

Tracing Colonial Spanish Florida through Bioarchaeology

The state of Florida's Native Americans communities experienced a rich, if mostly-forgotten, pre-European history. Following the arrival of the Spanish in 1512, these communities were displaced, ravaged with sickness and infection, and either forced to assimilate or cast away entirely by the European aggressors. The remains they left behind can, however, be analyzed to uncover what exactly happened to them—enriching traditional historical records with lost information. In doing so, a greater picture of life in post-sixteenth century Florida can be imagined and a more thoughtful study can further be conducted concerning the results of the Spanish contact. Using skeletal remains and culturally significant artifacts including burial materials and religious tools, bioarchaeological methodology is useful in filling in the gaps of what exactly the past of the various tribes in Spanish Florida may have looked like both before and after contact with Europeans. The focus of this paper is to provide insight into the health and activities of Native Americans in the time period before, during, and after the Spanish invasion by putting it under the microscope that is biological anthropology.

The history of “La Florida” began when Juan Ponce de Leon sailed in search of the fabled fountain of youth. Initial contact was made in 1512 through 1513 and the land was claimed by the Spanish Monarch, King Ferdinand II.¹ Contact was briefly made with the indigenous people, whom the Spanish deemed to be unfriendly.² Finding no fountain of youth, De Leon and his crew travelled southward to the Central American islands. Spain sent more expeditions in 1516 and 1517, which were met with aggression and forced to retreat.³

In 1514, Ferdinand II dictated instructions to De Leon for the colonization of Florida, aiming to convert the native people to Catholicism and demanding they accept the Spanish colonists and live in peace with them. The Spanish were ordered to only be violent or enslave the

locals if they resisted.⁴ A first attempt at colonization was made in 1521, which was later found to have been unsuccessful, written about years later by Spanish historiographers. The native tribes refused to obey and hence war was waged, one (Spanish) source even describes them as a people “not accustomed to a peaceful existence.” Both Spanish Christians and natives were killed, and Ponce de Leon escaped to nearby Cuba where he succumbed to his wounds.⁵ Several big figures in Spanish exploration played roles in the attempted colonization of La Florida over the course of the next three centuries, including Lucas Vázquez de Ayllón, Pánfilo de Narváez, Álvar Núñez Cabeza de Vaca, and Hernando de Soto, most of which were unsuccessful.⁶ The first successful colony by the Spanish was settled in St. Augustine in 1565 by Pedro Menéndez de Avilés, in close competition with the French who were settling to the north.⁷

In the nineteenth century, Florida became a large sanctuary territory for escaped slaves from the southern U.S., especially in the wake of the war of 1812. Black slaves would escape to join the Seminole tribes, made up of dozens of native groups including the Hitchiti, Coweta, Miccosukee, and dozens more.⁸ The Seminole tribes were originally Creek natives who migrated from Georgia and Alabama in the eighteenth century. Florida tribes later became collectively referred to as Seminoles, which became common vernacular until at least the 1770s.⁹ Provinces were designated as restricted land where Seminole tribes were allowed to reside and were strictly maintained by the Spanish throughout the Georgia, Alabama, and Florida areas.

Along with the original Seminoles were numerous other groups who had been living in Florida for hundreds or even thousands of years. One of the most important of these groups were the Ais, located along the southeastern coast, outside of St. Augustine and the Florida Keys. Shortly after first contact with the Spanish, a war broke out with the Ais, continuing until 1570. Little is known about this tribe prior to European contact, but they were known to have killed

shipwrecked sailors, as well as taken many in. They were a hunter-gatherer tribe whose diet was rich with seafood and local berries.¹⁰

Perhaps the oldest tribe, the Apalachees, have lived in Florida since at least A.D. 1000.¹¹ They were farmers who were well regarded as powerful in the area. Their civilization was comparatively advanced, with a rich culture characterized by strict gender roles associated with hunter-gatherer dichotomy, religion and competitive leisurely activities, and it is estimated their population consisted of at least 50,000 to 60,000 members across multiple villages.¹² Localized to the northwest of Florida, they also commonly built large ceremonial mounds, believed to have been an indicator of social strata where the largest complex would have belonged to the chief. They cultivated local vegetables like beans and squash.

Close by to the Ais lived the Timucua people spread as far as the southeast of Georgia to St. Augustine. Organized as chiefdoms, they fished, hunted, and cultivated farmland as well as created many cultural artifacts and tools such as pottery and arrowheads.¹³ The amount of surviving evidence among Taino tribes varies significantly, but based on linguistic deduction, they originated from the Caribbean and spoke a form of creole derived from an Amazonian language group.¹⁴ Agricultural practice featured crop rotation and a mature economy between the Timucua and Apalachee. Hernando de Soto's expedition relied heavily on the appropriation of the local crops found in north Florida.

The historically colonial regions of Florida hold some of the richest heritage in the nation. The land previously home to just the paleo-Indian tribes collided with European way of life when of Ponce de Leon and the Spanish arrived in the year 1513, creating one of the original melting pots of America. This pot led to a mixing of cultures, traditions, sociopolitical organizations, and physical artifacts of significance between groups. The emergence of creole

groups, the cultures and language to come about due to acculturation between the Spanish and indigenous populations, became one of these greatly studied facets. Other cultural interests include the relationship between gender and indigenous household tools and their level of status within communities.¹⁵

The greatest consequence of first contact between Europeans and natives is was the plethora of new diseases brought to the New World as well as the forced dietary changes that would result from the European's arrival. This has been well-documented historically and medically, with disease being one of the biggest and most easily demonstratable products of post-contact. Ponce de Leon's claim over Cape Canaveral would eventually bring irreparable damages to the demographics of the New World, leading to drastic consequences for surviving populations, including population bottlenecks, changes in work and labor, and unsuccessful adaptations to diet and subsistence strategy. Research that uncovered these events was analyzed through extensive samples of osteological evidence which consisted of pathologies brought by the excavation of several grave sites throughout the Spanish Florida territories and traditional native mortuary sites. This research will analyze several previously researched archaeological sites throughout Florida by focusing on biological remains and burial practices in an attempt to bring light to a history and cultures that are often overlooked.

Research

Under the disciplines of ethnohistory and archaeology, the effects of a change in subsistence are understood to have been caused by the Spanish empire's forcing of maize onto the natives of the New World. Prior to the establishment of missions under the Spanish, communities were found to have mainly relied on a diet and nutrition pattern consisting of many

different species of wild plants and animals, with exceptions for domesticated plants in local areas. Many coastal regions took in an especially high intake of marine-based food.¹⁶

In native communities, maize did not play an important role in their daily nutrition. However, when European-controlled settlements appeared, records indicate a varied diet which now incorporated a high dependence on maize in the Apalachee province and the fresh adoption of the plant in the Timucua province.¹⁷ When this change took place, it led to health disruptions in dentition and within bone, which now present in osteological signs such as dental caries and porotic hyperostosis due to iron deficiency. According to analyses of earlier skeletal records, the presence of these pathologies along with cribra orbitalia, lesions localized to the orbital roof of the frontal bone and another indicator of iron deficiency, was well under 10 percent in prehistorical periods.¹⁸ This severe decline eventually culminated in a shattering statistic of about 73 percent of late mission era juveniles on Amelia Island presenting cribra orbitalia and 50 percent of juveniles presenting porotic hyperostosis.¹⁹ Porotic hyperostosis and cribra orbitalia are uncommon in modern medical literature and modern populations but seen often in bioarchaeological findings and are commonly thought to be representative of severe iron-deficiency anemia, particularly in childhood.²⁰ One 2020 study conducted on a contemporary mortality sample from New Mexico using 461 juvenile individuals found that the two conditions are more likely to be seen in those with signs of respiratory infection, indicating a higher mortality rate, and that cribra orbitalia has a greater correlation with heart conditions.²¹

The struggle to biologically adapt to a new diet was only exacerbated by an increase in labor under the repartimiento draft labor system, which is reflected by a dramatic increase in osteoarthritis, a degenerative bone disease that wears down the connective tissue of the joints leading to worsening pain over time. This system allowed the Spanish to freely recruit any

indigenous persons to carry out forced labor. The presence of degenerative joint symptoms is especially pronounced in the vertebral column in samples of the cervical, thoracic, and lumbar vertebrae as well as in the shoulder, hip, wrist, and hand joints.²² This documentation is based on remains found on Amelia Island from the late mission era, most likely native adult male individuals which were recruited for intensive labor projects. Under this draft system, adult males could be recruited to make long distance trips carrying heavy materials which put massive strain on weight-bearing joints like those that were found showing signs of osteoarthritis. This context adds a window for relatability to individual remains and creates perspective into the lives of these marginalized communities.

Population decline as a result of epidemic disease is another important aspect of the history of European conquest of North America, exemplified by the introduction of Old-World pathogens—such as smallpox and measles—wreaking havoc on small, vulnerable societies. Scholars overwhelmingly agree that the arrival of the Europeans had immensely negative impacts on the health and well-being of native populations, in some cases even resulting in the full extinction of whole communities. This is consistent with an apparent bottleneck effect evident from the extreme decline in genetic variability among the surviving generations, which was also followed by population size declines and an increase in intergroup migration.²³ Specific pathology representing tuberculosis and treponematosi s has been recorded largely from the Irene Mound site, a ceremonial center from the Mississippian territory of West Spanish Florida. Cranial lesions characteristic of treponematosi s can indicate the spread of numerous infectious diseases such as syphilis, yaws, and pinta. The latter two diseases are tropical infections spread by close skin-to-skin contact requiring trauma or broken skin, with yaws being native to humid equatorial regions and pinta to the populations of Mexico, and Central and South America.²⁴

Various periosteal reactions of indeterminate infection or trauma have also been recorded by bioarchaeologists in the region.

In a case study of a burial mound discovered in Weeki Wachee, a coastal bay area just north of Tampa, a total of eighty-four individuals were discovered.²⁵ Periosteal reactions were present in eleven, which may have been caused by multiple factors including infection, trauma, or other irritations. This was found mostly among tibiae, of which 16 percent held evidence of unspecific periosteal reaction. Two individuals were found to be diagnosed with osteomyelitis affecting multiple elements in chronic forms of the disease. Another twelve individuals had dentitions that met criteria for hypoplasia analysis, a general sign of metabolic disruption, nutritional deficiency, or disease. These dentitions were further discovered to be consistent with the expected lesions of a maize-dependent diet, matching with the earlier study which showed other skeletal consequences for this forced variation. Through this data, the individuals among the site clearly trended toward a general decline in health with the adoption of Spanish agriculture and maize subsistence, but this decline can be more strongly correlated to the increase in diseases brought to them as seen through the various osteological symptoms.

Conversely, only one individual from the Weeki Wachee Mound site was found exhibiting skeletal trauma.²⁶ This reveals that the prevalence of violence or accident within this community was kept relatively low, and that this group may not have experienced a high level of warfare from outside the community prior to Spanish first contact. Based on this finding, it can be suggested that at least the native peoples of the Weeki Wachee area were on peaceful terms with their missionary Spanish visitors at the time of these individual's passings, which were estimated to be between the years A.D. 1525-1550. While the historical record shows that the Spaniards were not aiming to engage in violent activities unless deemed necessary, this is still

significant given its context and time period.²⁷ This context implies that the individual was likely either female or a juvenile at the time of Spain's continued colonization efforts.

Mortuary practice among Native American villages appeared to experience a significant shift after European contact. Before first contact, native mortuary practices were highly diverse, ranging from a simple village burial to multiple burials in the form of complex multistage mounds.²⁸ Burial mounds as a traditional practice date back to the Archaic Age in peninsular Florida, and underwent evolutions according to environmental changes. Prior to European arrival, mortuary practice had undergone transformation from shell burials to sand burials with spaces being occupied by several individuals at once, and placed with material artifacts associated with the dead. Even before that, southeastern archaeology finds that pond burials were tradition to some, though few have seen serious research.²⁹ Of course, due to the impact of new Christian ideals, these practices were bound to change again when beliefs regarding the deceased changed with them. Early traditional-style mound burials were soon replaced with European-style church burial in shallow pits, usually with no inclusions placed with the dead. Certain missions, however, did apparently allow these inclusions of material culture such as on St. Catherines Island and in modern Leon County, Florida.³⁰

Several Franciscan sites of the late sixteenth-century have been found throughout Florida. What is thought of to be the first was found in St. Augustine, being a site on the grounds of the Fountain of Youth Park, which was excavated in 1934 after workers planting trees discovered human skeletons from the three-hundred-year-old mission church, thought to be of origin from a Christian Timucuan settlement. Among 112 burials in total, archaeologist Roy Dickson found twenty-six cases of multiple remains left in one burial throughout all of what had been found of the first Franciscan missions to Florida.³¹ Mixed between adult and children, this pit is thought to

represent a family and even one that was completely killed off through an epidemic disease. This would line up with the widespread reports of infectious diseases throughout native populations at this time. Non-Christian burial practices were found to have been incorporated at native settlements by the use of bundle or flex burials and, in some, the burial of an adult accompanied by a separate disarticulated skull.

Other varieties of grave goods or inclusions include a remarkable amount of glass beads, religious medallions, metal ornaments, and other Native American ritual objects.³² This was all found at the singular mission site of Santa Catalina de Guale, a grave that has been the center of decades long excavations due to its massive size and elaborate array of material artifacts. Reportedly more than 400 native bodies were discovered dating back to two separate mission occupations, one of late sixteenth-century with a short gap in between, picking back up in the early seventeenth-century.³³ The wealth of knowledge from these sites alone proves how much there still is to learn from the study of bioarchaeology in regions of aboriginal significance.

Another site of osteological interest is the small Nebot excavation found in Palm Beach, Florida within the ecosystem of the Circum-Glades region.³⁴ The site lies 100 meters west of the beachline of the Atlantic coast on the ridge of a sand dune four meters above sea level. Two female skeletal individuals were found, one estimated to be aged 16-17(BU1) and one 35-39(BU2). Their time period is estimated to be from the Archaic Period or even earlier. Thinking of health, caries was found in both mandibular third molars as well as an advanced alveolar abscess in the younger individual, while BU2 was interestingly found with no caries but one lesion, an abscess and considerable tartar accumulation. Tooth wear was little to none in the BU1 while the BU2 showed extensive dental erosion. Interestingly, one third molar of the BU2 was totally absent, signifying either an early sign of agenesis or manual extraction. Nebot individuals

were analyzed to exhibit larger teeth in comparison to specimens found from Highland Beach and smaller than those found in Bayshore Homes from the west coast.

In terms of pathology, BU2, whose age was estimated as being between 35-39, was the only individual from the small site to show signs of disease. The beginning of degenerative arthritis was found, as well as osteophytic extensions, bony spurs, and lipping around the auricular surfaces of both patellae. Meanwhile, even though BU1 lacked specific pathology, their long bone diameters were found to be significantly smaller than expected, indicating some form of nutritional deficiency. In comparison to remains found around other areas of Florida, these individuals were relatively healthy, with minor periosteal swelling and minimal but not uncommon signs of arthritis. Signs of dental caries is thought to represent a shift in subsistence from hunter-gathering to a diet which includes and depends on agriculture.

BU1 and BU2 were also found to be buried in possession of various artifacts which were crafted from animal bone.³⁵ Most bones are thought to be used from white-tailed deer, while there were also shark teeth and marine shell fragments included. One artifact was a projectile point, which is especially interesting given the two individuals were female and hunting as opposed to gathering is assumed to have been a male activity. It may have been a ceremonial item used in mortuary ritual, or additionally it might be viewed as a sacred heirloom from their community. The artifacts also show unique motifs and other symbols found predominantly in northern Florida.³⁶ These bone artifacts are found to differ from those found among other Florida sites and the pathology found at Nebot as well as these primitive tools have added significant data to what was previously known about native pre-Spanish history.

Discussion

Shifting diets due to the introduction of new agriculture and insistence by the Spanish to permanently undergo this shift was definitively one of the biggest results of post-contact colonial Florida, also known as La Florida. The wealth of evidence presented in literature on this topic cements the importance of bioarchaeological analysis, creating a record of Native American lifestyle that can seldom be found in other disciplines. The European's believed significance and forced assimilation to the consumption of maize was a direct contributor to the widespread decline in health among several communities across Spanish Florida territory. Iron deficiency and dental caries found from the remains at Amelia Island and Weeki Wachee prove this conclusion, and the relative health of the individuals from the Nebot site provide an opportunity for biological comparison.

Pathology from infectious disease, of course, is another detrimental effect of post-contact. Porotic hyperostosis being the most commonly found health indicator also came alongside general periosteal reactions, which represent anything from smallpox to tuberculosis. Evidence of some diseases causing widespread community extinction was found as well as bottleneck effects that might have taken place. Arthritis and other forms of lesions were found in several remains between all three sites. It was also found that skeletal trauma born from violence was not common, whether it be from within a singular community unit or between the natives and outside forces. Surprisingly little evidence of violence was found among any archaeological sites throughout Florida, indicating societies held together by pacifistic ideals.

Material culture and mortuary practice also became a large focus of these findings, as it naturally comes along with the excavation of skeletal remains. Many different indicators of culture were found between the burial inclusions uncovered at the Fountain of Youth Park in St

Augustine or the osteological hunter-gatherer artifacts alongside the Nebot individuals. These inclusions provide generous insight into the cultural importance people may have shown towards the dead or death as a concept by the burying of such elaborate ornaments as religious medallions and other valuables. A better picture of who these First Peoples were and what was important to them is determined through these discoveries.

The bioarchaeological record of the greater Spanish Florida territory is essential for understanding the history of those who lived before the explosion of European colonialism. Aspects of lifestyle such as diet, views on death, and burial importance as well as what disease looked like within closed communities before outsiders brought new threats can all be found through the careful excavation and analyses of ancient sites like the ones discussed above. These all give individualized stories and a new color to what can be understood of life in America prior to the sixteenth century that cannot be told through historical records and literature alone. This demonstrates how important it is for further research to be conducted and for the field to grow and popularize in the coming years, as imagining what more could still be discovered is an exciting thought. The osteological record of Florida and its aboriginal communities should be of paramount research interest for local archaeological opportunities, based on this small amount of literature alone.

ENDNOTES

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