

2013

The Historical Archaeology of Seventeenth-Century La Florida

Bonnie G. McEwan



Part of the [American Studies Commons](#), and the [United States History Commons](#)

Find similar works at: <https://stars.library.ucf.edu/fhq>

University of Central Florida Libraries <http://library.ucf.edu>

This Article is brought to you for free and open access by STARS. It has been accepted for inclusion in Florida Historical Quarterly by an authorized editor of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

McEwan, Bonnie G. (2013) "The Historical Archaeology of Seventeenth-Century La Florida," *Florida Historical Quarterly*. Vol. 92: No. 3, Article 6.

Available at: <https://stars.library.ucf.edu/fhq/vol92/iss3/6>

The Historical Archaeology of Seventeenth-Century La Florida

by Bonnie G. McEwan

At the beginning of the seventeenth century, St. Augustine was still recovering from Francis Drake's 1586 raid during which the town and fields were ravaged.¹ Officials were also evaluating the fallout from the 1597 Guale Rebellion during which four of the five friars working among the native peoples were killed,² and rebuilding the town following a devastating fire in 1599. If not for St. Augustine's strategic location and perceived progress in the religious conversion of natives, Florida might well have been abandoned at the turn of the century.³ As it turned out, the next century would be the period of Spain's most extensive presence in La Florida.

This essay is intended to highlight some of the most significant archaeological research relevant to this period and direct readers to the pertinent literature. These studies cover a broad range of

Bonnie G. McEwan is the Director of Research at Mission San Luis in Tallahassee, Florida. She is the author of *The Spanish Missions of La Florida* (1993) and *Indians of the Greater Southeast: Historical Archaeology and Ethnohistory* (2003).

- 1 James W. Covington, "Drake Destroys St. Augustine," *Florida Historical Quarterly* 44, nos. 1-2 (July 1965): 81-93.
- 2 Amy Turner Bushnell, *Situado and Sabana: Spain's Support System for the Presidio and Mission Provinces of Florida* (New York: American Museum of Natural History Anthropological Papers 74, 1994), 65-66; See also J. Michael Francis and Kathleen M. Kole, *Murder and Martyrdom in Spanish Florida: Don Juan and the Guale Uprising of 1597* (New York: American Museum of Natural History Anthropological Papers 95, 2011).
- 3 See also Charles Arnade, *Florida on Trial* (Coral Gables, FL: University of Miami Institute of Hispanic Studies Publications, 1959).

topics from the details of daily existence to the physical impacts of missionization on native populations and, together with the documentary record, reveal compelling insights into the people and communities of Spanish Florida.

The Missions

Throughout the seventeenth century, St. Augustine remained a garrison town ruled by a military governor. Missionaries, rather than soldiers or settlers, were used to secure the hinterland provinces in support of the capital. The anchor for the Franciscan mission effort was La Inmaculada Concepción, often referred to today as the Convento de San Francisco. Although there are no known plans of the sixteenth-century Franciscan headquarters in St. Augustine, it apparently consisted of a church and friary (*convento*), both made of red cedar logs and planks with thatched roofs.⁴ This site is of singular importance since it served both as a retreat for ill and/or aged friars as well as the training ground for missionaries. Kathleen Hoffman conducted excavations at the Convento de San Francisco providing important insights into this center of mission activity, some of which will be discussed below.

The first *doctrina* (a principal mission with a resident friar who typically served several outlying satellite villages or *visitas*) was among the first missions identified archaeologically. In 1934, Mayor Walter B. Frasier found human remains on his property at the Fountain of Youth Park. He contacted the Smithsonian Institution and archaeologist J. Ray Dickson was sent to investigate what would turn out to be the cemetery associated with Nombre

4 Kathleen Hoffman, "Archaeological Excavation at the Florida National Guard Headquarters (Site SA-42A), St. Augustine, Florida" (Project report on file, Florida Museum of Natural History, Gainesville, 1990). See also Kathleen Hoffman, "The Development of a Cultural Identity in Colonial America: The Spanish-American Experience in La Florida" (PhD diss., University of Florida, 1994); Kathleen Hoffman, "The Material Culture of Seventeenth-Century St. Augustine," *El Escrivano* 32(1995): 91-112; Kathleen Hoffman, "Cultural Development in *La Florida*," *Historical Archaeology* 31, no. 1 (1997): 24-35; Kathleen A. Hoffman, "The Archaeology of the Convento de San Francisco," in *The Spanish Missions of La Florida*, ed. Bonnie G. McEwan (Gainesville: University Press of Florida, 1993), 62-86.

de Dios.⁵ This excavation provided the first archaeological glimpse of Christianized Native Americans in Spanish Florida. With few exceptions, the bodies were placed in a recumbent position in individual grave pits. Most of the burials were oriented in the same direction with their feet toward the east; their arms were folded on their chests. They were interred with a modest number of Spanish and native artifacts, including shell and glass beads. In years to come, these features would become highly recognizable traits to mission archaeologists.

After the *doctrina* of Nombre de Dios was established sometime around 1587 (prior to this time the Christianized natives attended Mass in St. Augustine),⁶ friars extended their reach northward along the coastal mainland and barrier islands. San Juan del Puerto was established on Fort George Island at the mouth of the St. Johns River. In close proximity to St. Augustine, San Juan had the distinction of being the only Mocama or Guale mission that was never relocated during the tumultuous seventeenth century.⁷ It was first investigated by John W. Griffin in 1951, and has continued to be studied periodically.⁸ Some of the earliest investigations of coastal missions located north of San Juan del Puerto were conducted by

5 Dickson's excavations of the cemetery were originally reported by Lillian Seaberg in, "Report on the Indian Site at the 'Fountain of Youth, St. Augustine,'" in *Spanish Borderlands Sourcebooks 25: America's Ancient City Spanish St. Augustine, 1565-1763*, ed. Kathleen Deagan (New York: Garland Publishing, 1991), 209-278.

6 John H. Hann, *Summary Guide to the Spanish Florida Missions and Visitas, with Churches in the Sixteenth and Seventeenth Centuries* (Washington, DC: Academy of American Franciscan History, 1990), 11.

7 John E. Worth, *The Struggle for the Georgia Coast: An Eighteenth Century Spanish Perspective on Guale and Mocama* (New York: American Museum of Natural History Anthropological Papers 75, 1995), 198-199.

8 John W. Griffin, "Preliminary Papers on the Site of the Mission of San Juan Del Puerto, Fort George Island, Florida," *Papers of the Jacksonville Historical Society* 4 (1960):63-66; Martin Dickinson, "Delineating a Site Through Limited Research: the Mission of San Juan Del Puerto (8DU53), Fort George Island, Florida," *Florida Anthropologist* 42, no. 4 (1989): 396-409. An examination of the pottery was conducted by Judith MacMurray in "The Definition of the Ceramic Complex at San Juan del Puerto" (MA thesis, University of Florida, 1973). More recent studies have been undertaken by James Davidson and Rebecca Douberly of the University of Florida.

Lewis H. Larson, Joseph R. Caldwell, and Sheila Kelly Caldwell.⁹ Guale and Mocama area missions that have been studied in recent years include Santa María de Yamassee and the relocated Santa Catalina de Guale on Amelia Island,¹⁰ San Pedro de Tacatacuru on Cumberland Island,¹¹ San Buenaventura de Guadalquini on St. Simon's Island and its relocated settlement of Santa Cruz y San Buenaventura de Guadalquini on Black Hammock Island in north Florida,¹² Mission Santo Domingo de Talaje at Darien Bluff,¹³ San Joseph de Sapala on Sapelo Island,¹⁴ and the original Santa Catalina de Guale on St. Catherines Island.¹⁵

-
- 9 See, for example, Lewis H. Larson, "Historic Guale Indians on the Georgia Coast and the Impact of the Spanish Mission Effort," in *Tacachale: Essays on the Indians of Florida and Southeastern Georgia during the Historic Period*, ed. Jerald T. Milanich and Samuel Proctor (Gainesville: University Press of Florida, 1978), 120-140; Lewis H. Larson, "The Spanish on Sapelo," in *Sapelo Papers: Researches in the History and Prehistory of Sapelo Island, Georgia*, ed. Daniel P. Juengst (Carrollton: West Georgia College Studies in the Social Sciences 19, 1980), 35-45; Joseph R. Caldwell, "Cultural Relations of Four Indian Sites on the Georgia Coast" (MA thesis, University of Chicago, 1943); Sheila K. Caldwell, "A Spanish Mission Site near Darien," *Early Georgia* 1(1954): 13-17; Sheila K. Caldwell, "Excavations at a Spanish Mission Site in Georgia," *Southeastern Archaeological Conference Newsletter* 3(1953): 31-32.
- 10 See Rebecca Saunders, *Excavations at 8NA41: Two Mission Period Sites on Amelia Island, Florida* (Gainesville: Florida State Museum Miscellaneous Project Report Series No. 35, 1988); Jerald T. Milanich and Rebecca Saunders, *The Spanish Castillo and the Franciscan Doctrina of Santa Catalina, at Santa Maria, Amelia Island, Florida (8-NA-41)* (Gainesville: Florida State Museum Miscellaneous Project Report Series 20, 1986).
- 11 Jerald T. Milanich, "Tacatacuru and the San Pedro de Mocama Mission," *Florida Historical Quarterly* 50, no. 3 (January 1972): 283-291; Jerald T. Milanich, "Surface Information from the Presumed Site of the San Pedro de Mocama Mission," *Conference on Historic Site Archaeology Papers* 9 (1975): 94-96.
- 12 Keith H. Ashley, Vicki L. Rolland, and Robert Thunen, "Missions San Buenaventura and Santa Cruz de Guadalquini: Retreat from the Georgia Coast," in *Life among the Tides: Recent Archaeology on the Georgia Bight*, ed. Victor D. Thompson and David Hurst Thomas (New York: American Museum of Natural History Anthropological Papers No. 98, 2013), 395-422.
- 13 Richard W. Jefferies has been re-examining the Santo Domingo de Talaje excavations conducted by Joseph Caldwell, Shelia K. Caldwell, and William Kelso (personal communication, 2013). See also William M. Kelso, *Excavations at Fort King George Historical Site, Darien, Georgia: The 1967 Survey* (Atlanta: Georgia Historical Commission Archaeological Research Series No. 1, 1968); Joseph R. Caldwell, "Cultural Relations"; Caldwell, "A Spanish Mission Site near Darien"; Caldwell, "Excavations at a Spanish Mission Site in Georgia."
- 14 Richard W. Jefferies and Christopher R. Moore, "Mission San Joseph de Sapala," in *Life among the Tides*, 345-374.
- 15 David Hurst Thomas, *The History and Archaeology of Mission Santa Catalina de Guale: 1. Search and Discovery* (New York: American Museum of Natural History

John M. Goggin of the University of Florida was the first to investigate many coastal and interior Timucuan mission-era sites, and did so with a broad Spanish Borderlands perspective. Although a Florida native, Goggin studied in the Southwest and also worked in Mexico. Additionally, he was the curator of the Coronado National Monument in New Mexico from 1941 to 1942.¹⁶ His early exposure to Spanish colonial architecture, material culture, and missionized Indian cultures fueled his decades-long study of Spanish colonial sites in Florida and the Caribbean. These investigations also provided the raw data necessary for Goggin to develop his majolica and olive jar typologies and chronologies.¹⁷ In addition to his research in St. Augustine at Nombre de Dios and the Castillo de San Marcos,¹⁸ Goggin worked at a number of interior sites including the mission of San Martín de Ayacuto (at the time believed to be Santa Catalina de Ajohica), popularly known as Fig Springs. Located in Ichetucknee Springs State Park, Goggin recovered over 4,000 artifacts from the mission's refuse area near the spring head. He also used this site to assign many of the now popular majolica type names including Fig Springs Polychrome, Ichetucknee [sic] Blue on White, and Columbia Plain (for Columbia County, Florida). As a graduate student, Kathleen Deagan analyzed Goggin's extensive Fig Springs assemblage to assess the impact of missionization on the then poorly-understood interior Timucua.¹⁹ At the time she noted, "The appearance of the

Anthropological Papers 63, part 2, 1987); David Hurst Thomas, *Native American Landscapes of St. Catherines Island, Georgia*, 3 vols. (New York: American Museum of Natural History Anthropological Papers 88, 2008).

- 16 For a comprehensive account of John Goggin's life and work, see Brent Richards Weisman, *Pioneer in Space and Time: John Mann Goggin and the Development of Florida Archaeology* (Gainesville: University Press of Florida, 2002).
- 17 John M. Goggin, *The Spanish Olive Jar: An Introductory Study* (New Haven: Yale University Publications in Anthropology 62, 1960); John M. Goggin, *Spanish Majolica in the New World* (New Haven: Yale University Publications in Anthropology 72, 1968).
- 18 Goggin's work at Nombre de Dios is reported in Lillian Seaberg "Report on the Indian Site at the "Fountain of Youth Park," in *Spanish Borderlands Sourcebooks*. His investigations at the Castillo are published in J.C. Harrington, Albert Manucy and John M. Goggin, "Archaeological Excavations in the Courtyard of the Castillo de San Marcos." *Florida Historical Quarterly* 34, no. 1 (July 1955): 101-141.
- 19 Kathleen Deagan, "Fig Springs: The Mid-Seventeenth Century in North-Central Florida," *Historical Archaeology* 6 (1972):23-46.

Leon-Jefferson period in Florida suggests a pan-Indian response to a new set of interaction patterns with both Europeans and other aboriginal groups."²⁰

The terrestrial portion of the Fig Springs site was eventually identified by Kenneth Johnson in 1986.²¹ In the late 1980s and early 1990s, Brent Weisman conducted extensive excavations at San Martín and identified the religious complex (including the cemetery), along with an aboriginal structure and midden.²² Subsequent work was undertaken by Jerald T. Milanich, Lisa M. Hoshower, and Rebecca Saunders.²³ In fact, most of the recent archaeological research on interior Timucuan missions has been conducted by Milanich and his students.²⁴ These sites include the probable Potano mission of San Buenaventura (also known as the

20 Ibid., 42.

21 Kenneth W. Johnson, *The Search for Aquacaleyquen and Cali: Archaeological Survey of Portions of Alachua, Bradford, Citrus, Clay, Columbia, Marion, Sumter, and Union Counties, Florida* (Gainesville: Florida State Museum Miscellaneous Project Report 33, 1987); Kenneth W. Johnson, "The Discovery of a Seventeenth-Century Spanish Mission in Ichetucknee State Park, 1986," *Florida Journal of Anthropology* 15 (1990): 39-46.

22 Brent Richards Weisman, *Excavations on the Franciscan Frontier: Archaeology at the Fig Springs Mission* (Gainesville: University of Florida Press, 1992). See also Brent R. Weisman, *1988 Excavations at Fig Springs, (8CO1):Season 1, January-July 1988* (Tallahassee: Florida Archaeological Reports 11, 1988); Brent R. Weisman, *1988 Excavations at Fig Springs (8CO1), Season 2, July-December, 1988* (Tallahassee: Florida Archaeological Reports, 1988); Brent R. Weisman, "Archaeology of Fig Springs Mission, Ichetucknee Springs State Park," in *Spanish Missions of La Florida, 165-192*; John E. Worth, "Archaeology in the Timucua Mission Province: 1990 Excavations at Fig Springs (8CO1), South End Village, Preliminary Report," Paper presented at the annual meeting of the Southeastern Archaeological Conference, Mobile, AL., 1990.

23 Lisa M. Hoshower and Jerald T. Milanich, "Excavations in the Fig Springs Mission Burial Area" in *Spanish Missions of La Florida*, 217-243; Lisa M. Hoshower, "Bioanthropological Analysis of a Seventeenth-Century Native American-Spanish Mission Population: Biocultural Impacts on the Northern Utina" (PhD diss., University of Florida, 1992); Lisa Hoshower, *1990 Excavations in the Fig Springs Mission Burial Area, Florida (8CO1)* (Gainesville: Florida Museum of Natural History, 1990); Rebecca Saunders, "Mission Period Settlement Structure: A Test of the Model at San Martín de Timucua," *Historical Archaeology* 30 (1996): 24-36.

24 For comprehensive overviews of this work, see Jerald T. Milanich, *Laboring in the Fields of the Lord* (Washington, DC: Smithsonian Institution Press, 1999); Jerald T. Milanich, *The Timucua* (Oxford: Blackwell Publishers, 1996); Jerald T. Milanich, *Florida Indians and the Invasion from Europe* (Gainesville: University Press of Florida, 1995).

Richardson site),²⁵ San Juan de Guacara I (Baptizing Spring),²⁶ Santa Fé de Toloca,²⁷ Santa Cruz de Tarihica,²⁸ and Santa Cruz de Cachipile in south central Georgia.²⁹ Other seventeenth-century Timucuan sites studied include San Francisco de Potano,³⁰ San Juan de Guacara II,³¹ San Antonio de Enacape,³² the La Chua hacienda³³ and the associated Zetrouer site.³⁴ Earlier this year,

-
- 25 Jerald T. Milanich, "Excavations at the Richardson Site, Alachua County, Florida: An Early 17th Century Potano Indian Village (with notes on Potano culture change)," (Tallahassee: Bureau of Historic Sites and Properties Bulletin No. 2, 1972):35-61. Recent work has been undertaken by Willet Boyer, "The Route of Hernando de Soto in North Central Florida: Marion and Alachua Contact/Mission Sites," Paper presented at the annual meeting of the Southeastern Archaeological Conference, Tampa, 2013.
- 26 Lana Jill Loucks, "Political and Economic Interactions between Spaniards and Indians: Archeological and Ethnohistorical Perspectives of the Mission System in Florida" (PhD diss., University of Florida, 1979); L. Jill Loucks, "Spanish-Indian Interaction on the Florida Missions: The Archaeology of Baptizing Spring," in *Spanish Missions of La Florida*, 193-216.
- 27 Jerald T. Milanich and Kenneth W. Johnson, *Santa Fé: A Name Out of Time* (Gainesville: Florida Museum of Natural History Miscellaneous Project Report Number 41, 1989); Kenneth W. Johnson, "Mission Santa Fé de Toloca," in *The Spanish Missions of La Florida*, 141-164.
- 28 Kenneth W. Johnson, "The Utina and the Potano Peoples of Northern Florida: Changing Settlement Systems in the Spanish Colonial Period" (PhD diss., University of Florida, 1991).
- 29 Marvin T. Smith and Eric Marks, "Timucuan Mission Ceramics of South Central Georgia," Paper presented at the annual meeting of the Southeastern Archaeological Conference, Biloxi, Mississippi, 2002.
- 30 Martha I. Symes and M.E. Stephens, "A272: The Fox Pond Site," *The Florida Anthropologist* 18 (1965): 65-76. More recent work has been conducted at San Francisco de Potano by Kathleen Deagan and Gifford Waters. See Delene Beeland, "Old Spanish Mission Found near Gainesville," *Natural History* 116, no. 1 (2007), 62.
- 31 San Juan de Guacara II (8SU23) was identified by B. Calvin Jones in 1971, Florida Master Site File, Tallahassee. Lists of areas identified and artifacts collected by Jones are reported in B. Calvin Jones, "Test Excavation of San Pedro de Potohiriba: A 17th Century Spanish- Yustaga Indian Mission Site (8MD30) in Madison County, Florida" *Florida Archaeological Reports* 37 (1998): Appendix 1, 82-83.
- 32 San Antonio de Enacape was identified at the well-known prehistoric site of Mount Royal (8PU35) reported in B. Calvin Jones and Louis D. Tesar, "1983-1995 Survey, Salvage and Mitigation of Archaeological Resources within the Mount Royal Site (8PU35) Village Area, Putnam County, Florida." Report on file, Florida Bureau of Archaeological Research, Tallahassee, 2001.
- 33 Henry A. Baker, "Spanish Ranching and the Alachua Sink Site: A Preliminary Report," *The Florida Anthropologist* 46, no. 2 (1993): 82-100.
- 34 John M. Goggin, M.E. Godwin, E. Hester, D. Prange, and R. Spangenberg, "An Historic Indian Burial, Alachua County, Florida," *The Florida Anthropologist* 2 (1949): 10-24; Lillian M. Seaberg, "The Zetrouer Site: Indian and Spanish in Central Florida" (MA thesis, University of Florida, 1955).

Robin Moore identified the mission church and a fortified fence line at the important settlement of San Diego de Salamatoto on the east bank of the St. Johns River.³⁵

Research in Apalachee Province began in earnest following World War II. Two of Florida's native sons, John W. Griffin and Hale G. Smith, were working for the Archaeological Survey of the Florida Park Service in Tallahassee and were explicitly interested in exploring culture change on contact sites. They found a kindred spirit in retired epidemiologist and avocational historian Mark F. Boyd who had recently published papers on Fort San Marcos de Apalachee and the Florida missions.³⁶ In 1947-1948, Smith worked at the Scott Miller site (La Concepción de Ayubale) in Jefferson County, and Griffin investigated the fort at San Luis de Talimali (hereafter San Luis) in Leon County.³⁷ Their combined efforts represented early problem-oriented archaeology and resulted in one of the first long-term collaborations between archaeologists and a historian.³⁸ Griffin and Smith's findings from the two sites were remarkably similar and enabled them to establish baseline attributes of mission complexes that included burned whitewashed clay (from wattle and daub buildings), and a range of common Hispanic materials including olive jar, majolica, beads and iron hardware from otherwise indigenous assemblages.³⁹ They also observed the same transformation and/or replacement of traditional native ceramic types in the Tallahassee area that had previously been observed in St. Augustine.⁴⁰

35 Robin E. Moore, personal communication, September 2013.

36 Mark F. Boyd "The Fortifications at San Marcos de Apalachee," *Quarterly Periodical of the Florida Historical Society* 15, no. 1 (1936): 3-34; Mark F. Boyd, "Spanish Mission Sites in Florida," *Florida Historical Quarterly* 17, no. 4 (1939): 254-280.

37 Hale G. Smith, "A Spanish Mission Site in Jefferson County, Florida," in *Here They Once Stood: The Tragic End of the Apalachee Missions*, ed. Mark F. Boyd, Hale G. Smith, and John W. Griffin (Gainesville: University Press of Florida, 1951), 107-136; John W. Griffin, "Excavations at the Site of San Luis," *Here They Once Stood*, 139-160.

38 Boyd, Smith and Griffin, *Here They Once Stood*.

39 John W. Griffin and Hale G. Smith, "Trait List of Two Spanish Sites of the Mission Period," in *Here They Once Stood*, 175-177.

40 Hale G. Smith, "Leon-Jefferson Ceramic Types" in *Here They Once Stood*, 163-174; "Two Historical Archaeological Periods in Florida," *American Antiquity* 13, no. 4, pt. 1 (1948), 313-319. This was also described by Gordon R. Willey in *Archeology of the Florida Gulf Coast Smithsonian Miscellaneous Collections Vol. 113* (Washington, D.C.: Smithsonian Institution, 1949), 488-495.

The National Historic Preservation Act [1966], the Department of Transportation Act [1966], and the National Environmental Policy Act [1969] had profound impacts on archaeology in Florida and throughout the country. These laws mandated that archaeological resources be given the same consideration as environmental resources during the course of federally-funded development projects.⁴¹ Their passage coincided with the construction of I-10 through Leon, Jefferson, and Madison counties in the Florida panhandle. Enter B. Calvin Jones. Jones was hired by the State of Florida in 1968 to mitigate sites in the projected path of the interstate. During the course of this work, L. Ross Morrell and Jones identified a number of Apalachee missions including San Juan de Aspalaga, San Damian de Escambé, San Pedro y San Pablo de Patale I and Patale II (Turkey Roost).⁴² A few years later, the Florida Division of Archives, History, and Records Management (now the Florida Division of Historical Resources) hoped to mark the upcoming bicentennial by identifying at least four additional north Florida missions and acquiring the most pristine one. In theory, this mission would be thoroughly researched and reconstructed by July 4, 1976.⁴³ Jones began the project in October 1971 and proceeded to locate and test San Lorenzo de Ivitachuco, San Miguel de Asile, San Pedro de Potohiriba, and San Joseph de Ocuya.⁴⁴ Although Jones never worked at San Luis de Talimali (it was in private ownership), he ultimately recommended that the state purchase and reconstruct this site based on its history,

41 George S. Smith, Francis P. McManamon, Ronald D. Anzalone, James W. Hand, and James C. Maxon, comp., "The Federal Archaeology Program in 'Archaeology and the Federal Government'," *CRM Bulletin* 11 (1988): 1, 3-8.

42 B. Calvin Jones, "Missions Reveal State's Spanish-Indian Heritage [San Juan de Aspalaga]," *Archives and History News* 1, no. 2 (1970): 1, 3; L. Ross Morrell and B. Calvin Jones, "San Juan de Aspalaga: (A Preliminary Architectural Study)," *Bureau of Historic Sites and Properties Bulletin No. 1* (1970); "Seventeenth-Century Spanish Mission Cemetery is Discovered Near Tallahassee [San Damian de Escambé]," *Archives and History News* 1, no. 4 (1970): 1-2; "State Archaeologists Unearth Spanish Mission Ruins [San Pedro y San Pablo de Patale]," *Archives and History News* 2, no. 4 (1971): 2; B. Calvin Jones, John Hann, and John F. Scarry, "San Pedro y San Pablo de Patale: A Seventeenth-Century Spanish Mission in Leon, County, Florida," *Florida Archaeology* 5, (1991): 1-201.

43 Jones, *San Pedro de Potohiriba*, 1.

44 B. Calvin Jones, "Spanish Mission Located and Test Excavated," *Archives and History News* 3, no. 6 (1972): 1-2; B. Calvin Jones, "A Semi-Subterranean Structure at Mission San Joseph de Ocuya, Jefferson County," *Bureau of Historic Sites and Properties Bulletin No. 3* (1998): 1-50; Jones, *San Pedro de Potohiriba*, 1998.

intrinsic beauty, and accessibility via major highways.⁴⁵ The State never did buy or recreate a mission in time for the bicentennial, but its ambitious goal would be realized thirty years later.⁴⁶

A Mission Model

Jones's investigation of eight Apalachee missions was summarized in 1987 in collaboration with Gary Shapiro who added his preliminary data from San Luis.⁴⁷ Based on their test results, they developed a predictive model for identifying mission churches, friaries, and outbuildings (usually kitchens) based primarily on building size, the spatial relationship of buildings to one another, and the east-west axis of structures and cemeteries. This model would be tested by archaeologists throughout the 1990s and early 2000s. After following up on Jones' excavations at Patale I and Patale II, Rochelle A. Marrinan acknowledged the disparities in Apalachee mission architecture, but suggested that the Florida missions should reflect a unified conceptual plan.

There has been, I believe, a readiness to accept the missions of *La Florida* as small, rustic settlements. Evidence from other areas indicates that wherever Franciscans went they demonstrated an organizational concept of mission plan. The ruins of the southwestern missions stand as testimony to their obvious ability to translate, through the labor of the native population, the architectural plan of places of worship in a grand scale. I believe we will find that the Franciscan missionaries of *La Florida* were equally capable.⁴⁸

A contrasting perspective was presented by Rebecca Saunders. Following her investigations of Santa Catalina de Amelia (relocated

45 B. Calvin Jones, comp., "The Mission San Luis de Talimali (Apalache): A Reconstruction Study," (Report on file, Mission San Luis, Tallahassee, 1974).

46 Bonnie G. McEwan and John H. Hann, "Reconstructing a Spanish Mission: San Luis de Talimali," *Magazine of History* 14, no. 4 (2000):16-20.

47 B. Calvin Jones and Gary N. Shapiro, "Nine Mission Sites in Apalachee," in *Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East*, ed. D. H. Thomas (Washington, DC: Smithsonian Institution Press, 1990), 491-509.

48 Rochelle A. Marrinan, "Archaeological Investigations at Mission Patale, 1984-1992," in *Spanish Missions of La Florida*, 286.

from Santa Catalina de Guale in 1686) and Santa María de Yamassee on Amelia Island, Saunders worked at San Martín de Timucua. She re-evaluated the architectural data from previous excavations and suggested that the mission model was fundamentally flawed and had, in some instances, been used uncritically to interpret archaeological remains.⁴⁹

It is now generally accepted that the size of structures within *doctrina* church complexes was variable, probably dependent on the number of parishioners being served. Milanich found that mission churches in Spanish Florida averaged about 60 by 35 feet,⁵⁰ however, investigations at San Luis revealed a considerably larger church that measured 110 by 50 feet.⁵¹ The design of churches was also somewhat inconsistent, although the data are equivocal or incomplete in many instances. For example, San Martín may have had an open chapel,⁵² while the churches at Santa Catalina de Guale and San Luis were completely enclosed, each with distinctive wall treatments in the naves and sanctuaries.⁵³

The types of structures within church complexes have proven to be fairly predictable. As suggested by Jones and Shapiro these often include a church, friary, and a detached kitchen. It has also been established that church floors became the consecrated burial ground for most native parishioners. Throughout Spanish Florida, interments were generally confined to the naves and were often superimposed, presumably to fit within the confines of the burial

49 Jones and Shapiro were the first to acknowledge the preliminary nature of their data and that their model should be considered a starting point. Rebecca Saunders, "Mission-Period Settlement Structure: A Test of the Model at San Martín de Timucua," *Historical Archaeology* 30, no. 4 (1996), 24-36. Related articles include Rebecca Saunders, "Ideal and Innovation: Spanish Mission Architecture in the Southeast," *Columbian Consequences*, 527-542; Rebecca Saunders, "Architecture of the Missions Santa María and Santa Catalina de Amelia," in *The Spanish Missions of La Florida*, 35-61.

50 Milanich, *Laboring in the Fields*, 132.

51 Bonnie G. McEwan and Clark Spencer Larsen, "Archaeological and Biocultural Investigations in the Church Complex at San Luis, Interim Report to the National Endowment for the Humanities," (Project report on file, Mission San Luis, Tallahassee, 1995); John H. Hann and Bonnie G. McEwan, *The Apalachee Indians and Mission San Luis* (Gainesville: University Press of Florida, 1998), 84-87.

52 Saunders, "San Martín de Timucua," 34.

53 David Hurst Thomas, "The Archaeology of Mission Santa Catalina de Guale: Our First 15 Years," in *Spanish Missions of La Florida*, 9; Hann and McEwan, *The Apalachee Indians*, 87.

area. They were typically oriented on the long axis of the church in such a way that if the individuals were to sit up, they would be facing the altar.

The Cemeteries

Since grave goods represent one of the few physical manifestations of ideology available to archaeologists, the mission cemeteries of Spanish Florida represent one of the most interesting contexts. Thomas has suggested that during the early seventeenth-century, or pre-parochial period of missionization, there was a higher frequency of burial goods with religious symbolism. Evidence of this is most pronounced in the cemetery at Santa Catalina de Guale (1600-1680), where the largest number of religious objects and other grave furnishings has been recovered.⁵⁴ The subsequent phase, or secularization period, technically never occurred in Spanish Florida since none of the Florida missions ever became regular parishes. The later burial assemblage from San Luis (1656-1704), provides an interesting point of comparison to Santa Catalina since it contains a high concentration of burial goods, but relatively few overtly religious artifacts.⁵⁵

54 David Hurst Thomas, "Saints and Soldiers at Santa Catalina: Hispanic Design for Colonial America" in *The Recovery of Meaning in Historical Archaeology in the Eastern United States*, ed. Mark P. Leone and Parker B. Potter, Jr. (Washington DC: Smithsonian Institution Press, 1988): 73-140; See also Elliot H. Blair, Lorann S.A. Pendleton, and Peter Francis, Jr., *The Beads of St. Catherines Island* (New York: American Museum of Natural History Anthropological Papers 89, 2009).

55 Bonnie G. McEwan, "The Spiritual Conquest of Spanish Florida," *American Anthropologist* 103, no.3 (2001): 633-644; Bonnie G. McEwan, Michael W. Davidson, and Jeffrey M. Mitchem, "A Quartz Crystal Cross from Mission San Luis, Florida," *Journal of Archaeological Science* 24 (1997): 529-536; Jeffrey M. Mitchem, "Beads and Pendants from San Luis de Talimali: Inferences from Varying Contexts," *Spanish Missions of La Florida*, 399-417; Jeffrey M. Mitchem, "Analysis of Beads and Pendants from San Luis de Talimali (8LE4): The Cemetery and Church (Project report on file, Mission San Luis, Tallahassee, 1990); Jeffrey M. Mitchem, "Explorers and Missionaries: The Spanish Bead Trade in Florida during the 16th and 17th Centuries," Paper presented at the Bead Trade in the Americas Conference, Santa Fe, NM, 1992; Jeffrey M. Mitchem, "Analysis of Personal Adornment Items from the Cemetery at Mission San Luis (8LE4): 1993 Excavations," Project report on file, Mission San Luis, Tallahassee, 1994; Jeffrey M. Mitchem, "Analysis of Personal Adornment Items from the Cemetery at Mission San Luis (8LE4): 1994 Excavations," Project report on file, Mission San Luis, Tallahassee, 1995; Jeffrey M. Mitchem, "Personal Adornment Items from the Cemetery at Mission San Luis (8LE4): 1995 Excavations, with Addenda from the 1994 Excavations," Project report on file, Mission San Luis, Tallahassee, 1996.

Both of these assemblages are exceptional compared to other mission cemeteries, which typically have few artifacts. Worth has argued that the accumulation of grave goods found at the mission capitals of Santa Catalina de Guale and San Luis de Talimali are a direct reflection of their concentrated wealth from corn production and their proximity to shipping lanes.⁵⁶ The high quantity of imported goods associated with Spanish households at San Luis is thought to be attributable to these same factors.⁵⁷

Bioarchaeology

Some of the most informative research on Spanish Florida has resulted from bioarchaeological studies. Clark Spencer Larsen has been a pioneer in this area directing the decades-long La Florida Bioarchaeology Project. Working in tandem with project field archaeologists, he conducted multi-year field investigations on human remains from Santa Catalina de Guale, Santa Catalina and Santa Maria de Yamassee on Amelia Island, and San Luis de Talimali (hereafter referred to as San Luis).⁵⁸ Larsen and his colleagues also studied previously-excavated remains from prehistoric, protohistoric, and mission period sites throughout Spanish Florida.⁵⁹ These data enabled their team to generate a diachronic assessment of native diet and health from pre-contact times through the mission era.

56 John E. Worth, *Timucuan Chiefdoms of Spanish Florida, Volume 1: Assimilation* (Gainesville: University of Florida Press, 1998), 178-179.

57 Bonnie G. McEwan, "Hispanic Life on the Seventeenth-Century Florida Frontier" in *Spanish Missions of La Florida*, 295-321; Bonnie G. McEwan, "San Luis de Talimali: The Archaeology of Spanish Indian Relations at a Florida Mission," *Historical Archaeology* 25, no. 3 (1991): 36-60; Bonnie G. McEwan, "The Archaeology of Women in the Spanish New World," *Historical Archaeology* 25, no. 4 (1991): 33-41.

58 Clark Spencer Larsen, *The Archaeology of Mission Santa Catalina de Guale: 2. Biocultural Interpretations of a Population in Transition* (New York: American Museum of Natural History Anthropological Papers 68, 1990); Clark Spencer Larsen and Tiffany A. Tung, "Mission San Luis de Apalachee: Final Report on the Human Remains," Project report on file, Mission San Luis, Tallahassee, 2002; Clark Spencer Larsen, "On the Frontier of Contact: Mission Bioarchaeology in La Florida" in *The Spanish Missions of La Florida*, 322-356.

59 Attitudes and laws regarding the study of Native American burials in this country have changed considerably since this research was conducted. For a discussion of Florida's human burial laws, see Ryan W. Wheeler, "Florida's Unmarked Human Burial Law: A Retrospective, 1987-2010," *The Florida Anthropologist*, (in press).

Isotope analyses of the available remains revealed a significant difference in carbon and nitrogen ratios before and after contact.⁶⁰ This finding indicated a decrease in dietary diversity and an increase in maize (carbohydrate) consumption through time. San Luis was an exception to this pattern, presumably because of the availability of domestic meat (protein) which also resulted in a relatively low prevalence of dental caries at the site.

A series of detailed skeletal and tooth studies indicated an increasingly higher proportion of both short- and long-term physiological stress following contact. These included enamel defects such as hypoplasias and Retzius lines, along with an increase in caries and reduced dental microwear (suggestive of a diet of softer foods leading to plaque and bacteria build-up). Poor diet, anemia, and a greater number of infections were also suggested by an increased number of lesions on tibiae and crania (porotic hyperostosis). These findings led to the overall conclusion that missionized natives suffered from malnutrition, susceptibility to chronic infectious diseases, and a marked decline in their overall health. Those who did not perish outright from related illnesses very likely experienced reduced fertility and reproductive growth.⁶¹

Another facet of the bioarchaeology study was an examination of work behavior before and after missionization. Larsen and his colleagues observed a dramatic increase in joint deterioration (osteoarthritis) in late mission period skeletal remains, attributable to increased workloads over an extended period of time.⁶² In their study of humeri and femora cross-sections, Christopher Ruff and Larsen determined that mission Indians also had larger and stronger bones than their precontact counterparts, perhaps

60 Dale L. Hutchinson, Clark Spencer Larsen, Margaret J. Schoeninger, and Lynette Norr, "Regional Variation in the Pattern of Maize Adoption and Use in Florida and Georgia," *American Antiquity* 63 (1998): 397-416.

61 For an excellent compilation of related bioarchaeology studies, see Clark Spencer Larsen, ed, *Bioarchaeology of Spanish Florida: The Impact of Colonialism* (Gainesville: University Press of Florida, 2001).

62 Clark Spencer Larsen, Mark C. Griffin, Dale L. Hutchinson, Vivian E. Noble, Lynette Norr, Robert F. Pastor, Christopher B. Ruff, Katherine F. Russell, Margaret J. Schoeninger, Michael Schultz, Scott W. Simpson, and Mark Teaford, "Frontiers of Contact: Bioarchaeology of Spanish Florida," *Journal of World Prehistory* 15 (2001): 98-100.

reflecting increased body weight from their high carbohydrate diet, increased sedentism, and/or static or repetitive work.⁶³

Epidemics were not readily identifiable in the Florida skeletal populations. Amy Bushnell noted that “pests and contagions” purportedly killed half the Indian population between 1613 and 1617; typhus or yellow fever, smallpox, and measles took 10,000 lives from 1649 to 1659; and another pestilence struck from 1672 to 1674.⁶⁴ Yet despite these documented episodes, acute infectious diseases are rarely found on skeletal remains since the human hosts usually perish long before changes in bone can occur.⁶⁵ There is, however, evidence of traumatic death at the missions. An adult male at San Luis was found with a .44 caliber lead shot near his lumbar vertebrae from an apparent gunshot wound to his abdomen.⁶⁶ Another male was found with a projectile point next to his leg suggesting it was imbedded in his flesh. This could easily have led to a lethal blood infection, or he may have perished from other non-evident wounds.⁶⁷

Bioarchaeologist Christopher Stojanowski has studied mission remains from a different perspective. Using phenotypic (tooth size) profiles, he has proposed possible lineages and social standing in Apalachee burial populations within rows, near altars, and within

63 Christopher B. Ruff and Clark Spencer Larsen, “Reconstructing Behavior in Spanish Florida: The Biomechanical Evidence,” in *Bioarchaeology of Spanish Florida*, 113-145.

64 Amy Bushnell, *The King's Coffin: Proprietors of the Spanish Florida Treasury, 1565-1702* (Gainesville: University Presses of Florida, 1981), 13-14.

65 Larsen, et al., *Journal of World Prehistory*, 93.

66 The archaeological evidence was initially evaluated by William R. Maples, C.A. Pound Human Identification Laboratory at the University of Florida. The results were published in Clark Spencer Larsen, Hong P. Huynh, and Bonnie G. McEwan, “Death by Gunshot: Biocultural Implications of Trauma at Mission San Luis,” *International Journal of Osteoarchaeology* 6 (1996): 42-50.

67 The challenge of identifying victims of warfare archaeologically is discussed in George R. Milner, “Nineteenth-Century Arrow Wounds and Perceptions of Prehistoric Warfare,” *American Antiquity* 70, no. 1 (2005): 144-156. Other related works include George R. Milner, “Warfare in Prehistoric and Early Historic Eastern North America,” *Journal of Archaeological Research* 7, no. 2 (1999): 105-151; George R. Milner, Eve Anderson, and Virginia G. Smith, “Warfare in Late Prehistoric West-Central Illinois,” *American Antiquity* 56, no. 4 (1991): 581-603.

coffins at both San Luis and Patale.⁶⁸ He has also used a larger body of phenotypic data to propose evolutionary profiles of native populations throughout Spanish Florida.⁶⁹

Beyond the Religious Complex: Secular Settlement Patterns in Spanish Florida

In the late 1970s, Kathleen Deagan conceptualized a plan for defining the areal extent of sixteenth-century St. Augustine as part of the "St. Augustine 1580" project.⁷⁰ Her broad-scale survey, which has been widely replicated ever since, revealed that the final (1572) relocated town lay south of the plaza in an area bounded by Marine, Bridge, and St. George streets.⁷¹ It was not until the Castillo was under construction in the 1670s that the town expanded north of the plaza.⁷² Equally important was her finding that St. Augustine was laid out on a gridded town plan conforming to the basic ordinances for colonial settlement issued by King Philip II in

68 Christopher M. Stojanowski, Clark Spencer Larsen, Tiffany A. Tung, and Bonnie G. McEwan, "Biological Structure and Health Implications from Tooth Size at Mission San Luis," *American Journal of Physical Anthropology* 132 (2007): 207-222; Christopher Michael Stojanowski, "Biological Structure of the San Pedro y San Pablo de Patale Mission Cemetery," *Southeastern Archaeology* 24 (2005): 165-179; Christopher M. Stojanowski, "Differential Phenotypic Variability among Apalachee Populations of La Florida," *American Journal of Physical Anthropology* 120 (2003): 352-363.

69 See Christopher M. Stojanowski, *Biocultural Histories in La Florida: A Bioarchaeological Perspective* (Tuscaloosa: University of Alabama Press, 2005); Christopher M. Stojanowski, "The Bioarchaeology of Identity in Spanish Colonial Florida: Social and Evolutionary Transformation Before, During and After Demographic Collapse," *American Anthropologist* 107(2005): 417-431; Christopher M. Stojanowski, *Mission Cemeteries, Mission Peoples: Historical and Evolutionary Dimensions of Intracemetery Bioarchaeology in Spanish Florida* (Gainesville: University Press of Florida, 2013); Christopher M. Stojanowski, *Bioarchaeology of Ethnogenesis in the Colonial Southeast* (Gainesville: University Press of Florida, 2010).

70 Kathleen Deagan, "Downtown Survey: The Discovery of Sixteenth Century St. Augustine in an Urban Area," *American Antiquity* 46 (1981): 626-634. For a discussion of this project, see Paul E. Hoffman, "St. Augustine 1580, The Research Project," *El Escribano* 14 (1977): 5-19.

71 Kathleen Deagan, "The Archaeology of 16th Century St. Augustine," *The Florida Anthropologist* 38 (1985): Figs. 1 & 2, 10.

72 Kathleen Deagan, *Spanish St. Augustine: The Archaeology of a Colonial Creole Community* (New York: Academic Press, 1983), 25.

1573.⁷³ David J. Weber has noted that other than New Orleans, St. Augustine was perhaps the only other Spanish settlement in North America to achieve the status of *ciudad*.⁷⁴

The manner in which St. Augustine's frontier outposts developed was far from uniform, and nowhere are the settlement trajectories more distinct than in the provincial capitals of Santa Catalina de Guale and San Luis. Thomas has been investigating Santa Catalina de Guale on St. Catherines Island, Georgia since the late 1970s. As one of the northernmost missions, Santa Catalina functioned as a religious headquarters among the Guale Indians and as a military stronghold against British and French incursions.⁷⁵ It was also a breadbasket and source of labor for St. Augustine until its abandonment in 1680.⁷⁶ During the course of his research, Thomas identified the remains of the seventeenth-century church and *convento* on top of their sixteenth century counterparts (the earlier mission settlement was destroyed during the 1597 Guale Rebellion, but resettled in 1604).⁷⁷ The church, friary, kitchen, and two wells were located around a rectangular plaza and the entire complex was probably surrounded by a stockade.⁷⁸ Although testing of the adjacent Guale village or *pueblo* is still in its preliminary stages, Thomas anticipates that the Spanish practice of *reducción* resulted in the nucleation of native communities into a secular settlement surrounding the religious complex.⁷⁹ Early indications suggest that "housing in the pueblo

73 Deagan, "The Archaeology of 16th Century St. Augustine," 9-13; For a review of Spanish city planning ordinances, see Dora Crouch, Daniel Garr, and Axel Mundigo, ed., *Spanish City Planning in North America* (Cambridge, MA: MIT Press, 1982).

74 David J. Weber, *The Spanish Frontier in North America* (New Haven: Yale University Press, 1992), 322.

75 See David Hurst Thomas, *The Archaeology of Mission Santa Catalina de Guale: I* (New York: American Museum of Natural History Anthropological Papers 63, no. 2, 1987); Thomas, *The Native American Landscapes of St. Catherines Island, Georgia* (New York: American Museum of Natural History Anthropological Papers 88, 2008).

76 Bushnell, *Situado and Sabana*, 68.

77 Thomas, "The Archaeology of Mission Santa Catalina de Guale: Our First 15 Years," 9, 16.

78 Elliot H. Blair, "The Guale Landscape of Santa Catalina de Guale: 30 Years of Geophysics at a Spanish Colonial Mission," in *Life among the Tides*, 375-393.

79 David Hurst Thomas, "Late Aboriginal Ceramics from St. Catherines Island," in *From Santa Elena to St. Augustine: Indigenous Ceramic Variability (A.D. 1400-1700)*, ed. K. Deagan and D. H. Thomas (New York: Anthropological Papers of the American Museum of Natural History Number 90), 63-64.

consisted of rectangular buildings, perhaps separated by “streets.” Native American structures were apparently built as an extension of the initial gridwork.⁸⁰

Located in present day Tallahassee, San Luis (de Talimali) was established at its present location in 1656 at the behest of Spanish military authorities, more than one-half century after Santa Catalina.⁸¹ An early fortification was built at the crest (north end) of the hilltop, and an Apalachee mission village was constructed on the south end. The Apalachees defined a large circular plaza, and built a council house, chief’s house, and church facing it.⁸² The church and a small friary were initially integrated into what was otherwise a native village. It was not until the establishment of a Spanish settlement at San Luis in the late 1670s and 1680s—about the time Santa Catalina was abandoned—that the Apalachee dwellings were replaced with Spanish homes similar to those found in St. Augustine.⁸³ The formal religious complex, including a large friary and kitchen, was also constructed at this later date presumably to accommodate Spanish parishioners. Interestingly, the Apalachee council house remained intact and was by far the largest building on the plaza throughout the occupation of the site.

A guiding factor in the evolution of San Luis appears to have been the *Camino Real* which ran through the approximate center of the settlement and is still visible on the western slope of the site. All of the European buildings investigated to date ran parallel or perpendicular to the road. Once the native village was replaced with aligned rectangular Spanish structures, the settlement likely took on a gridded appearance.⁸⁴ A rendering of an orderly Spanish

80 Ibid., 72.

81 San Luis was one of the first Apalachee missions established around 1633, but the chief was convinced (or coerced) to move his village to a new site selected by Spaniards during the winter of 1656. See John H. Hann, *Apalachee: The Land between the Rivers* (Gainesville: University Press of Florida, 1988).

82 Bonnie G. McEwan, “Cultural Landscapes at Mission San Luis,” Keynote address at the annual meeting of the Florida Anthropological Society, Tallahassee, 2012.

83 The remains of Spanish dwellings at San Luis were initially examined by Albert Manucy and Luis Arana. They have since been studied by Herschel E. Shepard and his students. See, ‘Research Project: San Luis Archaeological and Historic Site,’ Prepared by the College of Architecture, University of Florida, Gainesville (Project report on file, Mission San Luis, Tallahassee, 1993).

84 See Herschel E. Shepard, “Architectural Research: The Provincial Governor’s House,” (Project report on file, Mission San Luis, Tallahassee, Florida, 2008).

community at San Luis is depicted on the 1705 Landeche map of Apalachee Province.⁸⁵

Military Architecture

There were nine forts constructed in St. Augustine prior to the Castillo de San Marcos, the first of which (1565-1566) has been the subject of ongoing investigations by Kathleen Deagan. Deagan identified the remains of Seloy's sixteenth century village and Menéndez' initial occupation at the Fountain of Youth Park and the adjacent Shrine of Nuestra Señora de la Leche.⁸⁶ Owing to Indian hostilities, the next two forts were constructed across the bay on Anastasia Island.⁸⁷ City Archaeologist Carl Halbirt believes he located the remains of the seventh, eighth, or ninth wooden fort in the yard of the de Mesa House.⁸⁸ The archaeological identification of St. Augustine's early wooden forts has been challenging since they were occupied for relatively short periods of time and the remains are somewhat ephemeral. This would change in the 1670s.

The Castillo de San Marcos, built between 1672 and 1695, was not only a crowning architectural achievement but the first masonry (coquina) fortification in Spanish Florida.⁸⁹ It provided St. Augustine with exceptional defensive capability (surviving James Moore's 1702 assault), and changed the physical and demographic

85 A reproduction, translation, and details of the Landeche map can be found in Boyd, Smith, and Griffin, *Here They Once Stood*, Plates I and II.

86 Kathleen Deagan, *Historical Archaeology at the Fountain of Youth Park (8-SJ-31), St. Augustine, Florida: 1934-2007* (Gainesville: Florida Museum of Natural History Miscellaneous Project Reports in Archaeology 59, vol. 1, 2008), 241; Kathleen Deagan, *Archaeology at 8SJ34, The Nombre de Dios Mission/La Leche Shrine Site, St. Augustine: Summary Report on the 1934-2011 Excavations* (Gainesville: Florida Museum of Natural History Miscellaneous Project Reports in Archaeology 62, 2012), 24-25.

87 Eugene Lyon, "The First Three Wooden Forts of Spanish St. Augustine, 1565-1571," *El Escribano* 34 (1997): 140-157.

88 Mischa Johns and Carl Halbirt, "In the Shadow of the Castillo de San Marcos," Poster presentation at the annual meeting of the Florida Anthropological Society, St. Augustine, 2012.

89 During investigations on Anastasia Island in 2007, Carl Halbirt uncovered the remains of an adult donkey near one of the routes used to haul coquina from the quarry to the ferry. Carl D. Halbirt, "...skillfully disarticulated at the joints": A seventeenth-Century Donkey Burial, St. Augustine, Florida," Paper presented at the Annual Meeting of the Florida Anthropological Society, Ybor City, Florida, 2008.

landscape of the town.⁹⁰ Since it is a National Historic Landmark managed by the National Park Service, archaeological research at the Castillo de San Marcos has been focused primarily on issues related to its preservation and public interpretation.⁹¹

Beyond the Castillo, however, most seventeenth-century fortifications in Spanish Florida continued to be wooden earthfast constructions surrounded by palisades and/or moats. Although many were designed by military engineers, their actual construction was generally not as precise, complete, or durable as available plans suggest.⁹² An interesting example was the seventeenth-century fort at San Marcos on Apalachee Bay. This site was investigated by both Hale G. Smith and Charles H. Fairbanks during the 1950s and 1960s. Fairbanks found a group of submerged intact postmolds he attributed to the original seventeenth-century fort.⁹³ Although soldiers were

90 For a thorough discussion of the Castillo de San Marcos, see Verne E. Chatelain, *The Defenses of Spanish Florida, 1565 to 1763*. (Washington, D.C.: Carnegie Institution of Washington Publication 511, 1941); See also two volumes of collected papers by Luis Rafael Arana, "Defenses and Defenders at St. Augustine," *El Escribano* 36 (1999): 3-219 and "The Endurance of Castillo de San Marcos," *El Escribano* 41 (2004): 13-68; Luis R. Arana and Albert Manucy, *The Building of Castillo de San Marcos* (St. Augustine, FL: Eastern National Park and Monument Association, 1977); Albert C. Manucy, *The History of Castillo de San Marcos & Fort Matanzas from Contemporary Narratives and Letters* (Washington, D.C.: National Park Service, Source Book Series No. 3, Reprint 1955).

91 Harrington et al., *Excavations in the Courtyard of the Castillo*, 101-141; John W. Griffin, "Archeological Investigations of the Cubo Line," in *Fifty Years of Southeastern Archaeology: The Selected Works of John W. Griffin*, ed., Patricia C. Griffin (Gainesville: University Press of Florida, 1996), 101-114; Kathleen Deagan, *Excavation at the Castillo de San Marcos, St. Augustine, Florida: Archaeological Data in Support of Stabilization* (Tallahassee: National Park Service, Southeast Archeological Center, 1980); Charles F. Lawson and John E. Cornelison, Jr., *Archeological Investigations of the San Pablo and San Pedro Bastions at Castillo de San Marcos National Monument, St. Augustine, Florida* (Tallahassee: National Park Service, Southeast Archeological Center, Tallahassee, 2002); Carl Halbirt, "La Ciudad de San Agustín: A European Fighting Presidio in Eighteenth-Century La Florida," *Historical Archaeology* 38, no. 3 (2004): 33-46.

92 Bonnie G. McEwan and Charles B. Poe, "Excavations at Fort San Luis," *Florida Anthropologist* 47, no. 2 (1994): 90-106; Milanich and Saunders, *The Spanish Castillo and the Franciscan Doctrina of Santa Catalina*, (1986): 1-17.

93 Archaeological materials recovered from San Marcos de Apalachee [from Smith and possibly Fairbanks, although report is unclear] are discussed in Dorris L. Olds, "History and Archaeology of Fort Saint Marks in Apalachee" (MA thesis, Florida State University, 1962). For additional information, see Boyd, *San Marcos de Apalachee*, 3-34; Lucy L. Wenhold, "The First Fort of San Marcos de Apalachee," *Florida Historical Quarterly* 34, no. 4 (April 1956): 301-314.

stationed there when the port first opened in the 1640s, a makeshift wooden fort/watchtower was not built until the 1670s. Spaniards whitewashed the structure to give it the appearance of an imposing masonry building like the Castillo. The deception worked from a distance, but pirates caught on and sacked it in 1682 (an event John Hann attributed more to “the shortcomings of its defenders than because of the inadequacies of the structure itself”).⁹⁴ Today, the remains of the stone fort at San Marcos de Apalachee (begun in 1739) are still visible at the confluence of the Wakulla and St. Marks rivers, though much has been lost to erosion. The site is currently managed by the Florida Park Service.

In addition to St. Augustine and St. Marks, garrisons were also stationed at important mission centers such as Santa Catalina de Guale, San Pedro on Cumberland Island, and San Francisco de Potano, and at some *haciendas* including Asile and La Chua. Archaeological research on the military components of frontier sites includes investigations at San Luis,⁹⁵ Apalachicola,⁹⁶ and Salamatoto.⁹⁷ The end of the seventeenth century also brought the establishment of Santa María de Galve (1698-1719), the first of three presidios on Pensacola Bay. Archaeological research at this site was directed by Judith Bense (now president of the University of West Florida) in the 1990s. Her findings demonstrated Santa María’s strong reliance on Mexico to compensate for the limited native population in the Pensacola region. Although the Spanish residents at Santa María participated in well-documented illicit commerce with French Mobile, it was almost invisible archaeologically since many of the materials they received from Mobile were actually Hispanic in origin.⁹⁸

94 John H. Hann, “The Fort of San Marcos or St. Marks of Apalachee,” Notes on files, Mission San Luis, Tallahassee, 1996.

95 McEwan and Poe, “Excavations at Fort San Luis.”

96 Edward B. Kurjack and Fred Lamar Pearson, Jr., “Special Investigation of 1Ru101, The Spanish Fort Site,” in *Archaeological Salvage in the Walter F. George Basin of the Chattahoochee River in Alabama*, ed., D. L. DeJarnette (Tuscaloosa: University of Alabama Press, 1975), 200-229.

97 Robert E. Johnson, “Archaeological Data Recovery at the Site 8SJ3218, The Spanish Mission of San Diego de Salamatoto, St. Johns County, Florida,” Project report on file, Florida Master Site File, Tallahassee, 2010.

98 Judith A. Bense, ed., *Presidio Santa María de Galve* (Gainesville: University Press of Florida, 2003), 209; Judith A. Bense, “Presidio Santa María de Galve (1698-1719): A Frontier Garrison in Spanish West Florida,” *Historical Archaeology* 38, no. 3 (2004): 47-64.

Domestic Architecture

The clearest archaeological images of seventeenth-century Spanish domestic architecture come from St. Augustine and San Luis, thanks in large part to long-term collaborations with preservation architects Albert Manucy and Herschel Shepard. The design and construction of these colonial homes were in keeping with traditional Spanish folk or vernacular architecture. Most of the Hispanic dwellings in these two communities were modest constructions, typically ranging between 12 x 16 feet and 20 x 30 feet. They were timber-framed or braced-framed structures, with one or two interconnected rooms closely conforming to Manucy's "common plan" design.⁹⁹ The walls were infilled with either sawn planks or wattle and daub and they typically had earthen floors. Long-leaf yellow pine was the most prevalent wood used in construction, although cedar, oak, and cypress have also been identified. Most dwellings had pitched roofs covered with thatch (most commonly cabbage palm fronds), although shingles were sometimes used.

Archaeological evidence suggests that native architecture, at least in Apalachee Province, remained equally unchanged throughout the seventeenth century. The remnants of thatched circular dwellings and council houses, often containing benches, smudge pits, and hearths, suggest little Spanish influence on Apalachee architecture after contact.¹⁰⁰ The material culture

99 See Albert Manucy, *The Houses of St. Augustine, 1565-1821* (St. Augustine, FL: St. Augustine Historical Society, 1978); Albert Manucy, *Sixteenth-Century St. Augustine: The People and Their Homes* (Gainesville: University Press of Florida, 1997). Descriptions of structural remains found archaeologically can be found in Kathleen Deagan, "The Archaeology of Sixteenth-Century St. Augustine," *The Florida Anthropologist* 38, no. 1-2, pt. 1 (1985): 6-33; Deagan, *Spanish St. Augustine*, McEwan, "Hispanic Life on the Seventeenth-Century Florida Frontier," 295-321.

100 Bonnie G. McEwan, "The Apalachee Indians of Northwest Florida," in *Indians of the Greater Southeast*, ed. B. G. McEwan (Gainesville: University Press of Florida, 2000), 57-84; Gary Shapiro and Bonnie G. McEwan, "Archaeology at San Luis, Part I: The Apalachee Council House," *Florida Archaeology* 6 (1992): 1-173; Bonnie G. McEwan, "Archaeology of the Apalachee Village at San Luis de Talimali," *Florida Archaeological Reports* 28, (1992): 1-92; John F. Scarry and Bonnie G. McEwan, "Domestic Architecture in Apalachee Province: Apalachee and Spanish Residential Styles in the Late Prehistoric and Early Historic Period Southeast," *American Antiquity* 60, no. 3 (1995): 482-495; Bonnie G. McEwan, "Cultural Landscapes."

from these structures further suggests that many traditional social institutions and activities continued throughout the mission period.

Material Culture

Throughout La Florida, there is a preponderance of native pottery in every conceivable Spanish context including residential sites, forts, and religious complexes. Kathleen Deagan has attributed this finding to the integration of natives into the fabric of Hispanic colonial life through labor, religious indoctrination, trade, intermarriage, concubinage, and other forms of contact.¹⁰¹

The large quantities of native materials from Spanish contexts is more pronounced in the missions than in St. Augustine. For example, aboriginal pottery accounts for more than 70% of all ceramics at the Convento de San Francisco,¹⁰² but well over 80% of the pottery from the friary at San Luis. In fact, the ceramic assemblage from San Luis' *convento* contains so few European items (except a few items such as olive jar fragments), that it could easily have been recovered from an aboriginal context. These findings substantiate the Franciscans' mendicant obligation but, more significantly, underscore the friars' almost complete reliance on their native charges for most aspects of their material comfort.

The types of native pottery recovered in St. Augustine are those primarily associated with eastern Timucuan and Guale peoples.¹⁰³ Throughout the seventeenth century there was a sharp increase in San Marcos over St. Johns pottery correlating with the decline of St. Augustine area Timucua Indians and the relocation of Guale and Mocama mission populations into the area.¹⁰⁴ Although the Apalachee and western Timucuans had a regular presence in St. Augustine during the seventeenth century, they were typically represented by transient male *repartimiento* laborers.

101 Kathleen Deagan, "Accommodation and Resistance: The Process and Impact of Spanish Colonization in the Southeast," in *Columbian Consequences*, 300; Kathleen Deagan, "The Archaeology of Sixteenth Century St. Augustine," *The Florida Anthropologist* 38, nos. 1-2, pt. 1 (1985), 29.

102 Hoffman, "The Archaeology of the Convento de San Francisco," 75; Hoffman, "The Material Culture of Seventeenth-Century St. Augustine," 101-102.

103 Deagan, "Accommodation and Resistance," 300; Julia King, "Ceramic Variability in Seventeenth-Century St. Augustine, Florida" *Historical Archaeology* 18, no. 2 (1984): 75-82.

104 Worth, *The Struggle for the Georgia Coast*, 22-55.

As noted by some of the earliest mission researchers such as Griffin and Smith, extra-regional influence also begins to appear in the sixteenth century and becomes full-blown during the seventeenth century.¹⁰⁵ While there are no simple or straightforward answers to these changes, Worth has proposed that the pottery changes among the Guale and Mocama along the Atlantic coastline, as well as those among the Apalachee and Timucua/Potano to the west, were parallel transformations reflecting changes in the complex social interaction of these tribes in response to a common denominator—the Spanish colonial system based in St. Augustine.¹⁰⁶ This explanation is in keeping with Deagan's early interpretation of Timucuan social change following her study of materials from Fig Springs.

On a different note, ceramic technologist Ann Cordell of the Florida Museum of Natural History has conducted a long-term study of Apalachee pottery and colonowares.¹⁰⁷ Her petrographic analysis of pottery from San Luis and Old Mobile (where the Apalachees from San Luis migrated following the destruction of the missions in 1704), revealed that the Apalachees continued to make both traditional pottery and colonowares in Mobile. Continuity was maintained in tempering and other aspects of manufacture, however, there were changes in colonoware vessel traits such as footings and body thickness, presumably in response to French consumers with a different aesthetic than Spaniards.¹⁰⁸ Studies such as this have become increasingly important for the light they shed on market forces and how European consumers shaped indigenous pottery.¹⁰⁹ Remarkably, Cordell also found that

105 See Kathleen Deagan and David Hurst Thomas, ed., *From Santa Elena to St. Augustine: Indigenous Ceramic Variability, A.D. 1400-1700* (New York: Anthropological Papers of the American Museum of Natural History 90, 2009).

106 John E. Worth, "Ethnicity and Ceramics on the Southeastern Atlantic Coast: An Ethnohistorical Analysis," in *From Santa Elena to St. Augustine*, 179-207.

107 Ann S. Cordell, *Continuity and Change in Apalachee Pottery Manufacture* (Mobile: University of South Alabama Archaeological Monograph no. 9, 2001); Ann S. Cordell, "Continuity and Change in Early 18th Century Apalachee Colowares," paper presented at the Global Pottery 1st International Congress on Historical Archaeology & Archaeometry for Societies in Contact, Barcelona, Spain, 2012.

108 *Ibid.*, 36.

109 For more considerations of this topic see Charles R. Cobb and Chester B. DePratter, "Multisited Research on Colonowares and the Paradox of Globalization," *American Anthropologist* 114, no. 3 (2012): 446-461; Vicki L. Rolland and Keith H. Ashley, "Beneath the Bell: A Study of Mission Period Colonoware from Three Spanish Missions in Northeastern Florida," *The Florida Anthropologist* 53, no. 1 (2000): 36-61.

two of the vessels recovered from Old Mobile were made at San Luis, thus representing a few of the possessions carried with them during their forced exile.¹¹⁰

Diet

Pedro Menéndez de Avilés, Spanish Florida's first governor, supplied Florida with a range of domestic animals including sheep, pigs, and cattle. Although these species were generally not well suited to St. Augustine and the Atlantic coastal plain, they fared better in the interior provinces.¹¹¹ For several decades, Elizabeth Reitz of the University of Georgia and her colleagues have studied animal remains from Spanish colonial sites throughout *La Florida* and have identified a range of dietary adaptations.¹¹² Their research has revealed that Spaniards living at the missions exploited locally available sources of protein. For example, beef and pork were consumed in abundance at San Luis,¹¹³ while venison was eaten

110 Cordell, *Continuity and Change in Apalachee Pottery Manufacture*, 19.

111 Elizabeth J. Reitz and C. Margaret Scarry, *Reconstructing Historic Subsistence with an Example from Sixteenth-Century Spanish Florida*. The Society for Historical Archaeology Special Publication no. 3, 1985.

112 Elizabeth J. Reitz, "Zooarchaeological Evidence for Subsistence at La Florida Missions" in *Columbian Consequences*, 543-554; Elizabeth J. Reitz, "Evidence for Animal Use at the Missions of Spanish Florida," in *Spanish Missions of La Florida*, 376-398; Elizabeth J. Reitz, "Vertebrate Use and Cultural Change Among Native Americans," Paper presented at the annual meeting of the Southeastern Archaeological Conference, Knoxville, Tennessee, 1995; Lee Newsom and Irvy R. Quitmyer, "Appendix E: Archaeobotanical and Faunal Remains," in *Excavations on the Franciscan Frontier: Archaeology at the Fig Springs Mission*, 206-233.

113 Elizabeth J. Reitz, "Vertebrate Fauna from the Spanish Village and Ocala Road, San Luis de Talimali, Features 73 and 74," Project report on file, Mission San Luis, Tallahassee, 1991; Elizabeth J. Reitz, "Vertebrate Remains from the Apalachee Village at San Luis de Talimali," Project report on file, Mission San Luis, Tallahassee, 1993; Elizabeth J. Reitz and Jennifer Freer, "Vertebrate Remains from the Spanish Village at San Luis de Talimali, Feature 6," Project report on file, Mission San Luis, Tallahassee, 1990; Daniel C. Weinand and Elizabeth J. Reitz, "Vertebrate Fauna from San Luis de Talimali, 1992," Project report on file, Mission San Luis, Tallahassee, 1992; Daniel C. Weinand, Rhonda L. Smith, and Elizabeth J. Reitz, "Faunal Identifications from the 1993 Excavations at Fort San Luis," Project report on file, Mission San Luis, Tallahassee, 1994.

more frequently at Santa Catalina than at other missions.¹¹⁴ These findings stand in contrast to Nombre de Dios and other coastal missions where there was a heavy reliance on aquatic vertebrates, particularly fishes.¹¹⁵ The same was true for St. Augustine proper where the diet was much closer to that of the native population at Nombre de Dios than any of the frontier outposts.¹¹⁶ Interestingly, the animal remains from the Convento de San Francisco in St. Augustine suggest that Franciscans had more access to venison, chicken, and pork than their secular neighbors in town, perhaps as a result of direct shipments from the missions.¹¹⁷

Overall, the vertebrate remains from Spanish Florida indicate that Spaniards made adaptations to the diverse settings and microenvironments situated throughout the colony.¹¹⁸ Animal husbandry appears to have had limited success since large quantities of cow and pig have only been identified from San Luis (although this would presumably be the case at sites near La Chua and other *haciendas*). Curiously, the abundance of beef and pork available to residents in the interior provinces does not seem to have had a direct impact on subsistence in St. Augustine during the seventeenth century.¹¹⁹

114 Elizabeth J. Reitz and Joel Dukes, "Change and Stability in Vertebrate Use between the Irene Period and the Mission Period: Nonhuman Vertebrate Remains from Meeting House Field and Fallen Tree" in *Native American Landscapes of St. Catherines Island, Georgia: Volume 2*, ed. D. H. Thomas (New York: American Museum of Natural History Anthropological Papers 88, 2008), 778-798. Also see Elizabeth J. Reitz, Barnet Pavao-Zuckerman, Daniel C. Weinand, and Gwyneth A. Duncan, *Mission and Pueblo of Santa Catalina de Guale, St. Catherines Island, Georgia* (New York: Anthropological Papers of the American Museum of Natural History 91, 2010); Elizabeth J. Reitz, Irvy R. Quitmyer, and David Hurst Thomas, *Seasonality and Human Mobility along the Georgia Bight* (New York: American Museum of Natural History Anthropological Papers 97, 2012).

115 Kelly L. Orr and Carol Colaninno, "Native American and Spanish Subsistence in Sixteenth-Century St. Augustine: Vertebrate Faunal Remains from Fountain of Youth (8SJ31), St. Johns Co., Florida," in *Historical Archaeology at the Fountain of Youth Park (8-SJ-31), St. Augustine, Florida: 1954-2007*, ed. Kathleen Deagan (Gainesville: Florida Museum of Natural History Miscellaneous Project Reports in Archaeology 59, 2008): Volume II, Appendix 7 (1-53), 25-26.

116 *Ibid.*, 21-22.

117 Elizabeth J. Reitz, "Vertebrate Fauna from the St. Augustine Barracks Site (SA-42A), St. Augustine, Florida," Project report on file, Zooarchaeology Laboratory, Georgia Museum of Natural History, University of Georgia, Athens, 1992.

118 Elizabeth J. Reitz, "Vertebrate Fauna from Seventeenth-Century St. Augustine" *Southeastern Archaeology* 11, no. 2 (1992): 79-94.

119 Kathleen Deagan, "St. Augustine and the Mission Frontier," in *Spanish Missions of La Florida*, 87-110.

Zooarchaeological studies have been complemented by ethnobotanical analyses detailing plant use in *La Florida*. C. Margaret Scarry, Donna Ruhl, and Lee Newsom have investigated plant remains from the major mission provinces and from various sites in St. Augustine.¹²⁰ Their findings indicate that Spaniards had reasonable success introducing many Old World fruits and vegetables to Florida. Chili peppers, watermelon, peaches, melons, figs, pomegranates, peas, and oranges all flourished in the subtropical climate. It is also well-documented that wheat was grown (most notably at Asile *hacienda*), but its identification from archaeological sites has been primarily limited to those projects with the most rigorous recovery and processing techniques. Interestingly, wheat has most frequently been identified from religious complexes at the missions, suggesting that its use at these frontier settlements may have been largely reserved for ritual purposes.¹²¹ Other European plant foods, such as garbanzos, have only been recovered a few times and were possibly imported along with other Iberian staples such as olives, olive oil, and wine during the seventeenth century.

The most pronounced finding of the ethnobotanical studies was the prevalence of native corn, beans, and squash throughout Spanish Florida. Despite the success of many Old World cultigens, introduced species were always supplemental to native staples. Corn, in particular, was the dietary mainstay of the colony and as its production intensified, fewer alternative food sources were exploited.¹²²

Transportation and Economy

With over 2,000 miles of coastline, the Atlantic Ocean and Gulf of Mexico were critical to the life blood of the colony. Ships traveled

120 Donna L. Ruhl provides a comprehensive overview of these studies in Spanish Florida in "Old Customs and Traditions in New Terrain: Sixteenth- and Seventeenth-Century Archeobotanical Data from *La Florida*," in *Foraging and Farming in the Eastern Woodlands*, ed. C.M. Scarry (Gainesville: University Press of Florida, 1993), 255-283; Newsom and Quitmyer, "Appendix E: Archaeobotanical and Faunal Remains," 206-233.

121 Donna L. Ruhl, "Oranges and Wheat: Spanish Attempts at Agriculture in La Florida," *Historical Archaeology* 31 (1997): 36-45.

122 See, for example, C. Margaret Scarry, "Plant Production and Procurement in Apalachee Province," in *The Spanish Missions of La Florida*, 368-369; C. Margaret Scarry and Elizabeth J. Reitz, "Herbs, Fish, Scum and Vermin," 351.

from St. Augustine and Mexico to collect the *situado*, between St. Augustine and Apalachee to deliver supplies and receive provisions, and between Apalachee and Havana to exchange agricultural surplus for imported goods. From the Caribbean, the treasure fleets were propelled by the Gulf Stream through the Straits of Florida and along the Atlantic coastline before beginning their transatlantic voyage back to Spain.¹²³ The treacherous reefs and shoals through the Straits and along the coast, combined with the unpredictability of hurricanes (other than knowing they occurred in the fall and winter), created exceedingly dangerous conditions and Florida became a ship graveyard with literally thousands of wrecks in its waters.¹²⁴

The most renowned seventeenth-century shipwreck in Florida waters is *Nuestra Señora de Atocha*, the vice flag ship of the *Tierra Firme* fleet. This galleon was one of 28 vessels which left Cuba for Spain in September 1622 and was lost in a hurricane off the Florida Keys. No archaeological assemblage is more emblematic of the Spanish treasure fleets than that from the *Atocha*.¹²⁵ The materials have been studied by archaeologists and a wide range of maritime experts.¹²⁶ The *Atocha* assemblage underscores the vast wealth extracted from the Americas intended to fuel the Spanish Empire, and the burgeoning global economy as seen in the diverse materials originating from the Americas, Asia, and Europe.¹²⁷

123 See Roger C. Smith, James J. Miller, Sean M. Kelley, and Linda G. Harbin, *An Atlas of Maritime Florida* (Gainesville: University Press of Florida, 1997).

124 *Ibid.*; Steven Singer, *Florida Shipwrecks* (Sarasota, FL: Pineapple Press, 1992).

125 See R. Duncan Mathewson III, *Treasure of the Atocha: A Four Hundred Million Dollar Archaeological Adventure* (New York: E.P. Dutton, 1986); Eugene Lyon, *The Search for the Atocha* (New York: Harper and Row, 1979).

126 See for example, Kathleen Deagan, *Artifacts of the Spanish Colonies of Florida and the Caribbean, Volume I: Ceramics, Glassware and Beads* (Washington, D.C.: Smithsonian Institution Press, 1987); Kathleen Deagan, *Artifacts of the Spanish Colonies of Florida and the Caribbean, Volume II: Portable, Personal Possessions* (Washington D.C.: Smithsonian Institution Press, 2002); Mitchell W. Marken, *Pottery from Spanish Shipwrecks 1500-1800* (Gainesville: University Press of Florida, 1994); Alan K. Craig, *Spanish Colonial Gold Coins in the Florida Collection* (Gainesville: University Press of Florida, 2000); Alan K. Craig, *Spanish Colonial Silver Coins in the Florida Collection* (Gainesville: University Press of Florida, 2000).

127 The *Atocha* project became a lightning rod for academics, commercial salvors, politicians, and the courts concerned with the rightful ownership of shipwrecks and their contents. This contention resulted in the federal Abandoned Shipwreck Act signed into law in 1988.

Equally interesting were the remains from one of the merchant ships that sailed with the 1622 *Tierra Firme* fleet, tentatively identified as *Buen Jesús y Nuestra Señora de Rosario*, also found off the Florida Keys.¹²⁸ The large load of tobacco consigned to the ship had perished, but researchers found 6,639 pearls from *La Costa de las Perlas*—the Pearl Coast—off Venezuela’s mainland which were likely contraband since they were absent from the outward bound shipping manifest.¹²⁹ Among the most interesting aspects of the *Buen Jesús* wreck were the faunal remains which not only revealed evidence of mariners’ meals, including pigs, cattle, sheep/goats, and chicken (also found on the *Atocha*), but a high proportion of black rats.¹³⁰ These rodents were common passengers aboard colonial ships. Black rats ate through scarce onboard rations, contaminated fresh water supplies, and were vectors for typhus and bubonic plague.¹³¹ A New World parrot was also identified, perhaps one of many bound for Europe where they were commonly incorporated into portraits as status symbols.

Another facet of the Spanish colonial world was embodied by the *Henrietta Marie* which wrecked in 1700. Believed to be one of the oldest slave ships ever excavated in the Americas, this English merchant ship had just deposited its human cargo in Jamaica and was reloaded with New World commodities (including sugar and indigo) when it wrecked off Key West. The remains from the

128 See Greg Stemm and Sean Kingsley, eds., *Oceans Odyssey 3: The Deep-Sea Tortugas Shipwreck, Straits of Florida: A Merchant Vessel from Spain’s 1622 Tierra Firme Fleet* (Oxford: Oxbow Books, 2013).

129 For an archaeological examination of a sixteenth century Spanish town founded to exploit Venezuelan pearl fisheries, see Raymond F. Willis, “The Archeology of 16th Century Nueva Cádiz” (MA thesis, University of Florida, 1976). There is an interesting discussion of contraband cargo in Eugene Lyon and Barbara Purdy, “Contraband in Spanish Colonial Ships,” *Itinerario* 6 (1982)2:91-108.

130 Philip L. Armitage, “The Deep-Sea Tortugas Shipwreck, Florida: The Animal Bones,” in *Oceans Odyssey* 3, (2013): 151-169.

131 Black rats as carriers of bubonic plague and typhus are discussed by Alfred W. Crosby in *The Columbian Exchange: Biological and Cultural Consequences of 1492*, (Westport, CT: Greenwood Press, 1972), 97. Black rats were common shipboard passengers on other wrecks as well. See for example, Roger C. Smith, John R. Bratten, J. Cozzi, and K. Plaskett, “*The Emanuel Point Ship Archaeological Investigations 1997-1998*,” Report of Investigations No. 68 Archaeology Institute of West Florida, Pensacola (1998); Roger C. Smith, James Spirek, John Bratten, and Della Scott-Ireton, “*The Emanuel Point Ship Investigations, 1992-1995, Preliminary Report*,” Project report on file, Florida Bureau of Archaeological Research, Tallahassee, 1995.

Henrietta Marie chronicle both commercial English enterprise in the Caribbean and Southeast, and the brutal conditions of slaving operations. These activities would have a profound impact on Spanish Florida.¹³²

Beyond transportation by sea, the communication of agricultural products, supplies, soldiers, and Indian laborers between the mission provinces and St. Augustine was an ongoing operation. People and goods traveling north from St. Augustine had to cross the upper reaches of the St. Johns River by ferry at San Juan del Puerto. From here, provisions and military patrols were typically transported between the capital and Guale using the Inland Passage (now known as the Intracoastal Waterway).¹³³ Amy Bushnell has described a landing site on St. Catherine's Island as follows:

"At Asao, one of the stops on Ybarra's progress through Guale, he admonished the Indians 'to erect crosses along their roads similar to the one they have at the landing place. The cross is the perfect symbol of a Christian (Geiger 1937:174-175).' The church that was ready for consecration on St. Catherine's was half a league from the landing place on the southern end of the island."¹³⁴

During the seventeenth century, the Timucuan missions provided essential logistical support to soldiers, friars, *repartimiento* laborers, and commodities moving between Apalachee and St. Augustine.¹³⁵ Governor Rebolledo used the 1656 Timucuan Rebellion to his advantage by coercing chiefs involved in the revolt to relocate their villages along the *camino*, thus bolstering the native populations along this critical route. Archaeologists have been able to determine how Governor Rebolledo's plan of mission consolidation and

132 A permanent exhibit on the *Henrietta Marie* is on display at the Mel Fisher Maritime Museum, Key West, Florida.

133 Brian G. Boniface, "A Historical Geography of Spanish Florida, circa 1700" (MA thesis, University of Georgia, 1971), 167-172.

134 Bushnell, *Situado and Sabana*, 468. The in-quote citation is for Maynard Geiger, *The Franciscan Conquest of Florida (1573-1618)* (Washington DC: Catholic University of America, 1937), 174-175.

135 Worth, *Timucuan Chiefdoms of Spanish Florida, Volume 1: Assimilation*, 161.

resettlement was operationalized through the identification of many of these pre- and post-1656 Timucuan mission sites.¹³⁶

During the winter months, military couriers could make the trip between St. Augustine and Apalachee in four days; during the wet season it could take over a month.¹³⁷ Transportation by ship was a dangerous 700-mile voyage that took about two weeks (it only took eight days to sail from St. Marks to Havana). The preferred route from Apalachee to St. Augustine was amphibious. From Apalachee Bay, canoes and *piraguas* went along the Gulf Coast to the Suwannee River and up to the Santa Fé tributary. From here, goods were transported across the Alachua plain using pack animals and native cargo bearers.¹³⁸ The natives of San Diego de Salamatoto were assigned the difficult task of providing ferry service across the St. Johns River.

Some of the most interesting but under-reported archaeological remains have been associated with these river crossings and landings. Submerged remains have been recovered in the St. Johns near the Salamatoto mission and likely represent a combination of site erosion and lost cargo. They have also been recovered from the Suwannee River, most notably near the second (post-1656 rebellion) settlement of San Juan de Guacara where the *camino* crossed the river at Charles Spring.¹³⁹ One particularly interesting find from this area was a large iron concretion that was turned over to conservator James Levy of the Florida Bureau of Archaeological Research. After being cleaned and conserved, the rusted lump turned out to be a sack of iron tools including unused hoe blades and axe heads, no doubt intended for agricultural activities on the mission frontier.¹⁴⁰

136 John E. Worth, *Timucuan Chiefdoms of Spanish Florida, Volume 2: Resistance and Destruction* (Gainesville: University Press of Florida, 1998), Figure 5-1, 97-105. Also see Kenneth W. Johnson, "The Utina and the Potano Peoples of Northern Florida: Changing Settlement Systems in the Colonial Spanish Period" (PhD diss., University of Florida, 1991).

137 Mark F. Boyd, "Diego Peña's Expedition to Apalachee and Apalachicola in 1716," *Florida Historical Quarterly* 28 (1949):1-27.

138 *Piraguas*, or pirogues, were small, flat-bottomed vessels which had both oars and sails and were used to navigate the inland waterways, coastal zones, and rivers. See, for example, Chatelaine, *The Defenses of Spanish Florida*, 40.

139 This site, 8SU23, was found by B. Calvin Jones in 1971. Jones noted that the locations of the ferry landings were still discernible at the time.

140 Personal communication, James Dunbar, September, 2013. The materials were conserved by James Levy and are curated by the Florida Bureau of Archaeological Research, Mission San Luis, Tallahassee.

The Spanish Landing site, identified on the St. Marks River just north of Fort San Marcos, is believed to be the final destination for vessels carrying cargo to and from Apalachee Province.¹⁴¹ B. Calvin Jones conducted preliminary testing on the terrestrial (actually swampy) portion of the site and recovered typical Apalachee artifacts and ballast. The submerged remains in the river, however, were quite remarkable and included numerous leather shoe soles, decorative escutcheon, dozens of whole olive jars, pine corks large enough to cover olive jar openings, native clay pipes, Mexican majolica, and even a ceramic vessel fragment with the name Juan de la Rosa inscribed on it (he was a ship's captain working for San Luis resident and ship owner Diego de Florencia). The assemblage highlights the nature of the Apalachee economy which was based on the export of raw materials in exchange for finished products and imported foodstuffs. It is also one of the few places in Apalachee Province where San Marcos pottery has been recovered, indicative of goods being transported from St. Augustine to Apalachee. The St. Marks Landing site was located at the northernmost point on the St. Marks River where the water was deep enough for vessels to maneuver, yet the southernmost area where fresh water was still available.

Summary

Following his 1948 test excavations at San Luis, John Griffin made the following observation:

In one sense, the problem of the Spanish missions of Florida is related to the larger problem of Spanish missions in the hemisphere, and particularly those in North America. When enough data are available from the various regions to which Spanish activity was extended, it will be possible to study the varying reactions and adjustments of divergent aboriginal populations to a similar impact. In this connection, however, one should not assume that the

141 The Spanish Landing site was identified by Dr. Lou Hill and reported in David E. Swindell and Louis Hill, Jr., "Archaeological Investigations at Spanish Landing (8WA247): A Port for the Apalachee Missions," (Project report on file, Bureau of Archaeological Research, Tallahassee, 2001). These materials were reanalyzed and reported in Jennifer F. McKinnon, "Maritime Cultural Landscapes: Investigations at the Spanish Landing (8WA247)" (MA thesis, Florida State University, 2003).

impact was identical in the different geographical areas involved. Matters of colonial policy, location in relation to international affairs, isolation, and environment, as well as the personalities of the individuals involved, will combine to complicate the problem.¹⁴²

Indeed, it has been the cumulative impact of archaeological research on seventeenth-century sites in Spanish Florida that has been particularly compelling.¹⁴³ As dynamic institutions, Spanish missions, forts, and settlements had a range of expressions over space and time. Archaeologists have successfully investigated some of the ways by which natives were brought into the Spaniards' social, religious, and political orbit through sustained contact, indoctrination, and reorganization. They have also studied European elements such as sacred and secular architecture and found that although they were incorporated into their frontier communities, a significant number of social and material accommodations were also required. Perhaps most remarkable is the manner in which Spaniards continually adjusted their strategies in St. Augustine and the mission provinces to ensure they functioned as inter-related components of the larger colonial enterprise.

142 John W. Griffin, "Excavations at San Luis: Conclusions," in *Here They Once Stood*, 157.

143 All historical archaeologists working on Spanish colonial sites in La Florida owe a tremendous debt to the research that has been conducted in St. Augustine. The interdisciplinary program initiated in the 1970s by the St. Augustine Restoration Foundation established an unparalleled precedent for Spanish colonial research in this country. Subsequent studies have drawn heavily from this exemplary body of work for their theoretical and methodological underpinnings.