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## Historical Significance and Current Mapping Efforts at the NOTU (8BR1641) Archaeological Site

Melissa Stroup  
*University of Central Florida*

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HISTORICAL SIGNIFICANCE AND CURRENT MAPPING EFFORTS AT THE NOTU  
(8BR1641) ARCHAEOLOGICAL SITE

Melissa Stroup

## **Introduction**

The Naval Ordnance Test Unit (NOTU) site, also known as 8BR1641, sits on the boundary of the Cape Canaveral Space Force Station with the Banana River to the west and Port Canaveral to the east. Previous archaeological investigations of the site revealed the presence of significant assemblages of Native American artifactual remains most likely belonging to the Ais tribe and their predecessors; the Ais were known by the Spanish during their colonization of southern Florida, but ethnohistorical records detailing their lifeways and culture are scant, and no known tribal members survive today. Thus, NOTU provides a valuable look into the history of the Ais, of which anthropologists know fairly little.

This work was conducted as part of the Cape Canaveral Archaeological Mitigation Project (CCAMP), a joint effort between local university students and professional archaeologist Thomas Penders to analyze, survey, and excavate archaeological sites in the area that will soon be compromised by human activity, the effects of climate change, and other destructive factors. The goal of CCAMP is to educate future anthropologists by providing hands-on fieldwork activities while also preserving ancient and historic cultural deposits in the Cape Canaveral region.

This report opens with an overview of what is currently known of the Ais' history and culture, followed by an outline of previous investigations carried out at NOTU. These background sections are followed by a summary of a recent mapping project of the NOTU site conducted during the 2022 field season, including a map generated from the data collected by students working at this site. Recommendations and predictions for future projects at the NOTU site are outlined in the final section of this report.

## **The Ais Tribe**

Before exploring past and present archaeological efforts in recovering Native American cultural remains, it is important to establish a basic understanding of the Ais, the indigenous tribe that once populated this region. There is not a robust amount of historical documentation concerning the tribe's culture and history, but some ethnohistorical accounts by European settlers do exist; in these documents, the Ais are often characterized as rough and warlike, and it was not unknown for them to attack outsiders (Penders 2008). However, the Ais were not without compassion; the personal account of Englishman Jonathan Dickinson, one of the most well-known ethnohistorical sources on the Ais, describes how the tribe helped himself and other survivors following a shipwreck off the Florida coast, even when a severe storm struck the area shortly after their arrival (Daniels 2013). It is generally thought that while the Ais, as with other neighboring tribes in central and south Florida, had some contact and tenuous political ties with Spanish leaders, they retained much of their own social and cultural practices, rejecting any conversion efforts by the Europeans (Daniels 2013).

Unlike some of their indigenous neighbors, the Ais were not agriculturalists; rather, their primary subsistence strategy consisted of a mixture of hunting, foraging, and fishing. The lattermost food acquisition strategy appears to have been especially important to this tribe, as two previous archaeological surveys of the NOTU site revealed a significant amount of marine remains connected with Ais cultural activity zones (Deming 1999; Stickler 2006a). According to historical accounts, the Ais had a chiefdom-level society, and their settlements were generally organized into small camps associated with one of approximately four main villages—generally defined as Perucho, Ais, Ulumay, and Guacata—each of which was ruled by a chief, or cacique (Sigler-Eisenberg and Russo 1986). Early reports also note that Ais villages were marked by

shell mounds, and that the inhabitants lived in thatched wooden structures with palmetto leaf roofs (Michell 2018).

Archaeologically, the historic Ais are connected with the peoples of the earlier Malabar period, who share many of their cultural characteristics and likely represent a direct ancestral group to the later Ais. The Malabar culture, spanning from around 1000 BC to AD 1565, is divided into two periods: Malabar I, which spans from 1000 BC to AD 750 and is characterized by plain ceramics sometimes incised with lines or decorated with red slip, and Malabar II, which spans from AD 750 to AD 1565 and is characterized by St. Johns check-stamped ceramics and the eventual inclusion of European items in artifactual assemblages (Penders 2012). A Spanish crew led by Juan Ponce de Leon first made contact with a tribe they identified as the Ais near the end of the Malabar II period in 1513, further supporting the theory that the Malabar are the cultural antecedents to the Ais (Penders 2008).

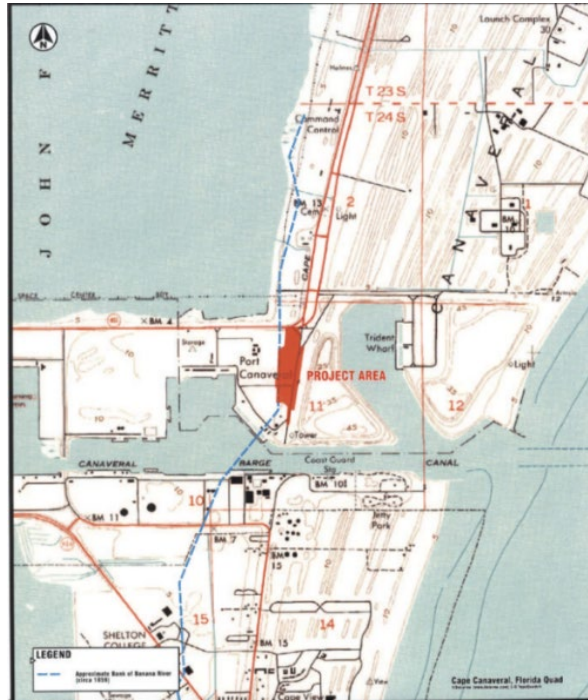
The Ais tribe is no longer in existence today, a fact due in no small part to European contact and its effects. Anthropologists generally agree that multiple factors, including the spread of disease, interpersonal violence, and the slave trade contributed to the demise of the tribe, with the last known member dying in 1783 (Florida State Historic Preservation Office, United States Air Force 2009). Because the Ais are no longer able to share and maintain their culture, it is thus vital for researchers to recover and preserve their artifactual remains to ensure that their history lives on.

### **Previous Investigations at NOTU**

Past archaeological work conducted at NOTU consisted primarily of Phase I and Phase II testing; a 1999 study of the project area by Archaeological Consultants Inc (ACI) involved the

digging of 37 shovel test pits (STPs) and five 1 x 1-meter test units at NOTU. This limited study recovered a great number of artifactual remains at the site, including many pieces of St. Johns, Glades Plain, and Belle Glade Plain ceramics ( $n = 138$ ), many faunal remains belonging to fish, turtles, mammals, and birds, and approximately nine indigenous shell tools made primarily from whelk and horse conch, from the STPs (Deming 1999). The five test units yielded similar data, including additional ceramics, faunal remains, and other artifacts such as bone pins, modified shark teeth, lithic fragments, and so on (Deming 1999).

A second, more extensive investigation of NOTU occurred in 2006, during which a team of researchers from the company PBS&J dug 181 STPs and a single 1 x 2-meter test unit at the site to further explore areas of interest for indigenous artifacts; this project yielded similar remains as the 1999 study, such as faunal remains consisting largely of turtle and fish and large numbers of St. Johns and Glades ceramic fragments (Stickler 2006a). This study also expanded the boundaries of the site by including more land north of the 1999 project area, as seen in Figure 1 below. Figure 2 displays the probable activity areas located by the PBS&J researchers, while Figure 3 displays where positive and negative STPs were found throughout the site (Stickler 2006b).



**Figure 1.** Map of the NOTU project area, taken from the PBS&J survey log (Stickler 2006a).

The findings of the 1999 and 2006 projects support the theory that the Ais focused primarily on marine resources for food acquisition; marine animals were by far the most numerous faunal remains found in these investigations, with approximately 75% of the recovered faunal remains in the 1999 study consisting of bony and cartilaginous fish, and approximately 59% of faunal remains belonging to bony fish, 18.7% to cartilaginous fish, and 13.4% to turtles in the 2006 study (Deming 1999; Stickler 2006a). This artifact assemblage makes sense when considering the Ais' geographic distribution, with their territory bordering multiple major bodies of water—including both the Indian River and Banana River—along Florida's east coast, making fishing a logical food acquisition strategy for this hunter-gatherer group. This data also matches the historical description of the Ais as prolific fishermen by Dickinson, further supporting the idea of marine-based subsistence in the region (Sigler-Eisenberg and Russo 1986).



**Figure 2.** (Left) Two areas at NOTU with high concentrations of artifacts. **Figure 3.** (Right)

NOTU areas of interest with positive and negative STPs marked. Both taken from the PBS&J survey log (Stickler 2006b).

Both projects also assessed NOTU for inclusion in the National Register of Historic Places (NRHP), a status that would ensure protection for the cultural remains found here; past investigators argued that NOTU is eligible for addition to the NRHP based on Criterion C, which states that the site is “among the best examples” of its kind in the area, and Criterion D, which states that the site may yield significant data concerning “chronology/cultural history, environmental change and prehistoric adaptation, subsistence, settlement patterns, and material culture/technology” (Deming 1999: 133). With these factors in mind, they argue that NOTU should be added to the NRHP and preservation efforts should be maintained at the site.

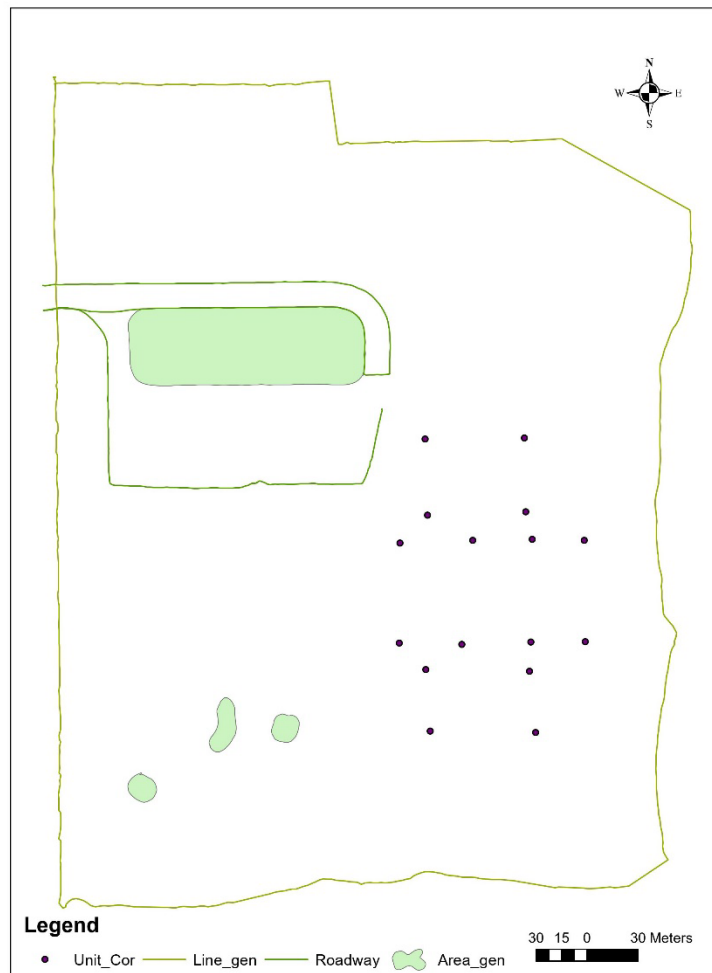
### **Progress in the 2022 Field Season**

The original goal for the 2022 field season was for the entirety of the NOTU site to be accurately mapped using both the Trimble GPS and TopCon Total Station. This work would be done with the intent of aiding future excavation and survey efforts at NOTU, which would take place within and around the transects cut through the wooded area lying within the boundaries of the CCSFS base (see Figures 2 and 3 above). However, there were a number of extenuating circumstances this season that prevented the completion of the initial mapping plans; it took an



extended period of time for those participating in mapping projects to be properly trained with the two pieces of equipment, and there were multiple major equipment malfunctions that stalled progress of the mapping teams once this training had taken place. These factors, in combination with inclement weather and CCSFS activity that prevented fieldwork on certain days throughout the semester, limited site accessibility during the field season.

In spite of these significant setbacks, the Trimble GPS was used to map the western portion of NOTU, which lies outside of the CCSFS base. One of the primary features of this area was a cluster of four buildings: the easternmost building, labelled the Sands Space History Center (Building #90328), the westernmost building, labelled the SpaceX Launch and Landing Control Center (Building #90327), the northernmost building, which was labeled only as Building #90326, and the southernmost building, which was likewise labelled only as Building #90329. The roadway leading into the site, the parking lot, the fence line separating the two halves of NOTU, and three of the major tree islands found at the site were also mapped using the GPS. A preliminary map of this half of the site, generated using the Trimble GPS unit and ArcMap software, can be seen in Figure 4 below.



**Figure 4.** New NOTU site map generated from data collected in the 2022 field season.

Access to the wooded area within the CCSFS base on the eastern side of the fence line was denied due to inadequate proof of security clearance. Unfortunately, an official work permit was not acquired by the end of the field season, and further mapping efforts could not be carried out at NOTU. Thus, the transects cut through the eastern portion of the site could not be mapped using the Trimble GPS, and no data was collected with the Topcon Total Station. Despite this disappointing development in fieldwork at NOTU, there was still some progress made in refining maps of the site with the use of the Trimble unit, which may aid in future survey and excavation projects conducted at this site.

### **Future Work Advisement and Predictions**

Future projects carried out at the NOTU site should begin by mapping in the new transects cut in the wooded area in the eastern portion of NOTU near the end of the 2022 field season. Once these transects are added to existing maps of the site, they can be marked at certain intervals (i.e., every 25 meters, etc) with flagging tape to note where additional STPs should be dug in future investigations. Special attention should be paid to the two portions of the site marked as areas of interest in the 2006 study reported by Stickler (see Figure 3), as these yielded the most artifacts during past studies. Once additional Phase I and II survey takes place at NOTU, larger excavation units may be opened in areas with a high volume of artifacts in the same manner as at the Penny Site (8BR158), another significant Ais site on the CCSFS base.

Based on artifact assemblages collected during past Phase I and Phase II assessments of the NOTU site, it is likely that future studies will uncover similar collections of St. Johns and Glades series ceramics, bone and shell tools and ornaments, and faunal assemblages made up primarily of fish and turtle remains. This site may represent an Ais activity area such as a satellite or base camp, an idea that may be supported by continued investigations here in subsequent seasons.

## **Conclusion**

In sum, the NOTU archaeological site still deserves further study and consideration as a past cultural activity area. Though the site could not be mapped in its entirety using both the Trimble GPS and Topcon Total Station in the 2022 field season, there was still some progress made in adding buildings and other major site features to existing maps of NOTU using the former, which will aid future investigators in assessing the site. Continued efforts should be taken in future field seasons to add the new transects to existing maps and mark out areas at predetermined distances along these transects for additional STPs. It is likely that later survey

and excavation projects will unearth more cultural remains from the Ais and their ancestors, including St. Johns and Malabar I ceramics and evidence for the exploitation of marine resources by these indigenous peoples. This will allow researchers to assess the two potential activity areas uncovered in previous surveys at NOTU, and to make a case for NOTU's inclusion in the NRHP.

### **Acknowledgements**

This research would not have been possible without Dr. Sarah Barber and the University of Central Florida Department of Anthropology, who provided equipment for use in this investigation and expertise in mapping and anthropological studies. We would also like to thank the Cape Canaveral Space Force Station for allowing access to project areas throughout the base, as well as Thomas Penders and the other members of the Cape Canaveral Archaeological Mitigation Project for their valued guidance and support.

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