Settlement and Subsistence of a Late Belle Glade Site at the Transitional St. Johns-Belle Glade Area of Central Florida.

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The southwestern portion of the Central Lake archaeological region of Florida is documented during late prehistoric-early historic times as a cultural transitional area between the northern St. Johns tradition (Timucuan) and the southern Belle Glade (Calusa) tradition. This paper presents partial results of a mitigation project conducted on the southeastern shores of Lake Tohopekaliga, Osceola County. Ceramic and faunal analysis of material, recovered at the Whaley-Lorenz site (8OS2439) in the spring of 2008, indicated that during late prehistoric times the site was a small settlement occupied by people of Belle Glade ceramic tradition, with a subsistence based predominantly on the exploitation of lacustrine resources, but incorporating many terrestrial species. During early historic times St. Johns ceramics dominated over Belle Glade wares, indicating migration or greater interaction with eastern St. Johns populations.
Introduction

The Whaley-Lorenz site (8OS2439) is located in northwestern Osceola County, southwest of the city of St. Cloud in Central Florida (Figure 2). The site is a prehistoric settlement situated on a hilltop about 60 feet above sea level, which overlooks Lake Tohopekaliga (Lake Toho). Remains of the ancient settlement are distributed in an area of approximately 10 acres. The site includes a 35-meter diameter freshwater shell midden and a number of artifact concentrations, probably the remains of prehistoric dwellings.

The Whaley-Lorenz site lies at the southwestern corner of the East and Central Lakes archaeological region (Figure 3). This region is defined by the St. Johns River Basin and adjacent coastal and western inland areas. The primary trait common in this region is the distinctive St. Johns Pottery. This area has been extensively studied in the past 70 years and is one of the best documented archaeological regions in Florida (Milanich and Fairbanks 1980). However, the majority of archaeological research in this area has been focused on the St. Johns River itself. The archaeology of the Central Lake district is poorly known.

The Central Lake District is limited to the south by the Okeechobee Basin cultural region characterized by the distinctive Belle Glade ceramic tradition. Recent studies along the Kissimmee River Valley confirm the dominance of Belle Glade ceramics in this region, pointing to a larger distribution up to the shores of Lake Toho (Allerton et al. 1984; Austin 1987).
St. Johns and Belle Glade Traditions

St. Johns Pottery probably originated from Late Archaic traditions around 500 B.C. and was still in use at contact times. The dominant pottery type is a chalky plain ware, with a check stamped surface decoration variety in later periods. The best studied St. Johns sites include large shell middens and midden clusters along the St. Johns River and Atlantic Coast, including Turtle Mound (8VO109), Green Mound (8VO90), Hontoon Island (8VO202), Zellwood (8OR17) and Mt. Royal (8PU35). Subsistence in this region was based mainly on marine and terrestrial resources, including cultivation of corn and other crops. Milanich and Fairbanks (1980) have suggested that cultivation of corn occurred along the St. Johns River and adjacent west areas during the warm months, alternating with a diet relying on marine resources during the winter period. More recent research indicates that this pattern may not be accurate; rather both the inland and coastal zones may have been occupied by different groups on a virtually year round basis.

Early Belle Glade settlements in the core Okeechobee basin are characterized by large earthworks, including circular ditches and linear embankments, but later settlements along the Kissimmee River are mainly large midden mounds and freshwater shell middens (Austin 1996). The best known Belle Glade sites include Fort Center (8GL13), Ortona (8GL15), Belle Glade (8PB40-41), Big Mound City (8PB48), Eberrback (8PO1008) and Barker (8PO1007). Early Belle Glade subsistence has been interpreted as being based on wild foods and corn cultivation (Sears 1982), but no conclusive evidence of corn cultivation has been found in this area. Recent analysis of midden deposits in the Kissimmee Valley has found no evidence of cultivation, but a diet based only on terrestrial and aquatic animal species (Austin 1996).
Historic Data (Figure 4)

At the time of European Contact, North Central Florida was known to have been populated by Timucuan tribes, heirs of the St. Johns ceramic tradition, who lived in villages near freshwater streams and practiced a subsistence pattern based on fishing, hunting, gathering and cultivation of corn, beans and squash (Milanich and Fairbanks 1980). On the other hand, Southwest Florida was the land of the Calusa, who during this period probably controlled the Okeechobee Basin and the Kissimmee River drainage. Pottery within the Calusa core area and Belle Glade region is very similar, indicating close contact within these regions (Milanich and Fairbanks 1980). Calusa subsistence is believed to have relied on marine and freshwater resources. European accounts made no mention of agricultural practices among the Calusa (Milanich and Fairbanks 1980; True 1945) (Figure 5).

Spanish documents indicate that during the Mission period, the Central Lake District was populated by Jororo and Mayaca Tribes; however the cultural affiliation of these groups is unclear. Whereas some documents mention a Timucuan cultural affiliation for these people, a number of reports indicate that these groups were closely related to the South Florida people, and were seasonally nomadic fisher-hunter-gatherers rather than agriculturalists (Hann 1993).

The Whaley-Lorenz Site (Figure 6)

Recent development around Lake Toho has required a number of archaeological surveys in the area, resulting in the identification of several small sites reported as lithic and/or ceramic scatters. Pottery in these sites has been reported as St. Johns, but no systematic analysis of material from this area has been conducted previous to the Whaley-Lorenz project.

In September 2005, SouthArc, inc. surveyed 625 acres on the east shore of Lake Toho. Survey at 50-meter intervals resulted in the location of the Whaley-Lorenz site in the southwest
part of the survey area, which was then bounded at 25-meter intervals resulting in the definition of an area of approximately 10 acres (Figure 7). Preliminary analysis of artifacts and analysis of early maps of the area indicated that the site could be the remains of a 19th century (Seminole) Indian village (Figure 8). The site was considered significant and eligible for the National Register of Historic Places. Phase II investigations were conducted in December 2005, followed by Phase III mitigation during the summer of 2008. The rest of this paper summarizes the results of these excavations as they relate to chronology, cultural affiliation, subsistence and settlement patterns of the site.

Cultural Affiliation (Figures 9 – 13)

Excavations at the Whaley-Lorenz site consisted of a 1 x 28-meter trench and 14 1 x 2-meter units, all of them excavated by 10 cm intervals or less within natural strata to an average depth of 1.2 meters. A total of 253.6 kg of archaeological material was recovered from these units, including 44.8 kg of pottery sherds. The majority of this material was recovered from Levels 3, 4 and 5 of all excavated units.

45.8% of the total ceramic assemblage was identified as Belle Glade Plain—the dominant ceramic type in the collection, followed by 30.6% St. Johns Plain and 2.6% St. Johns Check Stamped. Analysis of ceramic material by level indicated that the site was first settled by people with a predominant Belle Glade ceramic tradition that continued through Level 3; however, at Level 2 St. Johns Plain pottery began to be the most common pottery type up to the end of the occupation sequence.

Chronology (Figure 14)

Three charcoal samples were collected from Levels 3, 4 and 5 of the midden and were radiocarbon dated. Samples from levels 4 and 5 yielded similar dates ranging from A.D.1330 to
1408, whereas Level 3 yielded a date between A.D. 1524 to 1631. These dates are contemporary with St. Johns IIb and St. Johns IIc periods from the East Florida cultural sequence (Fairbanks and Milanich 1987:148), and with Glades II of the Circum Glades cultural sequence (Fairbanks and Milanich 1987:134). Since St. Johns Check Stamped pottery began to be manufactured no earlier than A.D. 750 in the St. Johns core area, its appearance in the Whaley-Lorenz sequence in the deepest levels suggests that the site was probably first occupied by a very small Belle Glade population during the 8th or 9th century A.D. However, the largest deposition of artifacts occurred between the 14th and 17th century during the late prehistoric-early historic period when the site was inhabited by a larger group of the Belle Glade cultural affiliation. Lithic material confirms this pattern, Pinellas points are the most common lithic tools in the collection. These small triangular points are dated as post A.D. 1250, and are considered variants of Mississippian triangular points. The site seems to have been occupied later during the historic period by a small St. Johns population that had access to a few Europeans artifacts as attested by a silver bead and a few majolica sherds found in the upper levels.

**Subsistence (Figure 15).**

Two 25 x 25 cm column samples were collected from the trench to study the subsistence pattern in the site. Levels 2 and 3 were chosen for a complete analysis of zooarchaeological material. These levels were chosen because they contained the densest concentration of shell, which affords the greatest chemical and mechanical protection of bone remains. In addition, these levels exhibited little or no disturbance and represent the period of highest occupation of the site. The goal of the study was to identify the faunal remains that are represented in the samples to the lowest possible taxon level and calculate their relative abundance. Although most of the material recovered was very fragmented, most faunal remains were identified to the class
level and a number of them to the species level. Biomass calculations indicated that 40% of the faunal diet of the Belle Glade population of the site relied on consumption of bony fish species, 30% on lacustrine reptiles—including several turtle species and alligator, and 4% on aquatic amphibians of *serenidae* species. Although by weight mussels and snails were the best represented ecofacts in the faunal assemblage, they only contribute 19% of the diet. Large mammals, including deer and opossum, were well represented in the sample representing 3% of the diet. Remarkably, several avian bones were identified in the assemblage. This finding is important because it contrasts with southern Belle Glade sites where the lack of bird bones has been interpreted as a cultural taboo of bird consumption (Sears 1982). In addition to faunal remains, nearly a kilo of charred hickory nuts was recovered from the trench, indicating gathering and consumption of these nuts was important to the subsistence pattern. No evidence of corn was found in the material despite intensive analysis of charcoal remains.

**Settlement Pattern** *(Figure 16)*

An analysis of artifact distribution was conducted using GIS. Kernel density estimates were calculated based on weight of pottery, charcoal and faunal material collected from testing at fine intervals throughout the shell midden. A bimodal distribution of midden material indicates two central points of material deposition suggesting two adjacent focuses of cultural activity probably conducted by different sub-groups of the same population *(Figure 17)*. Distribution analysis of lithic, pottery and faunal material using material obtained by systematic pit testing throughout the site *(Figure 18-21)* shows a concentric village distribution with faunal and pottery concentrated in the midden area *(Figure 18-21)*. This pattern can be interpreted as a village-wide sharing of processing, cooking and consumption activities. On the other hand, small amounts of pottery distributed at the west section of the site, together with concentrations of lithic debitage
northwest and southwest of the midden, indicate at least two separated activity areas. Analysis of lithic material indicated that small flakes present on the site do not represent different stages of tool manufacture but only debitage associated with tool maintenance. Assuming that tool maintenance was mainly conducted in a domestic context, pottery and lithic material in these areas indicated the probable location of domestic structures.

**Conclusion (Figure 22)**

The abundant lacustrine resources in the Central Lake district and specifically in Lake Toho certainly attracted early prehistoric populations to this area as indicated by a limited amount of Late Archaic fiber-tempered pottery found in the site; however, such early cultural evidence probably was left by small groups fishing and hunting on the lake shores. Larger groups staying for processing and cooking at the Whaley-Lorenz site began no earlier than A.D. 700, as indicated by the deposition of Belle Glade and St. Johns Check stamped pottery. A larger and probably longer occupation of the site is evident at about A.D. 1300 to 1600; however no concluding evidence to support or reject a permanent occupation of the site was defined during this investigation. The midden deposits could be the result of material accumulation occurring over a long period of seasonal visits for hunting and fishing in the Lake. The people occupying the site permanently or seasonally were of the Belle Glade cultural affiliation who utilized most of the available faunal resources including birds, not documented as being consumed by southern Belle Glade groups. After A.D. 1600, Belle Glade groups decreased their presence at the site, and people using St. Johns pottery, probably historic Timucuan increased their presence in the area—perhaps escaping from European occupation of the Timucuan heartland.

The limits of the Whaley-Lorenz site are well established by negative testing east, north and south of the core area; however the west portion was out of the project limits, leaving the
possibility that other activity areas could be located in this zone. Based on the data on hand and the spatial density of artifacts, it is estimated that during the period of major occupation, the Whaley-Lorenz site was a small village of no more than 50 people, strategically located to exploit the rich resources of Lake Toho and its adjacent woodlands.