	A03	20	25				Y				0.65	0.54	0.77
4744721	92-24-18	8LL37	A-8-101, ST 9	A04	0									1.29	0.98	
4744721	92-24-18	8LL37	A-8-101, ST 9	A05	20	20								1.16	1.09	1.05
4744721	92-24-18	8LL37	A-8-101, ST 9	A06	20	25				Y				0.67	0.81	0.92
4744721	92-24-18	8LL37	A-8-101, ST 9	A07	0									0.67	1.22	0.83
4744721	92-24-18	8LL37	A-8-101, ST 9	A08	30	10								0.66	0.93	0.71
4744721	92-24-18	8LL37	A-8-101, ST 9	A09	30	10								0.9	0.72	
4744721	92-24-18	8LL37	A-8-101, ST 9	A10	10	25				Y				0.95	0.69	0.77
4744721	92-24-18	8LL37	A-8-101, ST 9	A11	0									0.82	0.7	
4744721	92-24-18	8LL37	A-8-101, ST 9	A12	40	5								0.66	0.44	0.46
4744721	92-24-18	8LL37	A-8-101, ST 9	A13	20	10								0.92	0.65	
4744721	92-24-18	8LL37	A-8-101, ST 9	A14	20	5								0.59	0.58	0.5
4744721	92-24-18	8LL37	A-8-101, ST 9	A15	20	5								0.6	0.58	0.52
4744721	92-24-18	8LL37	A-8-101, ST 9	A16	20	20				Y				0.77	0.63	0.89

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-17-1	8LL37					92-24-17-1	P07									
92-24-18	8LL37					92-24-18	A01									
92-24-18	8LL37					92-24-18	A01									
92-24-18	8LL37	0.89	1.01			92-24-18	A02									
92-24-18	8LL37	1.19	0.79	1.614	1.01	92-24-18	A02									
92-24-18	8LL37	0.77	0.69	0.506		92-24-18	A03									
92-24-18	8LL37					92-24-18	A04									
92-24-18	8LL37					92-24-18	A05									
92-24-18	8LL37	1.06	0.83	0.575		92-24-18	A06									
92-24-18	8LL37					92-24-18	A07									
92-24-18	8LL37					92-24-18	A08									
92-24-18	8LL37					92-24-18	A09									
92-24-18	8LL37	0.66	0.56			92-24-18	A10									
92-24-18	8LL37					92-24-18	A11									
92-24-18	8LL37	0.31	0.25	0.197		92-24-18	A12									
92-24-18	8LL37					92-24-18	A13									
92-24-18	8LL37	0.65	0.77			92-24-18	A14									
92-24-18	8LL37	0.67				92-24-18	A15									
92-24-18	8LL37	0.69				92-24-18	A16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-17-1	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744721	92-24-18	8LL37	A-8-101, ST 9	A17	10	20				Y				1.1	0.86	0.69
4744721	92-24-18	8LL37	A-8-101, ST 9	A18	40	5								0.6	1.08	0.61
4744721	92-24-18	8LL37	A-8-101, ST 9	IND												
4744721	92-24-18	8LL37	A-8-101, ST 9	L01	10	100	Y			Y				0.92	0.2	1.3
4744721	92-24-18	8LL37	A-8-101, ST 9	P01	30	10								0.93	0.36	0.57
4744721	92-24-18	8LL37	A-8-101, ST 9	P01	40	10	Y	Y	Y					1.97	1.32	
4744721	92-24-18	8LL37	A-8-101, ST 9	P02	20	10								0.36	0.36	0.56
4744721	92-24-18	8LL37	A-8-101, ST 9	P03	40	5								0.17	0.29	0.14
4744721	92-24-18	8LL37	A-8-101, ST 9	P04	20	5								1.07	1.17	
4744677	92-24-2	8LL37	A-8-90, ST 2	A01	40	5								1.14	0.95	0.96
4744677	92-24-2	8LL37	A-8-90, ST 2	A02	30	10								1.05	0.47	0.46
4744677	92-24-2	8LL37	A-8-90, ST 2	A03	0	0								1.4	1.42	
4744677	92-24-2	8LL37	A-8-90, ST 2	A04	40	10								0.65	0.91	0.83
4744677	92-24-2	8LL37	A-8-90, ST 2	A05	40	15								0.82	0.75	0.74
4744677	92-24-2	8LL37	A-8-90, ST 2	A06	30	5								1.23	1	1.14
4744677	92-24-2	8LL37	A-8-90, ST 2	A07	20	10								0.97	1.61	0.73
4744677	92-24-2	8LL37	A-8-90, ST 2	A08	40	5								0.89	0.9	0.62
4744677	92-24-2	8LL37	A-8-90, ST 2	A09	30	20								0.89	1.5	1.15
4744677	92-24-2	8LL37	A-8-90, ST 2	A10	20	15								1.27	0.76	2.07
4744677	92-24-2	8LL37	A-8-90, ST 2	A11	40	10								0.69	0.81	0.66
4744677	92-24-2	8LL37	A-8-90, ST 2	A12	30	20								0.92	1.24	1.17
4744677	92-24-2	8LL37	A-8-90, ST 2	A13	50	10							Y	1.29	0.79	0.91
4744677	92-24-2	8LL37	A-8-90, ST 2	A14	20	20								1.18		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-18	8LL37					92-24-18	A17									
92-24-18	8LL37	0.76				92-24-18	A18									
92-24-18	8LL37					92-24-18	IND									
92-24-18	8LL37					92-24-18	L01									
92-24-18	8LL37	0.28	0.98	0.241	0.2	92-24-18	P01									
92-24-18	8LL37					92-24-18	P01									
92-24-18	8LL37					92-24-18	P02									
92-24-18	8LL37	0.34	0.36	0.311	0.33	92-24-18	P03	0.11								
92-24-18	8LL37					92-24-18	P04									
92-24-2	8LL37	0.88	1.05	1.028	1.28	92-24-2	A01									
92-24-2	8LL37	0.47	0.85	0.682	0.45	92-24-2	A02									
92-24-2	8LL37					92-24-2	A03									
92-24-2	8LL37					92-24-2	A04									
92-24-2	8LL37	0.99	0.93			92-24-2	A05									
92-24-2	8LL37	0.91	0.92			92-24-2	A06									
92-24-2	8LL37	0.84	1.03			92-24-2	A07									
92-24-2	8LL37	0.61	0.94			92-24-2	A08									
92-24-2	8LL37	0.93	1.12	1.292	1.68	92-24-2	A09									
92-24-2	8LL37					92-24-2	A10									
92-24-2	8LL37	0.84				92-24-2	A11									
92-24-2	8LL37	0.86	1.2			92-24-2	A12									
92-24-2	8LL37	0.84				92-24-2	A13									
92-24-2	8LL37					92-24-2	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-18	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744677	92-24-2	8LL37	A-8-90, ST 2	A15	40	5								1.69	1.26	1.41
4744677	92-24-2	8LL37	A-8-90, ST 2	A16	40	5								1	1.18	0.8
4744677	92-24-2	8LL37	A-8-90, ST 2	A17	40	5								1.02	1.23	0.63
4744677	92-24-2	8LL37	A-8-90, ST 2	A18	0	0								1.26	1.27	1.02
4744677	92-24-2	8LL37	A-8-90, ST 2	A19	0	0										
4744677	92-24-2	8LL37	A-8-90, ST 2	A20	30	5								0.75	1	1.11
4744677	92-24-2	8LL37	A-8-90, ST 2	A21	20	10								0.79	1.19	
4744677	92-24-2	8LL37	A-8-90, ST 2	A22	20	10							Y	1.08	0.73	1.03
4744677	92-24-2	8LL37	A-8-90, ST 2	A23	40	10								0.63	0.72	0.41
4744677	92-24-2	8LL37	A-8-90, ST 2	A24	30	10								0.84	0.52	0.91
4744677	92-24-2	8LL37	A-8-90, ST 2	A25	40	10								0.38	0.51	0.56
4744677	92-24-2	8LL37	A-8-90, ST 2	A26	40	5								0.55	0.79	0.49
4744677	92-24-2	8LL37	A-8-90, ST 2	A27	40	10								1.3	0.76	0.64
4744677	92-24-2	8LL37	A-8-90, ST 2	A28	30	15							Y	1.02	0.73	0.9
4744677	92-24-2	8LL37	A-8-90, ST 2	A29	40	5								0.67	0.74	0.61
4744677	92-24-2	8LL37	A-8-90, ST 2	A30	20	10								0.87	0.56	0.28
4744677	92-24-2	8LL37	A-8-90, ST 2	A31	40	10								0.74	1.22	0.73
4744677	92-24-2	8LL37	A-8-90, ST 2	A32	40	15								0.93	0.77	1.2
4744677	92-24-2	8LL37	A-8-90, ST 2	P01	0	0										
4744677	92-24-2	8LL37	A-8-90, ST 2	P02	40	5						Y				
4744677	92-24-2	8LL37	A-8-90, ST 2	P03	0	0										
4744677	92-24-2	8LL37	A-8-90, ST 2	P04	0	0										
4744677	92-24-2	8LL37	A-8-90, ST 2	P05	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-2	8LL37					92-24-2	A15									
92-24-2	8LL37	0.69	1			92-24-2	A16									
92-24-2	8LL37					92-24-2	A17									
92-24-2	8LL37	0.82	1.12			92-24-2	A18									
92-24-2	8LL37					92-24-2	A19									
92-24-2	8LL37	0.96	0.95			92-24-2	A20									
92-24-2	8LL37					92-24-2	A21									
92-24-2	8LL37	0.53	0.56			92-24-2	A22									
92-24-2	8LL37	0.42	0.75			92-24-2	A23									
92-24-2	8LL37	0.36	1.05			92-24-2	A24									
92-24-2	8LL37	0.46	0.32	0.201		92-24-2	A25									
92-24-2	8LL37					92-24-2	A26									
92-24-2	8LL37	0.84				92-24-2	A27									
92-24-2	8LL37					92-24-2	A28									
92-24-2	8LL37	0.7				92-24-2	A29									
92-24-2	8LL37	0.37	0.47	0.221	0.34	92-24-2	A30									
92-24-2	8LL37	0.71	0.89			92-24-2	A31									
92-24-2	8LL37	0.58	0.71	0.948	1.27	92-24-2	A32									
92-24-2	8LL37					92-24-2	P01									
92-24-2	8LL37					92-24-2	P02									
92-24-2	8LL37					92-24-2	P03									
92-24-2	8LL37					92-24-2	P04									
92-24-2	8LL37					92-24-2	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							
92-24-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744734	92-24-20	8LL37	A-8-101, ST 9	A01	30	10								0.82	0.55	0.69
4744734	92-24-20	8LL37	A-8-101, ST 9	A02	10	25				Y				0.49	0.55	0.81
4744734	92-24-20	8LL37	A-8-101, ST 9	A03	30	12								1.03	1.22	
4744734	92-24-20	8LL37	A-8-101, ST 9	A04	20	10								0.58	0.52	0.42
4744734	92-24-20	8LL37	A-8-101, ST 9	A05	20	25				Y				0.57	0.66	0.65
4744734	92-24-20	8LL37	A-8-101, ST 9	A06	0									0.57	0.53	0.57
4744734	92-24-20	8LL37	A-8-101, ST 9	A07	6		Y			Y				0.41	0.41	0.38
4744734	92-24-20	8LL37	A-8-101, ST 9	A08	0									0.99	0.81	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-20	8LL37	0.57				92-24-20	A01									
92-24-20	8LL37	0.87				92-24-20	A02									
92-24-20	8LL37					92-24-20	A03									
92-24-20	8LL37	0.5				92-24-20	A04									
92-24-20	8LL37	0.5	0.52	0.46		92-24-20	A05									
92-24-20	8LL37	0.4				92-24-20	A06									
92-24-20	8LL37	0.62	0.54			92-24-20	A07									
92-24-20	8LL37					92-24-20	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744734	92-24-20	8LL37	A-8-101, ST 9	A09	20	25				Y				0.41	0.38	0.55
4744734	92-24-20	8LL37	A-8-101, ST 9	A10	0									0.94		
4744734	92-24-20	8LL37	A-8-101, ST 9	A11	40	5								1.25		
4744734	92-24-20	8LL37	A-8-101, ST 9	A12	7		Y			Y				0.34	0.39	0.43
4744734	92-24-20	8LL37	A-8-101, ST 9	A13	20	25				Y				0.59	0.3	0.43
4744734	92-24-20	8LL37	A-8-101, ST 9	A14	30	5								0.82	0.75	0.73
4744734	92-24-20	8LL37	A-8-101, ST 9	A15	7		Y		Y					0.69	0.58	0.33
4744734	92-24-20	8LL37	A-8-101, ST 9	A16	7		Y		Y					0.6	0.69	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-20	8LL37	0.58	0.44			92-24-20	A09									
92-24-20	8LL37					92-24-20	A10									
92-24-20	8LL37					92-24-20	A11									
92-24-20	8LL37	0.37	0.44	0.488		92-24-20	A12									
92-24-20	8LL37					92-24-20	A13									
92-24-20	8LL37	0.6				92-24-20	A14									
92-24-20	8LL37	0.38				92-24-20	A15									
92-24-20	8LL37					92-24-20	A16									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744734	92-24-20	8LL37	A-8-101, ST 9	NA												
4744734	92-24-20	8LL37	A-8-101, ST 9	P01	20	20								0.4	0.78	0.77
4744734	92-24-20	8LL37	A-8-101, ST 9	P02	40	10								0.33	0.64	
4744734	92-24-20	8LL37	A-8-101, ST 9	P03	30	25			Y					0.49	0.75	0.69
4744734	92-24-20	8LL37	A-8-101, ST 9	P04	30	10								2.02	0.31	0.45
4744734	92-24-20	8LL37	A-8-101, ST 9	P05	10	25			Y					0.34	0.48	0.21
4744734	92-24-20	8LL37	A-8-101, ST 9	P06	40	5								1.33	1.19	0.46
4744734	92-24-20	8LL37	A-8-101, ST 9	P07	40	5								1.13	0.21	
4744734	92-24-20	8LL37	A-8-101, ST 9	P08	40	10								0.56		0.55
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A01	40	10								0.69	0.68	0.41
4744747	92-24-21	8LL37	A-8-102, ST 9-10	A01	0									0.58	0.98	0.51
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A01	60	8								1.13	1.02	1.21
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A01	0											
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A01	20	20								0.5	0.64	0.36
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A02	20	25	Y		Y					0.62	0.84	0.73
4744747	92-24-21	8LL37	A-8-102, ST 9-10	A02	40	10								0.54	0.95	0.97
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A02	0									0.66	0.76	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A02	20	25	Y			Y				0.39	0.48	0.49
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A02	30	10								0.62		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-20	8LL37					92-24-20	NA									
92-24-20	8LL37	0.23				92-24-20	P01									
92-24-20	8LL37					92-24-20	P02									
92-24-20	8LL37	1.14	0.91			92-24-20	P03									
92-24-20	8LL37	2.07	0.38	0.541		92-24-20	P04									
92-24-20	8LL37					92-24-20	P05									
92-24-20	8LL37					92-24-20	P06									
92-24-20	8LL37					92-24-20	P07									
92-24-20	8LL37					92-24-20	P08									
92-24-21	8LL37	0.7	0.22	0.606	1.15	92-24-21	A01									
92-24-21	8LL37	0.39	0.88	0.617		92-24-21	A01									
92-24-21	8LL37	0.82	1.11			92-24-21	A01									
92-24-21	8LL37					92-24-21	A01									
92-24-21	8LL37	0.66				92-24-21	A01									
92-24-21	8LL37	0.89	0.65	0.766		92-24-21	A02									
92-24-21	8LL37	0.57				92-24-21	A02									
92-24-21	8LL37					92-24-21	A02									
92-24-21	8LL37	0.65	0.9	0.609		92-24-21	A02									
92-24-21	8LL37					92-24-21	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-20	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A03	40	10								0.73	0.75	1.19
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A03	0											
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A03	8	50	Y			Y				0.38	0.5	0.58
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A03	13	50	Y			Y				0.49	0.56	0.51
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A04	10	25				Y				0.47	0.47	0.41
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A04	60	8								0.91	0.34	0.53
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A04	40	10								0.58	0.56	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A04	80	5								1.1	1.47	1.3
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A05	60	10								1.2	0.97	1.39
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A05	0											
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A05	40	10								0.99	1.23	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A05	40	10								0.5	0.88	0.53
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A06	30	10				Y				0.83	0.63	0.87
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A06	10	25								0.47	0.58	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A06	60	10								0.89	0.7	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A06	20	10								0.43	0.5	0.83

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37	1.16	0.98	1.071	0.77	92-24-21	A03									
92-24-21	8LL37					92-24-21	A03									
92-24-21	8LL37	0.43				92-24-21	A03									
92-24-21	8LL37	0.76	0.5	0.707	0.78	92-24-21	A03									
92-24-21	8LL37	0.75	0.5	0.495		92-24-21	A04									
92-24-21	8LL37					92-24-21	A04									
92-24-21	8LL37					92-24-21	A04									
92-24-21	8LL37	1.15				92-24-21	A04									
92-24-21	8LL37	0.77				92-24-21	A05									
92-24-21	8LL37					92-24-21	A05									
92-24-21	8LL37					92-24-21	A05									
92-24-21	8LL37	0.78	0.4			92-24-21	A05									
92-24-21	8LL37	1.01	0.88	0.497	0.75	92-24-21	A06	0.58								
92-24-21	8LL37					92-24-21	A06									
92-24-21	8LL37					92-24-21	A06									
92-24-21	8LL37	0.7	0.73	0.434		92-24-21	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A07	60	20								1.22	1.66	0.89
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A07	10	25				Y				0.54	0.57	0.54
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A07	20	25				Y						
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A07	0									0.73	1.17	
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A08	40	20	Y			Y				0.9	0.83	0.83
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A08	30	10								0.42	0.52	0.53
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A08	40	10								0.7	0.89	0.67
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A08	50	5								1.11	1.12	1.07
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A09	40	20								0.69	0.65	1.09
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A09	20	25	Y			Y				0.42	0.63	0.69
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A09	40	12								1.21	1.47	1.24
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A09	17	100	Y			Y				0.78	0.44	0.87
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A10	40	10								1.03	0.86	0.8
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A10	0									0.62	0.77	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A10	0											
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A10	20	50	Y			Y				0.55	0.75	0.61

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37	0.88				92-24-21	A07									
92-24-21	8LL37	0.65	0.79	0.657	0.55	92-24-21	A07									
92-24-21	8LL37					92-24-21	A07									
92-24-21	8LL37					92-24-21	A07									
92-24-21	8LL37	1.15	0.98	0.929	0.88	92-24-21	A08	1.1								
92-24-21	8LL37	0.32				92-24-21	A08									
92-24-21	8LL37					92-24-21	A08									
92-24-21	8LL37	1.47	0.93	0.748	0.89	92-24-21	A08	1.44	0.81	1.05	0.38					
92-24-21	8LL37	1.01	0.94	1.025	1.15	92-24-21	A09									
92-24-21	8LL37	1.07	0.67	0.715		92-24-21	A09									
92-24-21	8LL37	1.31	1.14			92-24-21	A09									
92-24-21	8LL37	0.61	0.7	0.839	0.61	92-24-21	A09									
92-24-21	8LL37					92-24-21	A10									
92-24-21	8LL37					92-24-21	A10									
92-24-21	8LL37					92-24-21	A10									
92-24-21	8LL37	0.59	0.6	0.572	0.92	92-24-21	A10	0.5	0.54	0.52						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A11	40	10								0.79	0.73	0.75
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A11	0									0.89	0.64	1.01
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A11	40	5								0.75	0.76	0.69
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A11	20	25				Y				0.72	0.61	0.71
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A12	0									0.75	0.6	0.78
4744749	92-24-21	8LL37	A-8-102, ST 9-10	A12	30	8								0.86	0.82	
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A12	8	100	Y		Y					0.33	0.31	0.34
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A12	15	25				Y				0.81	0.75	0.76
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A13	10	25			Y					0.34	0.35	0.65
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A13	14	100	Y		Y					0.73	0.64	0.89
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A13	40	5								0.89	0.57	0.49
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A14	40	5								0.71	0.88	0.75
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A14	60	10								0.72	0.84	0.79
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A14	30	10								0.76	0.6	0.65
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A15	10	25	Y		Y					0.39	0.36	0.41
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A15	40	10								0.89	0.7	0.68

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37					92-24-21	A11									
92-24-21	8LL37					92-24-21	A11									
92-24-21	8LL37	0.97	0.92	0.655		92-24-21	A11									
92-24-21	8LL37	0.76				92-24-21	A11									
92-24-21	8LL37	0.74	1.14			92-24-21	A12									
92-24-21	8LL37					92-24-21	A12									
92-24-21	8LL37	0.36	0.43			92-24-21	A12									
92-24-21	8LL37	0.82	0.56			92-24-21	A12									
92-24-21	8LL37	0.57				92-24-21	A13									
92-24-21	8LL37	0.62	0.46			92-24-21	A13									
92-24-21	8LL37	0.82	1			92-24-21	A13									
92-24-21	8LL37	1.02				92-24-21	A14									
92-24-21	8LL37	0.87	0.84			92-24-21	A14									
92-24-21	8LL37					92-24-21	A14									
92-24-21	8LL37	0.45				92-24-21	A15									
92-24-21	8LL37	0.49	0.52	0.547		92-24-21	A15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A15	60	5								1.25	1.33	1.85
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A16	10	25				Y				0.56	0.64	0.64
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A16	40	5								0.39	0.4	0.48
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A16	20	20								0.55	0.45	0.85
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A17	0									0.69	0.75	1.04
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A17	40	5								0.7	1.05	0.97
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A17	0									1.37		
4744746	92-24-21	8LL37	A-8-102, ST 9-10	A18	10	25	Y			Y				0.87	0.98	1.19
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A18	40	10								0.71	0.5	0.49
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A19	40	10								1.21	0.94	1.63
4744750	92-24-21	8LL37	A-8-102, ST 9-10	A20	6	100	Y		Y					0.41	0.43	0.43
4744747	92-24-21	8LL37	A-8-102, ST 9-10	P01	50	25								0.7	0.68	1.17

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37					92-24-21	A15									
92-24-21	8LL37	0.54				92-24-21	A16									
92-24-21	8LL37	0.61	0.56	0.617		92-24-21	A16									
92-24-21	8LL37	0.81	0.43	1.005		92-24-21	A16									
92-24-21	8LL37	0.97	0.84			92-24-21	A17									
92-24-21	8LL37	1.03	0.7			92-24-21	A17									
92-24-21	8LL37					92-24-21	A17									
92-24-21	8LL37					92-24-21	A18									
92-24-21	8LL37	0.78	0.75	0.283	0.83	92-24-21	A18									
92-24-21	8LL37					92-24-21	A19									
92-24-21	8LL37					92-24-21	A20									
92-24-21	8LL37	0.94	0.61	0.69	0.92	92-24-21	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P01	60	10								0.58	0.29	0.58
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P01	0							Y		1.74		
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P01	40	25								0.59	1.06	0.85
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P02	20	25			Y					0.74	0.32	0.29
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P02	40	10								1.28	1.06	0.77
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P02	50	10								0.99	1.87	1.11
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P03	20	25						Y		1.94		
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P03	40	12						Y		0.4	0.26	1.59
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P03	10	25			Y					0.32	0.31	0.23
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P04	20	30								0.39	0.61	1.32
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P04	0						Y					
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P04	20	20	Y			Y	Y			0.71	0.82	1.57
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P05	40	10								0.64	0.57	0.42
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P05	60	5						Y		0.69	1.11	1.15
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P06	20	25			Y					0.67	0.39	0.49
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P06	60	10						Y		0.37	1.52	0.73
4744749	92-24-21	8LL37	A-8-102, ST 9-10	P07	30	10										
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P07	40	5								1.41		
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P08	40	10								0.57	2	2.28
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P09	40	10	Y			Y				1.75	2.63	2.54
4744750	92-24-21	8LL37	A-8-102, ST 9-10	P10	6	100	Y		Y					0.5	0.85	
4744746	92-24-21	8LL37	A-8-102, ST 9-10	R01	20	25	Y			Y						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37	0.78	0.4	0.212	0.57	92-24-21	P01									
92-24-21	8LL37					92-24-21	P01									
92-24-21	8LL37	0.45	0.67	0.576	1.01	92-24-21	P01	1.07	1.82							
92-24-21	8LL37	0.13	0.38	0.737		92-24-21	P02									
92-24-21	8LL37	1.01				92-24-21	P02									
92-24-21	8LL37	0.7	0.7	0.475	0.39	92-24-21	P02	0.36								
92-24-21	8LL37					92-24-21	P03									
92-24-21	8LL37	0.47	0.49	0.323	2.88	92-24-21	P03									
92-24-21	8LL37	0.22	0.31	0.687	0.43	92-24-21	P03	0.37	0.28							
92-24-21	8LL37					92-24-21	P04									
92-24-21	8LL37					92-24-21	P04									
92-24-21	8LL37					92-24-21	P04									
92-24-21	8LL37	0.2	0.59			92-24-21	P05									
92-24-21	8LL37	0.72	0.55	0.946	0.69	92-24-21	P05	0.92	0.72							
92-24-21	8LL37	0.62				92-24-21	P06									
92-24-21	8LL37	0.37	0.36	0.233	0.74	92-24-21	P06	0.48								
92-24-21	8LL37					92-24-21	P07									
92-24-21	8LL37					92-24-21	P07									
92-24-21	8LL37	1.42				92-24-21	P08									
92-24-21	8LL37	0.45	0.93	1.789	1.01	92-24-21	P09	0.65	0.46							
92-24-21	8LL37					92-24-21	P10									
92-24-21	8LL37					92-24-21	R01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744750	92-24-21	8LL37	A-8-102, ST 9-10	R01	7	100	Y		Y							
4744750	92-24-21	8LL37	A-8-102, ST 9-10	R01	8	50	Y			Y						
4744746	92-24-21	8LL37	A-8-102, ST 9-10	R02	10	25	Y			Y						
4744746	92-24-21	8LL37	A-8-102, ST 9-10	R03	10	25	Y			Y						
4744746	92-24-21	8LL37	A-8-102, ST 9-10	R04	20	25	Y			Y						
4744746	92-24-21	8LL37	A-8-102, ST 9-10	R05	20	25	Y	Y		Y						
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A01	40	15								0.87	0.21	0.11
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A01	40	10								0.81	0.48	0.35
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A02	40	5								0.42	0.54	0.67
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A02	60	10								0.79	0.75	1.26
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A03	20	10								0.81	0.92	1.53
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A03	0	0								1.28	1.27	0.78
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A04	30	20							Y	0.51	0.51	0.61
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A04	0	0								0.95		
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A05	10	100	Y		Y					0.34	0.29	0.66
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A06	60	10								1	1.16	1.08
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A07	40	10								0.93	0.97	0.81
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A08	40	10								1.01	0.62	0.62
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A09	0	0								1.12	0.68	0.71
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A10	40	15								0.36	0.54	0.74
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A11	0	0								0.52	0.54	0.25
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A12	30	10								0.94	1.09	1.02
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A13	40	10								0.37	0.26	0.63
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A14	40	5								1.07	1.18	0.73

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-21	8LL37					92-24-21	R01									
92-24-21	8LL37					92-24-21	R01									
92-24-21	8LL37					92-24-21	R02									
92-24-21	8LL37					92-24-21	R03									
92-24-21	8LL37					92-24-21	R04									
92-24-21	8LL37					92-24-21	R05									
92-24-2-1	8LL37	0.58	0.76	1.37	0.81	92-24-2-1	A01	1.06	0.83	0.57						
92-24-2-1	8LL37	0.1	0.6	0.715	0.47	92-24-2-1	A01	0.35	0.52							
92-24-2-1	8LL37	0.86	0.79	1.264		92-24-2-1	A02									
92-24-2-1	8LL37	0.72	0.91	1.104		92-24-2-1	A02									
92-24-2-1	8LL37					92-24-2-1	A03									
92-24-2-1	8LL37	0.6	0.72			92-24-2-1	A03									
92-24-2-1	8LL37	0.49	0.66	0.647		92-24-2-1	A04									
92-24-2-1	8LL37					92-24-2-1	A04									
92-24-2-1	8LL37	0.62	0.72			92-24-2-1	A05									
92-24-2-1	8LL37	0.42	1.1	0.35	0.64	92-24-2-1	A06	0.66	0.46							
92-24-2-1	8LL37	1.14	0.8	0.55	1.27	92-24-2-1	A07									
92-24-2-1	8LL37	1.01				92-24-2-1	A08									
92-24-2-1	8LL37					92-24-2-1	A09									
92-24-2-1	8LL37	0.79	0.37	0.403		92-24-2-1	A10									
92-24-2-1	8LL37	0.57	0.88	1.053		92-24-2-1	A11									
92-24-2-1	8LL37	0.46	0.61	0.788	0.21	92-24-2-1	A12	0.65								
92-24-2-1	8LL37	0.53	0.57	0.561	0.37	92-24-2-1	A13	0.43								
92-24-2-1	8LL37	0.81	0.71	0.82	1.11	92-24-2-1	A14	0.86								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-21	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A15	20	15								1.48	1.15	
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A16	40	10								0.75	0.78	0.68
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A17	0	0										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A18	40	10							Y	0.65	0.19	0.49
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A19	20	10								0.45	0.22	0.4
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A20	60	10								0.58	0.81	0.82
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A21	20	20								0.65	0.24	0.52
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A22	60	10								0.65	0.99	0.46
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A23	40	10								0.84	0.5	0.47
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A24	40	5								0.77	0.57	0.7
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A25	40	5								0.87	0.67	
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A26	30	10								0.6	0.57	0.49
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A27	0	0								0.99	0.98	0.63
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A28	40	5								0.98	1.13	
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A29	0	0										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A30	0	0										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A31	0	0										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A32	20	20								1.12	0.83	
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A33	20	20								1.22	1.29	1.04
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A34	40	5								0.74	0.43	0.86
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A35	0	0										
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	A36	40	10								1.02	1.36	1.39
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	P01	20	20								1.25		
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	P02	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-2-1	8LL37					92-24-2-1	A15									
92-24-2-1	8LL37	0.77	0.57	0.808		92-24-2-1	A16									
92-24-2-1	8LL37					92-24-2-1	A17									
92-24-2-1	8LL37	0.79	1.1	0.722		92-24-2-1	A18									
92-24-2-1	8LL37	0.63	0.88	0.213	0.54	92-24-2-1	A19	1.05	0.98	0.89						
92-24-2-1	8LL37	0.67	0.49	0.775		92-24-2-1	A20									
92-24-2-1	8LL37	0.66	0.55	0.669	0.72	92-24-2-1	A21									
92-24-2-1	8LL37	0.97	1.2	1.075	0.97	92-24-2-1	A22	1.06	0.69	1.08	1.13					
92-24-2-1	8LL37	1.06	0.5	0.919		92-24-2-1	A23									
92-24-2-1	8LL37					92-24-2-1	A24									
92-24-2-1	8LL37					92-24-2-1	A25									
92-24-2-1	8LL37	0.79	0.52			92-24-2-1	A26									
92-24-2-1	8LL37	0.94	0.82			92-24-2-1	A27									
92-24-2-1	8LL37					92-24-2-1	A28									
92-24-2-1	8LL37					92-24-2-1	A29									
92-24-2-1	8LL37					92-24-2-1	A30									
92-24-2-1	8LL37					92-24-2-1	A31									
92-24-2-1	8LL37					92-24-2-1	A32									
92-24-2-1	8LL37	0.9				92-24-2-1	A33									
92-24-2-1	8LL37	0.65	0.98	0.715	0.36	92-24-2-1	A34									
92-24-2-1	8LL37					92-24-2-1	A35									
92-24-2-1	8LL37	0.51	0.4	1.851	1.01	92-24-2-1	A36									
92-24-2-1	8LL37					92-24-2-1	P01									
92-24-2-1	8LL37					92-24-2-1	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							
92-24-2-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744678	92-24-2-1	8LL37	A-8-90-1, ST 2	P03	40	10										
4744680	92-24-3	8LL37	A-8-91, ST 3	A01	40	10								1.12	1	1.29
4744680	92-24-3	8LL37	A-8-91, ST 3	A02	40	10								1.11	0.47	0.4
4744680	92-24-3	8LL37	A-8-91, ST 3	A03	40	20								0.34	0.54	0.68
4744680	92-24-3	8LL37	A-8-91, ST 3	A04	50	10								1.12	1.46	1.65
4744680	92-24-3	8LL37	A-8-91, ST 3	A05	20	20								0.7	0.78	0.52
4744680	92-24-3	8LL37	A-8-91, ST 3	A06	20	15								0.96	0.49	0.76
4744680	92-24-3	8LL37	A-8-91, ST 3	A07	20	10								1.04		
4744680	92-24-3	8LL37	A-8-91, ST 3	A08	0	0								1.28	1.26	
4744680	92-24-3	8LL37	A-8-91, ST 3	A09	40	10								0.87	1.01	0.63
4744680	92-24-3	8LL37	A-8-91, ST 3	A10	30	5								0.91	0.82	1.05
4744680	92-24-3	8LL37	A-8-91, ST 3	A11	40	5								1.21		
4744680	92-24-3	8LL37	A-8-91, ST 3	A12	20	10								1.18		
4744680	92-24-3	8LL37	A-8-91, ST 3	A13	40	5								0.61	0.59	1.1
4744680	92-24-3	8LL37	A-8-91, ST 3	A14	20	10								0.93	0.42	0.65
4744680	92-24-3	8LL37	A-8-91, ST 3	A15	40	5								0.78	0.83	0.91
4744680	92-24-3	8LL37	A-8-91, ST 3	A16	20	10								1.03	1.02	1.08
4744680	92-24-3	8LL37	A-8-91, ST 3	A17	0	0								0.65	0.81	0.73
4744680	92-24-3	8LL37	A-8-91, ST 3	A18	0	0								0.87	0.78	0.53
4744680	92-24-3	8LL37	A-8-91, ST 3	A19	40	5								0.75	0.4	0.33
4744680	92-24-3	8LL37	A-8-91, ST 3	A20	0	0										
4744680	92-24-3	8LL37	A-8-91, ST 3	A21	0	0								0.65	0.64	0.87
4744680	92-24-3	8LL37	A-8-91, ST 3	A22	40	5								1.04	1.07	
4744680	92-24-3	8LL37	A-8-91, ST 3	A23	0	0								1.04	0.5	0.74

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-2-1	8LL37					92-24-2-1	P03									
92-24-3	8LL37	0.97				92-24-3	A01									
92-24-3	8LL37	0.92	0.81	1.069		92-24-3	A02									
92-24-3	8LL37	0.64	0.53	0.595	0.5	92-24-3	A03	1.21	0.65	1.12	0.7	0.41	0.63	0.24	0.47	0.42
92-24-3	8LL37	0.99	0.92			92-24-3	A04									
92-24-3	8LL37	0.89				92-24-3	A05									
92-24-3	8LL37	0.78	0.72	0.345	0.94	92-24-3	A06									
92-24-3	8LL37					92-24-3	A07									
92-24-3	8LL37					92-24-3	A08									
92-24-3	8LL37					92-24-3	A09									
92-24-3	8LL37					92-24-3	A10									
92-24-3	8LL37					92-24-3	A11									
92-24-3	8LL37					92-24-3	A12									
92-24-3	8LL37	0.6	0.74			92-24-3	A13									
92-24-3	8LL37	0.24	0.35	0.471	0.6	92-24-3	A14	0.31								
92-24-3	8LL37	1.35				92-24-3	A15									
92-24-3	8LL37	0.95				92-24-3	A16									
92-24-3	8LL37	0.83	0.73			92-24-3	A17									
92-24-3	8LL37	0.84				92-24-3	A18									
92-24-3	8LL37	0.41	0.46	0.401	0.28	92-24-3	A19									
92-24-3	8LL37					92-24-3	A20									
92-24-3	8LL37	0.51	0.24	0.819		92-24-3	A21									
92-24-3	8LL37					92-24-3	A22									
92-24-3	8LL37	0.67	0.72			92-24-3	A23									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-2-1	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37	0.39						
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744680	92-24-3	8LL37	A-8-91, ST 3	A24	40	10								1.11	0.86	
4744680	92-24-3	8LL37	A-8-91, ST 3	A25	40	15								0.62	0.81	0.96
4744680	92-24-3	8LL37	A-8-91, ST 3	A26	20	20								1.18	1.01	1.05
4744680	92-24-3	8LL37	A-8-91, ST 3	A27	50	5								0.36	1.03	0.68
4744680	92-24-3	8LL37	A-8-91, ST 3	A28	40	25								1.57	1.52	1.28
4744680	92-24-3	8LL37	A-8-91, ST 3	A29	0	0								0.9	0.81	0.87
4744680	92-24-3	8LL37	A-8-91, ST 3	A30	40	5								1.62	1.19	
4744680	92-24-3	8LL37	A-8-91, ST 3	A31	0	0										
4744680	92-24-3	8LL37	A-8-91, ST 3	P01	40	10								1.05	0.35	0.53
4744680	92-24-3	8LL37	A-8-91, ST 3	P02	40	5										
4744680	92-24-3	8LL37	A-8-91, ST 3	P03	40	5										
4744680	92-24-3	8LL37	A-8-91, ST 3	P04	40	10								0.72	1.31	
4744680	92-24-3	8LL37	A-8-91, ST 3	P05	0	0										
4744680	92-24-3	8LL37	A-8-91, ST 3	P06	40	10								0.26	0.4	0.77
4744680	92-24-3	8LL37	A-8-91, ST 3	P07	40	15								1.73	1.22	
4744680	92-24-3	8LL37	A-8-91, ST 3	P08	0	0										
4744684	92-24-5	8LL37	A-8-93, ST 5	A01	20	10								0.87	0.88	1
4744684	92-24-5	8LL37	A-8-93, ST 5	A02	0	0								0.89	0.87	0.71
4744684	92-24-5	8LL37	A-8-93, ST 5	A03	40	10								0.69	0.7	0.7
4744684	92-24-5	8LL37	A-8-93, ST 5	A04	20	20								0.98	0.84	0.57
4744684	92-24-5	8LL37	A-8-93, ST 5	A05	20	50								1.42	1.65	
4744684	92-24-5	8LL37	A-8-93, ST 5	A06	40	10								0.78	0.74	0.79
4744684	92-24-5	8LL37	A-8-93, ST 5	A07	20	25								0.8	0.71	0.72
4744684	92-24-5	8LL37	A-8-93, ST 5	A08	30	10								0.85	0.9	0.76

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-3	8LL37					92-24-3	A24									
92-24-3	8LL37	0.47	0.72	1.147	1.34	92-24-3	A25	1.15								
92-24-3	8LL37	1.04				92-24-3	A26									
92-24-3	8LL37	0.87	0.51	0.608	0.56	92-24-3	A27									
92-24-3	8LL37	0.73	1.1	1.135	1.41	92-24-3	A28	0.82								
92-24-3	8LL37					92-24-3	A29									
92-24-3	8LL37					92-24-3	A30									
92-24-3	8LL37					92-24-3	A31									
92-24-3	8LL37					92-24-3	P01									
92-24-3	8LL37					92-24-3	P02									
92-24-3	8LL37					92-24-3	P03									
92-24-3	8LL37					92-24-3	P04									
92-24-3	8LL37					92-24-3	P05									
92-24-3	8LL37	0.66	0.22	0.463	0.46	92-24-3	P06	0.32	0.28	0.16						
92-24-3	8LL37					92-24-3	P07									
92-24-3	8LL37					92-24-3	P08									
92-24-5	8LL37					92-24-5	A01									
92-24-5	8LL37	1.02	0.4	0.634		92-24-5	A02									
92-24-5	8LL37	0.6	0.84	0.847	0.46	92-24-5	A03									
92-24-5	8LL37	0.85	0.79	0.463	0.56	92-24-5	A04	0.53	0.56							
92-24-5	8LL37					92-24-5	A05									
92-24-5	8LL37	1.03				92-24-5	A06									
92-24-5	8LL37	0.77	0.7	0.699		92-24-5	A07									
92-24-5	8LL37	1.09	0.84			92-24-5	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-3	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744684	92-24-5	8LL37	A-8-93, ST 5	A09	40	10								0.74	0.81	0.61
4744684	92-24-5	8LL37	A-8-93, ST 5	A10	20	25								0.57	0.48	0.58
4744684	92-24-5	8LL37	A-8-93, ST 5	A11	40	5								0.72	0.84	0.85
4744684	92-24-5	8LL37	A-8-93, ST 5	A12	40	5								0.88	0.69	0.69
4744684	92-24-5	8LL37	A-8-93, ST 5	A13	30	20								0.6	0.65	0.57
4744684	92-24-5	8LL37	A-8-93, ST 5	A14	40	15								0.54	0.9	0.49
4744684	92-24-5	8LL37	A-8-93, ST 5	A15	30	20								0.61	0.56	0.7
4744684	92-24-5	8LL37	A-8-93, ST 5	A16	20	10								0.81	0.61	0.9
4744684	92-24-5	8LL37	A-8-93, ST 5	A17	30	15								0.97	1.02	0.46
4744684	92-24-5	8LL37	A-8-93, ST 5	A18	40	15	Y			Y				0.63	0.75	0.8
4744684	92-24-5	8LL37	A-8-93, ST 5	A19	40	10								1	0.81	1.22
4744684	92-24-5	8LL37	A-8-93, ST 5	A20	40	10								0.71	0.79	0.74
4744684	92-24-5	8LL37	A-8-93, ST 5	A21	30	20								0.7	0.86	0.66
4744684	92-24-5	8LL37	A-8-93, ST 5	A22	10	100	Y			Y				0.31	0.61	0.63
4744684	92-24-5	8LL37	A-8-93, ST 5	A23	50	10							Y	1.01	0.94	0.56
4744684	92-24-5	8LL37	A-8-93, ST 5	A24	50	15								0.8	0.9	0.66
4744684	92-24-5	8LL37	A-8-93, ST 5	A25	20	100	Y		Y					0.89	0.52	0.51
4744684	92-24-5	8LL37	A-8-93, ST 5	P01	60	10										
4744684	92-24-5	8LL37	A-8-93, ST 5	P02	0	0										
4744684	92-24-5	8LL37	A-8-93, ST 5	P03	30	10										
4744684	92-24-5	8LL37	A-8-93, ST 5	P04	0	0										
4744684	92-24-5	8LL37	A-8-93, ST 5	P05	50	5								1.7	1.63	
4744684	92-24-5	8LL37	A-8-93, ST 5	P06	40	10								0.79	0.75	0.91
4744684	92-24-5	8LL37	A-8-93, ST 5	P07	30	20								2.58	2.01	0.71

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-5	8LL37	0.85	0.46	0.711	0.86	92-24-5	A09									
92-24-5	8LL37	0.58	0.7	0.639	0.6	92-24-5	A10	0.67	0.56							
92-24-5	8LL37	0.66				92-24-5	A11									
92-24-5	8LL37	0.81	0.57	0.793		92-24-5	A12									
92-24-5	8LL37	0.51	0.36	0.871	1.01	92-24-5	A13									
92-24-5	8LL37	1.01	0.66			92-24-5	A14									
92-24-5	8LL37	0.55	0.98	0.766	1.27	92-24-5	A15	1.18	0.96							
92-24-5	8LL37	0.68				92-24-5	A16									
92-24-5	8LL37	1.11	0.66			92-24-5	A17									
92-24-5	8LL37	0.59	0.63	0.587	0.72	92-24-5	A18									
92-24-5	8LL37	1.15	1.47			92-24-5	A19									
92-24-5	8LL37					92-24-5	A20									
92-24-5	8LL37	1.24	1.19	1.34	1.07	92-24-5	A21	0.64								
92-24-5	8LL37	0.75				92-24-5	A22									
92-24-5	8LL37	0.81	1.05	0.882		92-24-5	A23									
92-24-5	8LL37	0.67	0.92	0.887	0.52	92-24-5	A24									
92-24-5	8LL37	0.71	0.63	0.819	0.64	92-24-5	A25	0.65	0.62							
92-24-5	8LL37					92-24-5	P01									
92-24-5	8LL37					92-24-5	P02									
92-24-5	8LL37					92-24-5	P03									
92-24-5	8LL37					92-24-5	P04									
92-24-5	8LL37					92-24-5	P05									
92-24-5	8LL37					92-24-5	P06									
92-24-5	8LL37					92-24-5	P07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744684	92-24-5	8LL37	A-8-93, ST 5	P08	60	10								0.71	0.72	0.98
4744684	92-24-5	8LL37	A-8-93, ST 5	P09	60	10										
4744684	92-24-5	8LL37	A-8-93, ST 5	P09	40	15								0.53		
4744684	92-24-5	8LL37	A-8-93, ST 5	Q01	0	0										
4744684	92-24-5	8LL37	A-8-93, ST 5	Q02	0	0										
4744799	92-28-12	8LL37	A-12-98, ST 9	A01	5	50	Y			Y				1.07		
4744799	92-28-12	8LL37	A-12-98, ST 9	A02	40	10								1.21	0.84	1.19
4744799	92-28-12	8LL37	A-12-98, ST 9	A03	40	10										
4744799	92-28-12	8LL37	A-12-98, ST 9	A04	40	5								1.76	0.73	0.87
4744799	92-28-12	8LL37	A-12-98, ST 9	A05	20	10								1.02		
4744799	92-28-12	8LL37	A-12-98, ST 9	A06	40	5								0.91	1.35	
4744799	92-28-12	8LL37	A-12-98, ST 9	A07	0									0.65	0.71	0.96
4744799	92-28-12	8LL37	A-12-98, ST 9	A08	0									0.98		
4744799	92-28-12	8LL37	A-12-98, ST 9	A09	40	5								0.65	1.05	0.87
4744799	92-28-12	8LL37	A-12-98, ST 9	A10	40	10								0.73	1.02	1.08
4744799	92-28-12	8LL37	A-12-98, ST 9	A11	0									1.12	1.16	
4744799	92-28-12	8LL37	A-12-98, ST 9	A12	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	A13	0									0.72		
4744799	92-28-12	8LL37	A-12-98, ST 9	A14	40	10								0.95	0.78	
4744799	92-28-12	8LL37	A-12-98, ST 9	A15	40	5								1.05		
4744799	92-28-12	8LL37	A-12-98, ST 9	A16	10	25								0.59		
4744799	92-28-12	8LL37	A-12-98, ST 9	A17	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	A18	0									0.6	0.82	0.51
4744799	92-28-12	8LL37	A-12-98, ST 9	A19	40	5								1.27		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-24-5	8LL37	1.57	0.88	1.297		92-24-5	P08									
92-24-5	8LL37					92-24-5	P09									
92-24-5	8LL37					92-24-5	P09									
92-24-5	8LL37					92-24-5	Q01									
92-24-5	8LL37					92-24-5	Q02									
92-28-12	8LL37					92-28-12	A01									
92-28-12	8LL37	1.07	0.52	0.559		92-28-12	A02									
92-28-12	8LL37					92-28-12	A03									
92-28-12	8LL37	1.33	1.02			92-28-12	A04									
92-28-12	8LL37					92-28-12	A05									
92-28-12	8LL37					92-28-12	A06									
92-28-12	8LL37					92-28-12	A07									
92-28-12	8LL37					92-28-12	A08									
92-28-12	8LL37					92-28-12	A09									
92-28-12	8LL37	1.22				92-28-12	A10									
92-28-12	8LL37					92-28-12	A11									
92-28-12	8LL37					92-28-12	A12									
92-28-12	8LL37					92-28-12	A13									
92-28-12	8LL37					92-28-12	A14									
92-28-12	8LL37					92-28-12	A15									
92-28-12	8LL37					92-28-12	A16									
92-28-12	8LL37					92-28-12	A17									
92-28-12	8LL37	0.54				92-28-12	A18									
92-28-12	8LL37					92-28-12	A19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-24-5	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744799	92-28-12	8LL37	A-12-98, ST 9	A20	0									1.36		
4744799	92-28-12	8LL37	A-12-98, ST 9	P01	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	P02	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	P03	20	25								0.99	1.07	0.96
4744799	92-28-12	8LL37	A-12-98, ST 9	P04	0									0.8	0.94	0.6
4744799	92-28-12	8LL37	A-12-98, ST 9	P05	30	25								1.91		
4744799	92-28-12	8LL37	A-12-98, ST 9	P06	30	20								1.78		
4744799	92-28-12	8LL37	A-12-98, ST 9	P07	40	10								0.67	0.37	0.79
4744799	92-28-12	8LL37	A-12-98, ST 9	P08	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	P09	0											
4744799	92-28-12	8LL37	A-12-98, ST 9	P10	20	20								0.14	0.16	0.19
4744799	92-28-12	8LL37	A-12-98, ST 9	P11	40	10								1.86		
4744799	92-28-12	8LL37	A-12-98, ST 9	P12	30	15								0.81	1.26	1.05
4744800	92-28-13	8LL37	A-12-99, ST 9	A01	40	10								1.19	0.78	0.87
4744800	92-28-13	8LL37	A-12-99, ST 9	A02	20	15	Y			Y				0.87	0.89	0.72
4744800	92-28-13	8LL37	A-12-99, ST 9	A03	20	50	Y			Y				0.66	0.66	0.99
4744800	92-28-13	8LL37	A-12-99, ST 9	A04	10	50	Y			Y				0.21	0.39	0.41
4744800	92-28-13	8LL37	A-12-99, ST 9	A05	40	25								0.95	0.9	0.68
4744800	92-28-13	8LL37	A-12-99, ST 9	A06	20	10								0.63	0.56	0.68
4744800	92-28-13	8LL37	A-12-99, ST 9	A07	20	10								0.76	0.54	0.72
4744800	92-28-13	8LL37	A-12-99, ST 9	A08	0	0	Y		Y					0.51	0.56	0.64
4744800	92-28-13	8LL37	A-12-99, ST 9	A09	40	5								0.82	1.1	0.65
4744800	92-28-13	8LL37	A-12-99, ST 9	A10	40	5								0.92	1.01	0.79

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-12	8LL37					92-28-12	A20									
92-28-12	8LL37					92-28-12	P01									
92-28-12	8LL37					92-28-12	P02									
92-28-12	8LL37	0.73	0.42	0.384		92-28-12	P03									
92-28-12	8LL37	0.54	0.59	0.869		92-28-12	P04									
92-28-12	8LL37					92-28-12	P05									
92-28-12	8LL37					92-28-12	P06									
92-28-12	8LL37	0.55	0.91	0.333	0.31	92-28-12	P07	0.49	0.33							
92-28-12	8LL37					92-28-12	P08									
92-28-12	8LL37					92-28-12	P09									
92-28-12	8LL37	0.55	0.62	0.081	0.14	92-28-12	P10	0.15	0.19							
92-28-12	8LL37					92-28-12	P11									
92-28-12	8LL37	0.69	0.51	0.42		92-28-12	P12									
92-28-13	8LL37	0.84	0.79	0.769	0.77	92-28-13	A01									
92-28-13	8LL37	0.69	0.88	0.899		92-28-13	A02									
92-28-13	8LL37	1.04				92-28-13	A03									
92-28-13	8LL37	0.39	0.54	0.614	0.58	92-28-13	A04									
92-28-13	8LL37	0.56	0.73	0.8	1.22	92-28-13	A05									
92-28-13	8LL37					92-28-13	A06									
92-28-13	8LL37	0.58				92-28-13	A07									
92-28-13	8LL37					92-28-13	A08									
92-28-13	8LL37	0.64				92-28-13	A09									
92-28-13	8LL37	0.58	0.8			92-28-13	A10									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-12	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744800	92-28-13	8LL37	A-12-99, ST 9	A11	10	100			Y					0.48	0.44	0.44
4744800	92-28-13	8LL37	A-12-99, ST 9	A12	10	50			Y					0.3	0.43	0.43
4744800	92-28-13	8LL37	A-12-99, ST 9	A13	40	5								1.88	1.27	2.02
4744800	92-28-13	8LL37	A-12-99, ST 9	A14	40	5								1.23	0.96	
4744800	92-28-13	8LL37	A-12-99, ST 9	A15	30	5								0.69	0.62	1.06
4744800	92-28-13	8LL37	A-12-99, ST 9	A16	10	50		Y		Y				0.46	0.41	0.64
4744800	92-28-13	8LL37	A-12-99, ST 9	A17	10	20								0.87	0.98	0.54
4744800	92-28-13	8LL37	A-12-99, ST 9	A18	10	25								0.55	0.57	0.76
4744800	92-28-13	8LL37	A-12-99, ST 9	A19	0	0										
4744800	92-28-13	8LL37	A-12-99, ST 9	A20	10	100	Y		Y					0.61	0.51	0.56
4744800	92-28-13	8LL37	A-12-99, ST 9	A21	40	5								1.09	1.19	1
4744800	92-28-13	8LL37	A-12-99, ST 9	A22	0	0								1.24		
4744800	92-28-13	8LL37	A-12-99, ST 9	P01	0											
4744800	92-28-13	8LL37	A-12-99, ST 9	P02	40	5								0.68	0.12	1.11
4744800	92-28-13	8LL37	A-12-99, ST 9	P03	40	10								1.35	1.14	0.72
4744800	92-28-13	8LL37	A-12-99, ST 9	P04	30	10								0.62	0.78	0.53
4744800	92-28-13	8LL37	A-12-99, ST 9	P05	60	10								1.3	1.08	0.83
4744800	92-28-13	8LL37	A-12-99, ST 9	P06	30	10								1.38	0.6	0.53
4744800	92-28-13	8LL37	A-12-99, ST 9	P07	0											
4744800	92-28-13	8LL37	A-12-99, ST 9	P08	30	10								0.77	0.6	0.43
4744802	92-28-14	8LL37	A-12-100, ST 9	A01	20	25								0.81	0.96	1.3
4744802	92-28-14	8LL37	A-12-100, ST 9	A02	40	5								0.93	0.7	
4744802	92-28-14	8LL37	A-12-100, ST 9	A03	40	5								1.27	0.9	0.81
4744802	92-28-14	8LL37	A-12-100, ST 9	A04	0									0.81	0.85	0.87

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-13	8LL37	0.41				92-28-13	A11									
92-28-13	8LL37	0.57	0.54	0.41	0.5	92-28-13	A12	0.64	0.4	0.68						
92-28-13	8LL37	1.34	1.35			92-28-13	A13									
92-28-13	8LL37					92-28-13	A14									
92-28-13	8LL37					92-28-13	A15									
92-28-13	8LL37	0.44	0.48	0.294		92-28-13	A16									
92-28-13	8LL37					92-28-13	A17									
92-28-13	8LL37					92-28-13	A18									
92-28-13	8LL37					92-28-13	A19									
92-28-13	8LL37					92-28-13	A20									
92-28-13	8LL37	1.19	1.08			92-28-13	A21									
92-28-13	8LL37					92-28-13	A22									
92-28-13	8LL37					92-28-13	P01									
92-28-13	8LL37	0.63	0.66	0.442		92-28-13	P02									
92-28-13	8LL37					92-28-13	P03									
92-28-13	8LL37	0.58	0.51	0.303	0.24	92-28-13	P04	0.22	0.39	0.2						
92-28-13	8LL37	0.76	0.66	0.778	0.94	92-28-13	P05	1.94								
92-28-13	8LL37	1.09				92-28-13	P06									
92-28-13	8LL37					92-28-13	P07									
92-28-13	8LL37	0.45	0.74	0.424	0.51	92-28-13	P08									
92-28-14	8LL37	0.88				92-28-14	A01									
92-28-14	8LL37					92-28-14	A02									
92-28-14	8LL37					92-28-14	A03									
92-28-14	8LL37	0.67				92-28-14	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-13	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744802	92-28-14	8LL37	A-12-100, ST 9	A05	20	25								1.44	1.5	
4744802	92-28-14	8LL37	A-12-100, ST 9	A06	0									0.74	0.54	0.91
4744802	92-28-14	8LL37	A-12-100, ST 9	A07	40	5								0.81		
4744802	92-28-14	8LL37	A-12-100, ST 9	A08	20	25								1.15	0.76	0.88
4744802	92-28-14	8LL37	A-12-100, ST 9	A09	0									1.01		
4744802	92-28-14	8LL37	A-12-100, ST 9	A10	10	25				Y				0.84		
4744802	92-28-14	8LL37	A-12-100, ST 9	A11	0									0.66	0.74	0.43
4744802	92-28-14	8LL37	A-12-100, ST 9	A12	20	10								1.2		
4744802	92-28-14	8LL37	A-12-100, ST 9	A13	30	5								0.78	0.79	1.17
4744802	92-28-14	8LL37	A-12-100, ST 9	A14	40	5								1	0.75	0.61
4744802	92-28-14	8LL37	A-12-100, ST 9	A15	0											
4744802	92-28-14	8LL37	A-12-100, ST 9	A16	0									1.2	0.93	
4744802	92-28-14	8LL37	A-12-100, ST 9	A17	20	20								0.93	1.1	
4744802	92-28-14	8LL37	A-12-100, ST 9	A18	20	20								0.82	0.94	
4744802	92-28-14	8LL37	A-12-100, ST 9	P01	60	10								0.56	0.61	0.63
4744802	92-28-14	8LL37	A-12-100, ST 9	P02	40	10								1.43	1.45	
4744802	92-28-14	8LL37	A-12-100, ST 9	P03	0	0										
4744802	92-28-14	8LL37	A-12-100, ST 9	P04	20	25								0.12	0.37	0.55
4744802	92-28-14	8LL37	A-12-100, ST 9	P05	40	5								1.14	0.76	0.79
4744802	92-28-14	8LL37	A-12-100, ST 9	P06	40	10								0.84	1.02	0.73
4744802	92-28-14	8LL37	A-12-100, ST 9	P07	40	5								0.4	0.79	0.54
4744802	92-28-14	8LL37	A-12-100, ST 9	P08	40	5								2.79	1.3	1.19
4744802	92-28-14	8LL37	A-12-100, ST 9	P09	20	5										
4744802	92-28-14	8LL37	A-12-100, ST 9	P10	20	5								0.55	0.59	0.42

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-14	8LL37					92-28-14	A05									
92-28-14	8LL37	0.35	0.66			92-28-14	A06									
92-28-14	8LL37					92-28-14	A07									
92-28-14	8LL37	0.81	0.71	0.676		92-28-14	A08									
92-28-14	8LL37					92-28-14	A09									
92-28-14	8LL37					92-28-14	A10									
92-28-14	8LL37					92-28-14	A11									
92-28-14	8LL37					92-28-14	A12									
92-28-14	8LL37					92-28-14	A13									
92-28-14	8LL37	0.89	0.7			92-28-14	A14									
92-28-14	8LL37					92-28-14	A15									
92-28-14	8LL37					92-28-14	A16									
92-28-14	8LL37					92-28-14	A17									
92-28-14	8LL37					92-28-14	A18									
92-28-14	8LL37	0.8	0.38	0.225	0.68	92-28-14	P01	0.36	0.69	0.56	0.1	0.38				
92-28-14	8LL37					92-28-14	P02									
92-28-14	8LL37					92-28-14	P03									
92-28-14	8LL37	0.46	0.59			92-28-14	P04									
92-28-14	8LL37	1.25				92-28-14	P05									
92-28-14	8LL37	0.55				92-28-14	P06									
92-28-14	8LL37					92-28-14	P07									
92-28-14	8LL37	1.02				92-28-14	P08									
92-28-14	8LL37					92-28-14	P09									
92-28-14	8LL37	0.35	0.43	0.378	0.54	92-28-14	P10	0.42	0.35	0.27	0.43	0.25				

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744802	92-28-14	8LL37	A-12-100, ST 9	P11	0	0										
4744802	92-28-14	8LL37	A-12-100, ST 9	P12	40	5								0.8	1.06	
4744802	92-28-14	8LL37	A-12-100, ST 9	P13	20	20								0.53	0.59	0.74
4744802	92-28-14	8LL37	A-12-100, ST 9	P14	0									1.01		
4744802	92-28-14	8LL37	A-12-100, ST 9	P15	50	5								1.22	1.19	0.75
4744802	92-28-14	8LL37	A-12-100, ST 9	P16	0									0.72	0.57	
4744802	92-28-14	8LL37	A-12-100, ST 9	P17	40	10								0.62	0.66	0.53
4744805	92-28-15	8LL37	A-12-101, ST 9	A01	40	10								1.39	1.56	1.17
4744806	92-28-15	8LL37	A-12-101, ST 9	A01	20	25	Y			Y				0.42	0.41	0.6
4744807	92-28-15	8LL37	A-12-101, ST 9	A01	20	20								0.96	0.71	0.82
4744808	92-28-15	8LL37	A-12-101, ST 9	A01	20	25				Y				0.7	0.72	0.65
4744809	92-28-15	8LL37	A-12-101, ST 9	A01	0									1.29	1.18	1.06
4744810	92-28-15	8LL37	A-12-101, ST 9	A01	20	25				Y				0.79	0.68	0.67
4744811	92-28-15	8LL37	A-12-101, ST 9	A01	40	5								1.26	1.01	1.08
4744806	92-28-15	8LL37	A-12-101, ST 9	A02	0									0.81	1.1	0.79
4744807	92-28-15	8LL37	A-12-101, ST 9	A02	10	25								0.67	0.54	0.53
4744808	92-28-15	8LL37	A-12-101, ST 9	A02	0									1.02	0.57	0.73
4744809	92-28-15	8LL37	A-12-101, ST 9	A02	10	20								0.87	0.91	0.87
4744810	92-28-15	8LL37	A-12-101, ST 9	A02	40	5								0.92	1.03	0.69
4744811	92-28-15	8LL37	A-12-101, ST 9	A02	60	5								0.91	0.92	0.65
4744806	92-28-15	8LL37	A-12-101, ST 9	A03	10	90	Y		Y					0.85	0.83	
4744807	92-28-15	8LL37	A-12-101, ST 9	A03	40	5								0.78	0.89	
4744808	92-28-15	8LL37	A-12-101, ST 9	A03	0									0.96		
4744809	92-28-15	8LL37	A-12-101, ST 9	A03	10	25	Y			Y				0.52	0.51	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-14	8LL37					92-28-14	P11									
92-28-14	8LL37					92-28-14	P12									
92-28-14	8LL37					92-28-14	P13									
92-28-14	8LL37					92-28-14	P14									
92-28-14	8LL37	0.91				92-28-14	P15									
92-28-14	8LL37					92-28-14	P16									
92-28-14	8LL37	0.23				92-28-14	P17									
92-28-15	8LL37	1.62	1.21	1.167	1.03	92-28-15	A01	1.09	1.15							
92-28-15	8LL37	0.41	0.46	0.542	0.45	92-28-15	A01	0.7	1.02	0.9						
92-28-15	8LL37					92-28-15	A01									
92-28-15	8LL37	0.72	1.12	0.945		92-28-15	A01									
92-28-15	8LL37					92-28-15	A01									
92-28-15	8LL37	1				92-28-15	A01									
92-28-15	8LL37	0.96				92-28-15	A01									
92-28-15	8LL37	0.63	1	0.635	0.92	92-28-15	A02	1.05								
92-28-15	8LL37	0.3	0.45	0.349		92-28-15	A02									
92-28-15	8LL37					92-28-15	A02									
92-28-15	8LL37	0.62				92-28-15	A02									
92-28-15	8LL37					92-28-15	A02									
92-28-15	8LL37	0.9	0.85	0.697	0.79	92-28-15	A02	0.69								
92-28-15	8LL37					92-28-15	A03									
92-28-15	8LL37					92-28-15	A03									
92-28-15	8LL37					92-28-15	A03									
92-28-15	8LL37					92-28-15	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-14	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744810	92-28-15	8LL37	A-12-101, ST 9	A03	0									1.17		
4744811	92-28-15	8LL37	A-12-101, ST 9	A03	0									0.95	0.75	
4744806	92-28-15	8LL37	A-12-101, ST 9	A04	10	50	Y			Y				0.43	0.44	0.46
4744807	92-28-15	8LL37	A-12-101, ST 9	A04	20	5								0.89		
4744808	92-28-15	8LL37	A-12-101, ST 9	A04	0									1.11	1.33	
4744809	92-28-15	8LL37	A-12-101, ST 9	A04	10	20								0.73	0.82	0.47
4744810	92-28-15	8LL37	A-12-101, ST 9	A04	0											
4744811	92-28-15	8LL37	A-12-101, ST 9	A04	30	10								0.56	0.44	0.56
4744806	92-28-15	8LL37	A-12-101, ST 9	A05	40	10								1.16	1.15	1.52
4744807	92-28-15	8LL37	A-12-101, ST 9	A05	20	10								0.48	0.67	0.44
4744808	92-28-15	8LL37	A-12-101, ST 9	A05	0									0.54	0.73	
4744811	92-28-15	8LL37	A-12-101, ST 9	A05	40	10								1.08	0.97	0.57
4744806	92-28-15	8LL37	A-12-101, ST 9	A06	10	75	Y			Y				0.51	0.41	0.41
4744807	92-28-15	8LL37	A-12-101, ST 9	A06	20	25	Y		Y					0.46	0.56	0.7
4744808	92-28-15	8LL37	A-12-101, ST 9	A06	0									0.52	0.77	
4744811	92-28-15	8LL37	A-12-101, ST 9	A06	0									1.02	0.96	
4744806	92-28-15	8LL37	A-12-101, ST 9	A07	20	25	Y			Y						
4744807	92-28-15	8LL37	A-12-101, ST 9	A07	10	25	Y			Y				0.41	0.47	0.96
4744808	92-28-15	8LL37	A-12-101, ST 9	A07	10	25	Y			Y				0.36	0.42	0.66
4744811	92-28-15	8LL37	A-12-101, ST 9	A07	40	5								0.56	0.88	0.66
4744806	92-28-15	8LL37	A-12-101, ST 9	A08	10	50	Y			Y				0.68	0.74	0.57
4744807	92-28-15	8LL37	A-12-101, ST 9	A08	40	10								0.67	1.04	
4744808	92-28-15	8LL37	A-12-101, ST 9	A08	10	50	Y			Y				0.34	0.39	0.65
4744811	92-28-15	8LL37	A-12-101, ST 9	A08	40	5								0.82	1.04	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-15	8LL37					92-28-15	A03									
92-28-15	8LL37					92-28-15	A03									
92-28-15	8LL37	0.4	0.48			92-28-15	A04									
92-28-15	8LL37					92-28-15	A04									
92-28-15	8LL37					92-28-15	A04									
92-28-15	8LL37					92-28-15	A04									
92-28-15	8LL37					92-28-15	A04									
92-28-15	8LL37	0.4	0.46	0.727	0.77	92-28-15	A04	0.82								
92-28-15	8LL37					92-28-15	A05									
92-28-15	8LL37	0.76				92-28-15	A05									
92-28-15	8LL37					92-28-15	A05									
92-28-15	8LL37	0.78				92-28-15	A05									
92-28-15	8LL37	0.55	0.49	0.363	0.27	92-28-15	A06	0.42								
92-28-15	8LL37	0.74	0.61			92-28-15	A06									
92-28-15	8LL37					92-28-15	A06									
92-28-15	8LL37					92-28-15	A06									
92-28-15	8LL37					92-28-15	A07									
92-28-15	8LL37	0.61				92-28-15	A07									
92-28-15	8LL37	0.62	0.48	0.495	0.54	92-28-15	A07	0.37								
92-28-15	8LL37	1.05	1			92-28-15	A07									
92-28-15	8LL37					92-28-15	A08									
92-28-15	8LL37					92-28-15	A08									
92-28-15	8LL37	0.45	0.56	0.596		92-28-15	A08									
92-28-15	8LL37					92-28-15	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
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92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744806	92-28-15	8LL37	A-12-101, ST 9	A09	0									0.67	0.55	
4744807	92-28-15	8LL37	A-12-101, ST 9	A09	40	10								0.55	0.68	1.02
4744808	92-28-15	8LL37	A-12-101, ST 9	A09	20	50	Y		Y					0.99	0.8	0.64
4744811	92-28-15	8LL37	A-12-101, ST 9	A09	30	10								0.64	0.59	0.5
4744807	92-28-15	8LL37	A-12-101, ST 9	A10	40	10								0.75	0.97	0.76
4744808	92-28-15	8LL37	A-12-101, ST 9	A10	10	50	Y			Y				0.28	0.41	0.54
4744811	92-28-15	8LL37	A-12-101, ST 9	A10	0									1.06	1.39	
4744807	92-28-15	8LL37	A-12-101, ST 9	A11	0									0.81	1.35	
4744808	92-28-15	8LL37	A-12-101, ST 9	A11	40	5								1.43	1.16	
4744807	92-28-15	8LL37	A-12-101, ST 9	A12	20	10								0.54	0.52	0.54
4744808	92-28-15	8LL37	A-12-101, ST 9	A12	40	5								1.31	1.2	
4744807	92-28-15	8LL37	A-12-101, ST 9	A13	10	25	Y			Y				0.69	0.62	0.57
4744807	92-28-15	8LL37	A-12-101, ST 9	A14	40	10								1.05	0.88	0.93
4744807	92-28-15	8LL37	A-12-101, ST 9	A15	30	10								1.24	1.01	
4744807	92-28-15	8LL37	A-12-101, ST 9	A16	40	5								0.74	0.35	
4744807	92-28-15	8LL37	A-12-101, ST 9	A17	30	10								1.15		
4744811	92-28-15	8LL37	A-12-101, ST 9	C01	13	100	Y									
4744806	92-28-15	8LL37	A-12-101, ST 9	P01	30	25					Y			0.24	0.22	0.67
4744807	92-28-15	8LL37	A-12-101, ST 9	P01	0											
4744808	92-28-15	8LL37	A-12-101, ST 9	P01	30	10								2.05	0.65	1.68
4744809	92-28-15	8LL37	A-12-101, ST 9	P01	40	10								2.79	1	
4744810	92-28-15	8LL37	A-12-101, ST 9	P01	40	5								0.46	0.03	0.04
4744811	92-28-15	8LL37	A-12-101, ST 9	P01	0											
4744806	92-28-15	8LL37	A-12-101, ST 9	P02	0											

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-15	8LL37					92-28-15	A09									
92-28-15	8LL37	0.64	0.4	0.624		92-28-15	A09									
92-28-15	8LL37	0.62	0.79			92-28-15	A09									
92-28-15	8LL37	0.64	0.57	0.803	0.8	92-28-15	A09	0.87								
92-28-15	8LL37					92-28-15	A10									
92-28-15	8LL37	0.5	0.56	0.566	0.69	92-28-15	A10									
92-28-15	8LL37					92-28-15	A10									
92-28-15	8LL37					92-28-15	A11									
92-28-15	8LL37					92-28-15	A11									
92-28-15	8LL37	0.6				92-28-15	A12									
92-28-15	8LL37					92-28-15	A12									
92-28-15	8LL37	0.48	0.46			92-28-15	A13									
92-28-15	8LL37	0.91				92-28-15	A14									
92-28-15	8LL37					92-28-15	A15									
92-28-15	8LL37					92-28-15	A16									
92-28-15	8LL37					92-28-15	A17									
92-28-15	8LL37					92-28-15	C01									
92-28-15	8LL37	0.48	0.33	0.592	0.9	92-28-15	P01	0.21	0.1							
92-28-15	8LL37					92-28-15	P01									
92-28-15	8LL37	1.8				92-28-15	P01									
92-28-15	8LL37					92-28-15	P01									
92-28-15	8LL37	0.23	0.56	0.366	0.41	92-28-15	P01	0.46	0.23	0.28						
92-28-15	8LL37					92-28-15	P01									
92-28-15	8LL37					92-28-15	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744807	92-28-15	8LL37	A-12-101, ST 9	P02	0									0.62	0.63	1.04
4744808	92-28-15	8LL37	A-12-101, ST 9	P02	0									0.82	1.12	1.09
4744809	92-28-15	8LL37	A-12-101, ST 9	P02	0									0.19	0.3	0.36
4744811	92-28-15	8LL37	A-12-101, ST 9	P02	40	10								2.58		
4744807	92-28-15	8LL37	A-12-101, ST 9	P03	40	5										
4744809	92-28-15	8LL37	A-12-101, ST 9	P03	30	10								0.56	0.27	0.47
4744811	92-28-15	8LL37	A-12-101, ST 9	P03	80	10								2.51	1.2	
4744807	92-28-15	8LL37	A-12-101, ST 9	P04	40	5								0.19	0.15	0.13
4744809	92-28-15	8LL37	A-12-101, ST 9	P04	0											
4744811	92-28-15	8LL37	A-12-101, ST 9	P04	50	12								0.45	0.38	0.48
4744807	92-28-15	8LL37	A-12-101, ST 9	P05	20	20								1.01	1.29	0.68
4744809	92-28-15	8LL37	A-12-101, ST 9	P05	40	10								0.42	0.51	0.74
4744811	92-28-15	8LL37	A-12-101, ST 9	P05	20	25								0.55	0.36	0.74
4744807	92-28-15	8LL37	A-12-101, ST 9	P06	0									1.05	0.63	0.73
4744809	92-28-15	8LL37	A-12-101, ST 9	P06	40	10								0.58	0.92	1.04
4744811	92-28-15	8LL37	A-12-101, ST 9	P06	10	25				Y				0.21	0.16	0.12
4744807	92-28-15	8LL37	A-12-101, ST 9	P07	0									2.98		
4744809	92-28-15	8LL37	A-12-101, ST 9	P07	20	25								0.36	0.33	0.31
4744811	92-28-15	8LL37	A-12-101, ST 9	P07	0											
4744807	92-28-15	8LL37	A-12-101, ST 9	P08	0											
4744809	92-28-15	8LL37	A-12-101, ST 9	P08	40	10								0.57	0.3	0.43
4744811	92-28-15	8LL37	A-12-101, ST 9	P08	60	10										
4744809	92-28-15	8LL37	A-12-101, ST 9	P09	40	20								0.88	1.21	1.33

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-15	8LL37	0.9	0.22	0.799	0.61	92-28-15	P02									
92-28-15	8LL37	0.1				92-28-15	P02									
92-28-15	8LL37	0.35	0.42	0.364	0.46	92-28-15	P02	0.38								
92-28-15	8LL37					92-28-15	P02									
92-28-15	8LL37					92-28-15	P03									
92-28-15	8LL37	0.43	0.29	0.335	0.29	92-28-15	P03	0.28	0.27	0.45						
92-28-15	8LL37					92-28-15	P03									
92-28-15	8LL37	0.11	0.14	0.092	0.11	92-28-15	P04	0.23	0.47	0.55	0.41	0.33				
92-28-15	8LL37					92-28-15	P04									
92-28-15	8LL37	0.76	0.65	0.864	1.11	92-28-15	P04	0.79	0.52							
92-28-15	8LL37	0.36	0.31	0.808		92-28-15	P05									
92-28-15	8LL37	0.71	0.97	0.99	1.14	92-28-15	P05									
92-28-15	8LL37	1.35	0.54	0.516	0.5	92-28-15	P05									
92-28-15	8LL37	0.79				92-28-15	P06									
92-28-15	8LL37	1.41				92-28-15	P06									
92-28-15	8LL37	0.27	0.2	0.263	0.15	92-28-15	P06									
92-28-15	8LL37					92-28-15	P07									
92-28-15	8LL37	0.7	0.3	0.344	0.3	92-28-15	P07	0.26	0.39	0.31	0.36	0.35	0.55			
92-28-15	8LL37					92-28-15	P07									
92-28-15	8LL37					92-28-15	P08									
92-28-15	8LL37	0.43	0.3	0.354	0.29	92-28-15	P08	0.26	0.26	0.47						
92-28-15	8LL37					92-28-15	P08									
92-28-15	8LL37	1.3	0.89			92-28-15	P09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744811	92-28-15	8LL37	A-12-101, ST 9	P09	20	20								0.47	0.42	0.25
4744809	92-28-15	8LL37	A-12-101, ST 9	P10	40	10								0.37	0.36	0.56
4744811	92-28-15	8LL37	A-12-101, ST 9	P10	40	5								0.52	0.19	0.28
4744809	92-28-15	8LL37	A-12-101, ST 9	P11	60	10								2.2	0.88	1.29
4744811	92-28-15	8LL37	A-12-101, ST 9	P11	0											
4744809	92-28-15	8LL37	A-12-101, ST 9	P12	60	20										
4744811	92-28-15	8LL37	A-12-101, ST 9	P12	20	25								0.71	0.87	
4744811	92-28-15	8LL37	A-12-101, ST 9	P13	40	5								0.8	1.16	
4744811	92-28-15	8LL37	A-12-101, ST 9	P14	20	25								0.7	0.21	0.12
4744811	92-28-15	8LL37	A-12-101, ST 9	P15	40	10								0.39	0.37	0.59
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A01	40	10								0.7	0.59	0.56
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A01	8	100	Y		Y					0.26	0.4	0.42
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A01	0	0										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A01	30	20								0.35	0.55	0.68
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A01	0	0								0.93	1.37	
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A02	20	25								1.03	1.05	0.52
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A02	6	100	Y			Y				0.61	0.59	0.52
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A02	20	20								0.81	0.61	0.96
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A02	40	20								1.16	1.06	0.75
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A02	10	100								0.46	0.55	0.38

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-15	8LL37	0.35	0.79	0.687		92-28-15	P09									
92-28-15	8LL37	0.8	0.71	0.839		92-28-15	P10									
92-28-15	8LL37	0.63				92-28-15	P10									
92-28-15	8LL37					92-28-15	P11									
92-28-15	8LL37					92-28-15	P11									
92-28-15	8LL37					92-28-15	P12									
92-28-15	8LL37					92-28-15	P12									
92-28-15	8LL37					92-28-15	P13									
92-28-15	8LL37	0.19	0.1	0.192	0.1	92-28-15	P14	0.16								
92-28-15	8LL37	0.84	0.68	0.768	0.73	92-28-15	P15	0.67	0.85	0.51						
92-28-16	8LL37	0.69	0.62	0.511	0.38	92-28-16	A01	0.49	0.43							
92-28-16	8LL37	0.76	0.58	0.803		92-28-16	A01									
92-28-16	8LL37					92-28-16	A01									
92-28-16	8LL37	0.89	0.91	0.378	0.93	92-28-16	A01	1.03	0.56	0.97						
92-28-16	8LL37					92-28-16	A01									
92-28-16	8LL37	1.24				92-28-16	A02									
92-28-16	8LL37	0.73				92-28-16	A02									
92-28-16	8LL37	0.8				92-28-16	A02									
92-28-16	8LL37					92-28-16	A02									
92-28-16	8LL37	0.44	0.67	0.39	0.64	92-28-16	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-15	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A03	0									1.25	1.32	
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A03	8	100	Y		Y					0.56	0.57	0.31
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A03	0	0								0.84	0.62	0.81
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A03	10	25				Y				0.54	0.4	0.64
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A03	40	10								0.7	0.72	
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A04	20	20								0.95	1.16	1.44
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A04	0	0								1.05	1.01	0.89
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A04	20	25								0.83	0.76	1.11
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A04	60	10								0.31	0.47	0.94
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A04	40	15								0.82	0.81	0.92
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A05	0									1.03	1.07	1.1
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A05	20	20								0.62	0.92	
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A05	40	5								0.78	0.71	0.52
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A05	60	10								0.93	0.76	0.95
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A05	40	5								0.75	0.93	0.77
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A06	40	5							Y	0.9	1.03	0.79
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A06	0	0										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A06	40	10								1.01	0.59	0.89

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-16	8LL37					92-28-16	A03									
92-28-16	8LL37	0.45	0.35	0.245	0.35	92-28-16	A03	0.43								
92-28-16	8LL37	1.14	0.53	0.532		92-28-16	A03									
92-28-16	8LL37	0.4	0.6			92-28-16	A03									
92-28-16	8LL37					92-28-16	A03									
92-28-16	8LL37	0.77				92-28-16	A04									
92-28-16	8LL37					92-28-16	A04									
92-28-16	8LL37	0.73				92-28-16	A04									
92-28-16	8LL37	0.65				92-28-16	A04									
92-28-16	8LL37	0.92				92-28-16	A04									
92-28-16	8LL37	0.65				92-28-16	A05									
92-28-16	8LL37					92-28-16	A05									
92-28-16	8LL37	0.76				92-28-16	A05									
92-28-16	8LL37	1.79	0.62			92-28-16	A05									
92-28-16	8LL37	1.06	0.81			92-28-16	A05									
92-28-16	8LL37					92-28-16	A06									
92-28-16	8LL37					92-28-16	A06									
92-28-16	8LL37	0.81				92-28-16	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
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92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A06	30	10								1.54	1.25	1.16
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A06	0	0								0.35	1.25	0.9
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A07	40	10								0.93	1.2	0.96
4744818	92-28-16	8LL37	A-12-102, ST 9-10	A07	3	100	Y			Y				0.19	0.41	
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A07	6	100	Y		Y					0.2	0.28	0.37
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A07	10	25				Y				0.53	0.37	0.53
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A07	40	10								0.7	0.75	0.35
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A08	0									0.68	0.61	1.08
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A08	10	25								0.39	0.44	0.62
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A08	20	20								0.8	0.68	
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A08	0	0								0.59	0.57	0.71
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A09	20	25				Y				0.57	0.49	1.03
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A09	8	50								0.32	0.49	0.42
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A09	20	30	Y			Y				0.24	0.27	0.45
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A09	40	20								1.19	1.61	0.78
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A10	40	10								1.27	1.45	1.46

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-16	8LL37					92-28-16	A06									
92-28-16	8LL37	0.78	1.1	0.6	0.96	92-28-16	A06									
92-28-16	8LL37					92-28-16	A07									
92-28-16	8LL37					92-28-16	A07									
92-28-16	8LL37	0.37	0.54			92-28-16	A07									
92-28-16	8LL37	0.62				92-28-16	A07									
92-28-16	8LL37	0.33	0.54	0.621	0.43	92-28-16	A07	0.84								
92-28-16	8LL37	0.67	0.61			92-28-16	A08									
92-28-16	8LL37	0.43	0.41			92-28-16	A08									
92-28-16	8LL37					92-28-16	A08									
92-28-16	8LL37	1.54	0.85	0.825	0.81	92-28-16	A08	0.81	0.76							
92-28-16	8LL37					92-28-16	A09									
92-28-16	8LL37	0.47	0.56			92-28-16	A09									
92-28-16	8LL37	0.53	0.56	0.44	0.79	92-28-16	A09	0.82	0.79	0.44	0.71	0.39				
92-28-16	8LL37	1.04				92-28-16	A09									
92-28-16	8LL37	1.03	1.2	1.083	0.71	92-28-16	A10	0.74	0.88	0.78						

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A10	40	10								0.56	0.84	0.93
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A10	40	10								0.36	0.56	0.57
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A10	40	10								0.79	0.4	0.74
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A11	40	5								1.01		
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A11	0	0								0.65	0.52	0.96
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A11	40	10								0.74	0.93	0.69
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A11	60	10								0.69	1.1	0.74
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A12	40	5								0.85	1.14	1.14
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A12	0	0								0.63	0.97	1.16
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A12	40	10								0.48	1.23	1.2
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A12	60	5								0.74	1.03	0.71
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A13	40	10								0.55	0.74	0.7
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A13	0	0								1.19	1.33	1.24
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A13	0	0								0.94	0.6	0.62
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A13	10	100	Y		Y					0.47	0.36	0.57
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A14	40	5								1.4	0.75	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-16	8LL37	0.56	0.48	0.769		92-28-16	A10									
92-28-16	8LL37	0.6	0.67	0.851	0.74	92-28-16	A10	0.95	0.66	0.78	0.66					
92-28-16	8LL37	0.58	0.58	0.386		92-28-16	A10									
92-28-16	8LL37					92-28-16	A11									
92-28-16	8LL37	1.01	1.07			92-28-16	A11									
92-28-16	8LL37	0.58				92-28-16	A11									
92-28-16	8LL37	0.5	0.38	0.801	0.66	92-28-16	A11	0.81								
92-28-16	8LL37	1.27				92-28-16	A12									
92-28-16	8LL37	0.86	0.77			92-28-16	A12									
92-28-16	8LL37	0.74				92-28-16	A12									
92-28-16	8LL37	0.67	0.64	0.568	0.65	92-28-16	A12									
92-28-16	8LL37	0.81				92-28-16	A13									
92-28-16	8LL37	1.18	0.76	0.961		92-28-16	A13									
92-28-16	8LL37					92-28-16	A13									
92-28-16	8LL37	0.92	0.5	0.413		92-28-16	A13									
92-28-16	8LL37					92-28-16	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A14	10	100			Y							
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A14	10	25				Y				0.62	0.61	0.57
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A14	0	0								0.49	0.57	0.45
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A15	20	10								0.87	1.22	0.58
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A15	60	10								0.87	0.87	1.01
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A15	30	20								1.29	0.84	1.15
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A16	20	10							Y	0.84	0.5	0.92
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A16	0	0										
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A16	0	0										
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A17	0									0.69	1.4	1.1
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A17	20	20								0.87		
4744820	92-28-16	8LL37	A-12-102, ST 9-10	A17	30	10	Y			Y				0.4	0.47	0.61
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A18	14	100	Y		Y					0.26	0.39	0.52
4744819	92-28-16	8LL37	A-12-102, ST 9-10	A18	40	10								0.53	0.4	0.73
4744817	92-28-16	8LL37	A-12-102, ST 9-10	A19	50	20								1.78	1.97	1.21
4744817	92-28-16	8LL37	A-12-102, ST 9-10	P01	40	10										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P01	40	5								0.36	0.53	0.37
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P01	40	10		Y								
4744820	92-28-16	8LL37	A-12-102, ST 9-10	P01	60	5								1	1.16	0.97
4744817	92-28-16	8LL37	A-12-102, ST 9-10	P02	20	10										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P02	0	0								0.58	0.77	0.67
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P02	30	15								0.7	1.24	0.47

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-16	8LL37					92-28-16	A14									
92-28-16	8LL37	0.65				92-28-16	A14									
92-28-16	8LL37					92-28-16	A14									
92-28-16	8LL37	1.17	1.38	1.125		92-28-16	A15									
92-28-16	8LL37					92-28-16	A15									
92-28-16	8LL37	1.17	1.55			92-28-16	A15									
92-28-16	8LL37	1.12	1.37	1.176	1.64	92-28-16	A16	1.62								
92-28-16	8LL37					92-28-16	A16									
92-28-16	8LL37					92-28-16	A16									
92-28-16	8LL37					92-28-16	A17									
92-28-16	8LL37					92-28-16	A17									
92-28-16	8LL37	0.59	0.66	0.62	0.47	92-28-16	A17									
92-28-16	8LL37	0.33	0.51	0.604	0.53	92-28-16	A18	0.63								
92-28-16	8LL37	0.29	0.32	0.349	0.21	92-28-16	A18									
92-28-16	8LL37	1.21	0.95			92-28-16	A19									
92-28-16	8LL37					92-28-16	P01									
92-28-16	8LL37	0.24	0.55			92-28-16	P01									
92-28-16	8LL37					92-28-16	P01									
92-28-16	8LL37	1.96				92-28-16	P01									
92-28-16	8LL37					92-28-16	P02									
92-28-16	8LL37	1.16	1.07			92-28-16	P02									
92-28-16	8LL37	0.85				92-28-16	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744820	92-28-16	8LL37	A-12-102, ST 9-10	P02	80	5								1.15	0.88	0.61
4744817	92-28-16	8LL37	A-12-102, ST 9-10	P03	40	10								1.26	1.32	1.04
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P03	0	0					Y			0.76	0.84	
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P03	30	10								0.22	0.21	0.28
4744820	92-28-16	8LL37	A-12-102, ST 9-10	P03	0	0										
4744817	92-28-16	8LL37	A-12-102, ST 9-10	P04	40	10								0.61	0.82	0.79
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P04	0	0								3.16		
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P04	60	10										
4744817	92-28-16	8LL37	A-12-102, ST 9-10	P05	40	20										
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P05	60	10								0.55	0.82	0.34
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P06	40	10								1.22	1.37	
4744819	92-28-16	8LL37	A-12-102, ST 9-10	P07	60	10										
4744817	92-28-16	8LL37	A-12-102, ST 9-10	Q01	0									2.72	0.62	0.92
4744818	92-28-16	8LL37	A-12-102, ST 9-10	R01	6	100	Y		Y							
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A02	20	20								0.29	0.83	0.56
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A03	40	5								0.89	0.56	0.91
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A04	20	25								0.47	0.93	0.87
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A05	20	20								1.11		
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A06	0	0								0.87	0.8	0.78
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A07	40	10								0.45	0.22	0.41
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A08	40	10								1.04	1.12	
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A09	0	0								1.2	1.37	1.21
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A10	40	5								0.53	0.3	0.45
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A11	10	25				Y				0.37	0.69	0.53

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-16	8LL37	1.04	0.77			92-28-16	P02									
92-28-16	8LL37					92-28-16	P03									
92-28-16	8LL37					92-28-16	P03									
92-28-16	8LL37	0.12	0.29	0.41	0.88	92-28-16	P03	0.72	0.41	1.14						
92-28-16	8LL37					92-28-16	P03									
92-28-16	8LL37	0.25	1.22	2.56		92-28-16	P04									
92-28-16	8LL37					92-28-16	P04									
92-28-16	8LL37					92-28-16	P04									
92-28-16	8LL37					92-28-16	P05									
92-28-16	8LL37	0.3	0.41	0.241	0.21	92-28-16	P05	0.9								
92-28-16	8LL37					92-28-16	P06									
92-28-16	8LL37					92-28-16	P07									
92-28-16	8LL37					92-28-16	Q01									
92-28-16	8LL37					92-28-16	R01									
92-28-2	8LL37					92-28-2	A02									
92-28-2	8LL37	0.93				92-28-2	A03									
92-28-2	8LL37	0.65	0.63	0.596		92-28-2	A04									
92-28-2	8LL37					92-28-2	A05									
92-28-2	8LL37					92-28-2	A06									
92-28-2	8LL37	0.63	0.71			92-28-2	A07									
92-28-2	8LL37					92-28-2	A08									
92-28-2	8LL37					92-28-2	A09									
92-28-2	8LL37	0.64	0.29			92-28-2	A10									
92-28-2	8LL37					92-28-2	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-16	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A12	0	0								0.99		
4744783	92-28-2	8LL37	A-12-90, ST 1-2	A13	40	5								0.69	0.55	0.7
4744783	92-28-2	8LL37	A-12-90, ST 1-2	cf. A01	0	0										
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P01	60	10								1.62	0.68	1.1
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P02	60	10								1.21	1.22	1.39
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P03	120	5								1.12	1.6	1.61
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P04	20	20								1.01	0.77	0.79
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P05	20	20										
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P06	40	10								2.26	1.92	
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P07	0	0										
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P08	40	5								2.28	2.08	
4744783	92-28-2	8LL37	A-12-90, ST 1-2	P09	0	0										
4744784	92-28-2-1	8LL37	A-12-90-1	A01	40	5								0.79	1	0.84
4744784	92-28-2-1	8LL37	A-12-90-1	A02	40	5								0.84	1.14	0.78
4744784	92-28-2-1	8LL37	A-12-90-1	A03	40	10								0.91	0.94	0.89
4744784	92-28-2-1	8LL37	A-12-90-1	A04	40	10								1.1	0.98	0.77
4744784	92-28-2-1	8LL37	A-12-90-1	A05	0	0							Y	1.23	0.47	0.98
4744784	92-28-2-1	8LL37	A-12-90-1	A06	8	100	Y			Y				0.43	0.43	0.55
4744784	92-28-2-1	8LL37	A-12-90-1	A07	0	0								1.25	1.13	0.97
4744784	92-28-2-1	8LL37	A-12-90-1	A08	40	10								0.48	0.93	0.81
4744784	92-28-2-1	8LL37	A-12-90-1	A09	0	0								1.1	1.17	0.72

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-2	8LL37					92-28-2	A12									
92-28-2	8LL37					92-28-2	A13									
92-28-2	8LL37					92-28-2	cf. A01									
92-28-2	8LL37	1.51				92-28-2	P01									
92-28-2	8LL37	1.5	1.38			92-28-2	P02									
92-28-2	8LL37	1.61	1.44			92-28-2	P03									
92-28-2	8LL37					92-28-2	P04									
92-28-2	8LL37					92-28-2	P05									
92-28-2	8LL37					92-28-2	P06									
92-28-2	8LL37					92-28-2	P07									
92-28-2	8LL37					92-28-2	P08									
92-28-2	8LL37					92-28-2	P09									
92-28-2-1	8LL37	1.13	0.89			92-28-2-1	A01									
92-28-2-1	8LL37					92-28-2-1	A02									
92-28-2-1	8LL37	0.85	0.73	0.809		92-28-2-1	A03									
92-28-2-1	8LL37	0.69	0.86	0.745		92-28-2-1	A04									
92-28-2-1	8LL37	0.74				92-28-2-1	A05									
92-28-2-1	8LL37	0.49	0.7	0.766	0.62	92-28-2-1	A06	0.87								
92-28-2-1	8LL37					92-28-2-1	A07									
92-28-2-1	8LL37	0.93				92-28-2-1	A08									
92-28-2-1	8LL37	1.18	1.32			92-28-2-1	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744784	92-28-2-1	8LL37	A-12-90-1	A10	40	10								0.68	0.81	0.77
4744784	92-28-2-1	8LL37	A-12-90-1	A11	40	5								1.03	1.29	
4744784	92-28-2-1	8LL37	A-12-90-1	A12	20	25								0.48	0.57	1.09
4744784	92-28-2-1	8LL37	A-12-90-1	A13	30	25	Y			Y				0.21	0.35	0.69
4744784	92-28-2-1	8LL37	A-12-90-1	A14	30	20								1.07	0.89	0.9
4744784	92-28-2-1	8LL37	A-12-90-1	A15	0	0								1.25	1.05	1.01
4744784	92-28-2-1	8LL37	A-12-90-1	A16	40	10								1.09	0.74	0.64
4744784	92-28-2-1	8LL37	A-12-90-1	A17	20	20								0.91	0.87	0.76
4744784	92-28-2-1	8LL37	A-12-90-1	A18	20	15								0.78	0.61	0.72
4744784	92-28-2-1	8LL37	A-12-90-1	A19	40	10								1.08	1.51	0.57
4744784	92-28-2-1	8LL37	A-12-90-1	A20	40	5								0.89	0.95	1.08
4744784	92-28-2-1	8LL37	A-12-90-1	A21	20	20								0.91	0.76	0.85
4744784	92-28-2-1	8LL37	A-12-90-1	A22	20	20								0.69	0.48	0.47
4744784	92-28-2-1	8LL37	A-12-90-1	A23	30	10								0.61	0.65	0.53
4744784	92-28-2-1	8LL37	A-12-90-1	A24	40	10								1.19	0.8	1.16
4744784	92-28-2-1	8LL37	A-12-90-1	A25	40	10								1.2	1	1.12
4744784	92-28-2-1	8LL37	A-12-90-1	A26	20	20								0.5	0.7	0.45
4744784	92-28-2-1	8LL37	A-12-90-1	A27	40	10								0.59	1.03	1.05
4744784	92-28-2-1	8LL37	A-12-90-1	A28	10	100	Y		Y					0.22	0.41	0.53
4744784	92-28-2-1	8LL37	A-12-90-1	A29	40	10								0.78	0.7	0.82
4744784	92-28-2-1	8LL37	A-12-90-1	A30	20	25								0.96	0.93	1.19
4744784	92-28-2-1	8LL37	A-12-90-1	P01	0	0										
4744784	92-28-2-1	8LL37	A-12-90-1	P02	40	10								0.95	0.32	0.23
4744784	92-28-2-1	8LL37	A-12-90-1	P03	0	0								0.35	0.77	0.69

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-2-1	8LL37	1.32	1.47	1.019		92-28-2-1	A10									
92-28-2-1	8LL37					92-28-2-1	A11									
92-28-2-1	8LL37	0.71	0.5	0.811		92-28-2-1	A12									
92-28-2-1	8LL37	0.79	0.59	0.741	1.02	92-28-2-1	A13	0.65	0.84	0.55	0.9	0.82				
92-28-2-1	8LL37	1	1.17	0.749	1.11	92-28-2-1	A14									
92-28-2-1	8LL37					92-28-2-1	A15									
92-28-2-1	8LL37	0.62	0.56			92-28-2-1	A16									
92-28-2-1	8LL37					92-28-2-1	A17									
92-28-2-1	8LL37	1.01	0.58	1.035	0.42	92-28-2-1	A18	1.03								
92-28-2-1	8LL37	0.81	1.16	1.416		92-28-2-1	A19									
92-28-2-1	8LL37	0.91	0.93			92-28-2-1	A20									
92-28-2-1	8LL37	0.64	0.98			92-28-2-1	A21									
92-28-2-1	8LL37	0.44	0.56	0.554	0.77	92-28-2-1	A22									
92-28-2-1	8LL37	0.67	0.42	0.557	0.56	92-28-2-1	A23	1.03	0.58							
92-28-2-1	8LL37	1.38				92-28-2-1	A24									
92-28-2-1	8LL37	0.79				92-28-2-1	A25									
92-28-2-1	8LL37	0.44	0.39			92-28-2-1	A26									
92-28-2-1	8LL37	1.3				92-28-2-1	A27									
92-28-2-1	8LL37	0.32	0.18	0.342	0.44	92-28-2-1	A28	0.87	0.64	0.7	0.62					
92-28-2-1	8LL37	1.05	1.12	0.689	1.51	92-28-2-1	A29	0.99	1.25							
92-28-2-1	8LL37	0.89				92-28-2-1	A30									
92-28-2-1	8LL37					92-28-2-1	P01									
92-28-2-1	8LL37	0.86	0.75	0.954		92-28-2-1	P02									
92-28-2-1	8LL37	0.68				92-28-2-1	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744784	92-28-2-1	8LL37	A-12-90-1	P04	40	10										
4744784	92-28-2-1	8LL37	A-12-90-1	P05	40	10								0.88	2.03	
4744784	92-28-2-1	8LL37	A-12-90-1	P06	40	10								3.57		
4744787	92-28-3	8LL37	A-12-91, ST 3	A01	20	25								1.12	0.77	0.96
4744787	92-28-3	8LL37	A-12-91, ST 3	A02	40	10								1.02	0.79	1.19
4744787	92-28-3	8LL37	A-12-91, ST 3	A03	20	25	Y							0.33	0.53	0.54
4744787	92-28-3	8LL37	A-12-91, ST 3	A04	30	10								1.15	0.99	1.14
4744787	92-28-3	8LL37	A-12-91, ST 3	A05	0	0								0.96	0.8	1.19
4744787	92-28-3	8LL37	A-12-91, ST 3	A06	0	0								1	0.39	0.68
4744787	92-28-3	8LL37	A-12-91, ST 3	A07	20	10	Y		Y					0.35	0.45	0.5
4744787	92-28-3	8LL37	A-12-91, ST 3	A08	30	25								0.93	1.37	0.96
4744787	92-28-3	8LL37	A-12-91, ST 3	A09	40	20								1.05	0.85	0.55
4744787	92-28-3	8LL37	A-12-91, ST 3	A10	30	20								0.75	0.53	0.62
4744787	92-28-3	8LL37	A-12-91, ST 3	A11	20	25								0.59	0.7	0.83
4744787	92-28-3	8LL37	A-12-91, ST 3	A12	40	10										
4744787	92-28-3	8LL37	A-12-91, ST 3	A13	40	10								1.05	0.81	1.04
4744787	92-28-3	8LL37	A-12-91, ST 3	A14	0	0								0.8	0.52	0.99
4744787	92-28-3	8LL37	A-12-91, ST 3	A15	30	20								0.63	0.66	0.7
4744787	92-28-3	8LL37	A-12-91, ST 3	A16	60	5								1.04	1.04	1.01
4744787	92-28-3	8LL37	A-12-91, ST 3	A17	30	20								0.51	0.76	0.53
4744787	92-28-3	8LL37	A-12-91, ST 3	A18	40	10								0.91	1.09	0.75
4744787	92-28-3	8LL37	A-12-91, ST 3	A19	40	10								0.62	0.78	0.73
4744787	92-28-3	8LL37	A-12-91, ST 3	A20	40	10								1.23	0.93	1.59

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-2-1	8LL37					92-28-2-1	P04									
92-28-2-1	8LL37					92-28-2-1	P05									
92-28-2-1	8LL37					92-28-2-1	P06									
92-28-3	8LL37					92-28-3	A01									
92-28-3	8LL37	0.76				92-28-3	A02									
92-28-3	8LL37	0.7	0.93			92-28-3	A03									
92-28-3	8LL37	1.06	1.08	1.108		92-28-3	A04									
92-28-3	8LL37	0.79				92-28-3	A05									
92-28-3	8LL37	0.57				92-28-3	A06									
92-28-3	8LL37	0.54				92-28-3	A07									
92-28-3	8LL37	0.68				92-28-3	A08									
92-28-3	8LL37	1.05				92-28-3	A09									
92-28-3	8LL37	0.55	0.7			92-28-3	A10									
92-28-3	8LL37	0.83	1.04	0.739		92-28-3	A11									
92-28-3	8LL37					92-28-3	A12									
92-28-3	8LL37	0.93	1.12	0.713	1.15	92-28-3	A13									
92-28-3	8LL37	0.63	0.65	0.572	0.52	92-28-3	A14	0.76								
92-28-3	8LL37	0.7	0.8	0.576	0.93	92-28-3	A15	0.88	0.71	1.01	0.67					
92-28-3	8LL37	0.57	0.94	0.657		92-28-3	A16									
92-28-3	8LL37	1.08	0.62	0.917	0.44	92-28-3	A17	0.71	0.81							
92-28-3	8LL37	1.02	0.91			92-28-3	A18									
92-28-3	8LL37	0.66				92-28-3	A19									
92-28-3	8LL37	0.68				92-28-3	A20									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-2-1	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744787	92-28-3	8LL37	A-12-91, ST 3	A21	40	10										
4744787	92-28-3	8LL37	A-12-91, ST 3	A22	40	10								0.71	0.87	0.45
4744787	92-28-3	8LL37	A-12-91, ST 3	A23	40	10								1.06	1	1.34
4744787	92-28-3	8LL37	A-12-91, ST 3	A24	20	20								1.05	0.69	0.97
4744787	92-28-3	8LL37	A-12-91, ST 3	A25	40	5								1.38	1.1	1.07
4744787	92-28-3	8LL37	A-12-91, ST 3	A26	20	25								1.02	1.32	0.9
4744787	92-28-3	8LL37	A-12-91, ST 3	A27	30	20								1.06	0.73	0.84
4744787	92-28-3	8LL37	A-12-91, ST 3	A28	40	10								1.84	1.11	1.11
4744787	92-28-3	8LL37	A-12-91, ST 3	A29	0	0								0.88	1.42	0.77
4744787	92-28-3	8LL37	A-12-91, ST 3	A30	40	5								1.22	0.99	1.42
4744787	92-28-3	8LL37	A-12-91, ST 3	A31	40	10								0.73	0.57	0.46
4744787	92-28-3	8LL37	A-12-91, ST 3	A32	0	0								1.26	0.95	0.6
4744787	92-28-3	8LL37	A-12-91, ST 3	A33	0	0								1.31	0.8	
4744787	92-28-3	8LL37	A-12-91, ST 3	A34	40	10								0.63	0.61	0.85
4744787	92-28-3	8LL37	A-12-91, ST 3	A35	20	50	Y			Y				0.54	0.44	0.44
4744787	92-28-3	8LL37	A-12-91, ST 3	P01	40	10								1.48		
4744787	92-28-3	8LL37	A-12-91, ST 3	P02	60	10								1.05	1.29	
4744787	92-28-3	8LL37	A-12-91, ST 3	P03	0	0										
4744789	92-28-4	8LL37	A-12-92, ST 3	A01	40	5								0.94	0.68	0.9
4744789	92-28-4	8LL37	A-12-92, ST 3	A02	20	20								0.87	1.15	1.37
4744789	92-28-4	8LL37	A-12-92, ST 3	A03	20	15								0.74	0.78	1.18

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-3	8LL37					92-28-3	A21									
92-28-3	8LL37	0.34	0.63	0.439	0.33	92-28-3	A22	0.4	1.42							
92-28-3	8LL37	1.19	1.22	1.309	0.71	92-28-3	A23	0.2	1.26							
92-28-3	8LL37	1.38				92-28-3	A24									
92-28-3	8LL37					92-28-3	A25									
92-28-3	8LL37	1.26	0.68	0.766	1.49	92-28-3	A26									
92-28-3	8LL37	1.6	1.1	0.749	1.08	92-28-3	A27									
92-28-3	8LL37					92-28-3	A28									
92-28-3	8LL37	0.75	0.78	0.863	1.19	92-28-3	A29	1.04								
92-28-3	8LL37	0.69	0.59	0.58		92-28-3	A30									
92-28-3	8LL37	0.43	1.03	0.691	0.5	92-28-3	A31	0.66								
92-28-3	8LL37	1.14	0.97	1.361		92-28-3	A32									
92-28-3	8LL37					92-28-3	A33									
92-28-3	8LL37	0.63	1.39	1.206		92-28-3	A34									
92-28-3	8LL37	0.24	0.8	0.826	0.8	92-28-3	A35	0.74	0.71	0.97	1.14					
92-28-3	8LL37					92-28-3	P01									
92-28-3	8LL37					92-28-3	P02									
92-28-3	8LL37					92-28-3	P03									
92-28-4	8LL37	0.85	0.94			92-28-4	A01									
92-28-4	8LL37					92-28-4	A02									
92-28-4	8LL37	0.88	0.86	1.035		92-28-4	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-3	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744789	92-28-4	8LL37	A-12-92, ST 3	A04	40	10								0.91	0.81	0.69
4744789	92-28-4	8LL37	A-12-92, ST 3	A05	30	20	Y		Y					0.43	0.32	0.42
4744789	92-28-4	8LL37	A-12-92, ST 3	A06	20	20								1.12	0.71	0.81
4744789	92-28-4	8LL37	A-12-92, ST 3	A07	20	20								0.51	0.43	0.48
4744789	92-28-4	8LL37	A-12-92, ST 3	A08	40	10								0.72	1.02	0.64
4744789	92-28-4	8LL37	A-12-92, ST 3	A09	40	10								0.86	0.78	1.08
4744789	92-28-4	8LL37	A-12-92, ST 3	A10	40	5								0.77	0.95	1.04
4744789	92-28-4	8LL37	A-12-92, ST 3	A11	40	5								0.86	1.08	1.1
4744789	92-28-4	8LL37	A-12-92, ST 3	A12	20	20								0.56	0.5	0.64
4744789	92-28-4	8LL37	A-12-92, ST 3	A13	20	20								0.81	0.76	0.68
4744789	92-28-4	8LL37	A-12-92, ST 3	A14	40	15								0.93	0.61	0.94
4744789	92-28-4	8LL37	A-12-92, ST 3	A15	40	10								0.9	1.14	0.96
4744789	92-28-4	8LL37	A-12-92, ST 3	A16	40	5								0.69	0.98	1.12
4744789	92-28-4	8LL37	A-12-92, ST 3	A17	40	5								0.66	0.61	0.45
4744789	92-28-4	8LL37	A-12-92, ST 3	A18	20	20								0.53	0.65	0.86
4744789	92-28-4	8LL37	A-12-92, ST 3	A19	20	20	Y			Y				0.78	1.02	1.03
4744789	92-28-4	8LL37	A-12-92, ST 3	A20	40	10								1.1	1.29	1.16
4744789	92-28-4	8LL37	A-12-92, ST 3	A21	40	10								0.95	0.74	0.99
4744789	92-28-4	8LL37	A-12-92, ST 3	A22	0	0								1.04	0.78	0.51
4744789	92-28-4	8LL37	A-12-92, ST 3	A23	40	5								0.59	0.81	0.53
4744789	92-28-4	8LL37	A-12-92, ST 3	A24	30	20								1.08	0.84	1.38
4744789	92-28-4	8LL37	A-12-92, ST 3	A25	0	0								0.48	1.13	1.4
4744789	92-28-4	8LL37	A-12-92, ST 3	A26	0	0								1.25	1.27	0.51
4744789	92-28-4	8LL37	A-12-92, ST 3	A27	40	5								1.08	1.06	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-4	8LL37	1.02	0.83	0.937	1.18	92-28-4	A04									
92-28-4	8LL37	0.43	0.74	0.592	0.73	92-28-4	A05	0.76	0.54	0.95	0.52					
92-28-4	8LL37	1.27				92-28-4	A06									
92-28-4	8LL37	0.55	0.59	0.718	0.69	92-28-4	A07									
92-28-4	8LL37	0.79	0.79	0.898		92-28-4	A08									
92-28-4	8LL37	1.48	1.11			92-28-4	A09									
92-28-4	8LL37					92-28-4	A10									
92-28-4	8LL37	1.37	0.77	1.368		92-28-4	A11									
92-28-4	8LL37	0.79	0.94	1.059		92-28-4	A12									
92-28-4	8LL37	0.92	0.92	1.062	1	92-28-4	A13	1.09								
92-28-4	8LL37	0.54	1.26	0.783		92-28-4	A14									
92-28-4	8LL37	1.09				92-28-4	A15									
92-28-4	8LL37	1.46				92-28-4	A16									
92-28-4	8LL37	0.55	0.57	0.735	0.61	92-28-4	A17	0.73								
92-28-4	8LL37	0.72	0.62	0.868	0.81	92-28-4	A18	0.64	0.79	0.88						
92-28-4	8LL37	1.47				92-28-4	A19									
92-28-4	8LL37	0.53	0.83			92-28-4	A20									
92-28-4	8LL37	0.72	0.52	1.734	0.89	92-28-4	A21	0.94								
92-28-4	8LL37	0.9				92-28-4	A22									
92-28-4	8LL37	0.39	0.7	0.815	0.69	92-28-4	A23	0.7	0.59							
92-28-4	8LL37	1.1				92-28-4	A24									
92-28-4	8LL37					92-28-4	A25									
92-28-4	8LL37	0.94	0.95			92-28-4	A26									
92-28-4	8LL37					92-28-4	A27									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
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92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744789	92-28-4	8LL37	A-12-92, ST 3	C01	20	10								2.24		
4744789	92-28-4	8LL37	A-12-92, ST 3	P01	40	20								1.9		
4744789	92-28-4	8LL37	A-12-92, ST 3	P02	30	10										
4744789	92-28-4	8LL37	A-12-92, ST 3	P03	40	10								1.3		
4744789	92-28-4	8LL37	A-12-92, ST 3	P04	40	10								1.37		
4744789	92-28-4	8LL37	A-12-92, ST 3	P05	40	5								0.89	0.53	0.59
4744789	92-28-4	8LL37	A-12-92, ST 3	P06	40	10								1.3		
4744789	92-28-4	8LL37	A-12-92, ST 3	P07	20	25				Y				1.46	0.99	0.93
4744789	92-28-4	8LL37	A-12-92, ST 3	P08	30	20								0.35	0.86	0.22
4744789	92-28-4	8LL37	A-12-92, ST 3	P09	40	20								2.11		
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A01	20	20								0.72	0.82	0.82
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A02	30	10								0.98	0.98	1.08
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A03	40	20								0.56	0.79	1.1
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A04	40	10								0.49	0.8	0.42
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A05	40	5								0.91	0.86	0.82
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A06	0	0								0.62	0.44	0.57
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A07	0	0							Y	1.63	0.5	1.27
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A08	30	20								1.15	0.79	0.82
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A09	0	0								1.05	0.89	1.19
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A10	60	5								0.63	0.82	0.78
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A11	20	100	Y			Y				0.68	0.5	0.55
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A12	40	10								0.87	0.61	0.68
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A13	60	10								0.58	0.74	0.56

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-4	8LL37					92-28-4	C01									
92-28-4	8LL37					92-28-4	P01									
92-28-4	8LL37					92-28-4	P02									
92-28-4	8LL37					92-28-4	P03									
92-28-4	8LL37					92-28-4	P04									
92-28-4	8LL37	2.12				92-28-4	P05									
92-28-4	8LL37					92-28-4	P06									
92-28-4	8LL37					92-28-4	P07									
92-28-4	8LL37	0.74	0.48	0.865	0.82	92-28-4	P08	0.53								
92-28-4	8LL37					92-28-4	P09									
92-28-5	8LL37					92-28-5	A01									
92-28-5	8LL37	0.48	0.97	1.147		92-28-5	A02									
92-28-5	8LL37	0.68	1	1.18	0.85	92-28-5	A03									
92-28-5	8LL37	0.44	0.44	0.539	0.43	92-28-5	A04	0.7	0.32	0.62	0.4	0.42				
92-28-5	8LL37	0.7	0.47	0.884		92-28-5	A05									
92-28-5	8LL37	0.35	0.85	0.324	0.88	92-28-5	A06	0.17	0.47							
92-28-5	8LL37	0.82				92-28-5	A07									
92-28-5	8LL37	0.45	0.78	0.662		92-28-5	A08									
92-28-5	8LL37	0.8	1.11	0.828		92-28-5	A09									
92-28-5	8LL37	0.77				92-28-5	A10									
92-28-5	8LL37	0.51	0.64	0.69	0.64	92-28-5	A11									
92-28-5	8LL37	0.76	0.73			92-28-5	A12									
92-28-5	8LL37	0.37				92-28-5	A13									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-4	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A14	20	10								0.85	0.59	0.93
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A15	40	15								0.95	0.81	0.8
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A16	20	50	Y			Y				0.38	0.26	0.58
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A17	40	20								0.87	0.57	1.05
4744790	92-28-5	8LL37	A-12-93, ST 4-5	A18	60	20								0.64	0.95	0.66
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P01	40	20								0.28	0.35	0.31
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P02	10	25								0.17	0.18	0.25
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P03	40	5								2.41		
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P04	40	10								0.72	0.21	0.61
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P05	30	10								0.62	0.59	0.58
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P06	40	5										
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P07	0	0										
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P08	0	0								0.71	0.36	0.74
4744790	92-28-5	8LL37	A-12-93, ST 4-5	P09	40	10								2.5	3.02	
4744790	92-28-5	8LL37	A-12-93, ST 4-5	Q01	0	0										
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A01	40	10								0.97	1.46	1.05
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A02	40	10								1.51	1.27	1.34
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A03	0	0								0.99	0.9	0.71
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A04	40	5								0.91	0.35	1.05
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A05	40	5								1.48	1.4	1.08
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A06	10	25								0.89	0.61	0.81
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A07	40	10								0.88	0.76	1.03
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A08	40	10								0.77	0.86	1.08

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-5	8LL37	0.62				92-28-5	A14									
92-28-5	8LL37	0.97	0.9	0.996	0.8	92-28-5	A15	0.84	1.01	1.03						
92-28-5	8LL37	0.59	0.45	0.853	1.05	92-28-5	A16	0.88	0.96	0.9						
92-28-5	8LL37	0.78	0.7	0.936		92-28-5	A17									
92-28-5	8LL37	1.1	0.99	1.176	0.96	92-28-5	A18	1.16	0.97	1.18	1.4	0.79	0.81			
92-28-5	8LL37	0.15	0.28	0.489	0.17	92-28-5	P01	0.31	0.48							
92-28-5	8LL37	0.45	0.45	0.398	0.46	92-28-5	P02									
92-28-5	8LL37					92-28-5	P03									
92-28-5	8LL37	0.22	0.23	0.296	0.18	92-28-5	P04									
92-28-5	8LL37	0.68				92-28-5	P05									
92-28-5	8LL37					92-28-5	P06									
92-28-5	8LL37					92-28-5	P07									
92-28-5	8LL37	0.4	0.37			92-28-5	P08									
92-28-5	8LL37					92-28-5	P09									
92-28-5	8LL37					92-28-5	Q01									
92-28-6	8LL37					92-28-6	A01									
92-28-6	8LL37	0.97				92-28-6	A02									
92-28-6	8LL37	0.6	0.57			92-28-6	A03									
92-28-6	8LL37	1.27	0.96	0.923		92-28-6	A04									
92-28-6	8LL37					92-28-6	A05									
92-28-6	8LL37					92-28-6	A06									
92-28-6	8LL37					92-28-6	A07									
92-28-6	8LL37	0.91	1	0.88	0.79	92-28-6	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
92-28-5	8LL37							
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92-28-5	8LL37							
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92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A09	10	25	Y			Y				0.52	0.75	0.53
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A10	40	10								0.95	1.01	
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A11	0	0								1.57	1.12	0.98
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A12	30	10								1.11	0.64	0.57
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A13	40	5							Y	1.63	1.78	2.05
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A14	40	5								0.94	0.62	0.97
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A15	40	5								1.21	1.19	
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A16	0	0								0.74	0.84	0.93
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A17	40	5								0.97	0.78	1.22
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A18	40	5								0.7	0.39	0.33
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A19	0	0								0.83	1.34	
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A20	40	10								1.07	0.95	1.28
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A21	30	10								1.06	0.78	1.23
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A22	40	15								1.59	1.36	1.01
4744791	92-28-6	8LL37	A-12-94, ST 6-7	A23	50	10								1.22	1.31	0.87
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P01	40	10								0.65	0.58	0.67
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P02	40	10						Y		1.95	0.59	0.6
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P03	40	10					Y					
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P04	0	0										
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P05	30	5								0.65	0.56	0.41
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P06	0	0										
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P07	0	0								0.71	0.36	
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P08	30	5								3.03		
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P09	30	20								1.82		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-6	8LL37	0.58	0.83	0.727		92-28-6	A09									
92-28-6	8LL37					92-28-6	A10									
92-28-6	8LL37	1.08	0.88	0.714	0.62	92-28-6	A11	0.44	0.8	1.08						
92-28-6	8LL37	0.67	1.08	0.785	0.92	92-28-6	A12									
92-28-6	8LL37	0.88				92-28-6	A13									
92-28-6	8LL37	1.04	0.53	1.018	1.09	92-28-6	A14									
92-28-6	8LL37					92-28-6	A15									
92-28-6	8LL37	0.89	1.22			92-28-6	A16									
92-28-6	8LL37	0.53	0.89			92-28-6	A17									
92-28-6	8LL37	0.61	0.7	0.906	0.93	92-28-6	A18	1.04	0.51							
92-28-6	8LL37					92-28-6	A19									
92-28-6	8LL37					92-28-6	A20									
92-28-6	8LL37	1.3				92-28-6	A21									
92-28-6	8LL37	0.91	0.56	1.143		92-28-6	A22									
92-28-6	8LL37	1.16	0.8	0.656		92-28-6	A23									
92-28-6	8LL37	0.97				92-28-6	P01									
92-28-6	8LL37					92-28-6	P02									
92-28-6	8LL37					92-28-6	P03									
92-28-6	8LL37					92-28-6	P04									
92-28-6	8LL37					92-28-6	P05									
92-28-6	8LL37					92-28-6	P06									
92-28-6	8LL37					92-28-6	P07									
92-28-6	8LL37					92-28-6	P08									
92-28-6	8LL37					92-28-6	P09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							
92-28-6	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744791	92-28-6	8LL37	A-12-94, ST 6-7	P10	0	0								0.2	0.23	0.23
4744791	92-28-6	8LL37	A-12-94, ST 6-7	Q01	0	0										
4744795	92-28-9	8LL37	A-12-96, ST 8?	A01	40	5								0.95	0.81	1.16
4744795	92-28-9	8LL37	A-12-96, ST 8?	A02	40	10								0.86	1.15	1.65
4744795	92-28-9	8LL37	A-12-96, ST 8?	A03	0	0										
4744795	92-28-9	8LL37	A-12-96, ST 8?	A04	40	10								1.01	0.82	0.83
4744795	92-28-9	8LL37	A-12-96, ST 8?	A05	40	5								1.63	1.38	1.41
4744795	92-28-9	8LL37	A-12-96, ST 8?	A06	40	5								0.79	0.7	0.73
4744795	92-28-9	8LL37	A-12-96, ST 8?	A07	0	0								1.37	1.18	1.02
4744795	92-28-9	8LL37	A-12-96, ST 8?	A08	30	20								0.61	0.79	0.6
4744795	92-28-9	8LL37	A-12-96, ST 8?	A09	30	20								0.56	0.51	0.72
4744795	92-28-9	8LL37	A-12-96, ST 8?	A10	10	20	Y			Y				0.58	0.69	0.75
4744795	92-28-9	8LL37	A-12-96, ST 8?	A11	40	5							Y	0.77	0.68	0.47
4744795	92-28-9	8LL37	A-12-96, ST 8?	A12	0	0								1.45	1.44	1.12
4744795	92-28-9	8LL37	A-12-96, ST 8?	A13	30	5								1.13	0.96	1.08
4744795	92-28-9	8LL37	A-12-96, ST 8?	A14	20	20								0.5	0.75	0.85
4744795	92-28-9	8LL37	A-12-96, ST 8?	A15	40	10								1.46	1.29	0.94
4744795	92-28-9	8LL37	A-12-96, ST 8?	A16	40	5								0.43	0.56	0.47
4744795	92-28-9	8LL37	A-12-96, ST 8?	A17	40	10								0.86	1.08	0.65
4744795	92-28-9	8LL37	A-12-96, ST 8?	A18	40	10							Y	0.55	1.16	0.65
4744795	92-28-9	8LL37	A-12-96, ST 8?	A19	0	0										
4744795	92-28-9	8LL37	A-12-96, ST 8?	A20	0	0								0.82	0.85	0.65
4744795	92-28-9	8LL37	A-12-96, ST 8?	A21	40	10								0.76	0.53	1
4744795	92-28-9	8LL37	A-12-96, ST 8?	A22	30	5								0.89	0.9	0.84

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-6	8LL37	0.31	0.38	0.257	0.18	92-28-6	P10	0.17	0.31	0.52	0.83	0.26				
92-28-6	8LL37					92-28-6	Q01									
92-28-9	8LL37	0.91				92-28-9	A01									
92-28-9	8LL37	0.89	1.09	0.806	1.11	92-28-9	A02									
92-28-9	8LL37					92-28-9	A03									
92-28-9	8LL37	0.94	0.65	0.66		92-28-9	A04									
92-28-9	8LL37	1.08				92-28-9	A05									
92-28-9	8LL37	0.66				92-28-9	A06									
92-28-9	8LL37	0.88				92-28-9	A07									
92-28-9	8LL37	0.87	0.77			92-28-9	A08									
92-28-9	8LL37	0.67	0.85			92-28-9	A09									
92-28-9	8LL37	1.06				92-28-9	A10									
92-28-9	8LL37	1	1.18			92-28-9	A11									
92-28-9	8LL37	1.54	1.25	0.708		92-28-9	A12									
92-28-9	8LL37	1.3	1.16	0.986		92-28-9	A13									
92-28-9	8LL37	0.54	0.59	0.647	0.79	92-28-9	A14									
92-28-9	8LL37	0.63				92-28-9	A15									
92-28-9	8LL37	0.84	0.43	0.521	0.6	92-28-9	A16	0.82	0.49	0.56	0.56					
92-28-9	8LL37	0.68	0.62	0.578	0.52	92-28-9	A17									
92-28-9	8LL37	0.81	1.06	0.876		92-28-9	A18									
92-28-9	8LL37					92-28-9	A19									
92-28-9	8LL37	0.5	0.61			92-28-9	A20									
92-28-9	8LL37	0.75	0.74	0.462	0.69	92-28-9	A21									
92-28-9	8LL37	0.74	0.85			92-28-9	A22									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-6	8LL37							
92-28-6	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744795	92-28-9	8LL37	A-12-96, ST 8?	A23	40	5								0.41	0.6	
4744795	92-28-9	8LL37	A-12-96, ST 8?	A24	40	10								1.07	0.92	1
4744795	92-28-9	8LL37	A-12-96, ST 8?	A25	20	20								1.16	1.8	0.88
4744795	92-28-9	8LL37	A-12-96, ST 8?	A26	40	5								1.27	0.92	1
4744795	92-28-9	8LL37	A-12-96, ST 8?	A27	0	0										
4744795	92-28-9	8LL37	A-12-96, ST 8?	A28	40	5								1.34	0.93	0.71
4744795	92-28-9	8LL37	A-12-96, ST 8?	A29	10	25	Y		Y					0.6	0.52	0.55
4744795	92-28-9	8LL37	A-12-96, ST 8?	A30	30	20								0.57	0.82	0.9
4744795	92-28-9	8LL37	A-12-96, ST 8?	A31	30	10								0.74	0.85	0.67
4744795	92-28-9	8LL37	A-12-96, ST 8?	A32	0	0								0.99	1.1	0.9
4744795	92-28-9	8LL37	A-12-96, ST 8?	T01	0	0								0.5	0.75	1.98
4744993	92-32-14	8LL37	A-16-96, ST 8	A01	36									2.29	0.75	0.58
4744993	92-32-14	8LL37	A-16-96, ST 8	A02	17									1.69	1.22	1.04
4744993	92-32-14	8LL37	A-16-96, ST 8	A03	14									1.04	1.21	0.8
4744993	92-32-14	8LL37	A-16-96, ST 8	A04	222									1.1	0.47	0.63
4744993	92-32-14	8LL37	A-16-96, ST 8	A05	8									1.08	0.81	0.5
4744993	92-32-14	8LL37	A-16-96, ST 8	A06	14									1.39	1.03	0.6
4744993	92-32-14	8LL37	A-16-96, ST 8	A07	69									1.03	1.76	1.13
4744993	92-32-14	8LL37	A-16-96, ST 8	A08	19									0.68	0.55	0.94
4744993	92-32-14	8LL37	A-16-96, ST 8	A09	12									0.61	0.56	0.84
4744993	92-32-14	8LL37	A-16-96, ST 8	A10	10									0.89	1.07	0.84
4744993	92-32-14	8LL37	A-16-96, ST 8	A11	65									0.36	0.96	0.95

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-28-9	8LL37					92-28-9	A23									
92-28-9	8LL37	0.77	1.16	1.082	1.39	92-28-9	A24									
92-28-9	8LL37					92-28-9	A25									
92-28-9	8LL37	1.01	0.97			92-28-9	A26									
92-28-9	8LL37					92-28-9	A27									
92-28-9	8LL37					92-28-9	A28									
92-28-9	8LL37	0.8				92-28-9	A29									
92-28-9	8LL37	0.88	0.5	0.721		92-28-9	A30									
92-28-9	8LL37	0.54	1.17	1.031	0.64	92-28-9	A31									
92-28-9	8LL37					92-28-9	A32									
92-28-9	8LL37	1.45	0.59			92-28-9	T01									
92-32-14	8LL37	0.7	0.57	0.785		92-32-14	A01									
92-32-14	8LL37	0.91				92-32-14	A02									
92-32-14	8LL37	1.45				92-32-14	A03									
92-32-14	8LL37	0.6	0.54			92-32-14	A04									
92-32-14	8LL37	0.75				92-32-14	A05									
92-32-14	8LL37					92-32-14	A06									
92-32-14	8LL37	1.1				92-32-14	A07									
92-32-14	8LL37	0.67				92-32-14	A08									
92-32-14	8LL37	0.61	0.81			92-32-14	A09									
92-32-14	8LL37	0.7				92-32-14	A10									
92-32-14	8LL37	1.05	0.83			92-32-14	A11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-28-9	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744993	92-32-14	8LL37	A-16-96, ST 8	A12	17									1.23	0.61	0.92
4744993	92-32-14	8LL37	A-16-96, ST 8	A13	98									0.63	0.88	0.75
4744993	92-32-14	8LL37	A-16-96, ST 8	A14	18									0.55	0.55	0.52
4744993	92-32-14	8LL37	A-16-96, ST 8	A15	0									0.63	1.06	0.95
4744993	92-32-14	8LL37	A-16-96, ST 8	A16	22									0.96	0.61	1.1
4744993	92-32-14	8LL37	A-16-96, ST 8	A17	36									0.65	0.82	0.41
4744993	92-32-14	8LL37	A-16-96, ST 8	A18	24									1.23	1.29	1.16
4744993	92-32-14	8LL37	A-16-96, ST 8	A19	21									0.79	1.12	0.59

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-14	8LL37	1.36				92-32-14	A12									
92-32-14	8LL37	1.09	0.87			92-32-14	A13									
92-32-14	8LL37	0.78	0.66	0.675		92-32-14	A14									
92-32-14	8LL37	0.63				92-32-14	A15									
92-32-14	8LL37	1.4	0.69	0.785	0.82	92-32-14	A16									
92-32-14	8LL37	0.73	0.45			92-32-14	A17									
92-32-14	8LL37	1.35				92-32-14	A18									
92-32-14	8LL37	1				92-32-14	A19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744993	92-32-14	8LL37	A-16-96, ST 8	A20	26									1.18	1.02	0.75
4744993	92-32-14	8LL37	A-16-96, ST 8	A21	38									0.75	0.58	0.47
4744993	92-32-14	8LL37	A-16-96, ST 8	A22	16									0.98	1.06	1.21
4744993	92-32-14	8LL37	A-16-96, ST 8	A23	20									0.74	0.55	0.58
4744993	92-32-14	8LL37	A-16-96, ST 8	A24	30									0.69	0.45	0.58
4744993	92-32-14	8LL37	A-16-96, ST 8	A25	0									1.05	0.57	1.11
4744993	92-32-14	8LL37	A-16-96, ST 8	A26	25		Y			Y				0.53	0.85	0.69
4744993	92-32-14	8LL37	A-16-96, ST 8	A27	40									0.66	0.49	0.74

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-14	8LL37	0.92	0.99			92-32-14	A20									
92-32-14	8LL37	0.71	0.87			92-32-14	A21									
92-32-14	8LL37					92-32-14	A22									
92-32-14	8LL37	0.63	0.83	0.6	0.81	92-32-14	A23									
92-32-14	8LL37	1.11	0.72	0.405	0.58	92-32-14	A24									
92-32-14	8LL37	1.05	0.9			92-32-14	A25									
92-32-14	8LL37	0.83	0.76	1.061	1.06	92-32-14	A26	1.07	0.83							
92-32-14	8LL37	0.95				92-32-14	A27									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744993	92-32-14	8LL37	A-16-96, ST 8	A28	20									0.7	0.49	0.78
4744993	92-32-14	8LL37	A-16-96, ST 8	A29	80									0.64	0.57	0.77
4744993	92-32-14	8LL37	A-16-96, ST 8	A30	40									1.34	1.79	1.46
4744993	92-32-14	8LL37	A-16-96, ST 8	A31	34									1.16	1.66	1.45
4744993	92-32-14	8LL37	A-16-96, ST 8	A32	60									1.22	0.77	0.67
4744993	92-32-14	8LL37	A-16-96, ST 8	A33	60									0.43	0.79	1.09
4744993	92-32-14	8LL37	A-16-96, ST 8	P01	80									2.19		
4744993	92-32-14	8LL37	A-16-96, ST 8	P02	40									1.26	1.37	
4744995	92-32-16	8LL37	A-16-98, ST 8	A01	0	0								1.13	0.85	1.25
4744995	92-32-16	8LL37	A-16-98, ST 8	A02	60	10								0.79	0.72	0.45
4744995	92-32-16	8LL37	A-16-98, ST 8	A03	30	5								1.29	0.92	0.9
4744995	92-32-16	8LL37	A-16-98, ST 8	A04	20	5								0.87	0.97	0.93

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-14	8LL37	0.85	0.66	0.64	0.29	92-32-14	A28	0.58								
92-32-14	8LL37	0.89	0.93	1.035	0.53	92-32-14	A29	0.72								
92-32-14	8LL37	1.13	0.57	1.56		92-32-14	A30									
92-32-14	8LL37					92-32-14	A31									
92-32-14	8LL37					92-32-14	A32									
92-32-14	8LL37					92-32-14	A33									
92-32-14	8LL37					92-32-14	P01									
92-32-14	8LL37					92-32-14	P02									
92-32-16	8LL37	0.71				92-32-16	A01									
92-32-16	8LL37	0.75	0.59			92-32-16	A02									
92-32-16	8LL37	0.89				92-32-16	A03									
92-32-16	8LL37					92-32-16	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-14	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744995	92-32-16	8LL37	A-16-98, ST 8	A05	40	20							Y	0.69	0.65	0.73
4744995	92-32-16	8LL37	A-16-98, ST 8	A06	0	0								0.59	0.38	0.4
4744995	92-32-16	8LL37	A-16-98, ST 8	P01	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P02	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P03	40	5						Y		1.49	1.1	2.51
4744995	92-32-16	8LL37	A-16-98, ST 8	P04	30	5								0.78	0.36	0.42
4744995	92-32-16	8LL37	A-16-98, ST 8	P05	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P06	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P07	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P08	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P09	0	0										
4744995	92-32-16	8LL37	A-16-98, ST 8	P10	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A01	60	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A02	60	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A03	10	50										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A04	20	10										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A05	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-16	8LL37	0.71	0.65			92-32-16	A05									
92-32-16	8LL37	0.41				92-32-16	A06									
92-32-16	8LL37					92-32-16	P01									
92-32-16	8LL37					92-32-16	P02									
92-32-16	8LL37					92-32-16	P03									
92-32-16	8LL37	0.43				92-32-16	P04									
92-32-16	8LL37					92-32-16	P05									
92-32-16	8LL37					92-32-16	P06									
92-32-16	8LL37					92-32-16	P07									
92-32-16	8LL37					92-32-16	P08									
92-32-16	8LL37					92-32-16	P09									
92-32-16	8LL37					92-32-16	P10									
92-32-16-1	8LL37					92-32-16-1	A01									
92-32-16-1	8LL37					92-32-16-1	A02									
92-32-16-1	8LL37					92-32-16-1	A03									
92-32-16-1	8LL37					92-32-16-1	A04									
92-32-16-1	8LL37					92-32-16-1	A05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A06	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A07	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A08	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A09	20	25										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A10	30	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A11	20	20										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A12	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A13	40	10										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A14	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A15	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	A16	40	5										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	L01-03												

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-16-1	8LL37					92-32-16-1	A06									
92-32-16-1	8LL37					92-32-16-1	A07									
92-32-16-1	8LL37					92-32-16-1	A08									
92-32-16-1	8LL37					92-32-16-1	A09									
92-32-16-1	8LL37					92-32-16-1	A10									
92-32-16-1	8LL37					92-32-16-1	A11									
92-32-16-1	8LL37					92-32-16-1	A12									
92-32-16-1	8LL37					92-32-16-1	A13									
92-32-16-1	8LL37					92-32-16-1	A14									
92-32-16-1	8LL37					92-32-16-1	A15									
92-32-16-1	8LL37					92-32-16-1	A16									
92-32-16-1	8LL37					92-32-16-1	L01-03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P01	10	10						Y		0.68	0.5	
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P02	30	10								0.9		
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P02	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P03	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P04	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P05	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P06	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P07	0	0								0.38	0.21	
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P08	0	0										
4744996	92-32-16-1	8LL37	A-16-98-1, ST 9	P09	0	0										
4744997	92-32-17	8LL37	A-16-99, ST 9	A01	0	0										
4744997	92-32-17	8LL37	A-16-99, ST 9	A02	10	25				Y				0.36	0.33	0.63
4744997	92-32-17	8LL37	A-16-99, ST 9	A03	40	5								1.01	0.98	
4744997	92-32-17	8LL37	A-16-99, ST 9	A04	40	5								0.65	1.14	1.02

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-16-1	8LL37					92-32-16-1	P01									
92-32-16-1	8LL37					92-32-16-1	P02									
92-32-16-1	8LL37					92-32-16-1	P02									
92-32-16-1	8LL37					92-32-16-1	P03									
92-32-16-1	8LL37					92-32-16-1	P04									
92-32-16-1	8LL37					92-32-16-1	P05									
92-32-16-1	8LL37					92-32-16-1	P06									
92-32-16-1	8LL37					92-32-16-1	P07									
92-32-16-1	8LL37					92-32-16-1	P08									
92-32-16-1	8LL37					92-32-16-1	P09									
92-32-17	8LL37					92-32-17	A01									
92-32-17	8LL37					92-32-17	A02									
92-32-17	8LL37					92-32-17	A03									
92-32-17	8LL37	1.37				92-32-17	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-16-1	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744997	92-32-17	8LL37	A-16-99, ST 9	A05	60	5								0.88	0.51	0.93
4744997	92-32-17	8LL37	A-16-99, ST 9	A06	20	10				Y				0.92	1	
4744997	92-32-17	8LL37	A-16-99, ST 9	A07	0	0								0.68	0.71	1.05
4744997	92-32-17	8LL37	A-16-99, ST 9	A08	20	10				Y				1	0.76	0.6
4744997	92-32-17	8LL37	A-16-99, ST 9	A09	0	0										
4744997	92-32-17	8LL37	A-16-99, ST 9	A10	20	25	Y		Y					0.38	0.52	0.56
4744997	92-32-17	8LL37	A-16-99, ST 9	A11	10	20								0.57	0.82	0.78
4744997	92-32-17	8LL37	A-16-99, ST 9	A12	0	0								0.64	0.98	
4744997	92-32-17	8LL37	A-16-99, ST 9	A13	0	0										
4744997	92-32-17	8LL37	A-16-99, ST 9	A14	20	20								0.87	0.89	
4744997	92-32-17	8LL37	A-16-99, ST 9	P01-04	0	0										
4744997	92-32-17	8LL37	A-16-99, ST 9	P05	10	25										
4744997	92-32-17	8LL37	A-16-99, ST 9	P06	40	10						Y		0.77	0.67	0.39
4744997	92-32-17	8LL37	A-16-99, ST 9	P07	60	5								1.32		
4744997	92-32-17	8LL37	A-16-99, ST 9	P08	10	25								1.13	0.52	
4744997	92-32-17	8LL37	A-16-99, ST 9	Q01-02	0	0										
4744998	92-32-18	8LL37	A-16-100, ST 9	P01	40	5								0.99		
4745005	92-32-23	8LL37	A-16-100, ST 9	A01	20	20								0.83	0.77	
4745005	92-32-23	8LL37	A-16-100, ST 9	A02	0	0								1.04	0.87	
4745005	92-32-23	8LL37	A-16-100, ST 9	A03	10	100	Y			Y				0.47	0.22	0.3
4745005	92-32-23	8LL37	A-16-100, ST 9	A05	30	10								0.86	1.01	0.76
4745005	92-32-23	8LL37	A-16-100, ST 9	A06	40	5								1.38	1.01	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-17	8LL37					92-32-17	A05									
92-32-17	8LL37					92-32-17	A06									
92-32-17	8LL37	0.97				92-32-17	A07									
92-32-17	8LL37	0.4				92-32-17	A08									
92-32-17	8LL37					92-32-17	A09									
92-32-17	8LL37	0.45	0.5	0.957		92-32-17	A10									
92-32-17	8LL37	0.61				92-32-17	A11									
92-32-17	8LL37					92-32-17	A12									
92-32-17	8LL37					92-32-17	A13									
92-32-17	8LL37					92-32-17	A14									
92-32-17	8LL37					92-32-17	P01-04									
92-32-17	8LL37					92-32-17	P05									
92-32-17	8LL37	0.65				92-32-17	P06									
92-32-17	8LL37					92-32-17	P07									
92-32-17	8LL37					92-32-17	P08									
92-32-17	8LL37					92-32-17	Q01-02									
92-32-18	8LL37					92-32-18	P01									
92-32-23	8LL37					92-32-23	A01									
92-32-23	8LL37					92-32-23	A02									
92-32-23	8LL37	0.5				92-32-23	A03									
92-32-23	8LL37	0.8	0.69			92-32-23	A05									
92-32-23	8LL37					92-32-23	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-17	8LL37							
92-32-18	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745005	92-32-23	8LL37	A-16-100, ST 9	A07	0	0								0.69	0.69	1.18
4745005	92-32-23	8LL37	A-16-100, ST 9	A08	9	100	Y		Y				Y	0.21	0.3	0.24
4745005	92-32-23	8LL37	A-16-100, ST 9	A09	0	0								1.74	1.82	1.16
4745005	92-32-23	8LL37	A-16-100, ST 9	A10	0	0								1.43	1.86	0.9
4745005	92-32-23	8LL37	A-16-100, ST 9	P01	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P02	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P03	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P04	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P05	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P06	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P07	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P08	20	10					Y					
4745005	92-32-23	8LL37	A-16-100, ST 9	P09	40	5										
4745005	92-32-23	8LL37	A-16-100, ST 9	P10	30	10										
4745005	92-32-23	8LL37	A-16-100, ST 9	P11	20	50			Y			Y				
4745005	92-32-23	8LL37	A-16-100, ST 9	P12	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P13	0	0								2.78	2.67	
4745005	92-32-23	8LL37	A-16-100, ST 9	P14	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P15	40	5								1.14		
4745005	92-32-23	8LL37	A-16-100, ST 9	P16	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	P17	30	20								0.98	1.03	0.88
4745005	92-32-23	8LL37	A-16-100, ST 9	P18	40	10								1.16	2.05	
4745005	92-32-23	8LL37	A-16-100, ST 9	P19	0	0						Y		2.81		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-23	8LL37					92-32-23	A07									
92-32-23	8LL37	0.26	0.35	0.461	0.36	92-32-23	A08	0.24	0.09	0.12	0.27					
92-32-23	8LL37	1.01				92-32-23	A09									
92-32-23	8LL37	1.22				92-32-23	A10									
92-32-23	8LL37					92-32-23	P01									
92-32-23	8LL37					92-32-23	P02									
92-32-23	8LL37					92-32-23	P03									
92-32-23	8LL37					92-32-23	P04									
92-32-23	8LL37					92-32-23	P05									
92-32-23	8LL37					92-32-23	P06									
92-32-23	8LL37					92-32-23	P07									
92-32-23	8LL37					92-32-23	P08									
92-32-23	8LL37					92-32-23	P09									
92-32-23	8LL37					92-32-23	P10									
92-32-23	8LL37					92-32-23	P11									
92-32-23	8LL37					92-32-23	P12									
92-32-23	8LL37					92-32-23	P13									
92-32-23	8LL37					92-32-23	P14									
92-32-23	8LL37					92-32-23	P15									
92-32-23	8LL37					92-32-23	P16									
92-32-23	8LL37					92-32-23	P17									
92-32-23	8LL37					92-32-23	P18									
92-32-23	8LL37					92-32-23	P19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745005	92-32-23	8LL37	A-16-100, ST 9	P20	60	20					Y	Y		1.54	1.1	1.17
4745005	92-32-23	8LL37	A-16-100, ST 9	P21	30	15								1.25		
4745005	92-32-23	8LL37	A-16-100, ST 9	P22	0	0										
4745005	92-32-23	8LL37	A-16-100, ST 9	Q01	40	10								0.86	0.81	0.56
4745012	92-32-24	8LL37	A-16-101, ST 9	A01	40	10										
4745014	92-32-24	8LL37	A-16-101, ST 9	A01	0	0								1.25	0.49	
4745015	92-32-24	8LL37	A-16-101, ST 9	A01	0	0										
4745014	92-32-24	8LL37	A-16-101, ST 9	A02	40	5								0.54	0.44	0.69
4745015	92-32-24	8LL37	A-16-101, ST 9	A02	30	20								1.2	1.69	0.88
4745014	92-32-24	8LL37	A-16-101, ST 9	A03	60	7								0.67	0.58	0.86
4745015	92-32-24	8LL37	A-16-101, ST 9	A03	30	20								0.65	0.67	1.02
4745014	92-32-24	8LL37	A-16-101, ST 9	A04	20	20								1.48		
4745015	92-32-24	8LL37	A-16-101, ST 9	A04	40	10								1.03	0.99	1.07
4745014	92-32-24	8LL37	A-16-101, ST 9	A05	40	10								0.64	1.1	0.99
4745015	92-32-24	8LL37	A-16-101, ST 9	A05	40	10								0.88	1.02	
4745014	92-32-24	8LL37	A-16-101, ST 9	A06	20	25								0.6		
4745015	92-32-24	8LL37	A-16-101, ST 9	A06	40	10								0.9		
4745014	92-32-24	8LL37	A-16-101, ST 9	A07	30	10								0.76	1.48	0.65
4745015	92-32-24	8LL37	A-16-101, ST 9	A07	40	5								1.03	1.17	0.82
4745014	92-32-24	8LL37	A-16-101, ST 9	A08	20	20							Y	0.5	1.07	0.68
4745015	92-32-24	8LL37	A-16-101, ST 9	A08	40	5								1.19	0.73	1.03
4745014	92-32-24	8LL37	A-16-101, ST 9	A09	30	20								0.72	0.66	0.63

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-23	8LL37	0.49	1.12			92-32-23	P20									
92-32-23	8LL37					92-32-23	P21									
92-32-23	8LL37					92-32-23	P22									
92-32-23	8LL37	0.84				92-32-23	Q01									
92-32-24	8LL37					92-32-24	A01									
92-32-24	8LL37					92-32-24	A01									
92-32-24	8LL37					92-32-24	A01									
92-32-24	8LL37	0.67	0.73	0.734	0.5	92-32-24	A02	0.73								
92-32-24	8LL37	0.93	0.59			92-32-24	A02									
92-32-24	8LL37	0.78	0.65			92-32-24	A03									
92-32-24	8LL37	0.69	0.6	0.652	0.43	92-32-24	A03	1.18	0.31	0.55						
92-32-24	8LL37					92-32-24	A04									
92-32-24	8LL37	0.83	0.89	0.704		92-32-24	A04									
92-32-24	8LL37	0.86				92-32-24	A05									
92-32-24	8LL37					92-32-24	A05									
92-32-24	8LL37					92-32-24	A06									
92-32-24	8LL37					92-32-24	A06									
92-32-24	8LL37	1.24	0.76	0.731	1.16	92-32-24	A07	1.47								
92-32-24	8LL37	0.69	0.59	0.428		92-32-24	A07									
92-32-24	8LL37	0.65	0.55	0.525	0.45	92-32-24	A08									
92-32-24	8LL37	0.83				92-32-24	A08									
92-32-24	8LL37					92-32-24	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-23	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745015	92-32-24	8LL37	A-16-101, ST 9	A09	40	10								1.24	0.82	0.8
4745014	92-32-24	8LL37	A-16-101, ST 9	A10	20	20								0.65	0.76	0.78
4745015	92-32-24	8LL37	A-16-101, ST 9	A10	0	0										
4745014	92-32-24	8LL37	A-16-101, ST 9	A11	0	0								1.25		
4745015	92-32-24	8LL37	A-16-101, ST 9	A11	0	0								0.61	0.54	0.53
4745014	92-32-24	8LL37	A-16-101, ST 9	A12	40	10								1.01	0.84	1.09
4745015	92-32-24	8LL37	A-16-101, ST 9	A12	40	10								1.07	1.01	0.93
4745014	92-32-24	8LL37	A-16-101, ST 9	A13	20	20								0.66	0.73	0.56
4745015	92-32-24	8LL37	A-16-101, ST 9	A13	0	0										
4745014	92-32-24	8LL37	A-16-101, ST 9	A14	40	10								0.99	0.75	0.85
4745015	92-32-24	8LL37	A-16-101, ST 9	A14	0	0								1.26	1.16	
4745014	92-32-24	8LL37	A-16-101, ST 9	A15	0	0								0.75	0.64	0.57
4745015	92-32-24	8LL37	A-16-101, ST 9	A15	0	0	Y		Y							
4745014	92-32-24	8LL37	A-16-101, ST 9	A16	0	0								0.98	1.43	0.54
4745015	92-32-24	8LL37	A-16-101, ST 9	A16	0	0								0.91	1.52	1.17
4745015	92-32-24	8LL37	A-16-101, ST 9	A17	40	10								0.64	1.14	0.78
4745012	92-32-24	8LL37	A-16-101, ST 9	P01	60	10						Y		1.64	0.76	
4745014	92-32-24	8LL37	A-16-101, ST 9	P01	0	0										
4745015	92-32-24	8LL37	A-16-101, ST 9	P01	60	5					Y					
4745014	92-32-24	8LL37	A-16-101, ST 9	P02	0	0										
4745015	92-32-24	8LL37	A-16-101, ST 9	P02	40	10								0.59		
4745014	92-32-24	8LL37	A-16-101, ST 9	P03	0	0										
4745015	92-32-24	8LL37	A-16-101, ST 9	P03	40	10								0.8	1.3	0.94
4745014	92-32-24	8LL37	A-16-101, ST 9	P04	50	12								1.42	1.26	0.42

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-24	8LL37	0.85				92-32-24	A09									
92-32-24	8LL37	0.54	0.57	0.716		92-32-24	A10									
92-32-24	8LL37					92-32-24	A10									
92-32-24	8LL37					92-32-24	A11									
92-32-24	8LL37	0.75	0.59	1.183	1.04	92-32-24	A11	0.86	1.51							
92-32-24	8LL37	1.06	0.77			92-32-24	A12									
92-32-24	8LL37					92-32-24	A12									
92-32-24	8LL37	0.58	0.54	0.766	0.72	92-32-24	A13	0.54	0.47							
92-32-24	8LL37					92-32-24	A13									
92-32-24	8LL37	0.43	0.55	0.43	0.43	92-32-24	A14	0.32	0.59	0.83	0.65					
92-32-24	8LL37					92-32-24	A14									
92-32-24	8LL37	0.62	0.49	0.846	0.65	92-32-24	A15									
92-32-24	8LL37					92-32-24	A15									
92-32-24	8LL37	1.1				92-32-24	A16									
92-32-24	8LL37	0.69	0.68	1.111	0.9	92-32-24	A16									
92-32-24	8LL37	0.9	0.6	1.017		92-32-24	A17									
92-32-24	8LL37					92-32-24	P01									
92-32-24	8LL37					92-32-24	P01									
92-32-24	8LL37					92-32-24	P01									
92-32-24	8LL37					92-32-24	P02									
92-32-24	8LL37					92-32-24	P02									
92-32-24	8LL37					92-32-24	P03									
92-32-24	8LL37					92-32-24	P03									
92-32-24	8LL37	0.51	1.18	0.193	0.58	92-32-24	P04	0.35								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745015	92-32-24	8LL37	A-16-101, ST 9	P04	60	10										
4745014	92-32-24	8LL37	A-16-101, ST 9	P05	40	10										
4745015	92-32-24	8LL37	A-16-101, ST 9	P05	0	0								0.17	0.19	0.36
4745014	92-32-24	8LL37	A-16-101, ST 9	P06	0	0								0.59	0.83	0.77
4745015	92-32-24	8LL37	A-16-101, ST 9	P06	60	10								1.75	0.83	1.03
4745014	92-32-24	8LL37	A-16-101, ST 9	P07	30	25					Y			1.03		
4745015	92-32-24	8LL37	A-16-101, ST 9	P07	40	10								1.44	1.01	1.31
4745014	92-32-24	8LL37	A-16-101, ST 9	P08	30	25								0.41	0.7	3.85
4745015	92-32-24	8LL37	A-16-101, ST 9	P08	70	10								2.16	2.12	
4745014	92-32-24	8LL37	A-16-101, ST 9	P09	0	0								1.49		
4745015	92-32-24	8LL37	A-16-101, ST 9	P09	60	10								1.97	1.81	
4745014	92-32-24	8LL37	A-16-101, ST 9	P10	0	0								1.07	0.68	1.02
4745014	92-32-24	8LL37	A-16-101, ST 9	P11	0	0								1.22	0.57	0.53
4745014	92-32-24	8LL37	A-16-101, ST 9	P12	20	20										
4745014	92-32-24	8LL37	A-16-101, ST 9	P13	30	20								1.15		
4745014	92-32-24	8LL37	A-16-101, ST 9	P14	40	10						Y		0.56	0.3	0.54
4745014	92-32-24	8LL37	A-16-101, ST 9	P15	40	10										
4745014	92-32-24	8LL37	A-16-101, ST 9	P16	60	10								0.37	0.38	0.32
4745014	92-32-24	8LL37	A-16-101, ST 9	P17	0	0								0.59	0.47	
4745014	92-32-24	8LL37	A-16-101, ST 9	P18	40	5										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A01	10	20	Y			Y				0.25	0.38	0.36
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A01	50	10								0.88	1.01	0.64

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-24	8LL37					92-32-24	P04									
92-32-24	8LL37					92-32-24	P05									
92-32-24	8LL37	0.44	0.32	0.764	0.3	92-32-24	P05									
92-32-24	8LL37	0.73	0.63	0.78	0.77	92-32-24	P06	1.11	0.36							
92-32-24	8LL37					92-32-24	P06									
92-32-24	8LL37					92-32-24	P07									
92-32-24	8LL37	1.5	1.61			92-32-24	P07									
92-32-24	8LL37	2.02				92-32-24	P08									
92-32-24	8LL37					92-32-24	P08									
92-32-24	8LL37					92-32-24	P09									
92-32-24	8LL37					92-32-24	P09									
92-32-24	8LL37					92-32-24	P10									
92-32-24	8LL37					92-32-24	P11									
92-32-24	8LL37					92-32-24	P12									
92-32-24	8LL37					92-32-24	P13									
92-32-24	8LL37	0.71				92-32-24	P14									
92-32-24	8LL37					92-32-24	P15									
92-32-24	8LL37	0.8	0.41	0.575	1.17	92-32-24	P16	1.15								
92-32-24	8LL37					92-32-24	P17									
92-32-24	8LL37					92-32-24	P18									
92-32-25	8LL37	0.26				92-32-25	A01									
92-32-25	8LL37	0.72	0.79	0.5		92-32-25	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-24	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A02	10	25				Y				0.59		
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A02	10	25				Y				0.42	0.46	0.8
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A03	10	100	Y		Y	Y				0.56	0.5	
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A03	7	100	Y			Y				0.28	0.31	0.39
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A04	20	25				Y				0.65	0.59	0.46
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A04	40	10								0.96	1.02	0.72
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A05	0	0										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A05	40	10								0.89	0.95	0.69
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A06	20	25				Y				0.91	0.79	
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A06	0	0								0.73	1.02	0.49
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A07	40	5								0.73	0.88	1.04

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-25	8LL37					92-32-25	A02									
92-32-25	8LL37					92-32-25	A02									
92-32-25	8LL37					92-32-25	A03									
92-32-25	8LL37	0.42	0.12	0.179	0.25	92-32-25	A03									
92-32-25	8LL37	0.5	0.47	0.684		92-32-25	A04									
92-32-25	8LL37	0.55	0.8			92-32-25	A04									
92-32-25	8LL37					92-32-25	A05									
92-32-25	8LL37	0.69	0.59			92-32-25	A05									
92-32-25	8LL37					92-32-25	A06									
92-32-25	8LL37	0.55				92-32-25	A06									
92-32-25	8LL37					92-32-25	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A07	30	10								0.86	0.71	0.67
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A08	40	5								0.81	1.29	0.8
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A08	40	10								0.84	0.57	0.49
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A09	60	10								1.67	0.95	1.83
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A09	50	25								0.76	0.69	0.67
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A10	20	25				Y			Y	0.46	0.57	0.57
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A11	50	10							Y	1.76	1.6	1.84
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A12	0	0								1.12		
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A13	10	80	Y			Y				0.42	0.51	0.74
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A14	0	0								1.11	0.92	
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A15	0	0							Y	0.53	0.74	1.14
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A16	0	0										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A17	40	10								0.67	0.97	0.54
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A18	30	10								0.98	1.26	
4745020	92-32-25	8LL37	A-16-102, ST 9-10	A19	40	5								0.63	0.47	0.7
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P01	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-25	8LL37	0.74				92-32-25	A07									
92-32-25	8LL37	0.56				92-32-25	A08									
92-32-25	8LL37	0.71	0.73			92-32-25	A08									
92-32-25	8LL37	1.23	1.33			92-32-25	A09									
92-32-25	8LL37	0.72	0.91			92-32-25	A09									
92-32-25	8LL37	0.55				92-32-25	A10									
92-32-25	8LL37	1.87	0.9			92-32-25	A11									
92-32-25	8LL37					92-32-25	A12									
92-32-25	8LL37	0.81	0.97			92-32-25	A13									
92-32-25	8LL37					92-32-25	A14									
92-32-25	8LL37	0.82				92-32-25	A15									
92-32-25	8LL37					92-32-25	A16									
92-32-25	8LL37	0.84				92-32-25	A17									
92-32-25	8LL37					92-32-25	A18									
92-32-25	8LL37	0.5	0.72	0.613		92-32-25	A19									
92-32-25	8LL37					92-32-25	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P01	0	0						Y				
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P02	0	0										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P02	40	5						Y				
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P03	0	0										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P03	40	5								0.79	0.38	0.64
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P04	0	0										
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P04	40	5						Y		1.02	0.36	0.13
4745020	92-32-25	8LL37	A-16-102, ST 9-10	P05	60	5						Y		0.94	0.48	0.64
4744980	92-32-3	8LL37	A-16-91, ST 3	A01	0	0										
4744980	92-32-3	8LL37	A-16-91, ST 3	A02	20	10								1.52		
4744980	92-32-3	8LL37	A-16-91, ST 3	A03	40	5								1.11		
4744980	92-32-3	8LL37	A-16-91, ST 3	A04	60	5								0.37	0.88	0.3
4744980	92-32-3	8LL37	A-16-91, ST 3	A05	20	15								1.12	0.9	
4744980	92-32-3	8LL37	A-16-91, ST 3	A06	30	5								1.11	1.14	1.05
4744980	92-32-3	8LL37	A-16-91, ST 3	A07	40	5								1.21	0.54	0.86
4744980	92-32-3	8LL37	A-16-91, ST 3	A08	20	10										
4744980	92-32-3	8LL37	A-16-91, ST 3	A09	20	20								0.64	0.7	0.89

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-25	8LL37					92-32-25	P01									
92-32-25	8LL37					92-32-25	P02									
92-32-25	8LL37					92-32-25	P02									
92-32-25	8LL37					92-32-25	P03									
92-32-25	8LL37					92-32-25	P03									
92-32-25	8LL37					92-32-25	P04									
92-32-25	8LL37	1.03	0.47			92-32-25	P04									
92-32-25	8LL37					92-32-25	P05									
92-32-3	8LL37					92-32-3	A01									
92-32-3	8LL37					92-32-3	A02									
92-32-3	8LL37					92-32-3	A03									
92-32-3	8LL37	0.57	0.97	1.03	0.91	92-32-3	A04	0.65	0.94	0.52						
92-32-3	8LL37					92-32-3	A05									
92-32-3	8LL37	1.45	1			92-32-3	A06									
92-32-3	8LL37					92-32-3	A07									
92-32-3	8LL37					92-32-3	A08									
92-32-3	8LL37	0.71				92-32-3	A09									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-25	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744980	92-32-3	8LL37	A-16-91, ST 3	A10	20	20								0.56	0.58	0.74
4744980	92-32-3	8LL37	A-16-91, ST 3	A11	0	0								1.87	1.2	
4744980	92-32-3	8LL37	A-16-91, ST 3	A12	0	0								0.6	0.79	1.13
4744980	92-32-3	8LL37	A-16-91, ST 3	A13	40	5								0.76	0.71	0.6
4744980	92-32-3	8LL37	A-16-91, ST 3	A14	10	20								0.44	0.52	0.62
4744980	92-32-3	8LL37	A-16-91, ST 3	A15	40	5								0.52	1.04	0.92
4744980	92-32-3	8LL37	A-16-91, ST 3	A16	30	20								0.39	0.73	0.44
4744980	92-32-3	8LL37	A-16-91, ST 3	A17	20	25								0.91	1.09	1.22
4744980	92-32-3	8LL37	A-16-91, ST 3	A18	40	10								1.11	1.21	1.24
4744980	92-32-3	8LL37	A-16-91, ST 3	A19	20	50	Y		Y					0.25	0.24	0.43
4744980	92-32-3	8LL37	A-16-91, ST 3	P01	60	10								1.11	1.07	0.84
4744980	92-32-3	8LL37	A-16-91, ST 3	P01	0	0										
4744980	92-32-3	8LL37	A-16-91, ST 3	P02	40	5										
4744980	92-32-3	8LL37	A-16-91, ST 3	P03	0	0										
4744980	92-32-3	8LL37	A-16-91, ST 3	P04	20	10								1.37		
4744980	92-32-3	8LL37	A-16-91, ST 3	P05	20	10										
4744980	92-32-3	8LL37	A-16-91, ST 3	P06	0	0										
4744980	92-32-3	8LL37	A-16-91, ST 3	P07	20	10						Y		0.29	0.6	0.69
4744980	92-32-3	8LL37	A-16-91, ST 3	P08	20	20								1.1	0.9	
4744980	92-32-3	8LL37	A-16-91, ST 3	P09	40	10								1.73		
4744980	92-32-3	8LL37	A-16-91, ST 3	P10	40	10								1.13		
4744980	92-32-3	8LL37	A-16-91, ST 3	P11	30	25			Y					0.72	0.85	1.26
4744981	92-32-4	8LL37	A-16-92, ST 3	A01	40	20								1.57	1.21	1.08

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-3	8LL37	0.96	0.66			92-32-3	A10									
92-32-3	8LL37					92-32-3	A11									
92-32-3	8LL37					92-32-3	A12									
92-32-3	8LL37	1.06				92-32-3	A13									
92-32-3	8LL37	0.73	0.85			92-32-3	A14									
92-32-3	8LL37					92-32-3	A15									
92-32-3	8LL37	1.08	0.9	0.428	0.91	92-32-3	A16	1.31	1.1	1.36						
92-32-3	8LL37	1.27	1.04	0.904	1.45	92-32-3	A17									
92-32-3	8LL37	1.42				92-32-3	A18									
92-32-3	8LL37	0.49	0.47	0.665	0.75	92-32-3	A19	0.44	0.61	0.65	0.64	0.71				
92-32-3	8LL37	0.68	0.1	0.205	0.19	92-32-3	J01									
92-32-3	8LL37					92-32-3	P01									
92-32-3	8LL37					92-32-3	P02									
92-32-3	8LL37					92-32-3	P03									
92-32-3	8LL37					92-32-3	P04									
92-32-3	8LL37					92-32-3	P05									
92-32-3	8LL37					92-32-3	P06									
92-32-3	8LL37	0.56	0.42	0.274	0.23	92-32-3	P07	0.17								
92-32-3	8LL37					92-32-3	P08									
92-32-3	8LL37					92-32-3	P09									
92-32-3	8LL37					92-32-3	P10									
92-32-3	8LL37	0.77	0.59	1.014		92-32-3	P11									
92-32-4	8LL37	1.18	1.15	0.941		92-32-4	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-3	8LL37							
92-32-4	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744981	92-32-4	8LL37	A-16-92, ST 3	A02	20	25								0.72	0.76	1.16
4744981	92-32-4	8LL37	A-16-92, ST 3	A03	120	10							Y	0.72	1.21	0.94
4744981	92-32-4	8LL37	A-16-92, ST 3	A04	40	20								0.89	0.96	0.29
4744981	92-32-4	8LL37	A-16-92, ST 3	A05	40	10								1.17	1.69	1.25
4744981	92-32-4	8LL37	A-16-92, ST 3	A06	20	10								0.79	0.39	0.77
4744981	92-32-4	8LL37	A-16-92, ST 3	A07	40	10								0.87	0.48	0.3
4744981	92-32-4	8LL37	A-16-92, ST 3	A08	20	20								1.06	0.86	0.62
4744981	92-32-4	8LL37	A-16-92, ST 3	A09	0	0								0.53	0.93	0.69
4744981	92-32-4	8LL37	A-16-92, ST 3	A10	60	5								0.49	0.5	0.9
4744981	92-32-4	8LL37	A-16-92, ST 3	A11	20	25								0.7	0.71	0.51
4744981	92-32-4	8LL37	A-16-92, ST 3	A12	40	10								1.49	0.86	0.87
4744981	92-32-4	8LL37	A-16-92, ST 3	A13	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	A14	40	5								1.2	0.61	0.99
4744981	92-32-4	8LL37	A-16-92, ST 3	A15	0	0								0.92	1.39	0.97
4744981	92-32-4	8LL37	A-16-92, ST 3	A16	20	20								0.71	1.16	0.74
4744981	92-32-4	8LL37	A-16-92, ST 3	A17	20	25								0.31	0.48	0.43
4744981	92-32-4	8LL37	A-16-92, ST 3	A18	0	0								1.86		
4744981	92-32-4	8LL37	A-16-92, ST 3	A19	0	0								1.06	0.82	0.72
4744981	92-32-4	8LL37	A-16-92, ST 3	A20	40	5								0.62	0.61	0.72
4744981	92-32-4	8LL37	A-16-92, ST 3	A21	0	0								1.24	0.66	1.08
4744981	92-32-4	8LL37	A-16-92, ST 3	A22	0	0								0.9	1.08	0.91
4744981	92-32-4	8LL37	A-16-92, ST 3	P01	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	P02	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-4	8LL37	1.01	1.15	1.153	0.93	92-32-4	A02	1.02								
92-32-4	8LL37	1.26	0.89	1.079	0.62	92-32-4	A03	1.12								
92-32-4	8LL37	0.78	0.68	0.741	0.71	92-32-4	A04	0.73	0.98							
92-32-4	8LL37	0.78	0.69			92-32-4	A05									
92-32-4	8LL37	0.64	1.11	1.062	0.83	92-32-4	A06									
92-32-4	8LL37	0.96	1.14	0.482	0.99	92-32-4	A07	0.77	0.64	1.26	0.67	1.02	0.85	0.97		
92-32-4	8LL37	0.82	0.93	1.108	0.77	92-32-4	A08	0.91								
92-32-4	8LL37	0.82	1.18			92-32-4	A09									
92-32-4	8LL37	0.79	0.93	0.95	0.82	92-32-4	A10									
92-32-4	8LL37	0.68	0.58	0.546	0.6	92-32-4	A11	0.63	0.79	0.75	0.91	0.58	0.48			
92-32-4	8LL37	1.11	1.21	0.555	0.64	92-32-4	A12									
92-32-4	8LL37					92-32-4	A13									
92-32-4	8LL37	1.33				92-32-4	A14									
92-32-4	8LL37	1.1	0.82	1.182		92-32-4	A15									
92-32-4	8LL37	0.94	0.72			92-32-4	A16									
92-32-4	8LL37	0.25	0.3	0.492	0.45	92-32-4	A17									
92-32-4	8LL37					92-32-4	A18									
92-32-4	8LL37	0.7	0.57	1.109		92-32-4	A19									
92-32-4	8LL37	1.14	0.82	1.274		92-32-4	A20									
92-32-4	8LL37	1.11	1.13			92-32-4	A21									
92-32-4	8LL37	1.01				92-32-4	A22									
92-32-4	8LL37					92-32-4	P01									
92-32-4	8LL37					92-32-4	P02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744981	92-32-4	8LL37	A-16-92, ST 3	P03	20	20								2.87		
4744981	92-32-4	8LL37	A-16-92, ST 3	P04	40	10										
4744981	92-32-4	8LL37	A-16-92, ST 3	P05	40	10								1.33	1.02	0.59
4744981	92-32-4	8LL37	A-16-92, ST 3	P06	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	P07	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	P08	40	5										
4744981	92-32-4	8LL37	A-16-92, ST 3	P09	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	P10	40	5										
4744981	92-32-4	8LL37	A-16-92, ST 3	P11	0	0										
4744981	92-32-4	8LL37	A-16-92, ST 3	P12	20	25			Y					0.6	0.68	0.49
4744981	92-32-4	8LL37	A-16-92, ST 3	P13	40	25			Y					3.64	5.08	
4744982	92-32-5	8LL37	A-16-93, ST 4	A01	10	50								0.58	0.69	0.61
4744982	92-32-5	8LL37	A-16-93, ST 4	A02	40	5								0.75	0.68	0.73
4744982	92-32-5	8LL37	A-16-93, ST 4	A03	20	10								1.18	1	1.05
4744982	92-32-5	8LL37	A-16-93, ST 4	A04	40	5								0.88	1.03	1.54
4744982	92-32-5	8LL37	A-16-93, ST 4	A05	30	20								0.99	0.87	0.56
4744982	92-32-5	8LL37	A-16-93, ST 4	A06	60	5								1.42	1.13	1.41
4744982	92-32-5	8LL37	A-16-93, ST 4	A07	30	20								0.76	0.75	0.93
4744982	92-32-5	8LL37	A-16-93, ST 4	A08	30	10								0.71	0.75	0.61
4744982	92-32-5	8LL37	A-16-93, ST 4	A09	40	10								0.98	1.12	1.05
4744982	92-32-5	8LL37	A-16-93, ST 4	A10	40	5								1.08	0.78	0.85
4744982	92-32-5	8LL37	A-16-93, ST 4	A11	40	5								0.5	0.81	0.84
4744982	92-32-5	8LL37	A-16-93, ST 4	A12	60	5							Y	1.23	1.51	
4744982	92-32-5	8LL37	A-16-93, ST 4	A13	40	10								0.82	0.58	0.64

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-4	8LL37					92-32-4	P03									
92-32-4	8LL37					92-32-4	P04									
92-32-4	8LL37	1.06	0.88			92-32-4	P05									
92-32-4	8LL37					92-32-4	P06									
92-32-4	8LL37					92-32-4	P07									
92-32-4	8LL37					92-32-4	P08									
92-32-4	8LL37					92-32-4	P09									
92-32-4	8LL37					92-32-4	P10									
92-32-4	8LL37					92-32-4	P11									
92-32-4	8LL37	0.56	0.34	0.624	0.19	92-32-4	P12	0.39	0.72							
92-32-4	8LL37					92-32-4	P13									
92-32-5	8LL37	0.63	0.74			92-32-5	A01									
92-32-5	8LL37	1.32	1.02	1.003	1.14	92-32-5	A02									
92-32-5	8LL37	1.16				92-32-5	A03									
92-32-5	8LL37	0.98	1.35			92-32-5	A04									
92-32-5	8LL37	0.67	0.58			92-32-5	A05									
92-32-5	8LL37					92-32-5	A06									
92-32-5	8LL37	0.87	1.13	1.002		92-32-5	A07									
92-32-5	8LL37	0.75	0.84	1.505	1.15	92-32-5	A08									
92-32-5	8LL37	1.13	0.97	0.98	1.17	92-32-5	A09	0.79	0.85							
92-32-5	8LL37	0.52	0.33	1.134	1.06	92-32-5	A10									
92-32-5	8LL37	0.64	1.43	0.871	1.16	92-32-5	A11									
92-32-5	8LL37					92-32-5	A12									
92-32-5	8LL37	1.52	0.72			92-32-5	A13									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-4	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744982	92-32-5	8LL37	A-16-93, ST 4	A14	40	5								0.86	0.37	0.74
4744982	92-32-5	8LL37	A-16-93, ST 4	A15	40	5								0.78	0.61	0.71
4744982	92-32-5	8LL37	A-16-93, ST 4	A16	40	10								0.84	1.24	0.67
4744982	92-32-5	8LL37	A-16-93, ST 4	A17	40	5							Y	1.12	0.87	1.04
4744982	92-32-5	8LL37	A-16-93, ST 4	A18	0	0								1.12	0.46	0.6
4744982	92-32-5	8LL37	A-16-93, ST 4	A19	40	10							Y	0.97	1.06	0.54
4744982	92-32-5	8LL37	A-16-93, ST 4	A20	40	20								0.76	0.82	1.02
4744982	92-32-5	8LL37	A-16-93, ST 4	A21	40	5								0.73	0.73	0.95
4744982	92-32-5	8LL37	A-16-93, ST 4	A22	40	10								1.44	1.93	0.77
4744982	92-32-5	8LL37	A-16-93, ST 4	P01	40	10						Y		0.22	0.49	0.6
4744982	92-32-5	8LL37	A-16-93, ST 4	P02	50	10								1.14	1.02	
4744982	92-32-5	8LL37	A-16-93, ST 4	P03	40	10								1.52		
4744982	92-32-5	8LL37	A-16-93, ST 4	P04	40	5						Y		1.8	2.25	1.59
4744982	92-32-5	8LL37	A-16-93, ST 4	P05	40	10						Y		0.62	0.33	0.3
4744982	92-32-5	8LL37	A-16-93, ST 4	P06	40	5								1.16	0.87	
4744982	92-32-5	8LL37	A-16-93, ST 4	P07	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	A01	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	A02	40	5								0.81	0.79	0.67
4744985	92-32-8	8LL37	A-16-92, ST 3	A03	20	20								1.09	1.09	1.26
4744985	92-32-8	8LL37	A-16-92, ST 3	A04	40	5								1.45	1.07	0.79
4744985	92-32-8	8LL37	A-16-92, ST 3	A05	40	10								0.82	0.78	0.73
4744985	92-32-8	8LL37	A-16-92, ST 3	A06	40	10								1.13	1.03	0.71
4744985	92-32-8	8LL37	A-16-92, ST 3	A07	60	5								1.05	1.96	0.93
4744985	92-32-8	8LL37	A-16-92, ST 3	A08	40	5								1.13	1	1.07

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-5	8LL37	1	0.75			92-32-5	A14									
92-32-5	8LL37	0.92	1.07	1.273		92-32-5	A15									
92-32-5	8LL37	1.36	0.72	1.04	0.75	92-32-5	A16									
92-32-5	8LL37					92-32-5	A17									
92-32-5	8LL37	0.81	0.93			92-32-5	A18									
92-32-5	8LL37	0.94	0.76	0.804	1.22	92-32-5	A19	0.86	1.16	1.02	0.96	0.88	0.87			
92-32-5	8LL37	1.06	0.72	0.697	0.89	92-32-5	A20	0.9	1.01	0.91	1.04					
92-32-5	8LL37	1.5	1.25	1.389		92-32-5	A21									
92-32-5	8LL37	0.44	1.36	0.905	0.82	92-32-5	A22	1.15	1.37							
92-32-5	8LL37	0.18	0.79	0.218	0.28	92-32-5	P01	0.52	0.28	0.43	0.34	0.37				
92-32-5	8LL37					92-32-5	P02									
92-32-5	8LL37					92-32-5	P03									
92-32-5	8LL37					92-32-5	P04									
92-32-5	8LL37	0.41	1.36			92-32-5	P05									
92-32-5	8LL37					92-32-5	P06									
92-32-5	8LL37					92-32-5	P07									
92-32-8	8LL37					92-32-8	A01									
92-32-8	8LL37					92-32-8	A02									
92-32-8	8LL37	1.18				92-32-8	A03									
92-32-8	8LL37					92-32-8	A04									
92-32-8	8LL37					92-32-8	A05									
92-32-8	8LL37	1.2	1.22	1.174		92-32-8	A06									
92-32-8	8LL37	0.81	1.22	1.014		92-32-8	A07									
92-32-8	8LL37					92-32-8	A08									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-5	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744985	92-32-8	8LL37	A-16-92, ST 3	A09	40	5								1.4	1.26	
4744985	92-32-8	8LL37	A-16-92, ST 3	A10	0	0								1.27	1.03	
4744985	92-32-8	8LL37	A-16-92, ST 3	A11	0	0								0.66	0.9	1.17
4744985	92-32-8	8LL37	A-16-92, ST 3	A12	0	0								0.97	1.1	0.74
4744985	92-32-8	8LL37	A-16-92, ST 3	A13	40	20								0.98	0.88	0.92
4744985	92-32-8	8LL37	A-16-92, ST 3	A14	40	5								0.95	0.72	1.1
4744985	92-32-8	8LL37	A-16-92, ST 3	A15	20	20								1.23	1.28	
4744985	92-32-8	8LL37	A-16-92, ST 3	A16	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	A17	20	20								0.58	0.43	0.53
4744985	92-32-8	8LL37	A-16-92, ST 3	A18	0	0								1.05	0.8	
4744985	92-32-8	8LL37	A-16-92, ST 3	A19	20	20								0.44	0.43	0.67
4744985	92-32-8	8LL37	A-16-92, ST 3	A20	40	10								0.77	0.91	0.6
4744985	92-32-8	8LL37	A-16-92, ST 3	A21	40	20								1.35	0.63	1.43
4744985	92-32-8	8LL37	A-16-92, ST 3	P01	100	5								2.91	2.68	3.04
4744985	92-32-8	8LL37	A-16-92, ST 3	P02	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	P03	40	10								3.11		
4744985	92-32-8	8LL37	A-16-92, ST 3	P04	40	10								1.08	1.64	1.27
4744985	92-32-8	8LL37	A-16-92, ST 3	P05	40	10								1.76		
4744985	92-32-8	8LL37	A-16-92, ST 3	P06	40	10						Y		0.38	0.66	0.32
4744985	92-32-8	8LL37	A-16-92, ST 3	P07	20	20										
4744985	92-32-8	8LL37	A-16-92, ST 3	P08	0	0								0.64	0.49	0.65
4744985	92-32-8	8LL37	A-16-92, ST 3	P09	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	P10	0	0										
4744985	92-32-8	8LL37	A-16-92, ST 3	P11	20	10								2.08		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-8	8LL37					92-32-8	A09									
92-32-8	8LL37					92-32-8	A10									
92-32-8	8LL37	1.11	1.26			92-32-8	A11									
92-32-8	8LL37	1.02	0.83	1.109		92-32-8	A12									
92-32-8	8LL37	1.11	0.87	1.192		92-32-8	A13									
92-32-8	8LL37	1.32	0.96			92-32-8	A14									
92-32-8	8LL37					92-32-8	A15									
92-32-8	8LL37					92-32-8	A16									
92-32-8	8LL37	0.56	0.59	0.792	0.57	92-32-8	A17									
92-32-8	8LL37					92-32-8	A18									
92-32-8	8LL37	0.73	0.42	0.477	0.9	92-32-8	A19	0.69	0.6	0.66						
92-32-8	8LL37	0.87	0.81	1.121	1.34	92-32-8	A20	0.61	0.9							
92-32-8	8LL37	1.05	0.74	1.097	1.36	92-32-8	A21	1.59								
92-32-8	8LL37					92-32-8	P01									
92-32-8	8LL37					92-32-8	P02									
92-32-8	8LL37					92-32-8	P03									
92-32-8	8LL37	0.74				92-32-8	P04									
92-32-8	8LL37					92-32-8	P05									
92-32-8	8LL37	0.42	1.1	0.483	0.53	92-32-8	P06	0.29	0.6	0.7	0.26	0.52	0.31	0.72	0.2	0.6
92-32-8	8LL37					92-32-8	P07									
92-32-8	8LL37					92-32-8	P08									
92-32-8	8LL37					92-32-8	P09									
92-32-8	8LL37					92-32-8	P10									
92-32-8	8LL37					92-32-8	P11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744985	92-32-8	8LL37	A-16-92, ST 3	P12	40	5								0.3	0.45	0.3
4744985	92-32-8	8LL37	A-16-92, ST 3	P13	0	0								0.6	0.46	
4744985	92-32-8	8LL37	A-16-92, ST 3	P14	40	5								3.51	3.58	
4744987	92-32-9	8LL37	A-16-94, ST 5	A01	20	50	Y		Y					0.6	0.47	0.52
4744987	92-32-9	8LL37	A-16-94, ST 5	A02	40	10								0.33	0.42	0.39
4744987	92-32-9	8LL37	A-16-94, ST 5	A03	30	10								0.59	0.77	0.48
4744987	92-32-9	8LL37	A-16-94, ST 5	A04	30	10								1.01	0.5	0.48
4744987	92-32-9	8LL37	A-16-94, ST 5	A05	30	20								0.47	0.45	0.55
4744987	92-32-9	8LL37	A-16-94, ST 5	A06	20	20								1.25	1.79	
4744987	92-32-9	8LL37	A-16-94, ST 5	A07	40	5								0.72	0.58	0.74
4744987	92-32-9	8LL37	A-16-94, ST 5	A08	20	25								0.8	0.91	0.67
4744987	92-32-9	8LL37	A-16-94, ST 5	A09	40	5								0.8	0.56	0.95
4744987	92-32-9	8LL37	A-16-94, ST 5	A10	40	10								1.51	0.85	1.51
4744987	92-32-9	8LL37	A-16-94, ST 5	A11	40	5								0.76	0.6	0.85
4744987	92-32-9	8LL37	A-16-94, ST 5	A12	40	5								0.6	0.36	1.01
4744987	92-32-9	8LL37	A-16-94, ST 5	A13	40	10								0.68	0.75	0.56
4744987	92-32-9	8LL37	A-16-94, ST 5	A14	40	10								0.69	0.76	0.71
4744987	92-32-9	8LL37	A-16-94, ST 5	A15	10	25								0.51	0.48	0.38
4744987	92-32-9	8LL37	A-16-94, ST 5	A16	40	10								0.75	0.5	0.43
4744987	92-32-9	8LL37	A-16-94, ST 5	A17	40	10								1.07	0.95	
4744987	92-32-9	8LL37	A-16-94, ST 5	A18	40	10								0.87	0.94	0.98
4744987	92-32-9	8LL37	A-16-94, ST 5	A19	0	0								0.78	0.93	0.85
4744987	92-32-9	8LL37	A-16-94, ST 5	A20	20	20	Y							0.41	0.57	0.55
4744987	92-32-9	8LL37	A-16-94, ST 5	A21	40	10								0.58	0.35	0.61

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-8	8LL37	0.48	0.61			92-32-8	P12									
92-32-8	8LL37					92-32-8	P13									
92-32-8	8LL37					92-32-8	P14									
92-32-9	8LL37	0.3				92-32-9	A01									
92-32-9	8LL37	0.6	0.68			92-32-9	A02									
92-32-9	8LL37	0.66	0.88			92-32-9	A03									
92-32-9	8LL37	0.98	0.75	0.641	0.71	92-32-9	A04	0.81	1.03							
92-32-9	8LL37	0.63	0.61	0.977	0.76	92-32-9	A05	1.36								
92-32-9	8LL37					92-32-9	A06									
92-32-9	8LL37	0.66				92-32-9	A07									
92-32-9	8LL37	1.16				92-32-9	A08									
92-32-9	8LL37					92-32-9	A09									
92-32-9	8LL37	1.19				92-32-9	A10									
92-32-9	8LL37	0.4	0.59			92-32-9	A11									
92-32-9	8LL37					92-32-9	A12									
92-32-9	8LL37	0.69	0.55			92-32-9	A13									
92-32-9	8LL37	1.06				92-32-9	A14									
92-32-9	8LL37	0.41	0.79	0.401	0.47	92-32-9	A15									
92-32-9	8LL37	0.68	0.72	0.891	0.95	92-32-9	A16	1.1								
92-32-9	8LL37					92-32-9	A17									
92-32-9	8LL37					92-32-9	A18									
92-32-9	8LL37	0.85	0.81			92-32-9	A19									
92-32-9	8LL37	0.78	0.58	0.41	0.81	92-32-9	A20	0.6								
92-32-9	8LL37	0.49	0.61	0.362	0.54	92-32-9	A21	0.62								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-8	8LL37							
92-32-8	8LL37							
92-32-8	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4744987	92-32-9	8LL37	A-16-94, ST 5	A22	40	10								0.7	0.55	0.6
4744987	92-32-9	8LL37	A-16-94, ST 5	P01	30	10								0.29	0.7	0.28
4744987	92-32-9	8LL37	A-16-94, ST 5	P02	30	20								0.82	0.29	0.41
4744987	92-32-9	8LL37	A-16-94, ST 5	P03	0	0										
4744987	92-32-9	8LL37	A-16-94, ST 5	P04	60	5								1.02	0.31	0.27
4744987	92-32-9	8LL37	A-16-94, ST 5	P05	40	10										
4744987	92-32-9	8LL37	A-16-94, ST 5	P06	60	5								0.97	0.86	0.35
4744987	92-32-9	8LL37	A-16-94, ST 5	P07	30	5								0.45	0.68	0.39
4744987	92-32-9	8LL37	A-16-94, ST 5	P08	40	10								2.09		
4744987	92-32-9	8LL37	A-16-94, ST 5	Q01	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	A01	20	20								0.36	0.49	0.49
4745153	95-3-10	8LL37	C-1-81, ST 5	A02	20	20								0.77	0.66	0.56
4745153	95-3-10	8LL37	C-1-81, ST 5	A03	40	10								0.75	0.63	0.61
4745153	95-3-10	8LL37	C-1-81, ST 5	A04	20	20								0.43	0.41	0.38
4745153	95-3-10	8LL37	C-1-81, ST 5	A05	0	0								1	0.75	0.92
4745153	95-3-10	8LL37	C-1-81, ST 5	A06	0	0							Y	1.36		
4745153	95-3-10	8LL37	C-1-81, ST 5	A07	20	20								0.69	0.65	0.82
4745153	95-3-10	8LL37	C-1-81, ST 5	A08	0	0								1.15	1.22	
4745153	95-3-10	8LL37	C-1-81, ST 5	A09	0	0							Y	1.13	1.09	1.25
4745153	95-3-10	8LL37	C-1-81, ST 5	A10	0	0								0.81	0.57	0.72
4745153	95-3-10	8LL37	C-1-81, ST 5	A11	0	0								1.03	1.67	
4745153	95-3-10	8LL37	C-1-81, ST 5	P01	40	10										
4745153	95-3-10	8LL37	C-1-81, ST 5	P02	40	5								1.94		
4745153	95-3-10	8LL37	C-1-81, ST 5	P03	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
92-32-9	8LL37	0.67	0.59	1.129	0.98	92-32-9	A22									
92-32-9	8LL37	0.21	0.35			92-32-9	P01									
92-32-9	8LL37	0.44				92-32-9	P02									
92-32-9	8LL37					92-32-9	P03									
92-32-9	8LL37	0.75	0.23	0.48	0.69	92-32-9	P04									
92-32-9	8LL37					92-32-9	P05									
92-32-9	8LL37	1.4	0.65	0.625	0.35	92-32-9	P06	0.36								
92-32-9	8LL37	0.42	0.6	0.351	0.48	92-32-9	P07	0.65	0.53	0.92						
92-32-9	8LL37					92-32-9	P08									
92-32-9	8LL37					92-32-9	Q01									
95-3-10	8LL37	0.58	0.47	1.073	0.47	95-3-10	A01	0.43	0.47							
95-3-10	8LL37	0.85	0.92	0.832		95-3-10	A02									
95-3-10	8LL37	0.43	0.62	0.72		95-3-10	A03									
95-3-10	8LL37	0.34	0.36			95-3-10	A04									
95-3-10	8LL37	0.79	1.39			95-3-10	A05									
95-3-10	8LL37					95-3-10	A06									
95-3-10	8LL37	0.55	0.82	0.942		95-3-10	A07									
95-3-10	8LL37					95-3-10	A08									
95-3-10	8LL37					95-3-10	A09									
95-3-10	8LL37	0.74				95-3-10	A10									
95-3-10	8LL37					95-3-10	A11									
95-3-10	8LL37					95-3-10	P01									
95-3-10	8LL37					95-3-10	P02									
95-3-10	8LL37					95-3-10	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
92-32-9	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745153	95-3-10	8LL37	C-1-81, ST 5	P04	40	15								0.79	1.28	
4745153	95-3-10	8LL37	C-1-81, ST 5	P05	40	10						Y		0.53	1.28	0.67
4745153	95-3-10	8LL37	C-1-81, ST 5	P06	40	10								2.73		
4745153	95-3-10	8LL37	C-1-81, ST 5	P07	40	20								0.67	0.59	0.36
4745153	95-3-10	8LL37	C-1-81, ST 5	P08	40	15								1.37	1.79	0.55
4745153	95-3-10	8LL37	C-1-81, ST 5	P09	20	25			Y					1.24	1.74	1.05
4745153	95-3-10	8LL37	C-1-81, ST 5	P10	40	5								1.09	0.9	1.01
4745153	95-3-10	8LL37	C-1-81, ST 5	P11	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	P12	20	20										
4745153	95-3-10	8LL37	C-1-81, ST 5	P13	40	5								0.78	1.37	
4745153	95-3-10	8LL37	C-1-81, ST 5	P14	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	P15	0	0								1.24		
4745153	95-3-10	8LL37	C-1-81, ST 5	P16	20	20								1.76		
4745153	95-3-10	8LL37	C-1-81, ST 5	P17	0	0								0.49	0.29	0.95
4745153	95-3-10	8LL37	C-1-81, ST 5	P18	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	P19	40	20								1.61		
4745153	95-3-10	8LL37	C-1-81, ST 5	P20	40	10								1.46	1.95	0.64
4745153	95-3-10	8LL37	C-1-81, ST 5	P21	0	0								0.66		
4745153	95-3-10	8LL37	C-1-81, ST 5	P22	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	P23	40	5								0.43	0.59	0.65
4745153	95-3-10	8LL37	C-1-81, ST 5	P24	40	5						Y		0.91	2.11	
4745153	95-3-10	8LL37	C-1-81, ST 5	P25	0	0										
4745153	95-3-10	8LL37	C-1-81, ST 5	P26	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-10	8LL37					95-3-10	P04									
95-3-10	8LL37	0.82	1.27	1.492		95-3-10	P05									
95-3-10	8LL37					95-3-10	P06									
95-3-10	8LL37	0.77	0.88			95-3-10	P07									
95-3-10	8LL37					95-3-10	P08									
95-3-10	8LL37					95-3-10	P09									
95-3-10	8LL37					95-3-10	P10									
95-3-10	8LL37					95-3-10	P11									
95-3-10	8LL37					95-3-10	P12									
95-3-10	8LL37					95-3-10	P13									
95-3-10	8LL37					95-3-10	P14									
95-3-10	8LL37					95-3-10	P15									
95-3-10	8LL37					95-3-10	P16									
95-3-10	8LL37	0.38	0.73	0.453		95-3-10	P17									
95-3-10	8LL37					95-3-10	P18									
95-3-10	8LL37					95-3-10	P19									
95-3-10	8LL37	0.25				95-3-10	P20									
95-3-10	8LL37					95-3-10	P21									
95-3-10	8LL37					95-3-10	P22									
95-3-10	8LL37	0.53	0.3	0.668	0.84	95-3-10	P23	0.23								
95-3-10	8LL37					95-3-10	P24									
95-3-10	8LL37					95-3-10	P25									
95-3-10	8LL37					95-3-10	P26									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							
95-3-10	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745153	95-3-10	8LL37	C-1-81, ST 5	P27	0	0								0.37		
4745153	95-3-10	8LL37	C-1-81, ST 5	P28	0	0								0.83		
4745155	95-3-11-2	8LL37	C-1-82-2	A01	0	0										
4745156	95-3-12	8LL37	C-1-83	A01	20	10								0.72	1.14	
4745156	95-3-12	8LL37	C-1-83	A02	40	10								0.36	0.96	0.54
4745156	95-3-12	8LL37	C-1-83	P01	0	0										
4745156	95-3-12	8LL37	C-1-83	P02	40	10								1.03	1.62	
4745156	95-3-12	8LL37	C-1-83	P03	40	10								2.07	1.02	0.96
4745156	95-3-12	8LL37	C-1-83	P04	40	20								1.39	1.64	1.32
4745156	95-3-12	8LL37	C-1-83	P05	40	15										
4745156	95-3-12	8LL37	C-1-83	P06	40	15								1.02	0.46	1
4745156	95-3-12	8LL37	C-1-83	P07	40	10								1.14	0.69	
4745156	95-3-12	8LL37	C-1-83	P08	40	5								1.98	2.26	1.76
4745156	95-3-12	8LL37	C-1-83	P09	0	0										
4745156	95-3-12	8LL37	C-1-83	P10	30	20								0.46		
4745156	95-3-12	8LL37	C-1-83	P11	40	15								2.32		
4745156	95-3-12	8LL37	C-1-83	P12	0	0										
4745156	95-3-12	8LL37	C-1-83	P13	0	0										
4745156	95-3-12	8LL37	C-1-83	P14	20	20								0.81	0.42	
4745156	95-3-12	8LL37	C-1-83	P15	20	15								0.82	1.56	
4745156	95-3-12	8LL37	C-1-83	P16	0	0								0.99		
4745156	95-3-12	8LL37	C-1-83	P17	0	0										
4745156	95-3-12	8LL37	C-1-83	P18	0	0										
4745156	95-3-12	8LL37	C-1-83	P19	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-10	8LL37					95-3-10	P27									
95-3-10	8LL37					95-3-10	P28									
95-3-11-2	8LL37					95-3-11-2	A01									
95-3-12	8LL37					95-3-12	A01									
95-3-12	8LL37	0.51	1.18	0.724		95-3-12	A02									
95-3-12	8LL37					95-3-12	P01									
95-3-12	8LL37					95-3-12	P02									
95-3-12	8LL37	0.79				95-3-12	P03									
95-3-12	8LL37					95-3-12	P04									
95-3-12	8LL37					95-3-12	P05									
95-3-12	8LL37	0.58	0.76	0.601	0.78	95-3-12	P06	1.26								
95-3-12	8LL37					95-3-12	P07									
95-3-12	8LL37	1.26	0.93			95-3-12	P08									
95-3-12	8LL37					95-3-12	P09									
95-3-12	8LL37					95-3-12	P10									
95-3-12	8LL37					95-3-12	P11									
95-3-12	8LL37					95-3-12	P12									
95-3-12	8LL37					95-3-12	P13									
95-3-12	8LL37					95-3-12	P14									
95-3-12	8LL37					95-3-12	P15									
95-3-12	8LL37					95-3-12	P16									
95-3-12	8LL37					95-3-12	P17									
95-3-12	8LL37					95-3-12	P18									
95-3-12	8LL37					95-3-12	P19									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-10	8LL37							
95-3-10	8LL37							
95-3-11-2	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745156	95-3-12	8LL37	C-1-83	P20	0	0										
4745156	95-3-12	8LL37	C-1-83	P21	40	10								1.24		
4745156	95-3-12	8LL37	C-1-83	P22	0	0										
4745156	95-3-12	8LL37	C-1-83	P23	0	0										
4745156	95-3-12	8LL37	C-1-83	P24	0	0										
4745156	95-3-12	8LL37	C-1-83	P25-31	0	0										
4745157	95-3-12-2	8LL37	C-1-83-2	A01	0	0										
4745157	95-3-12-2	8LL37	C-1-83-2	P01	40	5								0.79		
4745157	95-3-12-2	8LL37	C-1-83-2	P02	40	5										
4745157	95-3-12-2	8LL37	C-1-83-2	P03	0	0								1.26		
4745157	95-3-12-2	8LL37	C-1-83-2	P04	0	0										
4745158	95-3-13-2	8LL37	C-1-84-2	A01	40	5								0.56	0.54	0.58
4745158	95-3-13-2	8LL37	C-1-84-2	A02	0	0								1.1	0.93	
4745158	95-3-13-2	8LL37	C-1-84-2	A03	40	10								1	0.7	0.78
4745158	95-3-13-2	8LL37	C-1-84-2	A04	40	5								0.45	0.79	0.72
4745158	95-3-13-2	8LL37	C-1-84-2	A05	40	10								1.19	1.43	0.3
4745158	95-3-13-2	8LL37	C-1-84-2	A06	20	10								1.63		
4745158	95-3-13-2	8LL37	C-1-84-2	A07	20	10								1.16	0.88	
4745158	95-3-13-2	8LL37	C-1-84-2	A08	40	5								0.93	1.51	0.76
4745158	95-3-13-2	8LL37	C-1-84-2	A09	20	20							Y	1.29	1.44	1.42
4745158	95-3-13-2	8LL37	C-1-84-2	A10	20	20								1	1.01	1.06
4745158	95-3-13-2	8LL37	C-1-84-2	A11	20	25								0.76	0.84	1.04
4745158	95-3-13-2	8LL37	C-1-84-2	A12	20	25								0.94	0.93	0.91

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-12	8LL37					95-3-12	P20									
95-3-12	8LL37					95-3-12	P21									
95-3-12	8LL37					95-3-12	P22									
95-3-12	8LL37					95-3-12	P23									
95-3-12	8LL37					95-3-12	P24									
95-3-12	8LL37					95-3-12	P25-31									
95-3-12-2	8LL37					95-3-12-2	A01									
95-3-12-2	8LL37					95-3-12-2	P01									
95-3-12-2	8LL37					95-3-12-2	P02									
95-3-12-2	8LL37					95-3-12-2	P03									
95-3-12-2	8LL37					95-3-12-2	P04									
95-3-13-2	8LL37					95-3-13-2	A01									
95-3-13-2	8LL37					95-3-13-2	A02									
95-3-13-2	8LL37					95-3-13-2	A03									
95-3-13-2	8LL37					95-3-13-2	A04									
95-3-13-2	8LL37	0.46				95-3-13-2	A05									
95-3-13-2	8LL37					95-3-13-2	A06									
95-3-13-2	8LL37					95-3-13-2	A07									
95-3-13-2	8LL37					95-3-13-2	A08									
95-3-13-2	8LL37	0.42	1.11			95-3-13-2	A09									
95-3-13-2	8LL37					95-3-13-2	A10									
95-3-13-2	8LL37	0.68	0.87			95-3-13-2	A11									
95-3-13-2	8LL37	0.97				95-3-13-2	A12									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12	8LL37							
95-3-12-2	8LL37							
95-3-12-2	8LL37							
95-3-12-2	8LL37							
95-3-12-2	8LL37							
95-3-12-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745158	95-3-13-2	8LL37	C-1-84-2	A13	40	5								0.53	0.73	0.73
4745158	95-3-13-2	8LL37	C-1-84-2	A14	0	0								0.7	0.63	0.75
4745158	95-3-13-2	8LL37	C-1-84-2	A15	0	0								0.77	0.77	0.96
4745158	95-3-13-2	8LL37	C-1-84-2	A16	0	0								1.28		
4745158	95-3-13-2	8LL37	C-1-84-2	A17	0	0								1.35	1.45	
4745158	95-3-13-2	8LL37	C-1-84-2	A18	20	20								1.27	1.56	1.28
4745158	95-3-13-2	8LL37	C-1-84-2	A19	0	0								1.32	1.34	1.18
4745158	95-3-13-2	8LL37	C-1-84-2	A20	20	20								1.47	1.38	
4745158	95-3-13-2	8LL37	C-1-84-2	A21	0	0								1.65	0.92	1.29
4745158	95-3-13-2	8LL37	C-1-84-2	P01	20	10						Y		0.22	0.09	0.42
4745158	95-3-13-2	8LL37	C-1-84-2	P02	40	5										
4745158	95-3-13-2	8LL37	C-1-84-2	P03	0	0										
4745158	95-3-13-2	8LL37	C-1-84-2	P04	40	5								0.3	0.95	
4745158	95-3-13-2	8LL37	C-1-84-2	P05	40	5								0.46	0.98	
4745158	95-3-13-2	8LL37	C-1-84-2	P06	20	25			Y					0.46	0.32	0.26
4745158	95-3-13-2	8LL37	C-1-84-2	P07	40	10								1.02	0.52	1.49
4745158	95-3-13-2	8LL37	C-1-84-2	P08	0	0										
4745158	95-3-13-2	8LL37	C-1-84-2	P09	20	20								0.92	1.03	
4745158	95-3-13-2	8LL37	C-1-84-2	P10	0	0										
4745158	95-3-13-2	8LL37	C-1-84-2	P11	0	0										
4745158	95-3-13-2	8LL37	C-1-84-2	P12	40	5								0.76	0.57	0.16
4745158	95-3-13-2	8LL37	C-1-84-2	P13	0	0	y		Y							
4745158	95-3-13-2	8LL37	C-1-84-2	P14	30	10								0.75	0.64	1.2
4745159	95-3-13-6	8LL37	C-1-84-6	P01	40	10						Y		0.56	0.83	0.83

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-13-2	8LL37	0.67	0.62	0.465	0.58	95-3-13-2	A13									
95-3-13-2	8LL37					95-3-13-2	A14									
95-3-13-2	8LL37					95-3-13-2	A15									
95-3-13-2	8LL37					95-3-13-2	A16									
95-3-13-2	8LL37					95-3-13-2	A17									
95-3-13-2	8LL37	1.21				95-3-13-2	A18									
95-3-13-2	8LL37					95-3-13-2	A19									
95-3-13-2	8LL37					95-3-13-2	A20									
95-3-13-2	8LL37					95-3-13-2	A21									
95-3-13-2	8LL37	0.29	0.43	0.231	0.23	95-3-13-2	P01	0.4								
95-3-13-2	8LL37					95-3-13-2	P02									
95-3-13-2	8LL37					95-3-13-2	P03									
95-3-13-2	8LL37					95-3-13-2	P04									
95-3-13-2	8LL37					95-3-13-2	P05									
95-3-13-2	8LL37	0.71	0.47	0.32		95-3-13-2	P06									
95-3-13-2	8LL37					95-3-13-2	P07									
95-3-13-2	8LL37					95-3-13-2	P08									
95-3-13-2	8LL37					95-3-13-2	P09									
95-3-13-2	8LL37					95-3-13-2	P10									
95-3-13-2	8LL37					95-3-13-2	P11									
95-3-13-2	8LL37	0.28	0.59	0.371	0.67	95-3-13-2	P12	0.26	0.4	0.28	0.2					
95-3-13-2	8LL37					95-3-13-2	P13									
95-3-13-2	8LL37	1.02				95-3-13-2	P14									
95-3-13-6	8LL37					95-3-13-6	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-2	8LL37							
95-3-13-6	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745159	95-3-13-6	8LL37	C-1-84-6	P02	20	20								2.29	1.19	
4745159	95-3-13-6	8LL37	C-1-84-6	P03	20	25			Y					1.5	0.7	1.1
4745159	95-3-13-6	8LL37	C-1-84-6	P04	20	25			Y					0.62	0.69	1.47
4745159	95-3-13-6	8LL37	C-1-84-6	P05	20	25			Y					1.84		
4745159	95-3-13-6	8LL37	C-1-84-6	P06	40	10								0.59	0.46	0.54
4745159	95-3-13-6	8LL37	C-1-84-6	P07	0	0										
4745159	95-3-13-6	8LL37	C-1-84-6	P08	0	0										
4745159	95-3-13-6	8LL37	C-1-84-6	P09	0	0										
4745159	95-3-13-6	8LL37	C-1-84-6	P10	0	0										
4745159	95-3-13-6	8LL37	C-1-84-6	P11	0	0										
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A01	0	0								1.06	1.22	
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A02	0	0								0.56	0.87	0.61
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A03	0	0										
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A04	40	10								1.03	0.98	0.85
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A05	40	10								1.75	0.81	1.19
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A06	30	10								1.07	0.78	0.68
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A07	10	25	Y			Y				0.3	0.37	0.66
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A08	40	10								0.96	0.72	0.51
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A09	40	10								0.9	0.3	0.98
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A10	40	5								0.8	1.14	0.62
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A11	0	0								0.81	0.52	0.89
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A12	40	5								1.1	0.87	1.16
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A13	0	0								1.2		
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A14	0	0								0.94		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-13-6	8LL37					95-3-13-6	P02									
95-3-13-6	8LL37	0.29				95-3-13-6	P03									
95-3-13-6	8LL37	0.64	0.51	0.575		95-3-13-6	P04									
95-3-13-6	8LL37					95-3-13-6	P05									
95-3-13-6	8LL37					95-3-13-6	P06									
95-3-13-6	8LL37					95-3-13-6	P07									
95-3-13-6	8LL37					95-3-13-6	P08									
95-3-13-6	8LL37					95-3-13-6	P09									
95-3-13-6	8LL37					95-3-13-6	P10									
95-3-13-6	8LL37					95-3-13-6	P11									
95-3-14	8LL37					95-3-14	A01									
95-3-14	8LL37	0.8	0.72			95-3-14	A02									
95-3-14	8LL37					95-3-14	A03									
95-3-14	8LL37	1.37				95-3-14	A04									
95-3-14	8LL37	0.84				95-3-14	A05									
95-3-14	8LL37	0.55	0.66	0.683	0.49	95-3-14	A06	0.5								
95-3-14	8LL37	0.66	0.81	0.802	0.75	95-3-14	A07	0.75								
95-3-14	8LL37	0.51				95-3-14	A08									
95-3-14	8LL37					95-3-14	A09									
95-3-14	8LL37	0.45	0.3	0.291	0.26	95-3-14	A10									
95-3-14	8LL37					95-3-14	A11									
95-3-14	8LL37					95-3-14	A12									
95-3-14	8LL37					95-3-14	A13									
95-3-14	8LL37					95-3-14	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-13-6	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A15	0	0								0.85		
4745160	95-3-14	8LL37	C-1-85, ST 6,8	A16	0	0										
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P01	0	0								1.51		
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P02	0	0								0.76	0.29	
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P03	40	10								0.99	1.78	
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P04	10	100			Y							
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P05	10	10								1.1	0.45	
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P06	0	0										
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P07	40	10								0.49	0.85	
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P08	20	10								0.23	0.24	0.45
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P09	0	0										
4745160	95-3-14	8LL37	C-1-85, ST 6,8	P12	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A01	20	10								1.54	1.39	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A02	0	0								1.56	0.81	0.74
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A03	20	20	Y		Y					0.58	0.49	0.78
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A04	40	5								0.78	0.71	0.58
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A05	0	0								0.87	1.16	0.84
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A06	40	10								1.09	0.81	1.26
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A07	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A08	40	10								1.05	0.9	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A09	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A10	20	20								1.03	0.94	1.24
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A11	40	10								1.65	1.66	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A12	0	0								1.19	1.56	1.15

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-14	8LL37					95-3-14	A15									
95-3-14	8LL37					95-3-14	A16									
95-3-14	8LL37					95-3-14	P01									
95-3-14	8LL37					95-3-14	P02									
95-3-14	8LL37					95-3-14	P03									
95-3-14	8LL37					95-3-14	P04									
95-3-14	8LL37					95-3-14	P05									
95-3-14	8LL37					95-3-14	P06									
95-3-14	8LL37					95-3-14	P07									
95-3-14	8LL37					95-3-14	P08									
95-3-14	8LL37					95-3-14	P09									
95-3-14	8LL37					95-3-14	P12									
95-3-15	8LL37					95-3-15	A01									
95-3-15	8LL37	0.61	1.09	0.696		95-3-15	A02									
95-3-15	8LL37	1.07	1.58	1.14	1.22	95-3-15	A03	1.46								
95-3-15	8LL37	0.44	0.52	0.705	0.74	95-3-15	A04	0.93								
95-3-15	8LL37					95-3-15	A05									
95-3-15	8LL37					95-3-15	A06									
95-3-15	8LL37					95-3-15	A07									
95-3-15	8LL37					95-3-15	A08									
95-3-15	8LL37					95-3-15	A09									
95-3-15	8LL37	1.25	0.99	1.146		95-3-15	A10									
95-3-15	8LL37					95-3-15	A11									
95-3-15	8LL37					95-3-15	A12									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-14	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A13	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A14	40	5								0.92	0.96	1
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A15	40	5								1.37	1.31	1.11
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A16	0	0								1.43		
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A17	0	0								1.26	1.19	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A18	0	0								1.94	1.29	1.4
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A19	0	0								1.1	0.79	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A20	0	0								1.09	1.34	1.04
4745161	95-3-15	8LL37	C-1-86, ST 6-9	A21	0	0								1.15	1.06	
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P01	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P02	40	1								0.84	0.91	0.55
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P03	40	10								0.64	0.5	0.41
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P04	40	10								0.67	0.91	0.27
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P05	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P06	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P07	40	5								0.54	0.6	0.96
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P08	0	0										
4745161	95-3-15	8LL37	C-1-86, ST 6-9	P09	0	0								0.24	0.59	0.46
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A01	40	5								0.92	1.16	1.42
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A02	40	10								1.35	0.61	0.75
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A03	40	10								0.83	0.66	0.68
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A04	40	10								1.11	0.83	0.75
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A05	0	0								1.25	0.93	1.04
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A06	20	20								0.54	0.68	0.88

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-15	8LL37					95-3-15	A13									
95-3-15	8LL37					95-3-15	A14									
95-3-15	8LL37					95-3-15	A15									
95-3-15	8LL37					95-3-15	A16									
95-3-15	8LL37					95-3-15	A17									
95-3-15	8LL37					95-3-15	A18									
95-3-15	8LL37					95-3-15	A19									
95-3-15	8LL37					95-3-15	A20									
95-3-15	8LL37					95-3-15	A21									
95-3-15	8LL37					95-3-15	P01									
95-3-15	8LL37	0.49	1.07	0.356	0.44	95-3-15	P02	0.35	0.42	0.23						
95-3-15	8LL37	0.2				95-3-15	P03									
95-3-15	8LL37	0.86				95-3-15	P04									
95-3-15	8LL37					95-3-15	P05									
95-3-15	8LL37					95-3-15	P06									
95-3-15	8LL37	0.91				95-3-15	P07									
95-3-15	8LL37					95-3-15	P08									
95-3-15	8LL37					95-3-15	P09									
95-3-16	8LL37					95-3-16	A01									
95-3-16	8LL37	0.7	0.55	0.571		95-3-16	A02									
95-3-16	8LL37	0.51	0.53	0.615		95-3-16	A03									
95-3-16	8LL37					95-3-16	A04									
95-3-16	8LL37					95-3-16	A05									
95-3-16	8LL37	0.63	1	0.797	0.9	95-3-16	A06									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-15	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A07	0	0								0.91	1.38	0.71
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A08	20	10								0.82	0.53	1.17
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A09	20	10								1.05	0.72	0.48
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A10	20	20								1.68	1	0.85
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A11	20	20								0.49	0.58	0.78
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A12	40	10								0.72	0.69	1.78
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A13	60	15								0.68	1.02	1.15
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A14	20	10								0.57	0.54	1.19
4745162	95-3-16	8LL37	C-1-87, ST 7-10	A15	30	10								0.75	0.41	0.59
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P01	0	0								1.47		
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P02	40	10								0.3	0.83	0.91
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P03	40	15								0.5	0.31	
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P04	20	20								1.29	1.04	
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P05	60	10										
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P06	60	10								1.45	0.56	1.32
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P07	20	20								0.84	1.08	
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P08	0	0										
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P09	0	0								1.8	0.33	1.27
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P10	30	20								0.54	0.63	0.77
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P11	0	0										
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P12	0	0										
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P13	40	10										
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P14	20	20								0.22	0.13	0.43
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P15	20	20								0.16	0.26	0.35

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-16	8LL37	1.64	0.8			95-3-16	A07									
95-3-16	8LL37	0.63				95-3-16	A08									
95-3-16	8LL37	0.72	1.04	1.03	1.07	95-3-16	A09	0.87								
95-3-16	8LL37	0.78	1.41			95-3-16	A10									
95-3-16	8LL37	0.72	0.96			95-3-16	A11									
95-3-16	8LL37	0.73				95-3-16	A12									
95-3-16	8LL37	0.93	0.74	1.128	1.23	95-3-16	A13	0.99	0.95	1.26	1.66	0.84	0.63	0.79		
95-3-16	8LL37					95-3-16	A14									
95-3-16	8LL37					95-3-16	A15									
95-3-16	8LL37					95-3-16	P01									
95-3-16	8LL37	0.46	2.84			95-3-16	P02									
95-3-16	8LL37					95-3-16	P03									
95-3-16	8LL37					95-3-16	P04									
95-3-16	8LL37					95-3-16	P05									
95-3-16	8LL37					95-3-16	P06									
95-3-16	8LL37					95-3-16	P07									
95-3-16	8LL37					95-3-16	P08									
95-3-16	8LL37	1.02	0.81			95-3-16	P09									
95-3-16	8LL37					95-3-16	P10									
95-3-16	8LL37					95-3-16	P11									
95-3-16	8LL37					95-3-16	P12									
95-3-16	8LL37					95-3-16	P13									
95-3-16	8LL37					95-3-16	P14									
95-3-16	8LL37	0.25	0.37	0.585	0.41	95-3-16	P15									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P16	20	15								0.49	0.22	0.26
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P17	40	10								0.86	0.5	1.38
4745162	95-3-16	8LL37	C-1-87, ST 7-10	P18	20	25			Y					0.66	0.26	0.22
4745163	95-3-17	8LL37	C-1-88	A01	0	0								0.77	0.32	0.64
4745163	95-3-17	8LL37	C-1-88	A02	40	5								1.76	1.23	1.41
4745163	95-3-17	8LL37	C-1-88	A03	40	10								1.75	1.88	
4745163	95-3-17	8LL37	C-1-88	A04	40	15								0.91	1.28	1.05
4745163	95-3-17	8LL37	C-1-88	A05	40	10							Y	0.39	0.71	1.05
4745163	95-3-17	8LL37	C-1-88	A06	40	10								0.89	0.63	0.58
4745163	95-3-17	8LL37	C-1-88	A07	40	10								0.81	0.86	1.12
4745163	95-3-17	8LL37	C-1-88	A08	40	10								0.82	0.68	
4745163	95-3-17	8LL37	C-1-88	A09	40	15								1.23	0.88	1.42
4745163	95-3-17	8LL37	C-1-88	A10	20	20								0.57	0.52	0.5
4745163	95-3-17	8LL37	C-1-88	A11	0	0								1.06	1.2	0.82
4745163	95-3-17	8LL37	C-1-88	A12	40	10								0.77	0.69	0.73
4745163	95-3-17	8LL37	C-1-88	A13	0	0								0.63	0.36	0.61
4745163	95-3-17	8LL37	C-1-88	A14	0	0								1.36	0.66	
4745163	95-3-17	8LL37	C-1-88	A15	0	0								1.48	1.1	
4745163	95-3-17	8LL37	C-1-88	A16	40	10								1.06	1.25	0.83
4745163	95-3-17	8LL37	C-1-88	A17	0	0								1.31	1.52	1.03
4745163	95-3-17	8LL37	C-1-88	A18	20	15				Y				1.1	0.74	0.79
4745163	95-3-17	8LL37	C-1-88	A19	0	0								1.7	1.31	0.48
4745163	95-3-17	8LL37	C-1-88	A20	0	0								0.96	0.7	0.78
4745163	95-3-17	8LL37	C-1-88	P01	40	15										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-16	8LL37	0.44	0.63	0.294	0.46	95-3-16	P16									
95-3-16	8LL37					95-3-16	P17									
95-3-16	8LL37	0.25	0.45			95-3-16	P18									
95-3-17	8LL37	0.71	0.74			95-3-17	A01									
95-3-17	8LL37					95-3-17	A02									
95-3-17	8LL37					95-3-17	A03									
95-3-17	8LL37	0.71				95-3-17	A04									
95-3-17	8LL37	0.45	0.91	1.136	0.68	95-3-17	A05									
95-3-17	8LL37	0.99	0.67	0.497	1.09	95-3-17	A06	0.81								
95-3-17	8LL37	0.98				95-3-17	A07									
95-3-17	8LL37					95-3-17	A08									
95-3-17	8LL37	0.86	1.02	1.003	1.02	95-3-17	A09									
95-3-17	8LL37	0.63	0.73			95-3-17	A10									
95-3-17	8LL37	0.83				95-3-17	A11									
95-3-17	8LL37	0.65	0.36			95-3-17	A12									
95-3-17	8LL37	0.45	0.93	0.746		95-3-17	A13									
95-3-17	8LL37					95-3-17	A14									
95-3-17	8LL37					95-3-17	A15									
95-3-17	8LL37	0.94				95-3-17	A16									
95-3-17	8LL37	0.89	1.25	1.779		95-3-17	A17									
95-3-17	8LL37					95-3-17	A18									
95-3-17	8LL37	1.46	1.6	1.512	1.58	95-3-17	A19									
95-3-17	8LL37	0.77				95-3-17	A20									
95-3-17	8LL37					95-3-17	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-16	8LL37							
95-3-16	8LL37							
95-3-16	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745163	95-3-17	8LL37	C-1-88	P02	40	15								3.13	2.21	
4745163	95-3-17	8LL37	C-1-88	P03	40	20								1.56	1.18	0.99
4745163	95-3-17	8LL37	C-1-88	P04	40	10						Y		0.62	1.32	
4745163	95-3-17	8LL37	C-1-88	P05	30	20								1.38	1.14	
4745163	95-3-17	8LL37	C-1-88	P06	40	10										
4745163	95-3-17	8LL37	C-1-88	P07	40	10						Y		1.81	0.54	0.77
4745163	95-3-17	8LL37	C-1-88	P08	40	5						Y		0.94		
4745163	95-3-17	8LL37	C-1-88	P09	40	5						Y		0.73	0.6	1.4
4745163	95-3-17	8LL37	C-1-88	P10	40	10								1.53	1.35	1.6
4745163	95-3-17	8LL37	C-1-88	P11	40	10								0.63	0.42	0.37
4745163	95-3-17	8LL37	C-1-88	P12	20	20								0.4	0.51	0.44
4745163	95-3-17	8LL37	C-1-88	P13	20	20								0.57	0.89	
4745163	95-3-17	8LL37	C-1-88	P14	0	0										
4745163	95-3-17	8LL37	C-1-88	P15	60	10								0.59	0.91	0.67
4745163	95-3-17	8LL37	C-1-88	Q01	40	5										
4745164	95-3-17/3	8LL37	C-1-88/3	A01	40	10								1.03	0.79	0.65
4745164	95-3-17/3	8LL37	C-1-88/3	A02	0	0								0.5	0.51	0.67
4745164	95-3-17/3	8LL37	C-1-88/3	A03	40	5								0.97	0.52	0.51
4745164	95-3-17/3	8LL37	C-1-88/3	P01	40	15								1.57	2.3	1.86
4745165	95-3-17-1	8LL37	C-1-88-1	A01	60	10								1.11	0.58	1.4
4745166	95-3-17-2	8LL37	C-1-88-2	A01	0	0										
4745166	95-3-17-2	8LL37	C-1-88-2	A02	0	0										
4745166	95-3-17-2	8LL37	C-1-88-2	A03	40	5								0.67	0.8	

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-17	8LL37					95-3-17	P02									
95-3-17	8LL37					95-3-17	P03									
95-3-17	8LL37					95-3-17	P04									
95-3-17	8LL37					95-3-17	P05									
95-3-17	8LL37					95-3-17	P06									
95-3-17	8LL37	0.95				95-3-17	P07									
95-3-17	8LL37					95-3-17	P08									
95-3-17	8LL37	0.73	0.94			95-3-17	P09									
95-3-17	8LL37					95-3-17	P10									
95-3-17	8LL37	0.55	0.53	0.449	0.54	95-3-17	P11	0.45	0.59	0.6						
95-3-17	8LL37	0.84				95-3-17	P12									
95-3-17	8LL37					95-3-17	P13									
95-3-17	8LL37					95-3-17	P14									
95-3-17	8LL37	0.6	1.07	0.549	0.35	95-3-17	P15	0.73	0.52							
95-3-17	8LL37					95-3-17	Q01									
95-3-17/3	8LL37	0.76	1.17			95-3-17/3	A01									
95-3-17/3	8LL37					95-3-17/3	A02									
95-3-17/3	8LL37	0.52	0.4			95-3-17/3	A03									
95-3-17/3	8LL37					95-3-17/3	P01									
95-3-17-1	8LL37	0.99	1.63			95-3-17-1	A01									
95-3-17-2	8LL37					95-3-17-2	A01									
95-3-17-2	8LL37					95-3-17-2	A02									
95-3-17-2	8LL37					95-3-17-2	A03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17	8LL37							
95-3-17/3	8LL37							
95-3-17/3	8LL37							
95-3-17/3	8LL37							
95-3-17/3	8LL37							
95-3-17-1	8LL37							
95-3-17-2	8LL37							
95-3-17-2	8LL37							
95-3-17-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745167	95-3-18	8LL37	C-1-89	A01	40	5								1.08	0.75	1.18
4745167	95-3-18	8LL37	C-1-89	A02	40	10									0.83	0.89
4745167	95-3-18	8LL37	C-1-89	A03	20	20								1.8	1.22	1.33
4745167	95-3-18	8LL37	C-1-89	A04	30	10								1.36	1.05	0.6
4745167	95-3-18	8LL37	C-1-89	A05	60	10							Y	1.04	0.97	1.04
4745167	95-3-18	8LL37	C-1-89	A06	0	0								0.92	0.7	0.76
4745167	95-3-18	8LL37	C-1-89	A07	20	10								1.09	1.19	
4745167	95-3-18	8LL37	C-1-89	A08	20	20								0.72	1.36	1.04
4745167	95-3-18	8LL37	C-1-89	A09	0	0								0.54	0.9	
4745167	95-3-18	8LL37	C-1-89	A10	0	0								1.03	0.9	
4745167	95-3-18	8LL37	C-1-89	A11	7	50								0.3	0.51	0.55
4745167	95-3-18	8LL37	C-1-89	A12	0	0								1.6	1.26	1.29
4745167	95-3-18	8LL37	C-1-89	A13	40	10								1.01	0.51	0.77
4745167	95-3-18	8LL37	C-1-89	A14	0	0								0.98	0.66	0.67
4745167	95-3-18	8LL37	C-1-89	A15	40	5								0.64	0.64	0.84
4745167	95-3-18	8LL37	C-1-89	A16	0	0								1.22		
4745167	95-3-18	8LL37	C-1-89	A17	40	5								1.04	0.61	0.69
4745167	95-3-18	8LL37	C-1-89	A18	40	5								1.08	1.17	
4745167	95-3-18	8LL37	C-1-89	A19	20	10								1.06	1.12	1.3
4745167	95-3-18	8LL37	C-1-89	A20	40	5								1.3	0.97	0.76
4745167	95-3-18	8LL37	C-1-89	A21	20	10								1.02	0.91	1.04
4745167	95-3-18	8LL37	C-1-89	A22	0	0										
4745167	95-3-18	8LL37	C-1-89	A23	0	0										
4745167	95-3-18	8LL37	C-1-89	A24	20	10								1.16	0.76	0.9

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-18	8LL37	0.76				95-3-18	A01									
95-3-18	8LL37					95-3-18	A02									
95-3-18	8LL37	1.11	1.05			95-3-18	A03									
95-3-18	8LL37	0.94				95-3-18	A04									
95-3-18	8LL37	0.65	1.38	0.619	0.88	95-3-18	A05									
95-3-18	8LL37	0.67	0.86			95-3-18	A06									
95-3-18	8LL37					95-3-18	A07									
95-3-18	8LL37	1.03	0.79	0.744	0.61	95-3-18	A08									
95-3-18	8LL37					95-3-18	A09									
95-3-18	8LL37					95-3-18	A10									
95-3-18	8LL37	0.87	0.8	0.816	0.64	95-3-18	A11	0.56								
95-3-18	8LL37	1.2				95-3-18	A12									
95-3-18	8LL37	0.55	0.93	0.419	0.38	95-3-18	A13									
95-3-18	8LL37					95-3-18	A14									
95-3-18	8LL37	0.56	0.67			95-3-18	A15									
95-3-18	8LL37					95-3-18	A16									
95-3-18	8LL37	0.86	0.76			95-3-18	A17									
95-3-18	8LL37					95-3-18	A18									
95-3-18	8LL37					95-3-18	A19									
95-3-18	8LL37	0.93				95-3-18	A20									
95-3-18	8LL37	1.3	0.97			95-3-18	A21									
95-3-18	8LL37					95-3-18	A22									
95-3-18	8LL37					95-3-18	A23									
95-3-18	8LL37					95-3-18	A24									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745167	95-3-18	8LL37	C-1-89	A25	40	5								0.37	0.35	0.32
4745167	95-3-18	8LL37	C-1-89	A26	20	10								0.7	0.62	0.54
4745167	95-3-18	8LL37	C-1-89	A27	20	10								0.65	0.59	
4745167	95-3-18	8LL37	C-1-89	P01	0	0										
4745167	95-3-18	8LL37	C-1-89	P02	0	0								0.96	0.63	0.81
4745167	95-3-18	8LL37	C-1-89	P03	0	0										
4745167	95-3-18	8LL37	C-1-89	P04	20	20								0.57	0.3	0.3
4745167	95-3-18	8LL37	C-1-89	P05	40	10								1.19		
4745167	95-3-18	8LL37	C-1-89	P06	60	10								0.36	0.2	0.36
4745167	95-3-18	8LL37	C-1-89	P07	0	0										
4745168	95-3-18-2	8LL37	C-1-89-2	A01	40	10								1.34	0.92	1.28
4745168	95-3-18-2	8LL37	C-1-89-2	A02	30	10								1.24	1.2	1.5
4745168	95-3-18-2	8LL37	C-1-89-2	A03	40	20								0.59	0.54	1.67
4745168	95-3-18-2	8LL37	C-1-89-2	A04	40	10								1.33	0.68	1.08
4745168	95-3-18-2	8LL37	C-1-89-2	A05	20	20								1.11	0.57	0.92
4745168	95-3-18-2	8LL37	C-1-89-2	A06	0	0								0.75	0.77	0.63
4745168	95-3-18-2	8LL37	C-1-89-2	A07	20	20								1.03	1.35	0.86
4745168	95-3-18-2	8LL37	C-1-89-2	A08	40	10								0.66	0.49	0.55
4745168	95-3-18-2	8LL37	C-1-89-2	A09	0	0								1.22	0.86	1.01
4745168	95-3-18-2	8LL37	C-1-89-2	A10	40	5								1.2	1.03	0.93
4745168	95-3-18-2	8LL37	C-1-89-2	A11	0	0								0.98	0.87	1.12
4745168	95-3-18-2	8LL37	C-1-89-2	A12	0	0								0.95	1.37	
4745168	95-3-18-2	8LL37	C-1-89-2	A13	0	0								1.08	1.28	
4745168	95-3-18-2	8LL37	C-1-89-2	A14	0	0								1.18	1.35	0.56

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-18	8LL37	0.32				95-3-18	A25									
95-3-18	8LL37	0.6	1.02			95-3-18	A26									
95-3-18	8LL37					95-3-18	A27									
95-3-18	8LL37					95-3-18	P01									
95-3-18	8LL37					95-3-18	P02									
95-3-18	8LL37					95-3-18	P03									
95-3-18	8LL37	0.42	0.2			95-3-18	P04									
95-3-18	8LL37					95-3-18	P05									
95-3-18	8LL37	0.15	0.42	0.19	0.42	95-3-18	P06	0.5	0.15	0.16	0.23					
95-3-18	8LL37					95-3-18	P07									
95-3-18-2	8LL37	0.79	1.09	1.399	1.25	95-3-18-2	A01									
95-3-18-2	8LL37	1	0.64	1.448	1.07	95-3-18-2	A02									
95-3-18-2	8LL37	1.42	1.69	1.001	1.89	95-3-18-2	A03									
95-3-18-2	8LL37	1.78	1.02	1.071		95-3-18-2	A04									
95-3-18-2	8LL37	1.07	1.19	1.223		95-3-18-2	A05									
95-3-18-2	8LL37	0.88	0.49	0.666	1.02	95-3-18-2	A06	0.85	0.31	1.21						
95-3-18-2	8LL37	0.86				95-3-18-2	A07									
95-3-18-2	8LL37	0.88	0.46	0.661	0.9	95-3-18-2	A08	0.69	1.05							
95-3-18-2	8LL37	0.91				95-3-18-2	A09									
95-3-18-2	8LL37					95-3-18-2	A10									
95-3-18-2	8LL37					95-3-18-2	A11									
95-3-18-2	8LL37					95-3-18-2	A12									
95-3-18-2	8LL37					95-3-18-2	A13									
95-3-18-2	8LL37	1.25				95-3-18-2	A14									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745168	95-3-18-2	8LL37	C-1-89-2	A15	0	0								1.09	0.66	0.92
4745168	95-3-18-2	8LL37	C-1-89-2	A16	40	5								0.89	1.11	0.79
4745168	95-3-18-2	8LL37	C-1-89-2	A17	40	5								0.96	1.73	
4745168	95-3-18-2	8LL37	C-1-89-2	A18	20	20								1.18	0.8	0.93
4745168	95-3-18-2	8LL37	C-1-89-2	A19	0	0								1.03	1.25	
4745168	95-3-18-2	8LL37	C-1-89-2	A20	0	0								0.99	0.8	1.08
4745168	95-3-18-2	8LL37	C-1-89-2	A21	0	0								1.31	0.83	
4745168	95-3-18-2	8LL37	C-1-89-2	P01	40	5								0.79	0.66	0.5
4745168	95-3-18-2	8LL37	C-1-89-2	P02	40	10								0.26	0.55	0.44
4745168	95-3-18-2	8LL37	C-1-89-2	P03	40	10								0.94	1.09	
4745168	95-3-18-2	8LL37	C-1-89-2	P04	0	0										
4745169	95-3-18-3	8LL37	C-1-89-3	A01	0	0										
4745169	95-3-18-3	8LL37	C-1-89-3	A02	0	0								1.4		
4745169	95-3-18-3	8LL37	C-1-89-3	A03	0	0								0.61		
4745169	95-3-18-3	8LL37	C-1-89-3	A04	20	20								1.26	0.8	0.69
4745169	95-3-18-3	8LL37	C-1-89-3	P01	0	0										
4745169	95-3-18-3	8LL37	C-1-89-3	P02	20	20								0.55	0.42	0.36
4745170	95-3-19	8LL37	C-1-90, ST 11	A01	40	5								0.98	0.53	
4745170	95-3-19	8LL37	C-1-90, ST 11	A02	0	0								0.83	0.77	0.79
4745170	95-3-19	8LL37	C-1-90, ST 11	A03	40	5								1.47	1.12	0.59
4745170	95-3-19	8LL37	C-1-90, ST 11	A04	40	5								0.84	0.84	0.76
4745170	95-3-19	8LL37	C-1-90, ST 11	A05	0	0								0.81	0.56	1.22
4745170	95-3-19	8LL37	C-1-90, ST 11	A06	0	0										
4745170	95-3-19	8LL37	C-1-90, ST 11	A07	40	5										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-18-2	8LL37	1.06	1.21	1.046		95-3-18-2	A15									
95-3-18-2	8LL37	1.07				95-3-18-2	A16									
95-3-18-2	8LL37					95-3-18-2	A17									
95-3-18-2	8LL37	1.43				95-3-18-2	A18									
95-3-18-2	8LL37					95-3-18-2	A19									
95-3-18-2	8LL37					95-3-18-2	A20									
95-3-18-2	8LL37					95-3-18-2	A21									
95-3-18-2	8LL37	0.31	0.39	0.169	0.36	95-3-18-2	P01	0.19								
95-3-18-2	8LL37	0.39				95-3-18-2	P02									
95-3-18-2	8LL37					95-3-18-2	P03									
95-3-18-2	8LL37					95-3-18-2	P04									
95-3-18-3	8LL37					95-3-18-3	A01									
95-3-18-3	8LL37					95-3-18-3	A02									
95-3-18-3	8LL37					95-3-18-3	A03									
95-3-18-3	8LL37	0.69	0.63	0.792	0.98	95-3-18-3	A04	0.61								
95-3-18-3	8LL37					95-3-18-3	P01									
95-3-18-3	8LL37	0.56	0.75	0.489		95-3-18-3	P02									
95-3-19	8LL37					95-3-19	A01									
95-3-19	8LL37					95-3-19	A02									
95-3-19	8LL37					95-3-19	A03									
95-3-19	8LL37	1.2	0.49			95-3-19	A04									
95-3-19	8LL37					95-3-19	A05									
95-3-19	8LL37					95-3-19	A06									
95-3-19	8LL37					95-3-19	A07									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-2	8LL37							
95-3-18-3	8LL37							
95-3-18-3	8LL37							
95-3-18-3	8LL37							
95-3-18-3	8LL37							
95-3-18-3	8LL37							
95-3-18-3	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745170	95-3-19	8LL37	C-1-90, ST 11	A08	0	0										
4745170	95-3-19	8LL37	C-1-90, ST 11	A09	40	5								1.07	1.04	1.01
4745170	95-3-19	8LL37	C-1-90, ST 11	A10	20	10								1.45	0.96	1.18
4745170	95-3-19	8LL37	C-1-90, ST 11	A11	20	10								1.24	1.19	
4745170	95-3-19	8LL37	C-1-90, ST 11	A12	40	5								0.81	0.84	0.62
4745170	95-3-19	8LL37	C-1-90, ST 11	A13	40	5								0.68	1.05	0.72
4745170	95-3-19	8LL37	C-1-90, ST 11	A14	0	0								1.02	0.78	0.44
4745170	95-3-19	8LL37	C-1-90, ST 11	P01	20	15								1.11	1.19	0.53
4745170	95-3-19	8LL37	C-1-90, ST 11	P02	40	10								1.11	0.88	0.51
4745170	95-3-19	8LL37	C-1-90, ST 11	P03	20	10										
4745170	95-3-19	8LL37	C-1-90, ST 11	P04	30	20								2.67		
4745170	95-3-19	8LL37	C-1-90, ST 11	P05	40	5								0.3	0.43	
4745170	95-3-19	8LL37	C-1-90, ST 11	P06	20	10						Y		0.68		
4745170	95-3-19	8LL37	C-1-90, ST 11	P07	0	0										
4745170	95-3-19	8LL37	C-1-90, ST 11	P08	0	0								0.28	0.31	0.4
4745170	95-3-19	8LL37	C-1-90, ST 11	P09	0	0										
4745171	95-3-19-3	8LL37	C-1-90-3, ST 11	P01	0	0										
4745134	95-3-2	8LL37	C-1-73, ST 2	P01	40	10								0.41	0.22	0.24
4745134	95-3-2	8LL37	C-1-73, ST 2	P02	0	0										
4745134	95-3-2	8LL37	C-1-73, ST 2	P03	0	0										
4745134	95-3-2	8LL37	C-1-73, ST 2	P4-5	0	0										
4745134	95-3-2	8LL37	C-1-73, ST 2	P6-8	0	0										
4745172	95-3-20	8LL37	C-1-91, ST 12	A01	20	10								0.98	0.46	0.76

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-19	8LL37					95-3-19	A08									
95-3-19	8LL37					95-3-19	A09									
95-3-19	8LL37					95-3-19	A10									
95-3-19	8LL37					95-3-19	A11									
95-3-19	8LL37	0.59	0.67			95-3-19	A12									
95-3-19	8LL37					95-3-19	A13									
95-3-19	8LL37	1.06				95-3-19	A14									
95-3-19	8LL37	0.43	1.13			95-3-19	P01									
95-3-19	8LL37	0.66				95-3-19	P02									
95-3-19	8LL37					95-3-19	P03									
95-3-19	8LL37					95-3-19	P04									
95-3-19	8LL37					95-3-19	P05									
95-3-19	8LL37					95-3-19	P06									
95-3-19	8LL37					95-3-19	P07									
95-3-19	8LL37	0.45				95-3-19	P08									
95-3-19	8LL37					95-3-19	P09									
95-3-19-3	8LL37					95-3-19-3	P01									
95-3-2	8LL37	0.73				95-3-2	P01									
95-3-2	8LL37					95-3-2	P02									
95-3-2	8LL37					95-3-2	P03									
95-3-2	8LL37					95-3-2	P4-5									
95-3-2	8LL37					95-3-2	P6-8									
95-3-20	8LL37	0.95	0.88			95-3-20	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19	8LL37							
95-3-19-3	8LL37							
95-3-2	8LL37							
95-3-2	8LL37							
95-3-2	8LL37							
95-3-2	8LL37							
95-3-2	8LL37							
95-3-20	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745172	95-3-20	8LL37	C-1-91, ST 12	Q1-8	0	0										
4745135	95-3-3	8LL37	C-1-74, ST 2	A01	40	5								0.63	0.35	0.83
4745135	95-3-3	8LL37	C-1-74, ST 2	A02	20	10							Y	0.72	0.87	
4745135	95-3-3	8LL37	C-1-74, ST 2	A03	40	5							Y	0.57	0.83	0.79
4745135	95-3-3	8LL37	C-1-74, ST 2	P01	40	5								0.54	0.59	0.7
4745135	95-3-3	8LL37	C-1-74, ST 2	P02	0	0								1.34		
4745135	95-3-3	8LL37	C-1-74, ST 2	P03	0	0										
4745135	95-3-3	8LL37	C-1-74, ST 2	P04	40	5								1.38	0.55	1.38
4745135	95-3-3	8LL37	C-1-74, ST 2	P05	10	25			Y					1.42		
4745135	95-3-3	8LL37	C-1-74, ST 2	P06	0	0										
4745135	95-3-3	8LL37	C-1-74, ST 2	P7-12	0	0										
4745136	95-3-3/1	8LL37	C-1-74/1	P01	40	20								0.89	1.2	0.84
4745177	95-3-30/1	8LL37	C-1 West Profile, Artifact #1	P01	10	25			Y					0.38	0.17	0.18
4745177	95-3-30/1	8LL37	C-1 West Profile, Artifact #1	P02-09	0	0										
4745179	95-3-30/4	8LL37	C-1 North Profile, Artifact #4	A01	50	10								1.1	0.96	1.32
4745179	95-3-30/4	8LL37	C-1 North Profile, Artifact #4	A02-03	0	0										
4745181	95-3-32-2	8LL37	C-1-91-2, ST 12	P01	20	20						Y		2.81		
4745137	95-3-4	8LL37	C-1-75	A01	0	0								1.15	0.42	0.85
4745137	95-3-4	8LL37	C-1-75	A02	0	0								0.85		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-20	8LL37					95-3-20	Q1-8									
95-3-3	8LL37	0.45	0.84	0.613	0.54	95-3-3	A01									
95-3-3	8LL37					95-3-3	A02									
95-3-3	8LL37					95-3-3	A03									
95-3-3	8LL37					95-3-3	P01									
95-3-3	8LL37					95-3-3	P02									
95-3-3	8LL37					95-3-3	P03									
95-3-3	8LL37					95-3-3	P04									
95-3-3	8LL37					95-3-3	P05									
95-3-3	8LL37					95-3-3	P06									
95-3-3	8LL37					95-3-3	P7-12									
95-3-3/1	8LL37	1.33	0.93			95-3-3/1	P01									
95-3-30/1	8LL37	0.18	0.16	0.252	0.29	95-3-30/1	P01	0.32	0.38							
95-3-30/1	8LL37					95-3-30/1	P02-09									
95-3-30/4	8LL37	1	0.78			95-3-30/4	A01									
95-3-30/4	8LL37					95-3-30/4	A02-03									
95-3-32-2	8LL37					95-3-32-2	P01									
95-3-4	8LL37	0.64	0.7	0.426	0.64	95-3-4	A01	0.63								
95-3-4	8LL37					95-3-4	A02									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-20	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3	8LL37							
95-3-3/1	8LL37							
95-3-30/1	8LL37							
95-3-30/1	8LL37							
95-3-30/4	8LL37							
95-3-30/4	8LL37							
95-3-32-2	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745137	95-3-4	8LL37	C-1-75	A03	40	10								0.56	0.31	0.92
4745137	95-3-4	8LL37	C-1-75	A04	0	0								1.21	1.49	
4745137	95-3-4	8LL37	C-1-75	A05	20	20								0.7	0.7	0.87
4745137	95-3-4	8LL37	C-1-75	A07	0	0								0.68	1.1	0.64
4745137	95-3-4	8LL37	C-1-75	A08	0	0								0.77	0.68	0.68
4745137	95-3-4	8LL37	C-1-75	A09	0	0							Y	0.63	0.68	
4745137	95-3-4	8LL37	C-1-75	A10	0	0								0.67	0.43	0.69
4745137	95-3-4	8LL37	C-1-75	A11	0	0								0.64	0.86	0.7
4745137	95-3-4	8LL37	C-1-75	P01	20	20								0.8	1.11	0.51
4745137	95-3-4	8LL37	C-1-75	P02	0	0								1.92		
4745137	95-3-4	8LL37	C-1-75	P03	10	50	Y			Y				0.57	0.46	
4745137	95-3-4	8LL37	C-1-75	P04	0	0								0.38	0.37	0.25
4745137	95-3-4	8LL37	C-1-75	P5-7	0	0										
4745138	95-3-4-1	8LL37	C-1-75-1	A01	0	0							Y	1.58	1.17	0.67
4745138	95-3-4-1	8LL37	C-1-75-1	A02	0	0							Y	0.83	0.95	0.76
4745138	95-3-4-1	8LL37	C-1-75-1	A03	0	0								0.5	0.62	0.83
4745138	95-3-4-1	8LL37	C-1-75-1	A04	0	0								0.82	0.9	0.74
4745139	95-3-5	8LL37	C-1-76	A01	0	0								1.64	1.86	1.21
4745139	95-3-5	8LL37	C-1-76	A02	0	0								0.91	0.43	0.43
4745139	95-3-5	8LL37	C-1-76	A03	0	0								1.41	1.65	1.61
4745140	95-3-5-1	8LL37	C-1-76-1	A01	30	20								0.41	0.54	0.48
4745140	95-3-5-1	8LL37	C-1-76-1	A02	40	5								0.97	0.98	0.96
4745140	95-3-5-1	8LL37	C-1-76-1	A03	0	0	Y			Y				0.28	0.29	0.43
4745140	95-3-5-1	8LL37	C-1-76-1	A04	0	0								0.6	0.57	0.15

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-4	8LL37	0.9	1.17	0.382	0.69	95-3-4	A03	1.01	0.8							
95-3-4	8LL37					95-3-4	A04									
95-3-4	8LL37	1.13				95-3-4	A05									
95-3-4	8LL37					95-3-4	A07									
95-3-4	8LL37					95-3-4	A08									
95-3-4	8LL37					95-3-4	A09									
95-3-4	8LL37					95-3-4	A10									
95-3-4	8LL37					95-3-4	A11									
95-3-4	8LL37					95-3-4	P01									
95-3-4	8LL37					95-3-4	P02									
95-3-4	8LL37					95-3-4	P03									
95-3-4	8LL37	0.32	0.29	0.31		95-3-4	P04									
95-3-4	8LL37					95-3-4	P5-7									
95-3-4-1	8LL37	1.09	0.21	1.008	0.75	95-3-4-1	A01									
95-3-4-1	8LL37	0.86	0.73			95-3-4-1	A02									
95-3-4-1	8LL37	0.71				95-3-4-1	A03									
95-3-4-1	8LL37	0.88	0.56			95-3-4-1	A04									
95-3-5	8LL37					95-3-5	A01									
95-3-5	8LL37	0.52	0.84	0.713		95-3-5	A02									
95-3-5	8LL37					95-3-5	A03									
95-3-5-1	8LL37	0.68	0.73	0.534	0.5	95-3-5-1	A01	0.72	0.78	0.7	0.92					
95-3-5-1	8LL37	0.57				95-3-5-1	A02									
95-3-5-1	8LL37	0.54	0.33	0.526		95-3-5-1	A03									
95-3-5-1	8LL37	0.27				95-3-5-1	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4	8LL37							
95-3-4-1	8LL37							
95-3-4-1	8LL37							
95-3-4-1	8LL37							
95-3-4-1	8LL37							
95-3-5	8LL37							
95-3-5	8LL37							
95-3-5	8LL37							
95-3-5-1	8LL37							
95-3-5-1	8LL37							
95-3-5-1	8LL37							
95-3-5-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745140	95-3-5-1	8LL37	C-1-76-1	A05	0	0	Y			Y				0.11	0.22	0.3
4745141	95-3-5-2	8LL37	C-1-76-2	A01	20	25								0.5	0.38	0.74
4745141	95-3-5-2	8LL37	C-1-76-2	P01	0	0								0.6		
4745142	95-3-6	8LL37	C-1-77, ST 3	A01	20	50							Y	0.57	0.48	0.63
4745142	95-3-6	8LL37	C-1-77, ST 3	A02	30	10								0.97	1.15	1.1
4745142	95-3-6	8LL37	C-1-77, ST 3	A03	40	5								1.09	0.63	0.83
4745142	95-3-6	8LL37	C-1-77, ST 3	A04	0	0							Y	0.97	1.27	0.98
4745142	95-3-6	8LL37	C-1-77, ST 3	A05	0	0								0.89	0.77	0.82
4745142	95-3-6	8LL37	C-1-77, ST 3	A06	0	0								0.7	0.68	0.54
4745142	95-3-6	8LL37	C-1-77, ST 3	A07	20	10										
4745142	95-3-6	8LL37	C-1-77, ST 3	A08	0	0								1.03		
4745142	95-3-6	8LL37	C-1-77, ST 3	A09	0	0								0.72	0.27	0.89
4745142	95-3-6	8LL37	C-1-77, ST 3	A10	40	5								1.28	0.83	0.81
4745142	95-3-6	8LL37	C-1-77, ST 3	P01	40	10								0.72	1.72	
4745142	95-3-6	8LL37	C-1-77, ST 3	P02	20	25			Y					0.48	0.73	
4745142	95-3-6	8LL37	C-1-77, ST 3	P03	10	25			Y					1.2		
4745142	95-3-6	8LL37	C-1-77, ST 3	P04	0	0										
4745142	95-3-6	8LL37	C-1-77, ST 3	P05	20	20								0.19	0.44	0.43
4745142	95-3-6	8LL37	C-1-77, ST 3	P06	40	10								0.48	0.46	0.65
4745142	95-3-6	8LL37	C-1-77, ST 3	P07	0	0										
4745142	95-3-6	8LL37	C-1-77, ST 3	P08	40	10								2.05		
4745142	95-3-6	8LL37	C-1-77, ST 3	P09	0	0										
4745142	95-3-6	8LL37	C-1-77, ST 3	P10	0	0										
4745142	95-3-6	8LL37	C-1-77, ST 3	P11	40	5								0.63		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-5-1	8LL37	0.28	0.46	0.221	0.24	95-3-5-1	A05	0.26	0.26							
95-3-5-2	8LL37	0.57	0.66			95-3-5-2	A01									
95-3-5-2	8LL37					95-3-5-2	P01									
95-3-6	8LL37	0.55	0.63	0.754	0.51	95-3-6	A01	0.48								
95-3-6	8LL37	1.02	1.12	1.397		95-3-6	A02									
95-3-6	8LL37	0.91	0.8	0.928		95-3-6	A03									
95-3-6	8LL37					95-3-6	A04									
95-3-6	8LL37	1.02	0.89			95-3-6	A05									
95-3-6	8LL37	0.61	0.86	0.835		95-3-6	A06									
95-3-6	8LL37					95-3-6	A07									
95-3-6	8LL37					95-3-6	A08									
95-3-6	8LL37					95-3-6	A09									
95-3-6	8LL37	0.84	0.67			95-3-6	A10									
95-3-6	8LL37					95-3-6	P01									
95-3-6	8LL37					95-3-6	P02									
95-3-6	8LL37					95-3-6	P03									
95-3-6	8LL37					95-3-6	P04									
95-3-6	8LL37	0.62	0.43	0.315	0.22	95-3-6	P05									
95-3-6	8LL37	0.56	0.31			95-3-6	P06									
95-3-6	8LL37					95-3-6	P07									
95-3-6	8LL37					95-3-6	P08									
95-3-6	8LL37					95-3-6	P09									
95-3-6	8LL37					95-3-6	P10									
95-3-6	8LL37					95-3-6	P11									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-5-1	8LL37							
95-3-5-2	8LL37							
95-3-5-2	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							
95-3-6	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745142	95-3-6	8LL37	C-1-77, ST 3	P12	0	0										
4745142	95-3-6	8LL37	C-1-77, ST 3	P13	0	0										
4745143	95-3-7	8LL37	C-1-78	A01	40	25								1.51	1.04	0.89
4745143	95-3-7	8LL37	C-1-78	A02	20	20								0.7	0.66	0.75
4745143	95-3-7	8LL37	C-1-78	A03	30	10								1.05	0.84	1.3
4745143	95-3-7	8LL37	C-1-78	A04	0	0								0.98	1.26	
4745143	95-3-7	8LL37	C-1-78	A05	40	10								0.72	0.9	1.06
4745143	95-3-7	8LL37	C-1-78	A06	20	20	Y			Y				0.37	0.56	0.56
4745143	95-3-7	8LL37	C-1-78	A07	40	5								1.03	0.68	1.22
4745143	95-3-7	8LL37	C-1-78	A08	40	10								0.79	1.23	0.7
4745143	95-3-7	8LL37	C-1-78	A09	40	15								1.12	0.67	0.49
4745143	95-3-7	8LL37	C-1-78	A10	40	15								1.37	1.07	1.03
4745143	95-3-7	8LL37	C-1-78	A11	40	5								0.96	1.2	0.63
4745143	95-3-7	8LL37	C-1-78	A12	20	10								0.76	0.71	0.95
4745143	95-3-7	8LL37	C-1-78	A13	20	10								0.88	1.02	1.19
4745143	95-3-7	8LL37	C-1-78	A14	40	5							Y	0.98	0.9	1.37
4745143	95-3-7	8LL37	C-1-78	A15	40	10								0.83	1.31	0.66
4745143	95-3-7	8LL37	C-1-78	A16	40	5								0.73	1.11	0.88
4745143	95-3-7	8LL37	C-1-78	A17	40	10								0.85	1.19	0.72
4745143	95-3-7	8LL37	C-1-78	A18	20	25								1.07	0.75	1.09
4745143	95-3-7	8LL37	C-1-78	A19	40	5								1.57		
4745143	95-3-7	8LL37	C-1-78	A20	40	10								0.97	1.15	
4745143	95-3-7	8LL37	C-1-78	A21	0	0								0.91	0.68	1.25
4745143	95-3-7	8LL37	C-1-78	A22	40	10								0.74	0.68	1.47

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-6	8LL37					95-3-6	P12									
95-3-6	8LL37					95-3-6	P13									
95-3-7	8LL37	0.82	0.75	1.173	0.75	95-3-7	A01									
95-3-7	8LL37	0.79	0.66	0.611	0.67	95-3-7	A02	0.81	0.81							
95-3-7	8LL37					95-3-7	A03									
95-3-7	8LL37					95-3-7	A04									
95-3-7	8LL37	0.64	1.07			95-3-7	A05									
95-3-7	8LL37	0.4	0.73	0.935	0.51	95-3-7	A06									
95-3-7	8LL37	1.11	0.93			95-3-7	A07									
95-3-7	8LL37	1.48	0.85	1.134		95-3-7	A08									
95-3-7	8LL37	0.7	1.27	0.432	0.73	95-3-7	A09	0.97	0.49	0.85						
95-3-7	8LL37					95-3-7	A10									
95-3-7	8LL37	0.94	0.71			95-3-7	A11									
95-3-7	8LL37	0.84				95-3-7	A12									
95-3-7	8LL37					95-3-7	A13									
95-3-7	8LL37					95-3-7	A14									
95-3-7	8LL37	0.82	0.81	1.272		95-3-7	A15									
95-3-7	8LL37	0.78				95-3-7	A16									
95-3-7	8LL37					95-3-7	A17									
95-3-7	8LL37	0.95	0.79			95-3-7	A18									
95-3-7	8LL37					95-3-7	A19									
95-3-7	8LL37					95-3-7	A20									
95-3-7	8LL37					95-3-7	A21									
95-3-7	8LL37	1.02				95-3-7	A22									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-6	8LL37							
95-3-6	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745143	95-3-7	8LL37	C-1-78	A23	20	20								1.13	0.83	1.36
4745143	95-3-7	8LL37	C-1-78	A24	30	10							Y	0.91	0.65	0.83
4745143	95-3-7	8LL37	C-1-78	A25	0	0								0.76	0.64	0.61
4745143	95-3-7	8LL37	C-1-78	A26	0	0								0.76	1.1	1.83
4745143	95-3-7	8LL37	C-1-78	A27	40	10								0.67	0.82	1.24
4745143	95-3-7	8LL37	C-1-78	A28	40	5								0.63	0.8	1.05
4745143	95-3-7	8LL37	C-1-78	A29	40	10								0.47	0.42	0.53
4745143	95-3-7	8LL37	C-1-78	A30	20	20								0.48	0.44	0.62
4745143	95-3-7	8LL37	C-1-78	A31	0	0								0.92	0.96	0.96
4745143	95-3-7	8LL37	C-1-78	A32	10	30	Y			Y				0.44	0.52	0.8
4745143	95-3-7	8LL37	C-1-78	P01	0	0										
4745143	95-3-7	8LL37	C-1-78	P02	0	0										
4745143	95-3-7	8LL37	C-1-78	P03	20	25			Y					1	0.91	
4745143	95-3-7	8LL37	C-1-78	P04	0	0										
4745143	95-3-7	8LL37	C-1-78	P05	30	20								0.93	0.95	0.39
4745143	95-3-7	8LL37	C-1-78	P06	30	10								0.81	0.22	0.64
4745144	95-3-7-1	8LL37	C-1-78-1	A01	30	20				Y						
4745144	95-3-7-1	8LL37	C-1-78-1	A01	0	0								1.63	0.6	2.23
4745145	95-3-7-2	8LL37	C-1-78-2	A01	40	10								1.06	1.1	1.2
4745145	95-3-7-2	8LL37	C-1-78-2	A02	20	10								0.69	0.58	0.84
4745145	95-3-7-2	8LL37	C-1-78-2	P01	0	0										
4745145	95-3-7-2	8LL37	C-1-78-2	P02	0	0										
4745145	95-3-7-2	8LL37	C-1-78-2	P03	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-7	8LL37					95-3-7	A23									
95-3-7	8LL37					95-3-7	A24									
95-3-7	8LL37	0.71	0.92			95-3-7	A25									
95-3-7	8LL37	0.96				95-3-7	A26									
95-3-7	8LL37	1.18	1.12	0.854		95-3-7	A27									
95-3-7	8LL37	1.02	0.5	1.081	0.52	95-3-7	A28	0.72								
95-3-7	8LL37	0.39	0.62	0.604	1	95-3-7	A29	0.86	0.77							
95-3-7	8LL37	0.82	0.76	0.512	0.67	95-3-7	A30									
95-3-7	8LL37	0.66				95-3-7	A31									
95-3-7	8LL37	0.64	0.53	0.612	0.41	95-3-7	A32	0.47								
95-3-7	8LL37					95-3-7	P01									
95-3-7	8LL37					95-3-7	P02									
95-3-7	8LL37					95-3-7	P03									
95-3-7	8LL37					95-3-7	P04									
95-3-7	8LL37					95-3-7	P05									
95-3-7	8LL37					95-3-7	P06									
95-3-7-1	8LL37					95-3-7-1	A01									
95-3-7-1	8LL37	1.19	0.89	1.363	0.85	95-3-7-1	A01									
95-3-7-2	8LL37	1.2				95-3-7-2	A01									
95-3-7-2	8LL37	0.71				95-3-7-2	A02									
95-3-7-2	8LL37					95-3-7-2	P01									
95-3-7-2	8LL37					95-3-7-2	P02									
95-3-7-2	8LL37					95-3-7-2	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7	8LL37							
95-3-7-1	8LL37							
95-3-7-1	8LL37							
95-3-7-2	8LL37							
95-3-7-2	8LL37							
95-3-7-2	8LL37							
95-3-7-2	8LL37							
95-3-7-2	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745145	95-3-7-2	8LL37	C-1-78-2	P04	0	0										
4745146	95-3-7-3	8LL37	C-1-78-3	A01	40	10								1.39	1.01	0.88
4745146	95-3-7-3	8LL37	C-1-78-3	A02	20	20								1.11	0.94	1.29
4745147	95-3-8	8LL37	C-1-79	A01	20	10								0.88	1.13	0.99
4745147	95-3-8	8LL37	C-1-79	A02	0	0								1.42		
4745147	95-3-8	8LL37	C-1-79	A03	40	10								0.99	1.49	
4745147	95-3-8	8LL37	C-1-79	A04	0	0										
4745147	95-3-8	8LL37	C-1-79	P01	0	0										
4745147	95-3-8	8LL37	C-1-79	P02	20	10								0.71	0.44	0.68
4745147	95-3-8	8LL37	C-1-79	P03	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	A01	40	10								0.56	0.94	0.58
4745148	95-3-8-1	8LL37	C-1-79-1?	A02	40	10								0.68	0.88	0.83
4745148	95-3-8-1	8LL37	C-1-79-1?	A03	20	15							Y	0.77	0.74	1.09
4745148	95-3-8-1	8LL37	C-1-79-1?	A04	0	0								1.1	1.04	1.16
4745148	95-3-8-1	8LL37	C-1-79-1?	A05	40	5							Y	0.92	0.63	0.73
4745148	95-3-8-1	8LL37	C-1-79-1?	A06	0	0								1.14		
4745148	95-3-8-1	8LL37	C-1-79-1?	A07	40	10								1.08	1.13	1.12
4745148	95-3-8-1	8LL37	C-1-79-1?	A08	20	10								1.08	0.64	0.9
4745148	95-3-8-1	8LL37	C-1-79-1?	A09	0	0								0.81	0.66	0.72
4745148	95-3-8-1	8LL37	C-1-79-1?	P01	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	P02	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	P03	40	10								1.53	0.48	0.56
4745148	95-3-8-1	8LL37	C-1-79-1?	P04	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	P05	0	0										

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-7-2	8LL37					95-3-7-2	P04									
95-3-7-3	8LL37	1.39				95-3-7-3	A01									
95-3-7-3	8LL37	0.86	1.17	0.726		95-3-7-3	A02									
95-3-8	8LL37					95-3-8	A01									
95-3-8	8LL37					95-3-8	A02									
95-3-8	8LL37					95-3-8	A03									
95-3-8	8LL37					95-3-8	A04									
95-3-8	8LL37					95-3-8	P01									
95-3-8	8LL37					95-3-8	P02									
95-3-8	8LL37					95-3-8	P03									
95-3-8-1	8LL37	0.45	1.11			95-3-8-1	A01									
95-3-8-1	8LL37					95-3-8-1	A02									
95-3-8-1	8LL37	0.71	0.71			95-3-8-1	A03									
95-3-8-1	8LL37					95-3-8-1	A04									
95-3-8-1	8LL37	0.68				95-3-8-1	A05									
95-3-8-1	8LL37					95-3-8-1	A06									
95-3-8-1	8LL37					95-3-8-1	A07									
95-3-8-1	8LL37					95-3-8-1	A08									
95-3-8-1	8LL37	0.62				95-3-8-1	A09									
95-3-8-1	8LL37					95-3-8-1	P01									
95-3-8-1	8LL37					95-3-8-1	P02									
95-3-8-1	8LL37					95-3-8-1	P03									
95-3-8-1	8LL37					95-3-8-1	P04									
95-3-8-1	8LL37					95-3-8-1	P05									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-7-2	8LL37							
95-3-7-3	8LL37							
95-3-7-3	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
4745148	95-3-8-1	8LL37	C-1-79-1?	P06	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	P07	0	0										
4745148	95-3-8-1	8LL37	C-1-79-1?	P08	0	0										
4745149	95-3-8-3	8LL37	C-1-79-3	A01	0	0								0.43	0.46	0.5
4745149	95-3-8-3	8LL37	C-1-79-3	A02	0	0								0.79	0.87	
4745149	95-3-8-3	8LL37	C-1-79-3	A03	0	0								0.59	0.31	0.43
4745149	95-3-8-3	8LL37	C-1-79-3	A04	0	0								1.18	1.17	0.89
4745150	95-3-9	8LL37	C-1-80	A01	0	0								0.54	0.51	0.26
4745150	95-3-9	8LL37	C-1-80	P01	60	10								1.03	0.57	0.51
4745151	95-3-9-1	8LL37	C-1-80-1	A01	40	5								0.84	0.94	1.12
4745151	95-3-9-1	8LL37	C-1-80-1	A02	40	10								0.96	0.72	0.91
4745151	95-3-9-1	8LL37	C-1-80-1	A03	40	10								0.78	0.63	0.68
4745151	95-3-9-1	8LL37	C-1-80-1	A04	30	10								0.44	0.93	0.55
4745151	95-3-9-1	8LL37	C-1-80-1	A05	40	5								0.7	0.93	0.57
4745151	95-3-9-1	8LL37	C-1-80-1	P01	0	0										
4745151	95-3-9-1	8LL37	C-1-80-1	P02	40	10								0.54	0.66	1.01
4745152	95-3-9-2	8LL37	C-1-80-2	A01	40	10								0.85	0.83	0.72
4745152	95-3-9-2	8LL37	C-1-80-2	A02	0	0								1.31	0.66	0.64
	89-38-17	8LL51	B-9-12	Q01										2.07	0.84	1.83

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
95-3-8-1	8LL37					95-3-8-1	P06									
95-3-8-1	8LL37					95-3-8-1	P07									
95-3-8-1	8LL37					95-3-8-1	P08									
95-3-8-3	8LL37	0.43	0.41			95-3-8-3	A01									
95-3-8-3	8LL37					95-3-8-3	A02									
95-3-8-3	8LL37					95-3-8-3	A03									
95-3-8-3	8LL37	0.6	0.65	0.437		95-3-8-3	A04									
95-3-9	8LL37	0.59	0.56			95-3-9	A01									
95-3-9	8LL37	1.69				95-3-9	P01									
95-3-9-1	8LL37	0.62	0.73	0.946		95-3-9-1	A01									
95-3-9-1	8LL37	0.67	0.9			95-3-9-1	A02									
95-3-9-1	8LL37	0.38	0.76			95-3-9-1	A03									
95-3-9-1	8LL37	0.75	1.3	0.704	0.65	95-3-9-1	A04									
95-3-9-1	8LL37	0.95	0.66			95-3-9-1	A05									
95-3-9-1	8LL37					95-3-9-1	P01									
95-3-9-1	8LL37	0.26	0.26			95-3-9-1	P02									
95-3-9-2	8LL37	0.98	1.02			95-3-9-2	A01									
95-3-9-2	8LL37					95-3-9-2	A02									
89-38-17	8LL51	1.85	1.28	3.292	1.74	89-38-17	Q01	2.76								

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-1	8LL37							
95-3-8-3	8LL37							
95-3-8-3	8LL37							
95-3-8-3	8LL37							
95-3-8-3	8LL37							
95-3-9	8LL37							
95-3-9	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-1	8LL37							
95-3-9-2	8LL37							
95-3-9-2	8LL37							
89-38-17	8LL51							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	89-38-17	8LL51	B-9-12	Q02	40	20								1.56	1.54	2.07
	89-38-17	8LL51	B-9-12	Q03												
	89-38-17	8LL51	B-9-12	Q04										0.9	1.79	1.51
	89-38-17	8LL51	B-9-12	Q05										4.01	4.08	
	89-38-17	8LL51	B-9-12	Q06										0.92	0.79	1.78
	89-38-17	8LL51	B-9-12	Q07	40	15								1.37	1.55	
	89-38-17	8LL51	B-9-12	Q08												
	86-7 A27502	8LL722	A-1-2	P01	40	20								1.74	1.09	1.21

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
89-38-17	8LL51					89-38-17	Q02									
89-38-17	8LL51					89-38-17	Q03									
89-38-17	8LL51					89-38-17	Q04									
89-38-17	8LL51					89-38-17	Q05									
89-38-17	8LL51	2.2				89-38-17	Q06									
89-38-17	8LL51					89-38-17	Q07									
89-38-17	8LL51					89-38-17	Q08									
86-7 A27502	8LL722	2.24	0.44	0.582		86-7 A27502	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
89-38-17	8LL51							
89-38-17	8LL51							
89-38-17	8LL51							
89-38-17	8LL51							
89-38-17	8LL51							
89-38-17	8LL51							
89-38-17	8LL51							
86-7 A27502	8LL722							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-7 A27504	8LL722	A-1-4	A01	40	10								1.33	0.82	1.34
	86-7 A27504	8LL722	A-1-4	A02	20	25								0.85	0.87	0.49
	86-7 A27504	8LL722	A-1-4	A03	60	10								0.52	0.75	1.18
	86-7 A27532	8LL722	B-1-8-1	A01	30	25								1.03	1.22	1.31
	86-7 A27532	8LL722	B-1-8-1	A02	40	10								1.03	0.83	1.12
	86-7 A27532	8LL722	B-1-8-1	A03										1.25	1.24	1.46
	86-7 A27532	8LL722	B-1-8-1	A04										1.26	0.99	0.8
	86-7 A27532	8LL722	B-1-8-1	A05										0.67	0.82	0.77
	86-7 A27532	8LL722	B-1-8-1	A06										1.13	1.57	0.48
	86-7 A27533	8LL722	B-1-9-1	A01	40	15								1.51	1.3	1.34

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-7 A27504	8LL722	0.98	0.79	0.8	1	86-7 A27504	A01	1.07	1.04	1.28	1.09	1.29	1.31			
86-7 A27504	8LL722	0.92	0.7			86-7 A27504	A02									
86-7 A27504	8LL722	1.19	0.94			86-7 A27504	A03									
86-7 A27532	8LL722	1.2	1.91	0.841		86-7 A27532	A01									
86-7 A27532	8LL722	1.09	1.15			86-7 A27532	A02									
86-7 A27532	8LL722					86-7 A27532	A03									
86-7 A27532	8LL722	1.11				86-7 A27532	A04									
86-7 A27532	8LL722	0.7				86-7 A27532	A05									
86-7 A27532	8LL722	0.79				86-7 A27532	A06									
86-7 A27533	8LL722	1.58	1.45			86-7 A27533	A01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-7 A27504	8LL722							
86-7 A27504	8LL722							
86-7 A27504	8LL722							
86-7 A27532	8LL722							
86-7 A27532	8LL722							
86-7 A27532	8LL722							
86-7 A27532	8LL722							
86-7 A27532	8LL722							
86-7 A27532	8LL722							
86-7 A27533	8LL722							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-7 A27543	8LL722	A-1-14	A01	20	25								0.71	0.59	0.3
	86-7 A27549	8LL722	B-1-10	A01	40	15								0.95	0.66	0.8
	86-7 A27549	8LL722	B-1-10	A02	20	25								0.6	1.17	0.73
	86-7 A27550	8LL722	B-1-11	A01	40	20								1.01	0.95	0.61
	86-7 A27550	8LL722	B-1-11	A02	40	10								0.87	0.62	1.12
	86-7 A27550	8LL722	B-1-11	P01	40	20								1.03	0.69	1.54
	86-7 A27550	8LL722	B-1-11	P02	50	10								0.92	0.96	0.95
	86-7 A27550	8LL722	B-1-11	P03	20	20								1.14	1.07	0.94

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-7 A27543	8LL722	0.27	0.41	0.315	0.82	86-7 A27543	A01	0.8	0.76	0.97	0.94	0.63	0.4			
86-7 A27549	8LL722	0.5	0.51	0.815		86-7 A27549	A01									
86-7 A27549	8LL722	0.64				86-7 A27549	A02									
86-7 A27550	8LL722	0.94	0.67	0.945	0.64	86-7 A27550	A01	1.05	0.46							
86-7 A27550	8LL722	0.55	0.7	0.66		86-7 A27550	A02									
86-7 A27550	8LL722					86-7 A27550	P01									
86-7 A27550	8LL722	1.1	0.76			86-7 A27550	P02									
86-7 A27550	8LL722	0.71	0.52			86-7 A27550	P03									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-7 A27543	8LL722							
86-7 A27549	8LL722							
86-7 A27549	8LL722							
86-7 A27550	8LL722							
86-7 A27550	8LL722							
86-7 A27550	8LL722							
86-7 A27550	8LL722							
86-7 A27550	8LL722							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-7 A27550	8LL722	B-1-11	P04	40	10								0.42	0.5	
	86-7 A27567	8LL722	I-1-5	A01	20	20								0.8	0.83	1.11
	86-7.1 A27518	8LL722	B-1-4	P01	40	20								0.4	0.77	0.5
	86-7.1 A27554	8LL722	B-2-7	A01	40	15								1.03	0.97	0.85
	86-7.1 A27554	8LL722	B-2-7	P01	40	15								0.85	0.61	0.74
	86-7.1 A27564	8LL722	I-1-2	A01	30	40								0.47	0.54	0.54
	86-7.1 A27564	8LL722	I-1-2	P01	40	10								1.44	0.57	
	86-7.1 A27569	8LL722	B-2-9	A01	40	10								1.02	1.03	0.73
	86-7.1 A27569	8LL722	B-2-9	A02	40	20								1.7	1.38	1.42
	86-7.1 A27569	8LL722	B-2-9	A03										1.31	1.85	1.08
	86-7.1 A27569	8LL722	B-2-9	A04	40	15								0.85	0.98	1.28

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-7 A27550	8LL722					86-7 A27550	P04									
86-7 A27567	8LL722	0.67	1.03	0.689	0.95	86-7 A27567	A01	1.07								
86-7.1 A27518	8LL722	1.33	1.29			86-7.1 A27518	P01									
86-7.1 A27554	8LL722	1.09	1.2			86-7.1 A27554	A01									
86-7.1 A27554	8LL722	0.86	0.76	0.95		86-7.1 A27554	P01									
86-7.1 A27564	8LL722	0.75	0.57	0.859	0.75	86-7.1 A27564	A01	0.52	0.6	1.3						
86-7.1 A27564	8LL722					86-7.1 A27564	P01									
86-7.1 A27569	8LL722	0.9	0.76	1.165	0.93	86-7.1 A27569	A01	0.87								
86-7.1 A27569	8LL722	1	0.74	1.639	0.89	86-7.1 A27569	A02	0.89	1.11	1.34	1.54					
86-7.1 A27569	8LL722					86-7.1 A27569	A03									
86-7.1 A27569	8LL722	0.79	0.27	0.598	0.86	86-7.1 A27569	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-7 A27550	8LL722							
86-7 A27567	8LL722							
86-7.1 A27518	8LL722							
86-7.1 A27554	8LL722							
86-7.1 A27554	8LL722							
86-7.1 A27564	8LL722							
86-7.1 A27564	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-7.1 A27569	8LL722	B-2-9	A05	40	15								0.76	0.76	0.86
	86-7.1 A27569	8LL722	B-2-9	A06	20	10								0.56	0.7	0.8
	86-7.1 A27569	8LL722	B-2-9	A07	40	10								0.76	0.75	0.7
	86-7.1 A27569	8LL722	B-2-9	P01	40	10								1.08	0.73	0.33
	86-7.1 A27569	8LL722	B-2-9	P02	40	15								1	0.62	1.24
	86-7.1 A27569	8LL722	B-2-9	P03	20	25			Y			Y		0.41	0.84	0.57
	86-7.1 A27569	8LL722	B-2-9	P04	40	10								1.67	0.83	0.5
	86-7.1 A27569	8LL722	B-2-9	P05	40	20								0.62	0.31	0.75
	86-7.1 A27570	8LL722	B-2-5	A01	40	10								1.35	1.02	0.71
	86-7.1 A27570	8LL722	B-2-5	A02	40	10								0.83	0.87	0.89
	86-7.1 A27570	8LL722	B-2-5	A03	40	10								0.49	0.74	0.77
	86-7.1 A27570	8LL722	B-2-5	A04										1.33	1.21	0.84

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-7.1 A27569	8LL722	0.58	0.39	0.761	1.02	86-7.1 A27569	A05	0.44								
86-7.1 A27569	8LL722	1.05	1.19	1.119	1.15	86-7.1 A27569	A06									
86-7.1 A27569	8LL722	1.05				86-7.1 A27569	A07									
86-7.1 A27569	8LL722	0.37	0.39	0.509	0.49	86-7.1 A27569	P01	0.45	0.58							
86-7.1 A27569	8LL722					86-7.1 A27569	P02									
86-7.1 A27569	8LL722	0.25	1.21	0.707		86-7.1 A27569	P03									
86-7.1 A27569	8LL722	0.34	0.72	0.69	1.7	86-7.1 A27569	P04	0.72	0.59							
86-7.1 A27569	8LL722	1.66	1.16	1.346	1.2	86-7.1 A27569	P05									
86-7.1 A27570	8LL722	0.72	0.53	0.919	1.16	86-7.1 A27570	A01									
86-7.1 A27570	8LL722	0.79				86-7.1 A27570	A02									
86-7.1 A27570	8LL722	1.23	0.93	0.607	1.19	86-7.1 A27570	A03	1.09								
86-7.1 A27570	8LL722	0.69				86-7.1 A27570	A04									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27569	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

EA Cata No	ANT Cata No	Site_No	Provenience	Taxon ID	Diameter (mm)	Percent of arc	Pith	Bark	Branch	Yuvenile	Injury	Inter_variation	Discon. rings	Ring_width01	Ring_width02	Ring_width03
	86-7.1 A27570	8LL722	B-2-5	A05	20	20								1.11	0.9	0.73
	86-7.1 A27570	8LL722	B-2-5	A06	10	25								0.76	0.74	0.73
	86-7.1 A27570	8LL722	B-2-5	A07	20	20								0.47	0.87	0.6
	86-7.1 A27570	8LL722	B-2-5	A08										0.82	1.04	0.79
	86-7.1 A27570	8LL722	B-2-5	A09										1.18	1.22	1.07
	86-7.1 A27570	8LL722	B-2-5	A10			Y			Y				0.46	1	0.96
	86-7.2 A27555	8LL722	B-2-8	A01	40	25								0.94	1.05	0.82
	86-7.2 A27555	8LL722	B-2-8	P01	40	10								0.71		

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width04	Ring_width05	Ring_width06	Ring_width07	ANT Cata No	Taxon ID	Ring_width08	Ring_width09	Ring_width10	Ring_width11	Ring_width12	Ring_width13	Ring_width14	Ring_width15	Ring_width16
86-7.1 A27570	8LL722					86-7.1 A27570	A05									
86-7.1 A27570	8LL722	0.65	0.64			86-7.1 A27570	A06									
86-7.1 A27570	8LL722	1.47				86-7.1 A27570	A07									
86-7.1 A27570	8LL722	0.79				86-7.1 A27570	A08									
86-7.1 A27570	8LL722					86-7.1 A27570	A09									
86-7.1 A27570	8LL722	0.6				86-7.1 A27570	A10									
86-7.2 A27555	8LL722	1.08	0.89	1.236	1.41	86-7.2 A27555	A01	0.94	0.99							
86-7.2 A27555	8LL722					86-7.2 A27555	P01									

Appendix C: Wood Anatomical Characters and Growth Increments. (Cont.)

ANT Cata No	Site_No	Ring_width_17	Ring_width_18	Ring-width_19	Ring-width_20	Ring_width_21	Ring_width_22	Ring_width_23
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.1 A27570	8LL722							
86-7.2 A27555	8LL722							
86-7.2 A27555	8LL722							

Appendix D

Summary of modern mangrove survey plot data.

Appendix D: Summary of Modern Mangrove Survey Plot Data.

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
1	1	A	*Rhizophora mangle*	4.75										
1	2	A	*Laguncularia racemosa*	7.50	2.56	2.23							1.00	3.50
1	3	A	*Rhizophora mangle*	2.00										
1	4	A	*Avicennia germinans*	4.75	3.75								2.00	3.38
1	5	A	*Rhizophora mangle*	1.00									0.63	1.00
1	6	A	*Rhizophora mangle*	0.50	1.00									
1	7	A	*Rhizophora mangle*	1.00										
1	8	A	*Laguncularia racemosa*	1.00									0.50	0.63
1	9	A	*Laguncularia racemosa*	2.56	1.25	0.75	1.25	2.25					0.50	
1	10	D	*Laguncularia racemosa*	8.50	6.75									
1	11	D	*Laguncularia racemosa*	5.75										
1	12	D	*Laguncularia racemosa*	5.81										
1	13	A	*Laguncularia racemosa*	4.25									0.47	1.38
1	14	D	*Laguncularia racemosa*	7.75										
1	15	D	*Laguncularia racemosa*	6.38	4.63									
1	16	D	*Laguncularia racemosa*	5.28										
1	17	A	*Rhizophora mangle*	1.88										
1	18	A	*Laguncularia racemosa*	1.00										
1	19	A	*Laguncularia racemosa*	0.81										
1	20	D	*Laguncularia racemosa*	3.59										
1	21	A	*Laguncularia racemosa*	5.63	1.00	0.81	1.00	1.38					1.00	1.63
1	22	D	*Laguncularia racemosa*	1.22										
1	23	D	*Rhizophora mangle*	2.50										
1	24	D	*Rhizophora mangle*	4.63										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
2	1	A	*Laguncularia racemosa*	0.84	2.28	0.75								
2	2	A	*Laguncularia racemosa*	2.00	0.44									
2	3	A	*Rhizophora mangle*	1.53										
2	4	A	*Rhizophora mangle*	1.22										
2	5	A	*Laguncularia racemosa*	1.64	2.19	3.00							0.72	1.25
2	6	A	*Laguncularia racemosa*	2.13	1.63	0.78								
2	7	A	*Rhizophora mangle*	1.22										
2	8	D	*Laguncularia racemosa*	1.25										
2	9	A	*Laguncularia racemosa*	3.25									0.75	
2	10	A	*Rhizophora mangle*	1.50										
2	11	A	*Rhizophora mangle*	1.25										
2	12	A	*Rhizophora mangle*	1.27										
2	13	A	*Rhizophora mangle*	1.05										
2	14	A	*Laguncularia racemosa*	3.13										
2	15	D	*Rhizophora mangle*	1.50										
2	16	A	*Rhizophora mangle*	1.19										
2	17	A	*Rhizophora mangle*	1.25										
2	18	A	*Rhizophora mangle*	2.91										
2	19	A	*Laguncularia racemosa*	2.83										
2	20	A	*Laguncularia racemosa*	3.94										
2	21	A	*Rhizophora mangle*	1.72										
2	22	A	*Rhizophora mangle*	1.25										
2	23	A	*Laguncularia racemosa*	2.81										
2	24	A	*Rhizophora mangle*	1.03	1.13									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
2	25	A	*Laguncularia racemosa*	2.38										
2	26	A	*Rhizophora mangle*	1.72	1.30									
2	27	A	*Laguncularia racemosa*	5.50										
2	27	A	*Rhizophora mangle*	1.27										
2	28	A	*Rhizophora mangle*	1.28										
2	29	A	*Rhizophora mangle*	1.03	0.75									
2	30	A	*Laguncularia racemosa*	4.28										
2	31	A	*Rhizophora mangle*	1.28										
2	32	A	*Rhizophora mangle*	1.25										
2	33	A	*Laguncularia racemosa*	2.75										
2	34	A	*Rhizophora mangle*	1.00										
2	35	A	*Rhizophora mangle*	1.25										
2	36	A	*Laguncularia racemosa*	3.25										
2	37	A	*Rhizophora mangle*	1.75										
2	38	A	*Laguncularia racemosa*	1.50										
2	39	A	*Rhizophora mangle*	1.00										
2	40	A	*Rhizophora mangle*	1.50	0.84									
2	41	A	*Laguncularia racemosa*	1.91										
2	42	D	Unidentifiable	2.13										
2	43	A	*Rhizophora mangle*	2.63										
2	44	A	*Laguncularia racemosa*	1.77										
2	45	A	*Laguncularia racemosa*	2.81										
2	46	A	*Laguncularia racemosa*	1.50										
2	47	A	*Laguncularia racemosa*	2.69	1.00									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
2	48	A	*Rhizophora mangle*	1.25	0.75									
2	49	A	*Laguncularia racemosa*	4.50										
2	50	A	*Laguncularia racemosa*	3.13	1.25									
2	51	A	*Avicennia germinans*	2.00	1.25									
2	52	A	*Rhizophora mangle*	1.13	1.28									
2	53	A	*Rhizophora mangle*	1.06	0.91									
2	54	A	*Rhizophora mangle*	1.55										
2	55	A	*Laguncularia racemosa*	3.75										
2	56	A	*Rhizophora mangle*	1.06										
2	57	A	*Rhizophora mangle*	1.38										
2	58	A	*Rhizophora mangle*	1.50	1.63									
2	59	A	*Laguncularia racemosa*	4.75										
2	60	A	*Laguncularia racemosa*	4.06	3.84									
2	61	A	*Rhizophora mangle*	1.13										
2	62	A	*Rhizophora mangle*	1.75										
2	63	A	*Rhizophora mangle*	1.13	0.84									
2	64	A	*Rhizophora mangle*	1.75										
2	65	A	*Rhizophora mangle*	1.00										
2	66	A	*Laguncularia racemosa*	1.25										
2	67	A	*Laguncularia racemosa*	1.38	0.75	0.50	1.63	3.50						
3	1	A	*Avicennia germinans*	0.72	0.50	0.75	0.75							
3	2	A	*Avicennia germinans*	1.03										
3	3	A	*Avicennia germinans*	1.00	0.75									
3	4	A	*Avicennia germinans*	1.50										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
3	5	A	*Avicennia germinans*	1.50	1.00									
3	6	A	*Avicennia germinans*	1.77										
3	7	A	*Avicennia germinans*	1.00	0.75									
3	8	A	*Avicennia germinans*	1.73										
3	9	A	*Laguncularia racemosa*	1.00										
3	10	A	*Avicennia germinans*	1.73										
3	11	A	*Avicennia germinans*	1.81	1.38								1.22	1.47
3	12	A	*Avicennia germinans*	1.81										
3	13	A	*Avicennia germinans*	1.75	2.06								0.63	1.50
3	14	A	*Avicennia germinans*	1.06										
3	15	A	*Avicennia germinans*	2.25									0.75	1.38
3	16	A	*Avicennia germinans*	1.00	1.75	3.13	1.11						0.75	1.75
3	17	A	*Avicennia germinans*	1.03	0.72									
3	18	A	*Avicennia germinans*	1.25										
3	19	A	*Avicennia germinans*	1.25									0.63	1.13
3	20	A	*Avicennia germinans*	1.22	0.78									
3	21	A	*Avicennia germinans*	2.22	2.13									
3	22	D	*Avicennia germinans*	1.00										
3	23	A	*Avicennia germinans*	1.78									0.75	1.28
3	24	A	*Avicennia germinans*	1.63									0.50	1.25
3	25	A	*Avicennia germinans*	1.50	1.25									
3	26	A	*Avicennia germinans*	1.38										
3	27	A	*Avicennia germinans*	1.16										
3	28	A	*Avicennia germinans*	1.28										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
3	29	A	*Avicennia germinans*	1.28	1.25									
3	30	A	*Avicennia germinans*	1.00										
3	31	A	*Avicennia germinans*	2.28	3.22	2.53							0.75	3.00
3	32	A	*Avicennia germinans*	1.53	1.00									
4	1	A	*Rhizophora mangle*	1.25									0.72	1.06
4	2	A	*Rhizophora mangle*	2.47										
4	3	A	*Avicennia germinans*	2.50										
4	4	D	*Rhizophora mangle*	1.25										
4	5	A	*Rhizophora mangle*	2.47										
4	6	A	*Rhizophora mangle*	1.84										
4	7	A	*Rhizophora mangle*	3.81										
4	8	A	*Rhizophora mangle*	1.81										
4	9	A	*Laguncularia racemosa*	2.30										
4	10	A	*Laguncularia racemosa*	1.63										
4	11	A	*Laguncularia racemosa*	3.63										
4	12	A	*Avicennia germinans*	3.75										
4	13	A	*Laguncularia racemosa*	2.00										
4	14	A	*Rhizophora mangle*	2.53										
4	15	D	*Rhizophora mangle*	1.55										
4	16	A	*Rhizophora mangle*	1.13										
4	17	A	*Avicennia germinans*	1.75	0.52									
4	18	D	*Rhizophora mangle*	2.00										
4	19	A	*Avicennia germinans*	1.75										
4	20	A	*Rhizophora mangle*	1.56										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	21	A	*Rhizophora mangle*	1.55										
4	22	A	*Laguncularia racemosa*	1.50										
4	23	D	*Avicennia germinans*	1.50										
4	24	A	*Avicennia germinans*	2.27										
4	25	A	*Rhizophora mangle*	1.41										
4	26	D	*Avicennia germinans*	1.48										
4	27	D	*Laguncularia racemosa*	2.50										
4	28	D	*Laguncularia racemosa*	2.22										
4	29	A	*Rhizophora mangle*	1.50										
4	30	A	*Laguncularia racemosa*	4.88										
4	31	A	*Rhizophora mangle*	3.28	1.88									
4	32	A	*Rhizophora mangle*	2.88										
4	33	D	*Avicennia germinans*	3.27										
4	34	A	*Laguncularia racemosa*	2.00	1.52									
4	35	A	*Rhizophora mangle*	1.84										
4	36	A	*Rhizophora mangle*	1.48	1.27									
4	37	A	*Rhizophora mangle*	1.06										
4	38	A	*Rhizophora mangle*	2.06										
4	39	A	*Rhizophora mangle*	3.25										
4	40	A	*Laguncularia racemosa*	2.63	1.47	2.48	3.92							
4	41	A	*Rhizophora mangle*	1.63										
4	42	A	*Rhizophora mangle*	1.63										
4	43	A	*Rhizophora mangle*	1.27										
4	44	D	*Avicennia germinans*	1.78										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	45	A	*Rhizophora mangle*	1.00										
4	46	A	*Rhizophora mangle*	1.28										
4	47	A	*Laguncularia racemosa*	5.03	0.25	1.13	0.53	0.66						
4	48	A	*Laguncularia racemosa*	1.47										
4	49	D	Unidentifiable	1.56										
4	50	A	*Laguncularia racemosa*	2.69										
4	51	A	*Laguncularia racemosa*	2.75										
4	52	A	*Laguncularia racemosa*	4.47										
4	53	A	*Rhizophora mangle*	1.80										
4	54	A	*Laguncularia racemosa*	5.52	0.56	0.25								
4	55	D	Unidentifiable	2.47										
4	56	A	*Laguncularia racemosa*	1.50										
4	57	A	*Laguncularia racemosa*	1.84										
4	58	A	*Rhizophora mangle*	1.53										
4	59	A	*Laguncularia racemosa*	5.00										
4	60	A	*Rhizophora mangle*	2.75										
4	61	D	*Laguncularia racemosa*	1.50										
4	62	A	*Rhizophora mangle*	2.25										
4	63	A	*Rhizophora mangle*	1.41										
4	64	A	*Rhizophora mangle*	1.91										
4	65	D	*Laguncularia racemosa*	4.50										
4	66	A	*Rhizophora mangle*	2.50										
4	67	A	*Rhizophora mangle*	1.06										
4	68	A	*Rhizophora mangle*	1.22										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	69	A	*Rhizophora mangle*	1.31										
4	70	D	*Rhizophora mangle*	1.69										
4	71	A	*Rhizophora mangle*	1.38										
4	72	D	*Rhizophora mangle*	4.16										
4	73	A	*Rhizophora mangle*	4.47										
4	74	A	*Rhizophora mangle*	1.75										
4	75	A	*Rhizophora mangle*	1.88										
4	76	A	*Rhizophora mangle*	2.63										
4	77	A	*Rhizophora mangle*	2.38										
4	78	A	*Rhizophora mangle*	2.47										
4	79	A	*Rhizophora mangle*	3.63										
4	80	D	*Rhizophora mangle*	2.00										
4	81	A	*Rhizophora mangle*	1.63										
4	82	A	*Rhizophora mangle*	1.75										
4	83	A	*Rhizophora mangle*	1.50										
4	84	A	*Rhizophora mangle*	1.13										
4	85	D	*Rhizophora mangle*	1.75										
4	86	A	*Rhizophora mangle*	2.50										
4	87	A	*Avicennia germinans*	3.25										
4	88	D	*Rhizophora mangle*	1.47										
4	89	A	*Rhizophora mangle*	1.28										
4	90	A	*Rhizophora mangle*	1.22										
4	91	A	*Rhizophora mangle*	2.53										
4	92	A	*Rhizophora mangle*	1.34										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	93	A	*Laguncularia racemosa*	2.75										
4	94	D	*Rhizophora mangle*	1.00										
4	95	A	*Rhizophora mangle*	2.63	1.63									
4	96	A	*Rhizophora mangle*	2.50										
4	97	D	*Laguncularia racemosa*	1.59										
4	98	D	*Rhizophora mangle*	1.00										
4	99	A	*Rhizophora mangle*	1.06										
4	100	D	*Rhizophora mangle*	1.88										
4	101	A	*Rhizophora mangle*	2.78										
4	102	A	*Rhizophora mangle*	3.00	4.00									
4	103	A	*Rhizophora mangle*	1.50	2.38									
4	104	A	*Rhizophora mangle*	1.72										
4	105	D	Unidentifiable	2.00										
4	106	A	*Rhizophora mangle*	1.91										
4	107	A	*Rhizophora mangle*	2.31										
5	1	D	Unidentifiable	3.50									1.75	
5	2	D	Unidentifiable	2.25										
5	3	D	Unidentifiable	1.25										
5	4	A	*Avicennia germinans*	3.53										
5	5	A	*Avicennia germinans*	3.75	0.75								1.63	
5	6	A	*Avicennia germinans*	1.50										
5	7	A	*Avicennia germinans*	2.25	1.06								0.81	0.88
5	8	A	*Avicennia germinans*	1.75										
5	9	A	*Avicennia germinans*	2.34	1.34								0.75	1.50

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
5	10	D	*Avicennia germinans*	4.38										
5	11	A	*Avicennia germinans*	3.38	3.00								1.78	2.22
5	12	A	*Avicennia germinans*	1.06										
5	13	A	*Avicennia germinans*	1.13										
5	14	A	*Avicennia germinans*	1.69									0.75	1.06
5	15	A	*Avicennia germinans*	2.06									1.28	1.47
5	16	A	*Avicennia germinans*	1.25									1.69	0.88
5	17	A	*Avicennia germinans*	1.47	1.25								0.86	0.69
5	18	A	*Avicennia germinans*	1.69									1.00	1.13
5	19	A	*Avicennia germinans*	3.22									1.25	1.25
5	20	A	*Avicennia germinans*	1.06										
5	21	A	*Avicennia germinans*	1.38	1.19	1.50								
5	22	A	*Avicennia germinans*	2.53	2.25									
5	23	A	*Avicennia germinans*	2.53	1.81	2.00	1.78							
5	24	A	*Avicennia germinans*	1.50									1.00	
5	25	A	*Avicennia germinans*	2.63										
6	1	A	*Rhizophora mangle*	2.09										
6	2	A	*Rhizophora mangle*	2.28										
6	3	A	*Rhizophora mangle*	2.00										
6	4	A	*Rhizophora mangle*	2.75										
6	5	A	*Rhizophora mangle*	1.08										
6	6	A	*Rhizophora mangle*	1.34										
6	7	A	*Rhizophora mangle*	1.31										
6	8	A	*Rhizophora mangle*	1.25										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	9	A	*Rhizophora mangle*	1.86										
6	10	A	*Rhizophora mangle*	2.94										
6	11	A	*Avicennia germinans*	2.44										
6	12	A	*Rhizophora mangle*	2.31										
6	13	A	*Rhizophora mangle*	2.63										
6	14	D	*Rhizophora mangle*	1.09									0.59	
6	15	A	*Rhizophora mangle*	1.88										
6	16	A	*Avicennia germinans*	3.25	2.50									
6	17	A	*Laguncularia racemosa*	1.75										
6	18	A	*Rhizophora mangle*	1.25										
6	19	A	*Rhizophora mangle*	1.31										
6	20	A	*Rhizophora mangle*	2.28										
6	21	A	*Rhizophora mangle*	1.19										
6	22	D	*Rhizophora mangle*	2.02										
6	23	D	*Rhizophora mangle*	2.00										
6	24	A	*Rhizophora mangle*	3.66										
6	25	A	*Rhizophora mangle*	2.03										
6	26	A	*Rhizophora mangle*	3.25									1.50	
6	27	A	*Avicennia germinans*	3.39	1.25	2.28								
6	28	A	*Rhizophora mangle*	1.23										
6	29	A	*Rhizophora mangle*	1.47										
6	30	A	*Rhizophora mangle*	1.45										
6	31	A	*Rhizophora mangle*	1.75										
6	32	A	*Rhizophora mangle*	1.69	0.56									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	33	A	*Avicennia germinans*	1.47										
6	34	A	*Rhizophora mangle*	1.31										
6	35	A	*Rhizophora mangle*	1.38										
6	36	A	*Rhizophora mangle*	1.84										
6	37	A	*Avicennia germinans*	2.44										
6	38	A	*Rhizophora mangle*	1.13										
6	39	A	*Avicennia germinans*	3.23	1.66									
6	40	A	*Avicennia germinans*	2.19										
6	41	A	*Laguncularia racemosa*	2.06	2.44	1.28								
6	42	A	*Rhizophora mangle*	1.50										
6	43	A	*Avicennia germinans*	1.19										
6	44	A	*Laguncularia racemosa*	2.36	0.94								0.44	
6	45	A	*Laguncularia racemosa*	1.00									0.81	0.38
6	46	A	*Avicennia germinans*	1.84	0.47									
6	47	A	*Rhizophora mangle*	1.00									0.63	
6	48	A	*Laguncularia racemosa*	1.00										
6	49	A	*Rhizophora mangle*	1.50										
6	50	A	*Rhizophora mangle*	1.00									0.47	
6	51	A	*Laguncularia racemosa*	2.56	0.78	0.69							0.94	0.73
6	52	A	*Rhizophora mangle*	2.13									0.69	
6	53	A	*Laguncularia racemosa*	1.00	0.84	1.08								
6	54	A	*Laguncularia racemosa*	1.19									1.00	
6	55	A	*Avicennia germinans*	1.38	1.13									
6	56	A	*Rhizophora mangle*	1.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	57	A	*Laguncularia racemosa*	1.56										
6	58	A	*Laguncularia racemosa*	3.13	1.13									
6	59	A	*Rhizophora mangle*	1.42										
6	60	A	*Avicennia germinans*	1.94										
6	61	A	*Rhizophora mangle*	2.39										
6	62	A	*Rhizophora mangle*	2.69										
6	63	A	*Rhizophora mangle*	1.53										
6	64	A	*Rhizophora mangle*	1.00										
6	65	A	*Rhizophora mangle*	2.97									1.00	
6	66	A	*Avicennia germinans*	1.80										
6	67	A	*Rhizophora mangle*	2.05										
6	68	A	*Laguncularia racemosa*	1.69										
6	69	A	*Rhizophora mangle*	1.03										
6	70	A	*Rhizophora mangle*	1.06										
6	71	A	*Laguncularia racemosa*	1.03										
6	72	A	*Rhizophora mangle*	1.13										
6	73	A	*Rhizophora mangle*	1.19										
6	74	A	*Rhizophora mangle*	1.34										
6	75	A	*Laguncularia racemosa*	1.38										
6	76	A	*Rhizophora mangle*	1.22										
6	77	A	*Rhizophora mangle*	1.34										
6	78	A	*Laguncularia racemosa*	2.00									0.50	0.69
6	79	A	*Laguncularia racemosa*	1.66	0.50									
6	80	D	*Laguncularia racemosa*	2.00	0.78									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	81	A	*Rhizophora mangle*	1.22	1.05									
6	82	A	*Rhizophora mangle*	1.05	0.66									
6	83	A	*Laguncularia racemosa*	2.44	1.06									
6	84	A	*Rhizophora mangle*	2.00										
6	85	A	*Laguncularia racemosa*	1.05										
7	1	A	*Avicennia germinans*	1.25	0.56	0.38	0.50						0.25	0.75
7	2	A	*Avicennia germinans*	3.00	3.19	2.38	1.75	2.00	1.91				0.69	2.06
7	3	D	*Avicennia germinans*	1.00										
7	4	A	*Avicennia germinans*	1.75	0.69	0.75								
7	5	A	*Avicennia germinans*	1.75									0.53	0.69
7	6	A	*Avicennia germinans*	0.75	0.94	0.63	1.25	0.94	0.50	0.63	0.75			
7	7	D	Unidentifiable	2.00	1.41									
7	8	D	Unidentifiable	2.25	1.75	1.38								
7	9	D	Unidentifiable	1.38	1.50									
7	10	A	*Avicennia germinans*	2.03	2.97	1.75	5.50	5.00					1.66	2.50
7	11	A	*Avicennia germinans*	0.81	0.97	1.44	1.19						0.50	0.81
1	2	A	*Rhizophora mangle*	1.13										
1	7	A	*Avicennia germinans*	1.38										
1	9	A	*Avicennia germinans*	1.75										
1	10	A	*Avicennia germinans*	8.13	1.50	1.50	0.63							
1	11	A	*Rhizophora mangle*	3.19										
1	12	A	*Rhizophora mangle*	3.00										
1	13	A	*Rhizophora mangle*	1.25										
1	14	A	*Rhizophora mangle*	1.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
1	18	A	*Rhizophora mangle*	1.50										
1	21	A	*Rhizophora mangle*	1.25										
1	22	A	*Laguncularia racemosa*	4.25									1.00	3.00
1	23	A	*Laguncularia racemosa*	3.50									1.00	2.25
1	24	A	*Rhizophora mangle*	1.75	1.00	1.75								
1	25	A	*Laguncularia racemosa*	1.75	1.50									
1	26	A	*Laguncularia racemosa*	1.75	1.50									
1	27	A	*Laguncularia racemosa*	1.50										
1	28	A	*Rhizophora mangle*	1.50	1.50									
1	29	A	*Laguncularia racemosa*	1.00										
1	30	A	*Laguncularia racemosa*	1.50										
1	31	A	*Laguncularia racemosa*	1.75										
1	32	A	*Laguncularia racemosa*	1.50									0.75	1.00
1	33	A	*Rhizophora mangle*	5.00										
1	34	A	*Laguncularia racemosa*	5.00	1.75	1.75								
1	35	A	*Rhizophora mangle*	2.25									1.25	2.50
1	36	A	*Rhizophora mangle*	2.75									1.00	1.25
1	37	A	*Rhizophora mangle*	1.50	1.00									
1	38	A	*Rhizophora mangle*	2.00										
1	39	A	*Avicennia germinans*	2.75	3.75	1.25	1.75							
1	40	A	*Avicennia germinans*	5.00									1.25	4.00
1	41	A	*Rhizophora mangle*	2.00									0.50	1.25
1	42	A	*Rhizophora mangle*	1.25									0.50	1.25
1	43	A	*Rhizophora mangle*	1.50									0.50	1.00

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
1	44	A	*Rhizophora mangle*	2.50									1.00	2.00
1	45	A	*Laguncularia racemosa*	4.50	1.25	1.50								
2	1	A	*Laguncularia racemosa*	2.25									1.25	1.75
2	2	A	*Laguncularia racemosa*	1.25									0.50	0.75
2	3	A	*Laguncularia racemosa*	2.75									0.25	1.25
2	4	A	*Laguncularia racemosa*	2.00	0.75									
2	5	A	*Rhizophora mangle*	1.00	0.50									
2	6	A	*Laguncularia racemosa*	2.50									0.50	1.25
2	7	A	*Laguncularia racemosa*	2.50									0.25	1.25
2	8	A	*Rhizophora mangle*	1.25									0.50	1.00
2	9	A	*Rhizophora mangle*	1.75									0.50	1.50
2	10	A	*Rhizophora mangle*	1.25									0.25	0.50
2	11	A	*Rhizophora mangle*	1.25										
2	12	A	*Laguncularia racemosa*	2.25	3.50	3.25							3.50	3.25
2	13	A	*Rhizophora mangle*	1.25									0.25	0.75
2	14	A	*Rhizophora mangle*	1.00									0.25	0.50
2	15	A	*Laguncularia racemosa*	1.25									0.25	0.75
2	16	A	*Laguncularia racemosa*	1.25									0.25	0.50
2	17	A	*Laguncularia racemosa*	1.25									0.25	
2	18	A	*Rhizophora mangle*	1.50									0.25	
2	19	A	*Laguncularia racemosa*	3.25									0.50	3.00
2	20	A	*Laguncularia racemosa*	2.25									0.25	2.00
2	21	A	*Rhizophora mangle*	1.25	0.75									
2	22	A	*Rhizophora mangle*	1.00	1.25									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
2	23	A	*Laguncularia racemosa*	2.00	1.00	2.50								
2	24	A	*Laguncularia racemosa*	2.75	0.75									
2	25	A	*Laguncularia racemosa*	5.25									0.25	3.00
2	26	A	*Laguncularia racemosa*	2.75	1.75									
2	27	A	*Laguncularia racemosa*	1.50	1.00									
2	28	A	*Rhizophora mangle*	1.25	1.75									
2	29	A	*Laguncularia racemosa*	2.75									0.50	2.50
2	30	A	*Laguncularia racemosa*	3.00									0.25	2.25
2	31	A	*Rhizophora mangle*	1.00									0.50	0.75
2	32	A	*Laguncularia racemosa*	2.00									0.50	1.50
2	33	A	*Avicennia germinans*	4.25									0.75	2.75
2	34	A	*Laguncularia racemosa*	1.25									0.25	1.00
2	35	A	*Laguncularia racemosa*	1.25									0.25	0.75
2	36	A	*Rhizophora mangle*	1.50									0.50	1.00
2	37	A	*Rhizophora mangle*	1.25									0.25	0.75
2	38	A	*Laguncularia racemosa*	1.75									1.25	1.50
2	39	A	*Laguncularia racemosa*	3.00									0.25	2.00
2	40	A	*Avicennia germinans*	2.25									0.50	1.75
2	41	A	*Rhizophora mangle*	1.00									0.50	0.75
2	42	A	*Laguncularia racemosa*	2.75	4.25	2.50								
2	43	A	*Laguncularia racemosa*	3.00	3.75									
2	44	A	*Rhizophora mangle*	1.25									0.25	0.75
2	45	A	*Rhizophora mangle*	1.75									0.25	1.25
2	46	A	*Rhizophora mangle*	1.25									0.25	1.00

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
2	47	A	*Avicennia germinans*	3.00									0.50	2.50
2	48	A	*Rhizophora mangle*	1.25									0.25	1.00
2	49	A	*Laguncularia racemosa*	1.50	3.75									
2	50	A	*Laguncularia racemosa*	4.00									0.25	3.50
2	51	A	*Rhizophora mangle*	1.75									0.50	1.00
2	52	A	*Rhizophora mangle*	1.25									0.50	0.75
2	53	A	*Laguncularia racemosa*	1.25									0.25	1.00
2	54	A	*Rhizophora mangle*	1.25	2.50									
2	55	A	*Laguncularia racemosa*	5.50	4.00									
2	56	A	*Rhizophora mangle*	2.25									0.50	1.25
2	57	A	*Rhizophora mangle*	1.00									0.25	0.75
2	58	A	*Laguncularia racemosa*	2.00	1.00									
2	59	A	*Laguncularia racemosa*	2.75									0.50	1.50
2	60	A	*Rhizophora mangle*	2.00	0.25									
2	61	A	*Laguncularia racemosa*	3.25	2.00	2.00	1.75							
3	1	A	*Avicennia germinans*	1.00	0.63									
3	2	A	*Avicennia germinans*	1.13	1.13									
3	3	A	*Avicennia germinans*	1.00	1.13	0.63	1.00							
3	5	A	*Avicennia germinans*	1.00	0.75	0.63	0.50							
3	6	A	*Avicennia germinans*	1.25	0.63									
3	7	A	*Avicennia germinans*	1.63	0.63	0.63								
3	7	D	*Avicennia germinans*	2.38										
3	8	A	*Avicennia germinans*	0.88	0.88									
3	9	A	*Avicennia germinans*	2.50	2.13	0.75								

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
3	10	A	*Avicennia germinans*	0.75									0.13	0.25
3	11	A	*Avicennia germinans*	1.75	1.13	1.13	1.13	0.75	1.00					
3	12	A	*Avicennia germinans*	1.13										
3	13	A	*Avicennia germinans*	1.38	0.75									
3	14	A	*Avicennia germinans*	1.25	1.13									
3	15	A	*Avicennia germinans*	1.00	0.50									
3	16	A	*Avicennia germinans*	1.75	1.50									
3	17	A	*Avicennia germinans*	0.88	0.88	1.00								
3	18	A	*Avicennia germinans*	1.75	0.75	0.63								
3	19	A	*Avicennia germinans*	1.38	2.13	2.13	1.25	2.25	1.88	1.13	2.00			
3	20	D	*Avicennia germinans*	1.00										
3	21	A	*Avicennia germinans*	1.13									0.13	0.75
3	22	A	*Avicennia germinans*	1.13	0.38									
3	23	A	*Avicennia germinans*	2.00									0.13	0.63
3	24	A	*Avicennia germinans*	1.88	3.25	0.50								
4	1	A	*Rhizophora mangle*	1.63										
4	2	A	*Rhizophora mangle*	2.50									1.75	2.25
4	3	A	*Rhizophora mangle*	3.13										
4	4	A	*Laguncularia racemosa*	2.63	1.50	2.75	1.00							
4	5	A	*Rhizophora mangle*	1.50										
4	6	A	*Rhizophora mangle*	0.75	1.00	1.75								
4	7	D	*Rhizophora mangle*	2.75										
4	8	A	*Rhizophora mangle*	3.50	2.50									
4	9	A	*Laguncularia racemosa*	1.50										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	10	A	*Rhizophora mangle*	4.00										
4	11	A	*Rhizophora mangle*	4.88	1.25									
4	12	A	*Laguncularia racemosa*	1.13										
4	13	A	*Rhizophora mangle*	2.50										
4	14	D	*Rhizophora mangle*	2.88										
4	15	D	*Rhizophora mangle*	3.38										
4	16	A	*Laguncularia racemosa*	2.25										
4	17	A	*Rhizophora mangle*	2.13	3.63									
4	18	D	*Rhizophora mangle*	1.75										
4	19	A	*Rhizophora mangle*	2.38										
4	20	A	*Rhizophora mangle*	1.75										
4	21	A	*Rhizophora mangle*	3.88	3.25									
4	22	A	*Rhizophora mangle*	2.88										
4	23	A	*Laguncularia racemosa*	1.75										
4	24	A	*Rhizophora mangle*	1.75										
4	25	A	*Laguncularia racemosa*	1.88	2.88	2.25								
4	26	A	*Avicennia germinans*	2.88										
4	27	A	*Rhizophora mangle*	2.88										
4	28	A	*Rhizophora mangle*	3.38										
4	29	A	*Rhizophora mangle*	2.13										
4	30	A	*Rhizophora mangle*	1.00	1.38	1.88								
4	31	A	*Avicennia germinans*	1.38	4.00									
4	32	A	*Rhizophora mangle*	2.13										
4	33	A	*Rhizophora mangle*	2.13	1.50									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	34	A	*Rhizophora mangle*	2.13									0.50	
4	35	A	*Rhizophora mangle*	4.50										
4	36	A	*Rhizophora mangle*	1.50	1.50	4.00								
4	37	A	*Rhizophora mangle*	1.63										
4	38	A	*Rhizophora mangle*	1.63										
4	39	D	*Rhizophora mangle*	2.50										
4	40	A	*Rhizophora mangle*	1.50										
4	41	A	*Laguncularia racemosa*	1.50	1.13									
4	42	D	*Rhizophora mangle*	3.00										
4	43	A	*Laguncularia racemosa*	0.75	0.50	2.63	0.75	4.00						
4	44	A	*Rhizophora mangle*	2.00										
4	45	D	*Rhizophora mangle*	1.63										
4	46	A	*Rhizophora mangle*	2.38										
4	47	A	*Rhizophora mangle*	1.13										
4	48	A	*Rhizophora mangle*	2.25										
4	50	A	*Rhizophora mangle*	3.75										
4	51	D	*Avicennia germinans*	1.50										
4	52	A	*Rhizophora mangle*	1.25										
4	53	A	*Rhizophora mangle*	1.38										
4	54	A	*Rhizophora mangle*	1.25										
4	55	A	*Rhizophora mangle*	1.25										
4	56	A	*Rhizophora mangle*	4.38	3.38									
4	57	A	*Rhizophora mangle*	1.50										
4	58	A	*Rhizophora mangle*	2.00										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
4	59	A	*Rhizophora mangle*	1.38										
4	60	A	*Rhizophora mangle*	2.13										
4	61	A	*Rhizophora mangle*	1.75	3.25									
4	62	D	*Rhizophora mangle*	1.00										
4	63	D	*Laguncularia racemosa*	2.00										
4	64	A	*Rhizophora mangle*	2.50										
5	1	A	*Avicennia germinans*	1.38	1.75	2.25	1.00							
5	2	A	*Avicennia germinans*	1.50									0.13	1.13
5	3	A	*Avicennia germinans*	1.00	1.13	0.63								
5	4	A	*Avicennia germinans*	1.88										
5	5	A	*Avicennia germinans*	2.00									375.00	1.38
5	6	A	*Avicennia germinans*	2.88	2.88									
5	7	A	*Avicennia germinans*	2.25									0.50	1.13
5	8	A	*Avicennia germinans*	1.50	0.88									
5	9	D	*Avicennia germinans*	3.00	3.25									
5	10	D	*Avicennia germinans*	1.38									0.13	0.88
5	11	A	*Avicennia germinans*	1.75									0.13	1.13
5	12	A	*Avicennia germinans*	0.88	1.13									
5	13	D	*Avicennia germinans*	1.00										
5	14	A	*Avicennia germinans*	1.75	0.75									
5	15	A	*Avicennia germinans*	3.00									0.13	1.13
5	16	A	*Avicennia germinans*	3.75									0.38	2.88
5	17	A	*Avicennia germinans*	3.50										
5	18	A	*Avicennia germinans*	2.63	2.75									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
5	19	A	*Avicennia germinans*	1.50	2.88	2.13	3.25							
5	20	A	*Avicennia germinans*	1.00	0.75									
6	1	A	*Rhizophora mangle*	1.00									0.13	0.55
6	2	A	*Rhizophora mangle*	1.23									0.13	1.36
6	3	A	*Rhizophora mangle*	1.47									0.78	1.45
6	4	A	*Rhizophora mangle*	1.03									0.13	0.75
6	5	A	*Avicennia germinans*	5.52	4.86									
6	6	A	*Laguncularia racemosa*	3.47	0.63									
6	7	A	*Rhizophora mangle*	1.22									0.13	0.63
6	8	A	*Rhizophora mangle*	1.06										
6	9	D	Unidentifiable	1.28										
6	10	A	*Rhizophora mangle*	1.31										
6	11	A	*Laguncularia racemosa*	3.50									1.39	2.63
6	12	A	*Rhizophora mangle*	1.38									0.81	1.44
6	13	A	*Rhizophora mangle*	1.13									0.53	0.88
6	14	A	*Laguncularia racemosa*	1.61										
6	15	A	*Rhizophora mangle*	1.50									0.44	1.06
6	16	A	*Laguncularia racemosa*	2.56									0.88	
6	17	A	*Rhizophora mangle*	2.34										
6	18	A	*Rhizophora mangle*	1.38										
6	19	A	*Rhizophora mangle*	2.78										
6	20	A	*Rhizophora mangle*	2.63										
6	21	D	*Rhizophora mangle*	1.50										
6	22	A	*Rhizophora mangle*	1.16										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	23	A	*Rhizophora mangle*	1.81										
6	24	A	*Rhizophora mangle*	1.81										
6	25	A	*Laguncularia racemosa*	2.06	0.75									
6	26	A	*Laguncularia racemosa*	3.31										
6	27	D	*Laguncularia racemosa*	1.02										
6	28	A	*Rhizophora mangle*	1.19										
6	29	A	*Laguncularia racemosa*	2.69	2.13	0.63								
6	30	A	*Rhizophora mangle*	1.16										
6	31	A	*Rhizophora mangle*	1.53										
6	32	A	*Rhizophora mangle*	1.06									0.50	
6	33	A	*Rhizophora mangle*	2.63										
6	34	A	*Rhizophora mangle*	1.30										
6	35	A	*Rhizophora mangle*	1.94										
6	36	A	*Rhizophora mangle*	1.53										
6	37	A	*Rhizophora mangle*	1.11										
6	38	A	*Rhizophora mangle*	2.63										
6	39	A	*Rhizophora mangle*	1.56										
6	40	A	*Rhizophora mangle*	2.16										
6	41	A	*Rhizophora mangle*	1.02										
6	42	A	*Rhizophora mangle*	2.05									0.53	1.13
6	43	A	*Avicennia germinans*	1.25									0.13	0.63
6	44	D	Unidentifiable	1.02	1.02									
6	45	A	*Rhizophora mangle*	2.44									0.63	0.81
6	46	A	*Laguncularia racemosa*	1.38									0.13	1.00

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	47	A	*Rhizophora mangle*	1.03									0.47	0.94
6	48	A	*Rhizophora mangle*	1.81										
6	49	A	*Rhizophora mangle*	1.09									0.31	0.72
6	50	A	*Rhizophora mangle*	1.31									0.31	0.56
6	51	A	*Rhizophora mangle*	1.89									0.50	1.00
6	52	A	*Laguncularia racemosa*	2.75	0.94									
6	53	A	*Rhizophora mangle*	1.25									0.50	0.81
6	54	A	*Laguncularia racemosa*	1.38										
6	55	D	*Laguncularia racemosa*	1.44										
6	56	A	*Rhizophora mangle*	1.66									0.44	0.56
6	57	D	*Rhizophora mangle*	2.78										
6	58	A	*Rhizophora mangle*	3.13										
6	59	A	*Rhizophora mangle*	1.69									0.59	
6	60	A	*Rhizophora mangle*	3.86									0.56	3.13
6	61	A	*Rhizophora mangle*	1.94									0.13	0.75
6	62	A	*Rhizophora mangle*	1.72										
6	63	A	*Rhizophora mangle*	1.13										
6	64	A	*Rhizophora mangle*	1.41										
6	65	A	*Rhizophora mangle*	1.34									1.00	1.44
6	66	A	*Rhizophora mangle*	3.48										
6	67	A	*Rhizophora mangle*	3.19										
6	68	A	*Rhizophora mangle*	1.03									0.25	0.69
6	69	A	*Rhizophora mangle*	1.75										
6	70	A	*Rhizophora mangle*	2.22										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
6	71	A	*Rhizophora mangle*	2.75										
6	72	A	*Rhizophora mangle*	1.98									0.38	2.03
6	73	A	*Rhizophora mangle*	1.38										
6	74	A	*Laguncularia racemosa*	1.31										
6	75	A	*Rhizophora mangle*	1.19										
6	76	A	*Rhizophora mangle*	2.25										
6	77	A	*Rhizophora mangle*	1.97									0.44	1.50
6	78	A	*Rhizophora mangle*	3.03										
6	79	A	*Rhizophora mangle*	1.94										
6	80	A	*Rhizophora mangle*	3.22										
6	80	A	*Rhizophora mangle*	2.31										
6	81	A	*Rhizophora mangle*	2.19									0.75	1.38
6	81	A	*Rhizophora mangle*	1.31									0.25	0.69
6	82	A	*Rhizophora mangle*	3.50										
6	82	A	*Rhizophora mangle*	1.66										
6	83	A	*Rhizophora mangle*	1.19									0.25	1.25
6	83	D	*Rhizophora mangle*	1.31										
6	84	A	*Rhizophora mangle*	2.00										
6	85	D	*Rhizophora mangle*	3.63										
6	86	A	*Rhizophora mangle*	3.53										
6	87	A	*Rhizophora mangle*	1.56										
6	88	A	*Rhizophora mangle*	1.31										
6	89	A	*Rhizophora mangle*	1.44										
7	1	A	*Avicennia germinans*	1.44	1.63	1.66	1.09	1.97	1.63	1.25	0.81			

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
7	2	A	*Avicennia germinans*	1.19	1.81	1.25	1.31							
7	3	A	*Avicennia germinans*	3.16	1.63	2.44								
7	4	A	*Avicennia germinans*	1.06										
8	1	A	*Rhizophora mangle*	4.13										
8	2	A	*Laguncularia racemosa*	1.58	1.19	1.00								
8	3	A	*Rhizophora mangle*	4.88										
8	4	A	*Rhizophora mangle*	5.47										
8	5	A	*Avicennia germinans*	5.25	9.63									
8	6	A	*Laguncularia racemosa*	1.63										
8	7	A	*Laguncularia racemosa*	1.00										
8	8	D	*Rhizophora mangle*	3.50										
8	9	A	*Rhizophora mangle*	1.31	1.31									
8	10	D	Unidentifiable	3.00	3.63									
8	11	A	*Rhizophora mangle*	8.02	3.72									
8	12	A	*Avicennia germinans*	12.91										
8	13	A	*Laguncularia racemosa*	2.81	1.59	1.97								
8	14	D	*Rhizophora mangle*	2.63										
8	15	A	*Rhizophora mangle*	3.31										
8	16	A	*Avicennia germinans*	10.13										
8	17	A	*Rhizophora mangle*	1.22									0.13	0.72
8	18	A	*Laguncularia racemosa*	1.06										
8	19	A	*Laguncularia racemosa*	1.19										
8	20	D	*Rhizophora mangle*	6.88										
8	21	A	*Rhizophora mangle*	3.34										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
8	22	A	*Laguncularia racemosa*	2.25										
8	23	D	*Rhizophora mangle*	3.38										
8	24	D	*Rhizophora mangle*	1.38										
8	25	A	*Laguncularia racemosa*	1.06	0.75									
8	26	A	*Laguncularia racemosa*	2.88										
8	27	A	*Laguncularia racemosa*	3.56									0.13	1.94
8	28	A	*Avicennia germinans*	8.06	3.63									
8	29	D	*Rhizophora mangle*	2.06										
8	30	A	*Rhizophora mangle*	2.75										
8	31	A	*Laguncularia racemosa*	2.50										
8	32	A	*Laguncularia racemosa*	1.16										
8	33	A	*Laguncularia racemosa*	1.06										
8	34	A	*Laguncularia racemosa*	1.00										
8	35	A	*Laguncularia racemosa*	1.02										
8	36	A	*Laguncularia racemosa*	1.44									0.13	0.91
8	37	A	*Rhizophora mangle*	4.25										
8	38	A	*Laguncularia racemosa*	1.00										
8	39	D	*Avicennia germinans*	6.88										
8	40	A	*Avicennia germinans*	12.38										
8	41	A	*Avicennia germinans*	13.69									9.03	1.31
8	42	A	*Laguncularia racemosa*	1.47										
8	43	D	*Rhizophora mangle*	3.75										
8	44	A	*Laguncularia racemosa*	2.44	0.88									
8	45	A	*Laguncularia racemosa*	1.34	0.78	0.69								

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
8	46	A	*Laguncularia racemosa*	1.69	0.75									
8	47	A	*Avicennia germinans*	12.13										
8	48	A	*Laguncularia racemosa*	1.69										
8	49	A	*Laguncularia racemosa*	1.00	0.56									
8	50	A	*Laguncularia racemosa*	1.53										
8	51	A	*Laguncularia racemosa*	1.84										
8	52	D	*Rhizophora mangle*	6.69										
8	53	D	*Rhizophora mangle*	2.50										
8	54	A	*Avicennia germinans*	9.13	4.06									
8	55	A	*Avicennia germinans*	3.31									0.50	2.88
8	56	A	*Laguncularia racemosa*	1.16	0.81									
8	57	A	*Laguncularia racemosa*	2.38										
8	58	A	*Rhizophora mangle*	3.13									0.44	1.19
8	59	A	*Laguncularia racemosa*	1.06										
8	60	A	*Laguncularia racemosa*	1.56										
8	61	A	*Laguncularia racemosa*	1.38										
8	62	A	*Laguncularia racemosa*	1.06										
8	63	A	*Avicennia germinans*	15.59	1.13	2.03	4.94						0.25	4.75
8	64	D	*Laguncularia racemosa*	2.44	0.56	0.08								
8	65	D	*Rhizophora mangle*	5.69										
8	66	A	*Laguncularia racemosa*	1.06										
8	67	A	*Laguncularia racemosa*	1.50	0.84									
8	68	D	*Rhizophora mangle*	6.69										
8	69	D	*Laguncularia racemosa*	1.02	0.50	0.47								

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
8	70	A	*Laguncularia racemosa*	3.00	0.88	1.44								
8	71	A	*Laguncularia racemosa*	1.25										
8	72	A	*Laguncularia racemosa*	1.75										
8	73	A	*Laguncularia racemosa*	1.78										
8	74	A	*Laguncularia racemosa*	1.44										
8	75	A	*Laguncularia racemosa*	2.06										
8	76	A	*Laguncularia racemosa*	1.13										
8	77	A	*Laguncularia racemosa*	1.13										
8	78	A	*Laguncularia racemosa*	1.13										
8	79	A	*Laguncularia racemosa*	1.19										
8	80	A	*Laguncularia racemosa*	1.66	1.25									
8	81	A	*Laguncularia racemosa*	2.00	0.72	1.16								
8	82	A	*Laguncularia racemosa*	1.38	0.59									
8	83	A	*Laguncularia racemosa*	1.69	0.84	0.50								
8	84	A	*Laguncularia racemosa*	1.53										
8	85	A	*Laguncularia racemosa*	1.84										
8	86	A	*Rhizophora mangle*	1.44									0.25	0.53
8	87	A	*Laguncularia racemosa*	2.13										
8	88	A	*Laguncularia racemosa*	1.13										
8	89	A	*Laguncularia racemosa*	2.69										
8	90	A	*Laguncularia racemosa*	1.03										
8	91	A	*Laguncularia racemosa*	1.72										
8	92	A	*Laguncularia racemosa*	1.00										
8	93	A	*Laguncularia racemosa*	2.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
8	94	A	*Laguncularia racemosa*	2.81	1.25									
8	95	A	*Laguncularia racemosa*	1.25										
8	96	A	*Laguncularia racemosa*	1.50										
8	97	A	*Laguncularia racemosa*	2.31										
8	98	A	*Laguncularia racemosa*	1.66										
8	99	A	*Laguncularia racemosa*	1.25	0.75	0.25								
8	100	A	*Laguncularia racemosa*	1.13										
8	101	A	*Laguncularia racemosa*	1.75										
8	102	A	*Laguncularia racemosa*	1.13										
8	103	A	*Laguncularia racemosa*	1.13										
8	104	A	*Laguncularia racemosa*	2.44										
8	105	A	*Laguncularia racemosa*	1.38										
8	106	A	*Laguncularia racemosa*	1.25										
8	107	A	*Laguncularia racemosa*	1.53										
8	108	A	*Laguncularia racemosa*	1.25										
8	109	A	*Laguncularia racemosa*	1.69										
8	110	A	*Laguncularia racemosa*	1.06										
8	111	A	*Laguncularia racemosa*	1.28										
8	112	A	*Laguncularia racemosa*	1.88										
8	113	A	*Laguncularia racemosa*	2.06	1.38									
8	114	A	*Laguncularia racemosa*	1.13										
8	115	D	Unidentifiable	3.19										
8	116	A	*Laguncularia racemosa*	1.63										
8	117	A	*Laguncularia racemosa*	2.06	0.63	0.56								

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
8	118	A	*Laguncularia racemosa*	2.06										
8	119	A	*Laguncularia racemosa*	2.13	1.75									
8	120	A	*Laguncularia racemosa*	1.97	1.69									
8	121	A	*Laguncularia racemosa*	1.75										
8	122	A	*Rhizophora mangle*	3.63										
8	123	A	*Laguncularia racemosa*	1.78										
8	124	A	*Rhizophora mangle*	2.88										
8	125	A	*Laguncularia racemosa*	2.06										
8	126	A	*Laguncularia racemosa*	2.06										
8	127	A	*Avicennia germinans*	7.16									0.44	1.81
8	128	A	*Laguncularia racemosa*	1.63										
8	129	A	*Rhizophora mangle*	3.75										
8	130	A	*Laguncularia racemosa*	1.94										
8	131	A	*Laguncularia racemosa*	1.88										
8	132	A	*Laguncularia racemosa*	1.78	1.16	1.06	1.06						0.63	
8	133	A	*Laguncularia racemosa*	2.31										
8	134	A	*Laguncularia racemosa*	1.63	0.94	1.56								
8	135	A	*Laguncularia racemosa*	2.16										
8	136	A	*Laguncularia racemosa*	1.53										
8	137	A	*Laguncularia racemosa*	1.28	0.81									
9	1	D	Unidentifiable	2.94										
9	2	D	Unidentifiable	3.75										
9	3	D	*Rhizophora mangle*	2.88										
9	4	D	Unidentifiable	4.44										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
9	5	D	Unidentifiable	4.03										
9	6	D	Unidentifiable	4.78										
9	7	D	Unidentifiable	4.13										
9	8	D	Unidentifiable	6.94										
9	9	D	Unidentifiable	6.88										
9	10	D	Unidentifiable	6.25										
9	11	D	Unidentifiable	2.94										
9	12	D	Unidentifiable	4.50										
9	13	D	Unidentifiable	2.63										
9	14	D	Unidentifiable	7.56										
9	15	D	Unidentifiable	2.50										
9	16	D	Unidentifiable	6.88										
9	17	D	Unidentifiable	6.50										
9	18	D	Unidentifiable	2.56										
9	19	D	Unidentifiable	1.75										
9	20	D	Unidentifiable	5.13										
9	21	D	Unidentifiable	3.00										
9	22	D	Unidentifiable	2.25										
9	23	D	Unidentifiable	8.06										
9	24	D	Unidentifiable	1.00										
9	25	D	Unidentifiable	2.25										
9	26	D	Unidentifiable	7.88										
9	27	D	Unidentifiable	6.88										
9	28	D	Unidentifiable	6.38										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
9	29	D	Unidentifiable	4.50										
9	30	D	Unidentifiable	3.78	4.50									
9	31	D	Unidentifiable	7.50										
9	32	D	Unidentifiable	2.38										
9	33	D	Unidentifiable	5.56										
9	34	D	Unidentifiable	1.75										
9	35	D	Unidentifiable	2.25										
9	36	D	Unidentifiable	5.50										
9	37	D	Unidentifiable	1.13										
9	38	D	Unidentifiable	7.94										
9	39	D	Unidentifiable	6.00										
9	40	D	Unidentifiable	6.72	5.31									
9	41	A	*Avicennia germinans*	1.22										
9	42	D	Unidentifiable	7.06										
9	43	A	*Avicennia germinans*	1.06										
9	44	A	*Avicennia germinans*	1.00										
9	45	D	Unidentifiable	5.38										
9	46	D	Unidentifiable	3.88										
9	47	D	Unidentifiable	4.94										
9	48	D	Unidentifiable	4.38										
9	49	D	Unidentifiable	6.91										
9	50	D	Unidentifiable	2.25										
9	51	D	Unidentifiable	1.75										
9	52	D	*Avicennia germinans*	7.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
9	53	D	Unidentifiable	1.38										
9	54	D	Unidentifiable	3.06										
9	55	D	Unidentifiable	4.75										
9	56	D	Unidentifiable	3.50										
9	57	D	Unidentifiable	5.88										
9	58	A	*Avicennia germinans*	4.97	1.88	1.56	1.06							
9	59	D	Unidentifiable	8.97										
9	60	D	Unidentifiable	9.50										
9	61	D	Unidentifiable	3.00										
9	62	D	Unidentifiable	2.63										
9	63	D	Unidentifiable	4.84										
9	64	D	Unidentifiable	4.66										
9	65	D	Unidentifiable	5.16										
9	66	D	Unidentifiable	8.06										
9	67	D	Unidentifiable	2.88										
9	68	D	Unidentifiable	6.50										
9	69	D	Unidentifiable	5.78										
9	70	D	Unidentifiable	4.06										
9	71	D	Unidentifiable	5.63										
9	72	D	Unidentifiable	4.78										
9	73	D	Unidentifiable	1.88										
9	74	D	Unidentifiable	7.00										
9	75	D	Unidentifiable	6.66										
9	76	D	Unidentifiable	4.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
9	77	D	Unidentifiable	3.38										
10	1	A	*Avicennia germinans*	2.38									1.00	1.63
10	2	A	*Avicennia germinans*	1.81	1.63									
10	3	A	*Avicennia germinans*	1.69	1.34									
10	4	A	*Avicennia germinans*	1.50	1.03									
10	5	A	*Avicennia germinans*	2.63	1.88								1.50	0.88
10	6	A	*Avicennia germinans*	3.88	2.94								1.13	2.63
10	7	A	*Laguncularia racemosa*	1.00										
10	8	A	*Avicennia germinans*	4.94	3.69	2.63							1.38	3.38
10	9	A	*Avicennia germinans*	1.94									0.88	1.25
10	10	A	*Avicennia germinans*	1.44										
10	11	A	*Avicennia germinans*	2.63									0.69	1.81
10	12	A	*Avicennia germinans*	3.13									1.00	1.94
10	13	A	*Avicennia germinans*	1.94										
10	14	A	*Avicennia germinans*	2.00									1.00	
10	15	A	*Avicennia germinans*	2.00	3.63	2.00							0.47	1.31
10	16	D	Unidentifiable	1.31	1.50									
10	17	A	*Avicennia germinans*	4.44	2.00								1.28	2.75
11	1	A	*Conocarpus erectus*	2.50	3.25								0.78	2.38
11	2	A	*Conocarpus erectus*	2.50									1.50	1.75
11	3	D	*Rhizophora mangle*	4.38										
11	4	A	*Conocarpus erectus*	2.00									0.94	
11	5	A	*Laguncularia racemosa*	2.73									0.88	1.25
11	6	A	*Conocarpus erectus*	1.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
11	7	A	*Conocarpus erectus*	2.00	1.38	1.69							1.25	
11	8	A	*Conocarpus erectus*	0.75	2.13									
11	9	A	*Conocarpus erectus*	2.56	2.84								1.94	
11	10	A	*Conocarpus erectus*	2.28	2.75								1.22	
11	11	A	*Conocarpus erectus*	2.38	0.94	0.63							1.22	
11	12	A	*Conocarpus erectus*	2.25									1.31	
11	13	A	*Conocarpus erectus*	2.94	2.88								1.31	
11	14	A	*Conocarpus erectus*	1.63	1.41	2.00	1.13							
11	15	A	*Conocarpus erectus*	1.00									0.69	0.63
11	16	A	*Conocarpus erectus*	2.31	0.75									
11	17	A	*Melaleuca quinquenervia*	1.50										
11	18	A	*Conocarpus erectus*	3.00	1.25	1.25							1.00	2.38
11	19	A	*Conocarpus erectus*	1.22	0.94	0.75								
11	20	A	*Conocarpus erectus*	0.94	0.50	0.50	1.50	1.06						
11	21	A	*Conocarpus erectus*	1.22	1.00	1.00	0.50	2.00	1.75	2.25			0.84	
11	22	D	Palmae	0.00										
11	23	A	*Conocarpus erectus*	2.00										
11	24	A	*Conocarpus erectus*	1.47	2.44	2.75	1.44	2.06						
11	25	A	*Conocarpus erectus*	2.38	1.50									
11	26	A	*Conocarpus erectus*	1.75										
11	27	A	*Avicennia germinans*	4.19	2.56	1.38	2.25	1.72					0.88	2.22
11	28	A	*Conocarpus erectus*	3.41	1.63	1.69	1.19	1.38					1.13	1.50
11	29	A	*Laguncularia racemosa*	1.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
11	30	A	*Laguncularia racemosa*	1.50										
11	31	A	*Conocarpus erectus*	1.25	1.13	1.13	0.94							
11	32	A	*Conocarpus erectus*	1.28	0.88	1.25	1.88							
11	33	A	*Conocarpus erectus*	1.63	1.88	1.31	2.00							
11	34	A	*Conocarpus erectus*	1.88	0.88									
11	35	A	*Conocarpus erectus*	1.13	0.69									
11	36	A	*Conocarpus erectus*	1.00	1.13	1.50	2.13	1.38	3.63	1.88	2.44	1.00		
11	37	A	*Melaleuca quinquenervia*	1.88										
11	38	D	Palmae	0.00										
11	39	D	Palmae	0.00										
11	40	A	*Conocarpus erectus*	1.50	1.22									
11	41	A	*Sideroxylon celastrinum*	1.13	1.38									
12	1	D	*Conocarpus erectus*	1.25	1.38	1.19	1.25							
12	2	D	*Conocarpus erectus*	1.31	1.13	2.13								
12	3	D	*Conocarpus erectus*	1.50										
12	4	D	*Conocarpus erectus*	1.31	1.31									
12	5	D	*Conocarpus erectus*	1.67									0.78	
12	6	D	*Conocarpus erectus*	2.00										
12	7	D	*Conocarpus erectus*	1.63										
12	8	D	*Conocarpus erectus*	2.25										
12	9	D	*Conocarpus erectus*	0.97	1.88									
12	10	D	*Conocarpus erectus*	1.00	2.19	2.25	1.06	1.00						
12	11	A	*Laguncularia racemosa*	0.50	0.75	1.44								

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
12	12	D	*Conocarpus erectus*	1.53										
12	13	A	*Laguncularia racemosa*	1.06	1.38									
12	14	A	*Laguncularia racemosa*	0.97										
12	15	D	*Conocarpus erectus*	1.03	0.73									
12	16	D	*Conocarpus erectus*	0.66	1.05	1.19	1.88	1.97						
12	17	A	*Avicennia germinans*	3.00	1.50	0.75	2.38						1.22	2.00
12	18	D	*Conocarpus erectus*	1.13										
12	19	A	*Conocarpus erectus*	1.25	1.03									
12	20	D	*Conocarpus erectus*	1.28										
12	21	D	*Laguncularia racemosa*	0.75										
12	22	A	*Laguncularia racemosa*	1.31										
12	23	A	*Laguncularia racemosa*	1.00										
12	24	A	*Laguncularia racemosa*	0.97										
12	25	A	*Laguncularia racemosa*	2.25									1.00	1.63
12	26	A	*Avicennia germinans*	4.13	2.81	0.94	0.94	2.94	4.38				2.63	1.67
12	27	A	*Laguncularia racemosa*	1.13	0.50									
12	28	A	*Laguncularia racemosa*	1.38										
12	29	A	*Laguncularia racemosa*	1.25										
12	30	A	*Laguncularia racemosa*	1.50	1.38									
12	31	A	*Avicennia germinans*	4.28		2.88	3.31						1.56	2.25
12	32	D	*Conocarpus erectus*	2.13	1.91	1.06	2.13						1.50	
12	33	D	*Conocarpus erectus*	1.75										
12	34	D	*Conocarpus erectus*	1.13										
12	35	D	*Conocarpus erectus*	1.94										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
12	36	D	*Conocarpus erectus*	1.66	1.31	1.38								
12	37	D	*Conocarpus erectus*	1.38										
12	38	D	*Conocarpus erectus*	1.14										
12	39	A	*Conocarpus erectus*	1.56										
12	40	D	*Conocarpus erectus*	2.63	1.72	1.75							1.13	1.63
12	41	D	*Conocarpus erectus*	1.94										
12	42	D	*Conocarpus erectus*	1.44										
12	43	D	*Conocarpus erectus*	1.25										
12	44	D	*Conocarpus erectus*	1.55	1.25									
12	45	A	*Conocarpus erectus*	2.13	2.13	1.75								
12	46	D	*Conocarpus erectus*	1.31	1.41	1.00	1.13							
12	47	D	*Conocarpus erectus*	1.53										
12	48	D	*Conocarpus erectus*	1.00										
12	49	D	*Conocarpus erectus*	1.25										
12	50	A	*Avicennia germinans*	1.75									0.94	
12	51	D	*Conocarpus erectus*	1.06	3.22	1.88	3.00							
12	52	A	*Avicennia germinans*	1.25	3.44								1.50	1.00
13	1	D	Unidentifiable	5.19									4.13	
13	2	D	Unidentifiable	5.06										
13	3	A	*Rhizophora mangle*	4.75										
13	4	A	*Avicennia germinans*	11.50										
13	5	A	*Avicennia germinans*	9.75										
13	6	D	*Rhizophora mangle*	4.38										
13	7	A	*Rhizophora mangle*	4.19										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
13	8	A	*Laguncularia racemosa*	7.63	2.59								1.44	3.19
13	9	A	*Laguncularia racemosa*	6.88	1.78								1.22	
13	10	A	*Laguncularia racemosa*	4.72									1.50	
13	11	D	Unidentifiable	1.63										
13	12	A	*Laguncularia racemosa*	3.25									1.69	0.63
13	13	A	*Rhizophora mangle*	5.44										
13	14	A	*Rhizophora mangle*	3.16										
13	15	A	*Avicennia germinans*	8.00									5.59	1.63
13	16	A	*Rhizophora mangle*	4.00										
13	17	A	*Rhizophora mangle*	2.30										
13	18	A	*Rhizophora mangle*	4.97										
13	19	A	*Avicennia germinans*	7.88	5.34								1.38	
13	20	D	*Laguncularia racemosa*	3.91										
13	21	A	*Rhizophora mangle*	1.06										
13	22	A	*Avicennia germinans*	9.59	11.41	3.50	1.53						3.31	1.41
13	23	D	*Rhizophora mangle*	2.88										
13	24	A	*Laguncularia racemosa*	6.00									1.19	1.70
13	25	A	*Avicennia germinans*	6.41	1.78	1.22								
13	26	A	*Laguncularia racemosa*	9.84	1.94								2.13	1.19
13	27	A	*Laguncularia racemosa*	3.38									1.63	
13	28	A	*Rhizophora mangle*	3.22										
13	29	A	*Laguncularia racemosa*	1.25										
13	30	D	*Laguncularia racemosa*	3.55										
13	31	D	*Laguncularia racemosa*	4.22									4.06	

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
13	32	A	*Rhizophora mangle*	3.16										
13	33	A	*Laguncularia racemosa*	9.50	1.25	1.00	0.75	0.50					2.13	0.50
13	34	A	*Laguncularia racemosa*	4.50									1.00	
13	35	A	*Rhizophora mangle*	4.56										
13	36	A	*Rhizophora mangle*	4.25										
13	37	A	*Rhizophora mangle*	2.36										
13	38	A	*Rhizophora mangle*	1.63										
13	39	A	*Avicennia germinans*	9.47	6.63									
13	40	A	*Rhizophora mangle*	3.08										
13	41	A	*Rhizophora mangle*	5.31										
13	42	A	*Rhizophora mangle*	3.69										
13	43	A	*Laguncularia racemosa*	3.63	5.88								2.23	
13	44	A	*Laguncularia racemosa*	8.13									1.09	
13	45	A	*Laguncularia racemosa*	3.91										
13	46	D	Unidentifiable	1.94										
13	47	D	Unidentifiable	2.88										
13	48	A	*Rhizophora mangle*	3.81										
14	1	A	*Rhizophora mangle*	1.22										
14	2	A	*Rhizophora mangle*	1.36										
14	3	A	*Laguncularia racemosa*	7.56									2.64	
14	4	D	*Laguncularia racemosa*	3.38										
14	5	A	*Rhizophora mangle*	3.00										
14	6	A	*Rhizophora mangle*	1.50										
14	7	A	*Rhizophora mangle*	1.78										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
14	8	A	*Rhizophora mangle*	1.06										
14	9	A	*Laguncularia racemosa*	5.66	0.72	0.25								
14	10	A	*Rhizophora mangle*	1.03										
14	11	A	*Rhizophora mangle*	2.06										
14	12	A	*Rhizophora mangle*	2.00										
14	13	A	*Rhizophora mangle*	1.56										
14	14	A	*Laguncularia racemosa*	4.38										
14	15	D	*Rhizophora mangle*	2.94										
14	16	A	*Rhizophora mangle*	1.84									1.41	
14	17	A	*Rhizophora mangle*	4.88									2.00	
14	18	A	*Rhizophora mangle*	3.38									1.47	
14	19	A	*Rhizophora mangle*	4.50										
14	20	A	*Laguncularia racemosa*	3.50									1.22	
14	21	A	*Rhizophora mangle*	1.44										
14	22	A	*Avicennia germinans*	1.75										
14	23	A	*Rhizophora mangle*	2.00										
14	24	A	*Rhizophora mangle*	1.84										
14	25	D	*Laguncularia racemosa*	3.38										
14	26	D	*Rhizophora mangle*	1.75										
14	27	A	*Rhizophora mangle*	1.88										
14	28	A	*Rhizophora mangle*	2.00										
14	29	A	*Rhizophora mangle*	2.22										
14	30	A	*Avicennia germinans*	5.00										
14	31	A	*Rhizophora mangle*	3.63										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
14	32	A	*Avicennia germinans*	2.81										
14	33	D	*Laguncularia racemosa*	5.25										
14	34	A	*Avicennia germinans*	8.50										
14	35	A	*Rhizophora mangle*	2.75										
14	36	A	*Laguncularia racemosa*	5.88										
14	37	A	*Laguncularia racemosa*	7.56									2.34	
14	38	A	*Rhizophora mangle*	1.84										
14	39	A	*Laguncularia racemosa*	3.50									1.63	
14	40	A	*Rhizophora mangle*	2.31									1.38	
14	41	A	*Rhizophora mangle*	3.00										
14	42	A	*Laguncularia racemosa*	5.44									1.84	
14	43	A	*Rhizophora mangle*	1.31										
14	44	D	*Rhizophora mangle*	5.06										
14	45	A	*Laguncularia racemosa*	2.00										
14	46	A	*Laguncularia racemosa*	7.38										
14	47	A	*Rhizophora mangle*	1.19										
14	48	A	*Rhizophora mangle*	1.25										
14	49	A	*Rhizophora mangle*	1.53										
14	50	A	*Rhizophora mangle*	1.22										
14	51	A	*Rhizophora mangle*	1.06										
14	52	A	*Rhizophora mangle*	2.13										
14	53	A	*Rhizophora mangle*	4.69										
14	54	A	*Rhizophora mangle*	1.63										
14	55	A	*Rhizophora mangle*	2.53										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
14	56	D	*Laguncularia racemosa*	1.25										
14	57	A	*Rhizophora mangle*	1.13										
14	58	A	*Rhizophora mangle*	1.94										
14	59	A	*Rhizophora mangle*	1.41										
14	60	D	*Laguncularia racemosa*	2.69										
14	61	A	*Rhizophora mangle*	1.34										
14	62	A	*Laguncularia racemosa*	6.50										
14	63	A	*Laguncularia racemosa*	4.22										
14	64	A	*Laguncularia racemosa*	6.38										
14	65	A	*Rhizophora mangle*	1.22										
14	66	A	*Rhizophora mangle*	1.53										
14	67	A	*Rhizophora mangle*	1.78										
14	68	A	*Rhizophora mangle*	1.28										
14	69	A	*Rhizophora mangle*	1.50										
14	70	A	*Rhizophora mangle*	2.09										
14	71	A	*Rhizophora mangle*	1.38										
14	72	A	*Rhizophora mangle*	1.47										
14	73	A	*Rhizophora mangle*	2.13										
14	74	A	*Rhizophora mangle*	1.72										
14	75	A	*Rhizophora mangle*	2.38										
14	76	A	*Rhizophora mangle*	1.88										
14	77	A	*Rhizophora mangle*	2.00										
14	78	A	*Rhizophora mangle*	1.25										
14	79	A	*Rhizophora mangle*	1.13										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
14	80	A	*Rhizophora mangle*	1.63										
14	81	A	*Rhizophora mangle*	1.38										
14	82	A	*Rhizophora mangle*	1.28										
14	83	A	*Rhizophora mangle*	1.56										
14	84	A	*Rhizophora mangle*	2.47										
15	1	A	*Rhizophora mangle*	12.83										
15	2	A	*Rhizophora mangle*	10.48										
15	3	A	*Laguncularia racemosa*	1.05										
15	4	A	*Rhizophora mangle*	1.25										
15	5	A	*Avicennia germinans*	9.22									2.56	
15	6	A	*Laguncularia racemosa*	1.00										
15	7	A	*Laguncularia racemosa*	2.19										
15	8	D	*Rhizophora mangle*	8.94										
15	9	A	*Laguncularia racemosa*	1.05										
15	10	D	*Rhizophora mangle*	7.53										
15	11	A	*Laguncularia racemosa*	1.69										
15	12	A	*Laguncularia racemosa*	1.81	1.69									
15	13	D	Unidentifiable	5.88										
15	14	A	*Laguncularia racemosa*	3.41									1.25	
15	15	D	*Rhizophora mangle*	4.25										
15	16	A	*Laguncularia racemosa*	7.97	0.50	1.00								
15	17	A	*Laguncularia racemosa*	6.53										
15	18	A	*Rhizophora mangle*	3.69										
15	19	A	*Rhizophora mangle*	8.94										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
15	20	A	*Laguncularia racemosa*	2.22	1.75									
15	21	A	*Rhizophora mangle*	6.09										
15	22	A	*Rhizophora mangle*	4.09										
15	23	A	*Rhizophora mangle*	1.50										
15	24	A	*Laguncularia racemosa*	2.00										
15	25	A	*Laguncularia racemosa*	2.13										
15	26	A	*Rhizophora mangle*	3.75										
15	27	D	*Rhizophora mangle*	2.55										
15	28	A	*Laguncularia racemosa*	1.25										
15	29	D	*Rhizophora mangle*	6.72										
15	30	A	*Rhizophora mangle*	4.59										
15	31	A	*Laguncularia racemosa*	1.00										
15	32	A	*Laguncularia racemosa*	1.00										
15	33	D	*Rhizophora mangle*	4.06										
15	34	A	*Rhizophora mangle*	2.61										
15	35	A	*Rhizophora mangle*	6.41										
15	36	D	*Rhizophora mangle*	6.81										
15	37	A	*Rhizophora mangle*	2.88										
15	38	D	*Laguncularia racemosa*	1.88										
15	39	A	*Laguncularia racemosa*	3.47	3.97	2.16	0.50							
15	40	A	*Rhizophora mangle*	2.55										
15	41	A	*Rhizophora mangle*	1.13										
15	42	A	*Rhizophora mangle*	1.80										
15	43	A	*Rhizophora mangle*	1.16										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
15	44	A	*Laguncularia racemosa*	1.25										
15	45	A	*Rhizophora mangle*	4.31										
15	46	A	*Laguncularia racemosa*	1.13										
15	47	A	*Laguncularia racemosa*	1.31										
15	48	A	*Laguncularia racemosa*	2.16										
15	49	A	*Laguncularia racemosa*	2.25										
15	50	A	*Laguncularia racemosa*	1.47										
15	51	A	*Laguncularia racemosa*	2.63										
15	52	A	*Laguncularia racemosa*	3.38										
15	53	A	*Laguncularia racemosa*	1.92										
15	54	A	*Laguncularia racemosa*	3.09										
15	55	D	*Rhizophora mangle*	12.44										
15	56	A	*Laguncularia racemosa*	1.63										
15	57	A	*Laguncularia racemosa*	1.75										
15	58	A	*Rhizophora mangle*	1.38										
15	59	A	*Rhizophora mangle*	1.38										
15	60	A	*Rhizophora mangle*	1.63										
15	61	A	*Rhizophora mangle*	5.00										
15	62	A	*Rhizophora mangle*	2.38										
15	63	A	*Rhizophora mangle*	4.50										
15	64	D	*Rhizophora mangle*	5.69										
15	65	A	*Rhizophora mangle*	2.50										
15	66	A	*Rhizophora mangle*	5.22										
15	67	D	Unidentifiable	6.38										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
15	68	A	*Laguncularia racemosa*	1.00										
15	69	A	*Laguncularia racemosa*	1.16										
16	1	A	*Rhizophora mangle*	2.75										
16	2	A	*Laguncularia racemosa*	11.30									2.19	3.38
16	3	A	*Laguncularia racemosa*	1.08										
16	4	A	*Laguncularia racemosa*	1.19										
16	5	A	*Laguncularia racemosa*	1.84										
16	6	A	*Laguncularia racemosa*	2.00										
16	7	D	*Rhizophora mangle*	4.88										
16	8	A	*Laguncularia racemosa*	1.94	3.22	4.50	1.13							
16	9	A	*Laguncularia racemosa*	1.44	1.94	1.25								
16	10	D	*Laguncularia racemosa*	1.25	0.69									
16	11	D	*Laguncularia racemosa*	1.63									0.75	0.94
16	12	D	*Laguncularia racemosa*	0.81	1.25									
16	13	D	Unidentifiable	4.88										
16	14	D	Unidentifiable	4.81										
16	15	D	*Laguncularia racemosa*	1.25										
16	16	D	Unidentifiable	2.78										
16	17	A	*Laguncularia racemosa*	1.41										
16	18	A	*Laguncularia racemosa*	1.91										
16	19	A	*Laguncularia racemosa*	1.44										
16	20	A	*Laguncularia racemosa*	2.56										
16	21	A	*Laguncularia racemosa*	2.28										
16	22	D	*Laguncularia racemosa*	1.08										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	23	A	*Laguncularia racemosa*	1.56										
16	24	D	*Laguncularia racemosa*	1.13	0.88									
16	25	A	*Laguncularia racemosa*	3.09										
16	26	A	*Laguncularia racemosa*	1.69										
16	27	D	*Laguncularia racemosa*	0.78	0.78	0.81	1.00							
16	28	A	*Rhizophora mangle*	1.98	2.69	2.06								
16	29	A	*Rhizophora mangle*	2.53	2.02	0.56								
16	30	A	*Rhizophora mangle*	2.38	0.88	0.63	1.25						0.50	
16	31	A	*Rhizophora mangle*	1.31	0.56									
16	32	A	*Rhizophora mangle*	1.69										
16	33	A	*Rhizophora mangle*	2.38	0.63	0.39							0.56	
16	34	A	*Laguncularia racemosa*	2.97	2.38	0.75							1.00	
16	35	A	*Rhizophora mangle*	1.00										
16	36	A	*Rhizophora mangle*	3.13	1.69	2.88							0.38	
16	37	A	*Rhizophora mangle*	1.50									0.38	
16	38	A	*Laguncularia racemosa*	3.34										
16	39	A	*Rhizophora mangle*	1.97									0.88	
16	40	A	*Laguncularia racemosa*	1.44										
16	41	D	*Rhizophora mangle*	5.08										
16	42	D	*Rhizophora mangle*	4.00										
16	43	A	*Laguncularia racemosa*	1.58									0.66	
16	44	A	*Laguncularia racemosa*	2.09										
16	45	D	*Rhizophora mangle*	2.63										
16	46	D	*Laguncularia racemosa*	1.25									1.00	

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	47	A	*Laguncularia racemosa*	2.50										
16	48	A	*Laguncularia racemosa*	3.50										
16	49	A	*Laguncularia racemosa*	2.83										
16	50	A	*Laguncularia racemosa*	2.55										
16	51	A	*Laguncularia racemosa*	2.19										
16	52	A	*Laguncularia racemosa*	3.88										
16	53	A	*Rhizophora mangle*	1.94	1.53									
16	54	A	*Rhizophora mangle*	2.05									1.50	
16	55	A	*Rhizophora mangle*	2.19										
16	56	A	*Rhizophora mangle*	1.88	1.28	2.28	3.69							
16	57	A	*Rhizophora mangle*	1.97									0.73	
16	58	A	*Rhizophora mangle*	2.50	2.05	2.44								
16	59	A	*Rhizophora mangle*	1.73									0.39	
16	60	A	*Rhizophora mangle*	1.95										
16	61	A	*Rhizophora mangle*	1.38										
16	62	A	*Rhizophora mangle*	1.03										
16	63	A	*Rhizophora mangle*	1.88										
16	64	A	*Rhizophora mangle*	1.33										
16	65	A	*Rhizophora mangle*	1.30										
16	66	A	*Rhizophora mangle*	2.25										
16	67	A	*Rhizophora mangle*	1.63										
16	68	A	*Rhizophora mangle*	1.05										
16	69	A	*Rhizophora mangle*	1.75										
16	70	A	*Rhizophora mangle*	1.25										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	71	A	*Rhizophora mangle*	1.14										
16	72	A	*Rhizophora mangle*	1.31										
16	73	A	*Laguncularia racemosa*	3.00	2.38	3.94								
16	74	A	*Rhizophora mangle*	1.47										
16	75	A	*Laguncularia racemosa*	3.09										
16	76	A	*Laguncularia racemosa*	2.63										
16	77	A	*Laguncularia racemosa*	1.88										
16	78	A	*Laguncularia racemosa*	3.00										
16	79	D	*Rhizophora mangle*	4.78										
16	80	D	*Rhizophora mangle*	3.63										
16	81	A	*Rhizophora mangle*	4.38										
16	82	A	*Laguncularia racemosa*	1.28										
16	83	A	*Rhizophora mangle*	2.75	2.19								0.63	
16	84	A	*Rhizophora mangle*	2.78										
16	85	A	*Rhizophora mangle*	2.13										
16	86	A	*Rhizophora mangle*	1.81										
16	87	D	*Rhizophora mangle*	3.13										
16	88	A	*Avicennia germinans*	5.00	3.13	1.63							1.44	
16	89	A	*Rhizophora mangle*	1.69										
16	90	A	*Rhizophora mangle*	2.13										
16	91	A	*Rhizophora mangle*	2.47										
16	92	A	*Rhizophora mangle*	2.13										
16	93	A	*Rhizophora mangle*	2.50										
16	94	A	*Rhizophora mangle*	2.69	2.69									

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	95	A	*Rhizophora mangle*	1.16										
16	96	A	*Rhizophora mangle*	1.13										
16	97	A	*Rhizophora mangle*	1.75	3.56								0.69	
16	98	A	*Rhizophora mangle*	2.11										
16	99	A	*Rhizophora mangle*	2.34	2.09	1.00	1.97	2.25					1.28	
16	100	A	*Rhizophora mangle*	2.44										
16	101	A	*Rhizophora mangle*	2.84										
16	102	A	*Rhizophora mangle*	2.94										
16	103	A	*Rhizophora mangle*	2.66	1.81									
16	104	A	*Rhizophora mangle*	2.38	1.75	2.31								
16	105	A	*Rhizophora mangle*	1.64	0.94									
16	106	A	*Rhizophora mangle*	1.44	2.13									
16	107	A	*Rhizophora mangle*	1.13	1.88									
16	108	A	*Rhizophora mangle*	1.19										
16	109	A	*Laguncularia racemosa*	2.63	0.63	1.44	2.13	0.97	1.81	0.58	2.50			
16	110	A	*Rhizophora mangle*	1.94										
16	111	A	*Rhizophora mangle*	0.00	0.00									
16	112	A	*Rhizophora mangle*	1.63	0.84									
16	113	A	*Rhizophora mangle*	1.13	0.63									
16	114	A	*Rhizophora mangle*	1.13										
16	115	A	*Rhizophora mangle*	2.00										
16	116	A	*Rhizophora mangle*	1.81										
16	117	A	*Rhizophora mangle*	1.00										
16	118	A	*Rhizophora mangle*	1.08										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	119	D	*Rhizophora mangle*	6.66										
16	120	A	*Rhizophora mangle*	2.44										
16	121	A	*Rhizophora mangle*	1.63										
16	122	A	*Laguncularia racemosa*	3.47	0.69									
16	123	A	*Rhizophora mangle*	1.22										
16	124	A	*Rhizophora mangle*	0.72	1.63									
16	125	A	*Rhizophora mangle*	2.56	1.22									
16	126	A	*Rhizophora mangle*	1.88	1.19	0.56								
16	127	A	*Rhizophora mangle*	0.63	1.56									
16	128	A	*Rhizophora mangle*	2.03	0.56									
16	129	A	*Rhizophora mangle*	0.95	1.38									
16	130	A	*Rhizophora mangle*	1.11										
16	131	A	*Rhizophora mangle*	1.50										
16	132	A	*Rhizophora mangle*	1.00	1.66									
16	133	A	*Rhizophora mangle*	0.63	1.22									
16	134	D	*Rhizophora mangle*	4.50										
16	135	A	*Rhizophora mangle*	1.00										
16	136	A	*Rhizophora mangle*	1.47										
16	137	A	*Rhizophora mangle*	1.22										
16	138	A	*Rhizophora mangle*	1.34										
16	139	A	*Rhizophora mangle*	2.25										
16	140	A	*Rhizophora mangle*	1.38										
16	141	A	*Rhizophora mangle*	2.00										
16	142	A	*Rhizophora mangle*	1.31										

Appendix D: Summary of Modern Mangrove Survey Plot Data. (Cont.)

Plot Number	Tree Number	Alive/Dead	Trees Species	Diam 1	Diam 2	Diam 3	Diam 4	Diam 5	Diam 6	Diam 7	Diam 8	Diam 9	Branch Min	Branch Max
16	143	A	*Rhizophora mangle*	1.44										
16	144	A	*Rhizophora mangle*	1.50										

VITA
Jennifer M. Haney

EDUCATION

2001 **M.A.**, Anthropology, Southern Illinois University, Carbondale, Illinois.
Thesis: *A Ceramic Characterization of Salt Pans at The Great Salt Spring, Gallatin County, Illinois.*

1993 **B.A.**, Anthropology, Indiana State University, Terre Haute, Indiana.
Thesis: *Archaeological Excavations at 12Vi135 and 12Vi194: The Modisett Mounds Group, Vigo County, Indiana*.

PROFESSIONAL EXPERIENCE

2017- **Laboratory Director**, Cultural Resource Analysts, Inc., Shreveport, Louisiana.

2015-2017 **Research Assistant**, funded under a National Science Foundation Grant (Award # 1523271), The Pennsylvania State University, under the direction of Lee A. Newsom.

2013-2015 **Curatorial Assistant**, The Arboretum at Penn State, The Pennsylvania State University, University Park, Pennsylvania.

2012 **Research Assistant**, Matson Museum of Anthropology, The Pennsylvania State University, University Park.

2003-2009 **Archaeological Field Supervisor**, Cultural Resource Analysts, Inc., Lexington, Kentucky.

2002-2003 **Project Director/Laboratory Supervisor**, University of Tennessee, Department of Anthropology, Archaeological Research Laboratory, Knoxville, Tennessee.

2001 **Field Laboratory Supervisor**, University of Tennessee, Department of Anthropology, Archaeological Research Laboratory, Knoxville, Tennessee.

2000-2001 **Field Crew Chief**, University of Tennessee, Department of Anthropology, Archaeological Research Laboratory, Knoxville, Tennessee.

1999-2000 **Field Laboratory Director**, Indiana State University, Department of Anthropology, Terre Haute, Indiana.

1998-1999 **Senior Field Laboratory Technician**, Indiana State University, Department of Anthropology, Terre Haute, Indiana.

1997-1998 **Field Laboratory Technician**, Indiana State University, Department of Anthropology, Terre Haute, Indiana.

1997-1998 **Field Technician**, Indiana State University, Department of Anthropology, Terre Haute, Indiana.

1995-1997 **Curation Assistant**, NAGPRA Collections, Southern Illinois University, Center for Archaeological Investigation, Carbondale, Illinois.

1995 **Lithic Analyst**, Southern Illinois University, Center for Archaeological Investigation, Carbondale, Illinois.

1992-1993 **Laboratory Technician/Artifact Analyst**, Indiana State University, Department of Anthropology, Terre Haute, Indiana.