3.0 PRECONTACT REVIEW

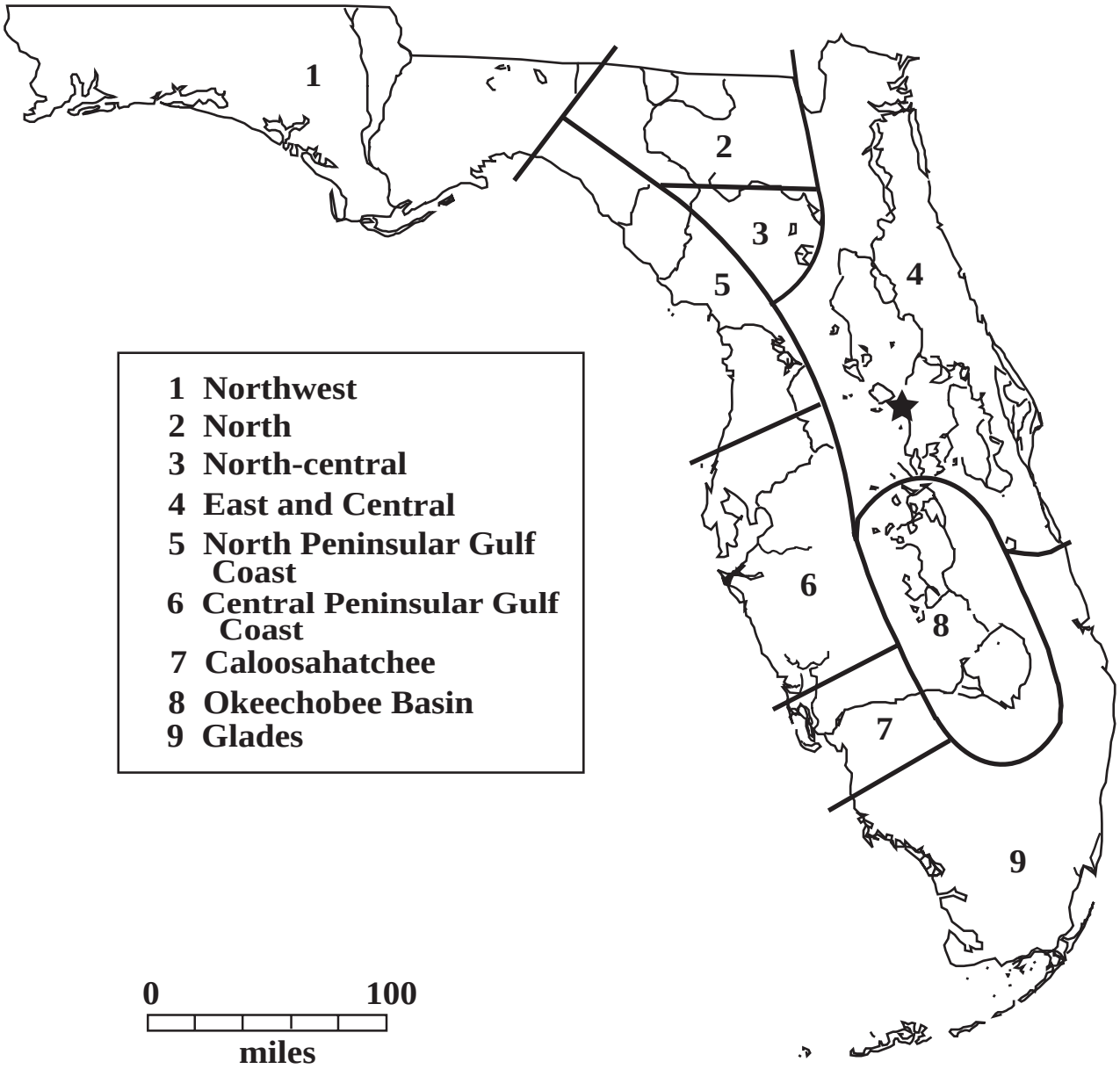
A discussion of the regional prehistory is included in cultural resource reports in order to provide a framework within which to examine the local archaeological record. Archaeological sites are not individual entities, but were once part of a dynamic cultural system. As a result, individual sites cannot be adequately examined or interpreted without reference to other sites and resources in the general area.

In general, archaeologists summarize the prehistory of a given area (i.e., the archaeological region) by outlining the sequence of archaeological cultures through time. Archaeological cultures are defined largely in geographical terms, but also reflect shared environmental and cultural traits. The Wekiva Parkway/SR 46 Realignment PD&E Study area is situated within the East and Central Lake archaeological region, as defined by Milanich and Fairbanks (1980) and Milanich (1994) (Figure 3.1). The spatial boundaries of the region are somewhat arbitrary, and it is after 500 B.C. that characteristic regional differences become more evident in the archaeological record. There are differences, however, evident as early as the Middle Archaic period when the characteristic Mount Taylor horizon develops along the St. Johns River.

The Paleo-Indian, Archaic, Formative, Mississippian, and Acculturative stages have been defined based on unique sets of material culture traits such as characteristic stone tool forms and ceramics, as well as subsistence, settlement, and burial patterns. These broad temporal units are further subdivided into culture horizons, phases or periods: Paleo-Indian (Clovis, Suwannee, Dalton?), Early Archaic (Bolen, Kirk), Mount Taylor, Orange, St. Johns I, St. Johns Ia, St. Johns Ib, and St. Johns IIa, IIb, and IIc (Table 3.1). The Paleo-Indian and Early Archaic subdivisions have been put forth by Widmer (1988) and Austin (2001) based on work in the Caloosahatchee and Central Peninsular Gulf Coast archaeological regions and are likely applicable to most of the state. A brief summary of these periods follows.

3.1 Paleo-Indian

The Paleo-Indian stage is the earliest cultural manifestation in Florida, dating from roughly 11,000 to 8000 B.C. (Austin 2001; Milanich 1994). Archeological evidence for Paleo-Indians consists primarily of scattered finds of diagnostic lanceolate projectile points. Clovis points characterize the Clovis horizon (ca. 11,000-10,00 B.C.), Suwannee and Simpson points are the diagnostic forms for the Suwannee horizon (10,000-9,000 B.C.), and the Dalton horizon (9000-8000 B.C.), which is poorly understood in the state, is identified by the presence of Dalton points. During this late Paleo-Indian period, the large lanceolate Suwannee and Simpson points may have been replaced by the smaller Tallahassee, Santa Fe, and Beaver Lake types (Milanich 1994:53). However, Austin (2001) notes that more often than not, these latter point types are most often recovered from Late Archaic or early Woodland period components as opposed to Paleo-Indian ones.



Post- 500 B.C. regions of precolumbian Florida

Figure 3.1. Florida Archaeological Regions (Milanich 1994:xix). The project area (★) is located in the East and Central Region (4).

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PD&E STUDY
Orange, Lake and Seminole Counties

Table 3.1. Cultural Chronology and Traits.

Cultural Period Time Frame	Cultural Traits
Paleo-Indian 11,000-8,000 B.C.	Migratory hunters and gatherers; Clovis, Suwannee and Simpson projectile points; unifacial scrapers.
Early Archaic 8000-6000 B.C.	Hunters and gatherers; less nomadic; increased utilization of coastal resources; Greenbriar, Bolen, Arredondo, Hamilton and Kirk Serrated points; increase in population size and density.
Mount Taylor 6000 - 2000 B.C.	First occupation of the St. Johns River valley; evidenced by large freshwater shell middens; burials in wet environment cemeteries and middens; increased sedentism; shellfish is an increasingly important part of the diet; more evidence for coastal occupation; stemmed, broad bladed projectile points, Newnan points most common; steatite; fired clay objects.
Orange 2000 - 500 B.C.	Appearance of ceramics; Orange series is fiber tempered and molded; plain ceramics early on, incising during later periods; increase occupation of the coastal lagoons; cultigens may be utilized; toward end of period increased use of sand as a tempering agent and an apparent increase in population size, socio-political complexity, and territorial range
St. Johns I 500 B.C. - A.D. 100	Plain and incised varieties of St. Johns ceramics; ceramics coiled, not molded; some pottery has fiber and quartz sand tempering; first use of burial mounds.
St. Johns Ia A.D. 100 - 500	Village pottery was primarily plain; larger burial mounds, some containing log tombs; trade evidenced by exotic materials within the burial mounds; Dunns Creek Red ceramics are common.
St. Johns Ib A.D. 500 - 750	Village pottery is plain; increased influence of Weeden Island populations; central pit burials within the mounds.; some pottery caches in mounds
St. Johns IIa A.D. 750 - 1050	St. Johns check stamped ceramics appear; increased use of burial mounds; mound burial seems to be saved for higher status individuals; pottery caches found in mounds; increase in size and number of villages; increase in the variety of burial patterns.
St. Johns IIb A.D. 1050 - 1513	Evidence of Mississippian influence seen; continued use of plain and check stamped ceramics; platform mound make their appearance at some of the ceremonial complexes.
St. Johns IIc A.D. 1513 - 1565	European artifacts occasionally found in the burial mounds; and middens; Timucuan speaking groups; disease beginning to decimate the aboriginal populations.

The majority of Paleo-Indian sites are associated with the rivers in the north-central portion of Florida (Dunbar and Waller 1983). At that time, the climate was cooler and drier. Vegetation was typified by xerophytic species with scrub oak, pine, open grassy prairies, and savannas being the most common (Milanich 1994:40). Since sea levels were as much as 35 meters (115 feet) below present levels and the coastal regions extended miles beyond present day shorelines (Milliman and Emery 1968). Miller (1998), however, suggests that around 10,000 years ago, along the Atlantic coast, the shoreline may have been 100 m (62 mi) to the east and sea level roughly 82 m (269 ft) below

present levels. It is probable that many of the sites dating from this time period have been inundated (Clausen et al. 1979; Dunbar 1997; Ruppé 1980; Scholl et al. 1969).

Some of the information about the Paleo-Indian period is derived from underwater excavations at two inland spring sites in Sarasota County: Little Salt and Warm Mineral Springs (Clausen et al. 1979). Traditionally, this time was characterized by small nomadic bands of hunters and gatherers. Daniel (1985) has proposed a model of early hunter-gatherer settlement that suggests that some Paleo-Indian groups may have practiced a more sedentary lifestyle than previously believed. Since the climate was cooler and much drier, it is likely that these nomadic bands traveled between permanent and semi-permanent sources of water, exploiting seasonally available resources. This has been referred to as the Oasis hypothesis (Dunbar 1991). These watering holes would have attracted the animals upon which the Indians hunted, thus providing food and drink. In addition to being tied to the water resources, most Paleo-Indian sites are also located proximate to sources of good quality lithic raw materials (Daniel 1985; Daniel and Wisenbaker 1987; Dunbar 1991; Goodyear et al. 1983). Given these parameters, (Miller 1998:54-57) suggests a higher probability for Paleo-Indian occurrence around or near Salt Springs, Silver Glen Springs, and Fern Hammock Springs.

Excavations at the Harney Flats Site in Hillsborough County (8HI507) provided a rich body of data concerning Paleo-Indian lifeways (Daniel and Wisenbaker 1987). It has been suggested that Paleo-Indian settlement may "not have been related as much to seasonal changes as generally postulated for the succeeding Archaic period," but instead movement was perhaps related to the scheduling of "tool-kit replacement, social needs, and the availability of water," among other factors (Daniel and Wisenbaker 1987:175). The excavations at the Colorado Site in Hernando County revealed a Paleo-Indian lithic workshop and encampment where that manufacture of blanks appears to have been a major site function (Horvath et al. 1998). The numerous expedient flake tools and the relative lack of formal tool forms may suggest that this site may date from the later Paleo-Indian period when foraging adaptations characterized by high residential mobility and expedient technologies became more prominent (Anderson 1996; Cable 1996).

Evidence for Paleo-Indian occupation within the East and Central Lake region is limited. This area is, however, outside of the Suwannee/Simpson macroband area postulated by Anderson (Anderson 1996:38). Clovis point was reportedly recovered from the Scott's Site (8SE1312) (Ellis et al. 1994). A portion of Suwannee point was found on the surface at the Crow's Bluff Swim Area site (8LA266) in Lake County, adjacent to the St. Johns River (FMSF).

3.2 Archaic

The beginning of the Archaic is denoted by interrelated environmental and cultural changes. The environmental changes associated with the end of the Pleistocene necessitated modification of the extant prehistoric settlement patterns and subsistence strategies. Whereas the Paleo-Indians depended more heavily upon the Pleistocene

megafauna and the relatively limited number of freshwater sources, Archaic populations hunted smaller game and learned to effectively exploit their changing environment. The gradual environmental changes led in part to the extinction of the Pleistocene fauna as well as resulted in the change in composition and distribution of various vegetative communities (Miller 1998). The adaptive changes of the aboriginal populations resulted in an increase in the number and types of archeological sites, such as marine and freshwater shell middens. The effects of the changing environment also can be seen in the variation in site locations. Although Early Archaic materials are often found in association with Paleo-Indian deposits, especially around water sources, other Early Archaic sites are located in areas devoid of Paleo-Indian components.

Early Archaic sites are recognized by the presence of Greenbriar and Bolen points as well as Kirk, Hardee Beveled, Hamilton, Arredondo, Sumter, and Thonotosassa varieties (Bullen 1975). Milanich (1994:64) notes that there are no well-documented Early Archaic coastal or riverine shell midden sites. This may be due to sea level rise as opposed to avoidance of these areas. Archaeological excavations at the Fort Florida Midden (8VO48), along the shore of the St. Johns River opposite its confluence with the Wekiva River, revealed an Early Archaic component based upon the recovery of a Kirk Serrated and a Kirk Corner Notched point (Johnson and Basinet 2002). It is unclear, however, whether or not the Archaic component included the freshwater shell midden or whether that material was associated solely with the more recent components.

Discoveries at Little Salt Spring in Sarasota County (Clausen et al. 1979) and the Windover site (Doran and Dickel 1988) in Brevard County indicate that bone and wood tools, as well as fabric and cordage, were an important part of the material culture. The archaeological record suggests a pattern of exploiting both coastal and interior resources. Although Miller (1998:64) has suggested that marine and estuarine resources had virtually no role in Early and Middle Archaic adaptation, the Windover Site has artifacts manufactured from sharks as teeth well as marine shell in addition to six whole marine shell that were likely used as grave goods (Purdy 1988). Most Early Archaic sites are small, seasonal campsites. This type of site may suggest that small bands moved seasonally in search of food. The Early Archaic tool assemblages are more diverse than the preceding Paleo-Indian tool kits, and include specialized stone tools for performing a variety of tasks (Milanich and Fairbanks 1980). Excavations at the Sligh Site (8SE1332) recovered a Kirk Serrated and Hardee Beveled point below a St. Johns I period shell midden (Dickinson and Wayne 1996). A Greenbriar/Bolen point was recovered from the Land's End Site (8SE1310) and a Bolen Beveled point was recovered from the Alaqua Borrow Pit Site (8SE1123) (Burger and Stine 1992; Ellis et al. 1994). The Zellwood site in Orange County, on the shore of Lake Apopka, has an Early Archaic component as evidenced by Beaver Lake and Marianna projectile points (Dreves 1974).

During the Middle Archaic, wetter conditions prevailed, sea levels began to rise, and pine forests and swamps began to emerge (Watts et al. 1996). The climate was changed to one of more pronounced seasonality with warmer summers and colder winters though by 4000 B.C. the climate became essentially the same as that of today (Watts et al. 1996:29). Settlement became focused within coastal and riverine locales (Milanich 1994:64). The

Mount Taylor period has been identified for the time of roughly 5000-2000 B.C. (Milanich 1994). Subsistence was based on hunting, fishing, shellfish collecting, and plant gathering. Sites are generally located along the Atlantic coast or along the upper reaches of the St. Johns River and the Ocklawaha and Wekiva Rivers (Ste. Claire 1990; Weisman 1993; Wheeler et al. 2000). The previously proposed theory that Archaic populations practiced a seasonal migration pattern between the interior and the coast has been called into question (Russo and Ste. Claire 1992; Ste. Claire 1990). Evidence from Horr's Island, located along the southwest Florida coast, indicates that this Middle Archaic site was occupied during all seasons of the year (Russo 1991) and investigations in northeast Florida also confirm year-round occupations at some sites (Russo 1992, 1996b; Russo et al. 1993; Russo and Ste. Claire 1992). Miller (1998:68) suggests that when sea levels reached their current positions, the St. Johns River changed its riverine characteristics to become similar to a lake in the upper reaches and more estuarine in the lower reaches. This allowed for the development of the wide resource base, especially beds of freshwater snails that required quiet waters (Clench and Turner 1956).

About 4,000 B.C., present-day vegetation patterns became established; hammocks of broad-leafed mesic trees, pine forests on uplands, and bayhead and cypress swamps became significant plant communities (Watts 1971). The archaeobotanical research at the Groves' Orange Midden (4260-2130 B.C.) and the Lake Monroe Outlet Midden (4040-3090 B.C.) confirms an environment similar to that which is present today (ACI/Janus 2001; Newsom 1994; Purdy 1994b). Most of the botanical remains were from wetland species, including trees and shrubs common along the lake margin, river swamp, and backwaters. Upland species were also utilized. It is believed that populations combined hunting and gathering into a productive subsistence strategy, and as a result, occupation became more sedentary and village life began (Milanich and Fairbanks 1980:147-152). Middens of mystery snail, apple snail, and mussel provide evidence of occupation and resource exploitation along the rivers of east and central Florida (Cumbaa 1976; Ellis et al. 1994; Fryman et al. 1978). The Lake Monroe Outlet Midden is somewhat anomalous in that the mystery snail was not a major portion of the subsistence economy; rather, apple snail and mussel were much more important (ACI/Janus 2001). Preliminary analysis of the faunal materials from the Fort Florida Midden (8VO48) suggests a subsistence economy based on the nearshore riverine resources, including catfish, gar, bowfin, eel, and turtles with the terrestrial resources including deer, raccoon, rabbit, and gopher tortoise (Quitmyer 2002).

The type site for this period is the Mount Taylor Site in Volusia County, investigated by C. B. Moore in the 1890s (Moore 1893). The artifact inventory of the Mt. Taylor people, as evidenced at the Groves' Orange Midden (8VO2601) and the Lake Monroe Outlet Midden, includes stone projectile points, tools, and microliths, as well as tools and decorative items of shell, bone, and wood (ACI/Janus 2001; Purdy 1994a; Wheeler and McGee 1994a, 1994b). Numerous shell and bone items recovered from these sites indicate contact with coast. Modified shark teeth, *Busycon* vessels, and other shellfish (oyster, arc, angle wing, cockle, etc.) remains were recovered from both sites. In addition, the recovery of *Strombus gigas* implements indicates contact with the south Florida coast, as this shellfish is only recovered south of Palm Beach. It is not certain whether these

items were deposited on site through trade or actual travel to the coast. (Russo and Ste. Claire 1992) suggest that the occupations in these two major environmental locales (St. Johns River valley and the Atlantic coast) were, in fact, separate cultural entities, not one group migrating back and forth. Although there is a similarity in tool and artifact assemblages, the settlement and subsistence patterns are quite different (Russo 1988).

According to Milanich and Fairbanks (1980:151), one of the most interesting aspects of the Mount Taylor culture is evidence for mass burial interments in specially prepared areas within shell middens. Such burials were found at Tick Island along the St. Johns River (Aten 1999; Bullen 1962; Jahn and Bullen 1978). Milanich (1994:81) suggests that Early and Middle Archaic peoples used aquatic environments for burial. The Early Archaic Windover Site, located near Titusville, contained primary and flexed burials within a peat pond. These were held in place with wooden stakes and the interments included grave goods such as textiles and worked bone, shell, and wood (Doran 2002). Underwater interments have also been recovered from the Middle Archaic Bay West Site near Naples, Republic Groves Site in Hardee County, and Nona's Site in southeast Sarasota County (Beriault et al. 1981; Luer 2002; Wharton et al. 1981). Each site, like Windover, had an adjacent land component evidenced by a midden. The Gauthier cemetery, dating from the Middle to Late Archaic, was situated on a palm island within a slough between a pond and Lake Poinsett, and contained primary and flexed burials (Carr and Jones 1981; Sigler-Eisenberg 1984b). The burial mound at Tomoka (8VO51) is one of the earliest in Florida (Piatek 1994). Russo (1996a:284) suggests though that the Archaic burials mounds of Florida (Tomoka and Horr's Island) were not the precursors to the extensive burial mound use seen in the more recent past, rather, they were short-lived, dead-end traditions.

The Middle to Late Archaic/Mount Taylor sites recorded throughout the state include large base camps, smaller special-use campsites, quarries, and burial areas and within East Florida, extensive shell middens. The large stemmed projectile points, especially the Newnan type, are diagnostic of Middle and Late preceramic Archaic period sites. Other common point types include Hillsborough, Levy, Putnam, Alachua, and Marion (Bullen 1975). In addition, silicified coral was more prevalent as a lithic tool raw material (Milanich 1994) and thermal alteration of the stone became more common (Ste. Claire 1987).

Interior sites include the smaller lithic scatter campsites that were most likely used for hunting or served as special use extractive sites for such activities as gathering nuts or other botanical materials (Ste. Claire 1989, 1990). Nut collecting stations would have been used seasonally. Within the Spruce Creek Basin, small temporary extractive camps were present in the upper reaches during the Middle to Late Archaic period, but the major sites are all located in the lower estuarine areas. No settlement or short-term use of the middle reaches of the creek have been documented (Ste. Claire 1998). There also is no evidence of occupation or utilization of the middle and upper reaches of the Tomoka River despite the presence of elevated, well-drained lands proximate to freshwater, and an abundance of natural resources (Payne 1985; Ste. Claire 1998). The McDonald Farm Site dates to this period (SEARCH 1997; Ste. Claire 1989). Ste. Claire (1989) believes

that this was an interior hunting camp associated with the coastal populations as opposed to those living along the St. Johns River, some 40 km (25 mi) to the west. The Tomoka Site (8VO81) consists of nine mounds and a surrounding village midden located near the confluence of the Tomoka and Halifax River. Occupants of this site utilized estuarine and coastal resources as evidenced by extensive use of coquina (coast) and oysters (estuary). No ceramics have been recovered from any of the excavations conducted at this site complex (Douglass 1882; Piatek 1992, 1994).

Aboriginal population mined the stone for their tools at quarry sites. The tools were usually roughly shaped prior to transporting to another locale for finishing. There are, however, no quarry sites known for this part of Florida. Evidence from the Groves' Orange Midden indicates contact, either physically or through trade, with the Tampa Bay and possibly the Suwannee River valley areas (Purdy 1994a). The occupants of the Lake Monroe Outlet Midden obtained most of their chert from the Ocala Quarry Cluster in the Marion County locale (ACI/Janus 2001). Other quarry clusters that were utilized include the Brooksville, Upper Withlacoochee, Peace River, and Hillsborough River (ACI/Janus 2001). Other evidence of trade can be seen in the use of soapstone; this material is imported from north central Georgia, South Carolina, and Virginia (Yates 2000). Sites in Volusia County containing soapstone include Bluffton, Tick Island, Nocoroco, Groves' Orange Midden, Hontoon Island, Mount Oswald Plantation, and the Lake Monroe Outlet Midden (ACI/Janus 2001; Yates 2000). Yates (2000:88) considers that the transportation of the soapstone occurred via watercraft, most likely the canoe. Evidence for canoes from this time period is well documented, and in fact, many of the canoes recovered from Florida waters have dated to the Archaic (Newsom and Purdy 1990; Purdy 1988; Wheeler et al. 2003). The earliest canoe comes from DeLeon Springs, and is roughly 6000 years old (Newsom and Purdy 1990).

By about 2000 B.C., there is evidence of fired clay pottery in Florida. The first ceramics types were tempered with fibers (Spanish moss or palmetto) are referred to as the Orange or Norwood series. The ceramics lacked decoration until about 1650 B.C. when they were decorated with geometric designs and punctations. The introduction of the St. Johns series of ceramics, a chalky feeling ceramic, occurred late in this period. Recent research, however, has called the entire Orange chronology into question (Sassaman 2003). Based on a series of AMS dates on soot from Orange Incised sherds from the middle St. Johns Valley and from radiocarbon dates on oyster and charcoal in association with Orange ceramics near the mouth of the river, all the various Orange ceramic types occur within the time span of roughly 4100-3600 BP. In addition, research by Cordell (2004) has documented the presence of sponge spicules in the Orange ceramic paste (the diagnostic trait of St. Johns wares) which suggest that the St. Johns ceramic tradition extends back to the beginning of the ceramic technology in the region (Sassaman 2003:11). The projectile points used by the Late Archaic populations were virtually the same as those utilized during the Middle Archaic period with the addition of the Clay, Culbreath, and Lafayette stemmed and corner-notched varieties (Bullen 1975).

Milanich (1994) and Miller (1998) indicate that there is little difference between Middle/Late Archaic and Orange populations except that there are more Orange sites and

the density of sites is higher. Orange settlements were primarily located near wetland locales. The abundance of resources located in and near the wetlands permitted larger settlements. This change in settlement patterns may be related to environmental changes resulting from the establishment of current sea levels. By the end of the Middle Archaic, the climate closely resembles that of todays'; vegetation changed from those species that preferred moist conditions to pines and mixed forests (Watts and Hansen 1988). Sea levels rose, inundating sites located along the coastal and riverine shorelines (McGee and Wheeler 1994; Ruppé 1988). The adaptation to this environment allowed for a wider variety of resources to be exploited and greater variability in settlement patterns. Shellfish, fish, and other food sources were now available from coastal and freshwater wetlands resulting in an increase in population size.

Middle to Late Archaic materials, including Florida Archaic Stemmed and Culbreath points as well as Orange Plain, Incised, and Punctated ceramics, were recovered from the Sligh Site (8SE1332) on the southern shore of Lake Jessup (Dickinson and Wayne 1996). The Samuel Butts Site (8VO5266) is a "rare example of an interior prehistoric black dirt midden in the Northeast Florida coastal region, an area dominated by shell midden sites" (Ste. Claire 1998:29). The presence of fiber-tempered pottery indicates that the site was first used during the Late Archaic/Orange period. The artifact assemblage recovered indicates a variety of activities, including bone pin and tool manufacture, stone tool manufacturing and/or maintenance, wood-working, cooking, food storage, and the processing of food or other natural materials. This suggests a long-term encampment as opposed to a limited activity hunting camp (Ste. Claire 1998).

Bridging the close of the Archaic stage and the beginning of the Formative is the Florida Transitional period, circa 1200 to 500 B.C., as defined by Ripley Bullen (1959). Milanich (1994), Miller (1998), Russo et al. (1993), Shannon (1986), and others suggest that assemblages from this "period" can not be discerned with any accuracy from the preceding or following periods. In general, this time was characterized by increased regionalism, population growth, and socio-cultural complexity (Bullen 1959, 1970). Exploitation of shellfish, fish and wild plants, as well as a reliance on hunting, was continued (Bullen 1959, 1970; Bullen et al. 1978), and limited horticulture may have been engaged in at this time (Milanich and Fairbanks 1980). Russo (1992:114) however, notes that there is no known evidence in this area for horticulture during this time. The Florida Transitional period is identified by the presence of St. Johns Incised ceramics (Bullen 1955b, 1972; Milanich 1994; Miller 1998). Bullen hypothesized that during the Florida Transitional period, the diffusion of culture traits, resulting from the movements of small groups of people, led to the spread of several ceramic and tool traditions (Bullen 1959). "The major changes in post-Transitional cultures cannot be attributed to environmental changes but rather appear to be the result of social, political, religious, and technological innovations introduced from elsewhere in the eastern United States" (Miller 1998:76).

3.3 Formative

The period from about 500 B.C. until A.D. 750 in the East and Central Lake region is referred to as St. Johns I, which has been divided into three temporal sub-periods: St. Johns I (500 B.C. - A.D. 100), St. Johns Ia (A.D. 100 - 500), and St. Johns Ib (A.D. 500 - 750) based primarily on characteristic ceramic types (Milanich 1994:247). There are regional variants of this basic cultural tradition: the St. Marys to the north and the Indian River to the south. The St. Marys Region is located at the mouth of the St. Johns and extends northward into Georgia (Russo 1992). Sites in this area contain a mixture of Georgia ceramics as well as St. Johns ceramics. St. Mary's I is defined, in part, on the presence of a combination of St. Johns I, Deptford, Swift Creek, and Colorinda ceramics while St. Mary's II contains Savannah Cordmarked and St. Johns Check Stamped ceramics, among others (Russo 1992). Ashley and Rolland (2002:25), however, suggests a somewhat different chronology: St. Marys I (500 B.C.-A.D. 900), St. Johns II (A.D. 900-1250) and St. Mary's II (A.D. 1250-1500+). The St. Mary's II period is identified by the presence of St. Marys Cordmarked ceramics (Ashley and Rolland 2002). Although this region was based its subsistence economy on the exploitation of the salt marsh, barrier island, and estuary resources, the cultivation of maize became a part of their subsistence economy around A.D. 1200 (Lee et al. 1984). At the southern end of the East and Central Region is the Indian River Region which was first defined by Rouse (1951). There is a much higher prevalence of sand-tempered wares in this region. Malabar I is coeval with St. Johns I. Malabar II occurs at the same time as St. Johns II and both are defined based on the presence of St. Johns Check Stamped pottery. Cordell's ceramic analysis has helped to better define the cultural sequences in this more southern area (Sigler-Eisenberg et al. 1985).

Settlement patterns during this time were virtually the same as that seen for the earlier Mount Taylor and Orange periods, i.e. along the coastal estuaries and larger rivers. The faunal analysis conducted at the Twin Mounds Site (8OR459) along the Wekiva River suggests that there was a slight decrease in the dependence on freshwater shellfish during the St. Johns periods as opposed to the preceding Orange period (Weisman 1993). Based on that analysis, there was an increase in the use of reptilian resources. There was also a tremendous increase in the number of archaeological sites during this time. An apparent trend from St. Johns I through Ib times was a population shift into the northern part of the St. Johns River valley, possibly due to the need for more arable land (Milanich and Fairbanks 1980:158).

Village wares were almost all St. Johns Plain throughout this period. St. Johns Incised is associated with the Early St. Johns I period. Deptford and Swift Creek pottery or copies are occasionally present in St. Johns I and Ia subperiods. St. Johns Cordmarked ceramics are associated with the St. Johns Ia period while Dunns Creek Red is associated with the St. Johns Ia and Ib periods. In her analysis of the ceramics from Shell Midden B (8VO1705) and Shell Mound D (8VO115) at Edgewater Landing, Cordell (Russo et al.

1989b:68) notes that through time, the St. Johns Plain ceramics become sandier due to increased use of quartz sand as an aplastic agent.

Evidence of the continuous use of burial mounds begins at this time. Many of the burials were found in large central pits, probably the result of secondary interments. Some changes in the burial practices include the possible use of log tombs during the St. Johns Ia period as well as inclusion of Hopewellian-Yent complex exotic trade items (Milanich 1994:261). Much of the information on St. Johns I period burial practices have been obtained from the Ross Hammock Site in Volusia County (Bullen et al. 1967). This site complex consists of two large burial mounds and an extensive village midden located on the west shore of Mosquito Lagoon. A large polished stone celt was recovered from Mound 1, and this artifact type was reportedly common in Weeden Island burial mounds on the Florida Gulf Coast (Bullen et al. 1967:16). The Benton Mound in Flagler County dates to the St. Johns Ia period (Miller 1994). Evidence for the Hopewellian-Yent ceremonial complex included two clear quartz crystals, *Busycon* cups, and Alligator Bayou Stamped ceramics. Other ceremonial activities associated with these sites include the "killing" of ceramic pots.

Year-round occupation of the coast and along the rivers occurred with special use-activity sites located in other locales and short-term campsites on the coast as well. Excavations at the Sligh Site (8SE1332) and the Lake Jessup South Site (8SE580), located on the south shore of Lake Jessup, suggest that these sites served as villages or long-term encampments (Dickinson and Wayne 1996; Wayne and Dickinson 1993). There was a wide variety of tools and an abundance of ceramics suggesting a relatively sedentary group. Hunting, food preparation, and tool making were common site activities. The site pattern "consists of small, probably individual household midden deposits with structural evidence limited to arcs of shallow post holes, often shell-filled, and firepits (Dickinson and Wayne 1996:108). The Hontoon Island Site (8VO202) located within the St. Johns River southwest of Lake Beresford, has provided a wealth of data due to the preservation of many classes of artifacts within the inundated midden deposits. Evidence of an extensive wood-working tradition is noted by the numerous carved items recovered from the river around the site as well as the debitage remaining from the carving activities (Bullen 1955a; Purdy 1987). The analysis of the faunal and botanical remains suggested that the site was occupied on a year round basis and that most of the resources were collected within 5-10 km (3-6 mi) of the site (Newsom 1987; Wing and McKean 1987).

The survey of the Edgewater Landing tract recorded several shell midden deposits that date to this period (Johnson and Ste. Claire 1988). Excavations conducted at two of the site indicated occupation during the St. Johns Ia (8VO1707) and St. Johns Ib (8VO115) periods. Both sites were characterized as temporary camps established to harvest oysters and hardshell clams, with no evidence being recovered to suggest any agricultural activities. The sites were occupied irregularly throughout the year, but contained evidence indicating that the sites were utilized during all seasons of the year (Russo et al. 1989b). A similar type of site is seen at the Canal Street Site (8VO4365) in New Smyrna Beach. This shell midden site, located along the North Indian River (Hillsborough River), dates from the St. Johns Ia period with an ephemeral St. Johns II period component as

well. The faunal analysis indicated that a wide variety of resources was utilized, but estuarine resources provided the bulk of the diet. Based on the analysis of the coquina, a late winter-early spring occupation was suggested. The relative lack of tools and low artifact count suggest a resource exploitation area as opposed to a long-term occupation locale (Dickinson and Wayne 1993). The Seminole Rest Site is a large quahog clam-processing center located along the west shore of Mosquito Lagoon (Horvath 1995). The faunal analysis indicated that the site was used throughout the year, but did not appear to be occupied on a year-round basis (Quitmyer 1995). Although located along the lagoon's shore, fish made up only a small portion of the diet, less than 15%, and mammals even less (Kozuch 1995). Interestingly, the Oak Hill Midden, located just a half mile south, was composed mostly of oyster as compared to Seminole Rest's predominance of quahog. Kozuch (1995:90) suggests that this may indicate that different clans or families had rights to different shellbeds and this tradition is still seen today (Provancha et al. 1991).

3.4 Mississippian/Acculturative

The St. Johns II period has also been sub-divided into three sub-periods: St. Johns IIa (A.D. 750 - 1050), St. Johns IIb (A.D. 1050 - 1513), and St. Johns IIc (A.D. 1513 - 1565). The St. Johns IIa-c periods are marked by the presence of St. Johns Check Stamped pottery. "St. Johns II carries on the tradition and is marked only by the introduction of check-stamped pottery" (Goggin 1952:70). Occupation of riverine and coastal shell middens continued, although Miller (1998:80) notes that there is a relative increase in the number of non-riverine and non-coastal sites, perhaps as the result of locating sites in more agriculturally suited locales. Such sites are quite numerous, suggesting the possibility of an increase in population. Several low density artifact scatter sites from the St. Johns IIa and IIb periods have been reported within the Alaqua Lakes project area (Burger and Stine 1992). Several small freshwater shell middens containing St. Johns Check Stamped pottery have also bee recorded along the shore of Lake Jessup (Ellis et al. 1994).

Milanich and Fairbanks (1980) suggest that hunting and gathering remained important but the dependence upon cultivated crops such as maize, squash, and gourds increased. The use of gourds as domesticates is still being studied as there is no evidence for cultivation even though gourds and squashes have been around for thousands of years prior to this period (Newsom et al. 1993). Sigler-Eisenberg and her colleagues (1985), however, suggest that in the upper St. Johns basin, the practice of horticulture was not adopted. Russo (1984) and Sigler-Eisenberg (1984a) further indicate that the wetland ecology and subsistence strategies were different. At the Gauthier Site, fish and aquatic turtles were the primary subsistence items, with relatively little reliance upon terrestrial game or freshwater shellfish (Sigler-Eisenberg 1984b). Seasonal utilization of the various coastal resources continued. The species exploited were dependent upon micro-environmental factors such as salinity and hardness of the lagoon bottom. The faunal remains recovered from the Castle Windy Site were indicative of a winter occupation

(Bullen and Sleight 1959). However, other St. Johns II sites such as Palmer and Fletcher were occupied during the fall (Miller 1980).

There was an increase in the number and size of villages during the St. Johns IIa period suggesting population expansion. A ranked society evolved as evidenced by the differential burial customs. No longer were all people interred in burial mounds. Deagan (1978:109) notes that around A.D. 1000 a population shift from the more southern and southwestern areas into the northern areas is evidenced by changes in relative frequencies of burial mounds in the areas over time. The Thursby Mound on the St. Johns River in Volusia County as well as two smaller habitation sites on the south shore of Lake Mizell in Orange County (Swindell et al. 1977:14), among others, date to this period. Excavations at the Burns, Ormond Beach, and Fuller Mounds A and D, revealed a new burial pattern in that the burials were placed on their backs with their heads or feet pointing toward the center of the mound (Jennings et al. 1957; Willey 1954)

The St. Johns IIb period is characterized by the adoption of some Mississippian traits into the ceremonial system as well as the presence of St. Johns Simple Stamped ceramics. The Mississippian lifestyle, however, never became dominant, possibly because the soils were not suitable for full agricultural pursuits. A more complex socio-political organization is suggested by the presence of platform mounds at the ceremonial centers. These include the Shields Mound, Mount Royal, and the Thursby Mound, all of which were excavated by C. B. Moore (Moore 1894a, 1894b). Copper beads and ornaments, as well as greenstone celts, have been recovered from several sites and suggest contact with cultures to the north and northwest of Florida

The St. Johns IIc period is marked by the introduction of European artifacts in some of the mounds. The historic aboriginal occupants of the region were the Timucua, Mayaca, Jororo, and possibly the Ais. The Timucuans shared a common language but cannot be considered as a specific cultural group because the range of the Timucuan speakers "... was crosscut by dialect, techno-environmental, ceremonial, political and geographical differences" (Deagan 1978:89). The project area lies within the territory of the Agua Dulce (Freshwater) Tribe, who occupied the upper reaches of the St. Johns River and coastal lagoon south of St. Augustine (Deagan 1978). The Mayaca were located in eastern Lake, western Volusia, and Seminole counties. Although these Indians apparently continued the St. Johns tradition, they did not share the same Timucuan language as many of the other St. Johns historic counterparts (Milanich 1995). The Jororo occupied the area of Orange and Seminole Counties, extending southward into Polk and Highlands Counties, as well (Milanich 1995:63). The Ais are located further south, from around Cape Canaveral south to Fort Pierce, extending inward to the St. Johns River in Brevard County (Milanich 1995). A major difference between the Timucua and the Ais is that the former, especially in north Florida, based a good percentage of their subsistence economy on cultigens whereas the Ais did not. The utilization of the coastal resources, however, was the same for both groups. They shared the same basic material culture and cultural practices including the St. Johns ceramic series, burial mounds, and diffuse shell middens. Excavations at Hontoon Island suggest that these people pursued a hunting-gathering-fishing economy without any major agricultural pursuits (Newsom 1987). The

Oyster Bay Site is a coastal shell midden that contains evidence of the Ribault Fleet shipwrecks that occurred in 1562 (Armstrong 1996; Brewer and Horvath 2004). A basic hunting-fishing-gathering subsistence economy was in place, though the higher prevalence of sea gull remains is believed to represent the arrival of the French, as these resources are not often encountered in other coastal middens (Brewer and Horvath 2004). Though there were, however, several sea gull bones recovered from the St. Johns II component of the Green Mound (Bullen and Sleight 1960). Spanish influence in the area is seen at the Riverbend Site (8VO2567) located near Ormond Beach. This site is an artifact scatter with a midden deposit. Spanish artifacts and burned corncobs were recovered. Corn also has been recovered from Hontoon Island, Mount Royal, and St. Augustine. The cultural materials recovered from the Riverbend Site suggest that it was occupied throughout the year and that the Timucuan and Guale (from Georgia) Indians interacted with each other, and both may have lived at the site (Russo et al. 1989a).

The arrival of the Europeans in the 1500s began a period of extensive social and cultural upheaval. Many of the traditional ways of life were destroyed or abandoned. Warfare and European diseases brought an end to the aboriginal inhabitants and their cultures. Due to the attempts of the Spanish military and missionaries to alter the traditional lifeways, by the end of the seventeenth century these aboriginal populations were virtually extinct. Raids in the early eighteenth century by Indian groups allied with the English drove many of the Mayaca and Timucuans to seek refuge near St. Augustine where most perished in warfare or because of epidemics (Hann 1993; Milanich 1995). By the first half of the 18th century, the native populations had all but vanished (Neill 1968), and groups of Creek Indians, who came to be known as Seminoles, moved into Florida. What few Timucua survived were transported to Cuba with the Spaniards of St. Augustine when Spain surrendered to Britain (Hann 1996:324).