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Abstract

This paper presents evidence for the hypothesis that the Penny Site (8BR158) was a seasonal hunter-gatherer site for the Ais Indigenous tribe who lived on Cape Canaveral. Evidence directly from the site itself is considered as well as comparisons with other sites across and near Florida to help determine possible season of occupation at the Penny site. It can be concluded that the Penny Site may have been occupied in the warm months, but the determination of season of occupation of sites has proved itself to be a somewhat challenging task and results often produce variation in season of occupation between sites.

Introduction

The Penny Site, 8BR158, in the Cape Canaveral Space Force Station provides a rich and exciting look into the lives of the Ais Indigenous group and their direct ancestors who lived roughly between four thousand years ago and as late as 1763, where they were destroyed as a tribe by the arrival of the Spanish in the 16th century (Davidsson 2001:5, 27). The Penny Site is named after the two Euro-Americans who were buried there at the turn of the 20th century: Nathan Penny, who died in 1911, and his wife, Maria Penny, who died in 1890. Initial excavations at the site revealed that the Pennys happened to be buried on top of a very important Indigenous American site. From the site, artifacts such as check stamped St. John's potsherds, bone tools, stone tools, and even shell tools have been found, reflecting a culture who made excellent use of their surrounding environment. There is also an abundance of evidence suggesting that the Penny Site was a seasonal camp used by the Ais Indigenous group, and here I present that evidence using artifacts and features found at the site itself as well as present evidence from other sites in and close to Florida to determine when the site might have been occupied during the year.

Evidence From the Site

It is clear from the site itself that the inhabitants kept coming back, evidenced by layers of features and artifacts. This is demonstrated by a number of test units at the site, most notably test units A, F, and G. Figure 1 shows Test Unit F, where multiple shell concentration features are shown at different levels within the unit. For instance, Shell Concentration 1 and Shell Concentration 2 are at 44 centimeters below datum and 40 centimeters below datum (cmbd), respectively, while Features 3 (a larger clam and conch concentration) and 4 (a shark vertebrae concentration), are at 47 cmbd and roughly 50-60 cmbd, respectively. Features 1 and 2 have been digitally re-outlined and the features and concentrations re-noted on the map for clarity.

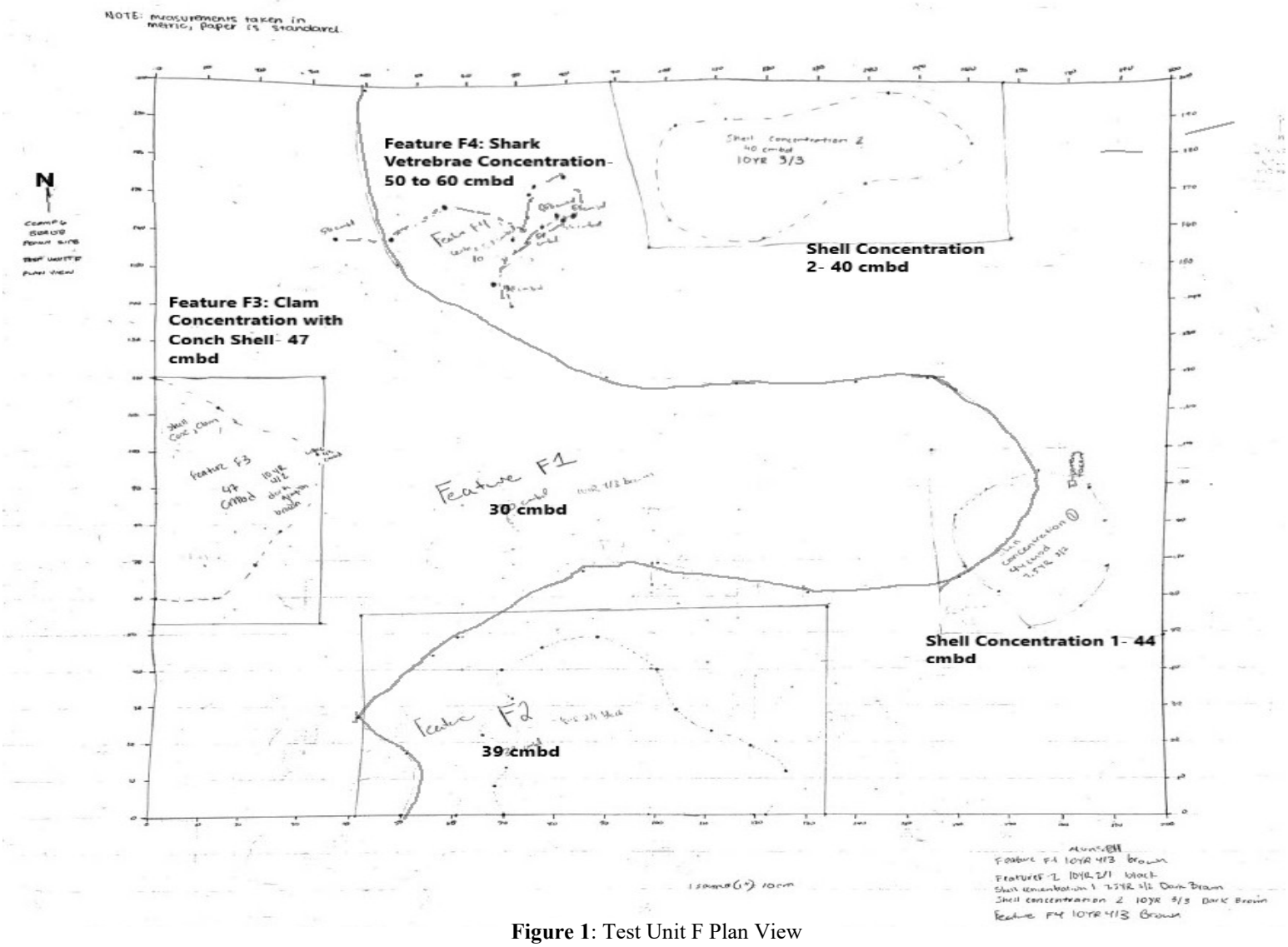

Figure 1: Test Unit F Plan View (Cape Canaveral Archaeological Mitigation Project Season 6.)

Additionally, in Test Unit A of the site, there have been finds of different kinds of shell concentrations depending on the level – the lowest levels have concentrations of Moon Snail (Naticidae) shell, and the higher levels have clam and oyster concentrations. This shows that the inhabitants in earlier times were eating an abundance of snail but changed their diet later on. Test Unit F as well shows numerous Moon Snail shell concentrations which were discovered after the above map was complete. Test Unit F contained an astounding eight features in all. Figure 2 shows one shell concentration in Test Unit F, Feature F7, largely consisting of Moon Snail shells.

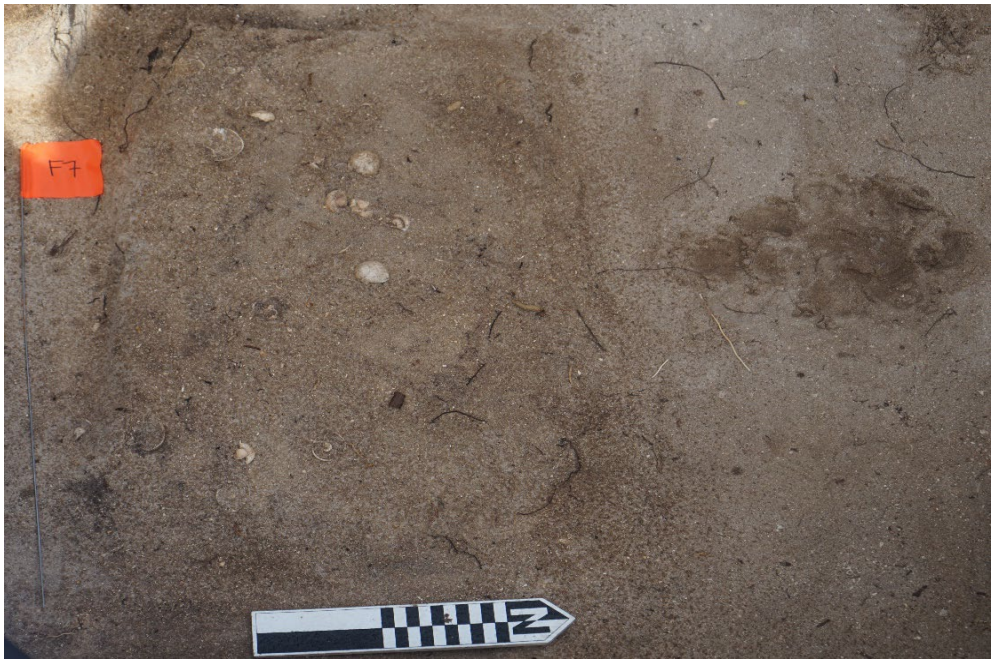

Figure 2: Feature F7 in Test Unit F. (Photograph Courtesy of Ms. Lydia Kiernicki.)

Additionally, Test Unit G, a black earth shell midden just half a mile or so away from the main cluster of test units, shows hearths on top of hearths in the stratigraphy. This is a direct indication that the inhabitants kept coming back to the site intermittently.

Also supporting my conclusion that this was a seasonal site is the fact that little evidence has been found suggesting permanent settlement. So far, sparse evidence of housing structures

have been found at the site, excluding a few post mold stains (dates for one came back as 892-934 AD). While the possibility of permanent housing certainly is there, this structure could have also been temporary, or an ad hoc structure created for food processing or protection from the weather. Whatever the case, the architecture here seems to have been limited. Seymour (2009:256) cites Binford (1990:121-122) as stating that, "all else being equal, there is a very general inverse relationship between mobility and investment in housing." Seymour (2009:257) also writes how multiple mobile hunter-gatherer groups in the American Southwest have "unobtrusive" housing and scant archaeological footprint, phenomenon similar to what we see with the Ais.

According to Davidsson (2001:31), the Ais Indigenous tribe was a largely hunter-gatherer group, and he cites European traveler Johnathan Dickinson who wrote about the Ais in 1696: "These people neither sow nor plant any manner of thing whatsoever..." (Dickinson 1961:34). Davidsson (2001:34) additionally writes that, "As hunter-gatherers, many Ais groups relocated their villages to meet seasonal variations in their food supply." Davidsson also highlights the importance of seasonal sites during the Malabar II period (750 to 1565), where he discusses how the Ais relocated to different sites to hunt fish and other migrating animals (2001:24). In fact, Merritt Island, a mere couple of miles away from the Cape Canaveral Space Force Station, contains a seasonal site of the Ais. The Ulumay Wildlife Sanctuary is the site of numerous shell middens, just as is seen in Test Unit G at Penny (Davidsson 2001:27). The evidence cited by Davidsson, in concordance with the evidence found so far at the Penny site, seem to support the fact that the Penny site was one of these seasonal sites for the Ais.

Determining Season

Multiple studies dealing with similar sites, even some sites that encompassed Ais territory, seem to point to different seasons of occupation. For instance, the Zaremba site at Wabasso Beach in Florida, another site where the Ais lived, shows a spring/summer occupation evidenced by the size of the coquina shells collected (Sigler-Eisenberg and Russo 1986:27). The sizes found at the Zaremba site seem to correlate with the sizes coquina naturally grow in the spring and summer months, about 6 to 16 millimeters, which is about the size we find at Penny as well (Sigler-Eisenberg and Russo 1986: Figure 1). It is important to note that the Zaremba site, just like the Penny site, is situated close to the Indian River (also known as the Banana River). Figure 3 shows where in relation to the river the Penny site is, as well other Ais sites throughout Cape Canaveral. This river is affected by seasonal inundations from freshwater rivers and creeks, which in turn affects salinity levels, causing different species of fish to appear at different times throughout the year (Sigler-Eisenberg and Russo 1986:22).

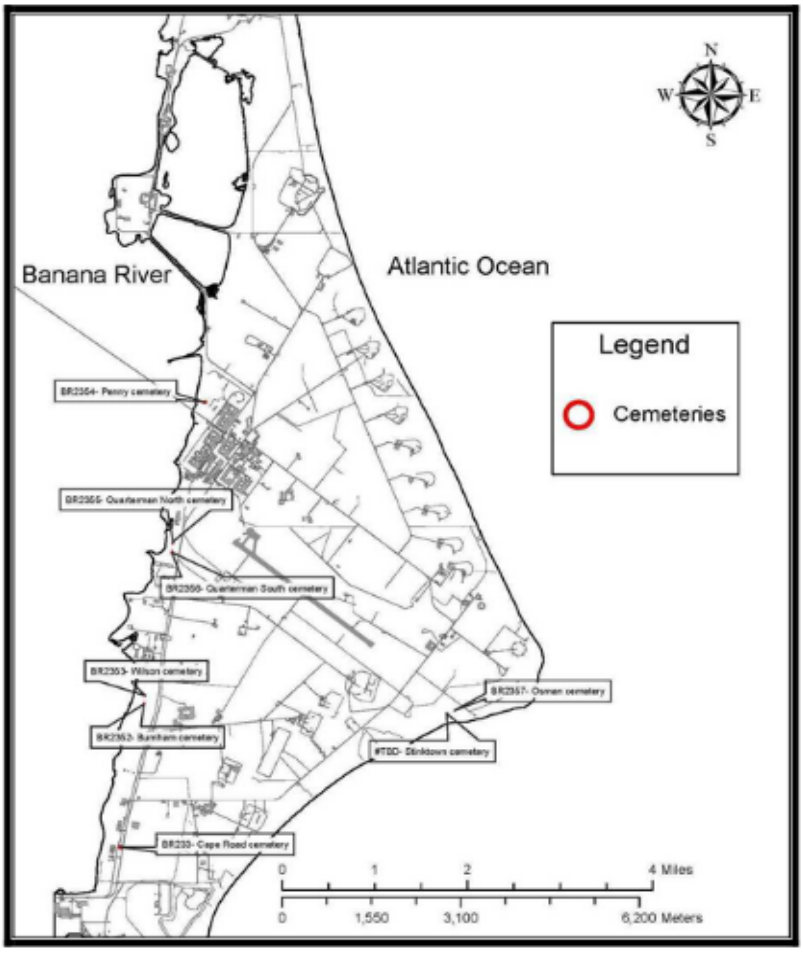

Figure 3: Map of Cape Canaveral Sites with Banana River. (Map courtesy of Mr. Thomas Penders.)

A similar circumstance is seen in the St. John's River area, which is also located near many Ais sites but more inland than the Banana River. In a study conducted by Fradkin (2015:163), the sites Greenfield No. 5 (8DU5541), Greenfield No.9 (8DU5545), and Mallard Cove (8DU1552) in the lower St. John's river are analyzed. The St. John's river also experiences seasonal inundations from freshwater sources, again creating seasonal differences in salinity (Fradkin 2015:161). These sites, in order, were occupied from 2450 to 1650 years BP, 1450 to 1250 years BP, and 1610 and 675 years BP (Mallard Cove seemed to be occupied twice in distinctive time periods), indicating a long pre-Columbian occupation of all sites (Fradkin 2015:163).

The sites studied here consist of oyster shell middens, similar to the shell middens at Penny (Fradkin 2015:163). Fradkin writes about the Greenfield No. 5 site, "Its rather large size and deep shell midden deposits suggest that this site may have been repeatedly used as a campsite for short intervals over a long period of time" (Fradkin 2015:163). As shown earlier, this is exactly what is observed at the Penny site, strengthening the notion that Penny was also an intermittent campsite.

One of the most frequent types of fish found at these sites include the drum fish (Sciaenidae), which is one of the most frequent species we find at Penny (Fradkin 2015:168). This fish is almost completely represented at Penny through their teeth, which are easily distinctive because of their resemblance to human teeth. Fradkin uses data from the Rollins Bird Sanctuary (8DU7410), another pre-Columbian site close to the St. John's River and located in what is now the Timucuan Ecological and Historic Preserve, indicating that the peoples here were the Timucuan tribe, neighbors to the Ais in the North (Fradkin 2015:163). This site indicated a summer collection of Atlantic Croaker, a species of drum fish, based on size and

other biological data, while it also indicated a winter collection of different species of fish found at the site, including menhaden (Fradkin 2015:169). Thus, we see how defining an exact season of occupation can be difficult, and sites may have been occupied year-round or at different points of the year. However, it should be noted that, because the Rollins Bird Sanctuary site indicates of a summer collection of drum fish, a similar summer collection of drum fish from the nearby St. John's river may have been also done at Penny.

Lastly, season of occupation in the St. Joseph's Bay area (located at the Florida panhandle) is discussed by Harke and others (2015). St. Joseph's Bay was home to the pre-Columbian Fort Walton culture (1000 to 5000 AD, roughly correlating with Ais Malabar II), and studies have shown that while the inland peoples were sedentary farmers, the coastal peoples were hunter-gatherers, evidenced by shell midden sites (Harke et. al 2015:98-99). Harke and others (2015:99) reveal that shell middens in the St. Joseph's Bay area largely contain predatory gastropods such as lightning whelks (Busycon sinistrum) and horse conch (Triplofusus giganteus) rather than ordinary shellfish such as clams or oysters. Year-round occupation is suggested due to the fact that lightning whelks are mostly seen in the winter and horse conch in the summer (Harke et. al 2015:99). However, ethnographic studies suggest cooler month occupation of the coast due to the dangers of insects and disease in the hotter months; thus, Harke and others set out to determine season of occupation for the area using data from lightning whelks at the St. Richardson's Hammock site in St. Joseph's Bay (2015:98-99). What the researchers found using stable isotope analysis was that, contrary to the ethnographic and whelk sighting evidence, lightning whelk collection was taking place during the warm half of the year (Harke et. al 2015:106). Here again we see evidence of a spring/summer occupation of coastal sites, indicating a trend for hunter gatherer groups in Florida. Harke and others (2015:106) also

note that work done by White (2002) and White and others (2005) "at the Richardson's Hammock site reveals a high density of postmolds, which are probably the remnants of ephemeral housing or food-processing structures." As aforementioned, the post mold features at Penny may be similar to these housing or food-processing structures reported in this article.

Comparisons

It is clear that Penny is not the only enigmatic coastal hunter gatherer site. Many similar sites are presented by Thompson and Worth (2011). Thompson and Worth (2011:63) cite Claassen (1986) in her work on shellfish collection seasons, where sites on the Florida Gulf Coast seem to exhibit spring to fall collection and sites on the eastern coast of Florida by the Atlantic Ocean exhibit fall to spring collection. Thompson and Worth (2011:64) also cite Russo (1998) and present how he concluded a year-round occupation of Horr's Island in Southwest Florida form shellfish data. The findings of these two authors are in direct conflict with the evidence I have presented above, highlighting the complex nuances in both the archaeological analysis of season of occupation and hunter-gatherer mobility in Florida.

Additionally, Thompson and Worth (2011:65) discuss the "Guale problem." The Guale were a group who lived on the Atlantic coast, and their "problem" entails figuring out if their direct ancestors were semisedentary fishers and farmers or if they were permanently sedentary, full-time agriculturalists (Thompson and Worth 2011:65). Thompson and Worth (2011:65) cite multiple studies surrounding the sites that the Guale inhabited, including studies done by Keene (2004) at Skidaway Island, Georgia and Andrus and Crowe (2008) at St. Catherine's Island, Georgia; all seem to point to year-round occupation for the Guale people. However, Thompson and Worth (2011:65) note that "Until researchers conduct more empirically grounded studies using such techniques as isotopic ratios on a wider variety of sites, such models will fail to

capture exactly how much variability there actually was in Guale mobility." We can see how the "Guale problem" mirrors the complex patterns of mobility exhibited by the Ais Indigenous Group.

Conclusion

From the evidence presented at the Penny site, it is probable that the Ais Indigenous tribe inhabited the site intermittently. Features on top of features likely represent a group that kept coming back to exploit the rich marine resources in the Cape Canaveral area, cooking them and sometimes even using them as tools. However, what is not as easy to discern from the available evidence is when occupation occurred during the year, though multiple studies at other sites relatively close to Cape Canaveral seem to point to a warm season occupation. What is explicit in the literature surrounding seasonality of coastal hunter gatherer sites is that it is challenging to study and that variations in season of occupation are widespread across even an area as small as Southeast Florida. Nonetheless, with advancing technology and advancing archaeological methods, there is no doubt that the reliability and clarity of the results of future studies will help dissipate some of the obscurity surrounding the question of seasonality. As for the Penny Site, it is evident from this paper that it is part of a larger, complex system of habitation for the Ais people all throughout the coast of Florida.

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