

**The Discovery and Exploration of Tristán de Luna's  
1559-1561 Settlement on Pensacola Bay**

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Abstract

Following the fortuitous 2015 discovery of a substantial assemblage of mid-16th-century Spanish ceramics in a residential neighborhood overlooking the Emanuel Point shipwrecks in Pensacola Bay, the University of West Florida Archaeology Institute worked with more than 120 landowners to conduct extensive archaeological testing across a broad area in order to bound and explore the site. This paper compares documentary and archaeological evidence to confirm the identification of the roughly 10-hectare site as Tristán de Luna's 1559-1561 settlement, making it the largest mid-16th-century Spanish colonial site in the Southeast, and the earliest multi-year European settlement in the entire United States.

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After mid-August of 1559, Tristán de Luna y Arellano and some 1,500 soldiers and other colonists disembarked and unloaded their equipment and supplies from the ships that brought them from Veracruz to Pensacola Bay, and they began to erect what they hoped would be the first successful Spanish settlement on the northern Gulf coast of the region then known as Florida.<sup>1</sup> The Pensacola settlement was actually Spain's third formal attempt to establish a colony in Florida, following two short-lived attempts under Juan Ponce de León in 1521 and Lúcas Vázquez de Ayllón in 1526, as well as a handful of other failed Spanish expeditions to southeastern North America.<sup>2</sup> The principal intent of Luna's Pensacola settlement, named Santa María de Ochuse, was to establish a beachhead from which to penetrate the mainland and eventually create an overland route to the Atlantic coast at Santa Elena in modern South Carolina, heading off anticipated French intrusion there. Although Ochuse was intended to be a port from which people and supplies could subsequently be funneled into the new Florida colony, the hurricane that struck just five weeks later on September 19th devastated the fleet and wiped out the majority of the colony's food still on board, instantly transforming Luna's settlement into a refuge for the now-stranded colonists. Even during the five months in 1560 that most of the colonists relocated inland into central Alabama in search of food, Ochuse remained a pivotal link to the outside world, where relief fleets could arrive and deliver food and other supplies.

Despite the fact that Luna's settlement was occupied continuously for a full two years between August, 1559 and August, 1561, only a few direct documentary references to its precise location on Pensacola Bay have survived. In part for this very reason, the site of the settlement has long remained a mystery, despite considerable research and many archaeological surveys in

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<sup>1</sup> Davila Padilla (1625); Priestley (2010); Hudson et al. (1989); Galloway (1995:143-160); Worth (n.d.).

<sup>2</sup> Davis (1935); Lawson (1946); Hoffman (1980, 1990, 1992, 1994); Lyon (1981); Peck (1992); Hudson (1997); Clayton et al. (1993); Lowery (1911:411-427); Weddle (1985:38-54, 234-246); Worth (2014:8-19, 23-28, 43-86, 154-189).

recent decades. Nevertheless, the few textual clues that have always been available narrow down the list of potential locations considerably, and have always included the location where the site was finally identified in the fall of 2015. Though a detailed review of this documentary evidence is beyond the scope of this paper,<sup>3</sup> when combined, the historical record indicates (1) that the Luna settlement should be located on the mainland on the western side of the Pensacola Bay system with easy access to the northern interior, (2) that it should be situated on a geographic landform that could be described as a point overlooking the bay, (3) that it should overlook a wide part of the bay encompassing 7-10 miles of visible waterscape, (4) that this landform should be broad and level enough to accommodate a 140-lot town plan with streets between 4-lot quadrangles, (5) that it should be reasonably close to a deep-water anchorage area (whether just 200 meters or more is unclear), (6) that it should be near or adjacent to a shallow-water zone near that anchorage where six Spanish ships grounded and wrecked during the 1559 hurricane, and (7) that it should have a low-lying area within about 600 meters that could have allowed a seventh ship to be washed over the trees to settle intact within a grove.

Using all these characteristics and qualifications, there are very few topographic locations along the bay that fit the textual accounts exactly. The most obvious of these, however, is the Emanuel Point peninsula, which not coincidentally happens to overlook the three currently-known shipwrecks from Luna's fleet. Though Emanuel Point has long been suspected to be a prime candidate for Luna's settlement, the 2015 discovery of a substantial and areally-extensive assemblage of mid-sixteenth-century Spanish residential debris in this area matches all the documentary expectations noted above, and as will be reviewed below, subsequent survey and testing by the University of West Florida Archaeology Institute has provided ample evidence that this is indeed the 1559 settlement of Tristán de Luna.

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<sup>3</sup> But see Worth (2016b).

The initial discovery on a private land was made by Pensacola resident Thomas Garner, a veteran of UWF archaeological projects directed by Judy Bense during the 1980s, who recognized the potential significance of an early-style Spanish olive jar neck and Columbia Plain majolica alongside a substantial assemblage of similar ceramics scattered across the recently-cleared lot.<sup>4</sup> After Garner brought the discovery to the attention of UWF archaeologists, a team of faculty, staff, and students was organized to conduct close-interval shovel testing on the lot before the start of house construction with the permission of the landowners. During five days of fieldwork in early November, some 71 shovel tests and one 1x1.5 meter test unit were excavated. In addition, a large volume of backdirt from new construction trenches was sifted, and long profiles documented. Excavations confirmed the presence of subsurface features and midden deposits with exactly the same assemblage of Spanish artifacts originally identified on the surface.

The assortment of 16th-century Spanish artifacts recovered from the lot was dominated by ceramics, amounting to more than 420 sherds of olive jar, glazed and unglazed coarse earthenware, and majolica, but also included 22 sherds of red filmed and black graphite painted Aztec pottery, more than 130 wrought iron nails including caret head nails thought to have been used in early 16th-century horseshoes, a handful of lead shot and improvised fishing line weights, several cupreous items including aglets, decorative rosettes, and an engraved hand bell fragment, and six glass trade beads including a Nueva Cadiz and five seven-layer chevron beads.<sup>5</sup> Not only was this collection remarkable because of the fact that it came from a sample area of just over a tenth of a hectare, it also represented the largest single assemblage of 16th-century Spanish ceramics from any terrestrial site in the southeastern United States excepting only the 1539-1540

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<sup>4</sup> St. Myer (2015).

<sup>5</sup> Worth (2016a).

Hernando de Soto winter encampment at the Martin Site in Tallahassee,<sup>6</sup> and the twin colonial towns of St. Augustine and Santa Elena on the Atlantic coasts of Florida and South Carolina, both postdating the 1565 arrival of Pedro Menéndez de Avilés.<sup>7</sup> In fact, the only comparable assemblages anywhere along the Florida Gulf coast were the two Emanuel Point shipwrecks just offshore, both of which possessed essentially identical ceramic types to the terrestrial find.<sup>8</sup> This includes the unique transitional olive jar rim form, neatly straddling the line between John Goggin's Early and Middle Styles, and an average body sherd thickness of 7.2 mm.

In addition to the sheer quantity of artifacts, the composition of the Luna assemblage also distinguishes it from many other sites with 16th-century Spanish artifacts from across the entire Southeast, the vast majority of which are comprised of a limited range and number of gift and trade goods dominated by glass beads, iron tools, ornamental items, and occasional military gear, and which are usually, though not always, found in association with Native American burials. But missing from such assemblages are substantial proportions of the one major category of artifact that seems to have been consistently present where Spaniards lived: ceramics.<sup>9</sup> Where Spanish settlers brought food, prepared food, and served food for themselves, they brought ceramics. But such items were of little interest to the Southeastern Indians. The broken Spanish ceramics were not generally recycled or scavenged by the Indians, and remained in place as a testament to the residential Spanish presence. Apart from the Soto winter encampment and the two colonial towns noted above, only the Berry Site in North Carolina, one of Menéndez's small garrisoned outposts, has proportions of Spanish ceramics comparable to the Luna site.<sup>10</sup>

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<sup>6</sup> Ewen and Hann (1998).

<sup>7</sup> E.g. Deagan (1981, 1982, 2009); South (1979, 1980, 1982); South et al. (1988); DePratter and South (1995); South and DePratter (1996).

<sup>8</sup> E.g. Smith et al. (1995, 1998); Cook et al. (2009, 2016); Sorset (2012); Bratten and Lloyd (2017).

<sup>9</sup> Worth (1994, 2015, 2016c).

<sup>10</sup> Beck et al. (2016).

The 2015 discovery was only one small portion of a much larger archaeological site (8ES1) previously documented and tested during a 1986 UWF archaeological field school under Judy Bense,<sup>11</sup> and our next step was to conduct a broader shovel test survey across the entire Emanuel Point landform in order to determine the spatial extent of 16th-century Spanish artifacts, and explore the integrity of subsurface deposits and any associated pit features. Since the site is located in the midst of a developed urban neighborhood with more than a hundred different landowners, UWF archaeologists first organized a neighborhood meeting with landowners and tenants to provide first notification about the find and start the process of soliciting permission for shovel testing and voluntary monitoring of ongoing or planned construction projects across the neighborhood. On the next morning, December 17, a formal press conference was held at the T.T. Wentworth Museum announcing the discovery of the first multi-year European settlement in the continental United States.<sup>12</sup>

Shovel testing sponsored by the UWF Archaeology Institute began in January of 2016, and continued throughout most of the year, ultimately encompassing more than 900 shovel tests across an area spanning some 34 hectares, or nearly 85 acres, with more than 120 landowners.<sup>13</sup> Even though the survey has many gaps due to the presence of houses, roads, and other disturbances, within the broader survey area, the distribution of 16th-century Spanish artifacts matching the original find can be used to bound the Luna settlement site. The most abundant diagnostic is early Spanish olive jar, which is distributed across an area of roughly 12.7 hectares, or 31 acres, including 8.9 hectares on the level upper summit of the terrace overlooking Pensacola Bay, with another 3.8 hectares extending along the lower slope down close to the shore and surrounding a freshwater pond draining to the west. In addition, several other common diagnostic markers

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<sup>11</sup> Bense (1986).

<sup>12</sup> St. Myer (2015).

<sup>13</sup> Benchley and Worth (2017).

overlap this cluster, including 16th-century lead glazed redware, Columbia Plain majolica, Aztec ceramics, and caret head nails. If Luna followed the Viceroy's original instruction to lay out a town of 140 house lots in a rectangular configuration of 5 x 7 quads, overlaying such a rectangle to encompass all the 16th-century material on the level terrace results in a rectangle roughly 375 meters by 290 meters, with a projected site area of roughly 11 hectares, or just over 27 acres, not counting the area below the upper terrace. Since the original town of Santa María de Ochuse was devastated just five weeks after Luna's arrival, and its stranded population fluctuated and gradually dwindled from 1,500 to roughly 160 by the spring of 1561, the artifactual trace of an original rectangular layout may be ephemeral at best, but may eventually be revealed by additional testing.

While we have only a few documentary details regarding configuration of the Luna settlement itself, we can nonetheless turn to archaeological evidence to establish a comparative baseline for other early Spanish settlements in Florida. To this end, we have two roughly contemporary sixteenth-century settlements from the Pedro Menéndez era to provide some comparison for what we might expect in terms of the size of the Luna site: St. Augustine and Santa Elena, both of which have been the subjects of considerable archaeological investigation.

The 1565 settlement of St. Augustine was located at the Fountain of Youth Park site (8SJ31), and initially housed some 600 Spaniards for a short period, though this number dwindled as garrisons were established elsewhere, reaching perhaps just 200 by the end of the year.<sup>14</sup> This settlement was relocated to somewhere on nearby Anastasia Island in 1566, but eventually what is still the location of modern St. Augustine was settled in 1572. Archaeological work led by Kathleen Deagan has shown that Menéndez's original settlement at the Fountain of Youth Park

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<sup>14</sup> Deagan (2009:33).

site was roughly 8,000 square meters in size (0.8 hectares), or about 1.9 acres, measuring about 90 by 60 meters.<sup>15</sup>

The 1572 settlement, however, has been documented by Deagan to cover an area of about 4.0 hectares, or 10.55 acres.<sup>16</sup> Dimensions of this area are roughly 260 by 230 meters (850 by 750 feet) based on maps of a 1981 survey by Deagan.<sup>17</sup> It seems to have held a population comprising probably 300 residents in 1580, growing to around 600 residents by the end of the century.

The 1566-1587 settlement at Santa Elena on Parris Island, South Carolina has been investigated extensively by Stanley South and Chester DePratter, and the total size of this town was about 6 hectares, or 15 acres.<sup>18</sup> The shape was an elongated triangle, running some 367 meters (1200 feet) long and tapering in width from 213 meters (700 feet) down to 91.5 meters (300 feet). The total population of Santa Elena during this era probably was about 300-400 residents.

Based on these three examples, the size of early Spanish colonial settlements in sixteenth-century Florida ranged between less than a hectare and up to 6 hectares, with no less than about 250 people per hectare at the Fountain of Youth Park (and for a short time more than 600) to as few as perhaps 66-150 people per hectare in Santa Elena and downtown St. Augustine during the same era. Using this admittedly broad range of population densities for Florida's other sixteenth-century settlements, we might estimate that the original 1559 Luna settlement of 1,500 people could have ranged in size from as small as 6 hectares, or 15 acres, to as large as 23 hectares, or 57 acres. This latter figure of course seems likely to have been too large and unwieldy to have

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<sup>15</sup> Deagan (2009:325).

<sup>16</sup> DePratter and South (1995:25-26).

<sup>17</sup> Deagan (1981); see also Deagan (1982:189) and Hoffman (1977).

<sup>18</sup> DePratter and South (1995:47-49).

provided any effective protection for residents of such an isolated colonial port community in the Florida frontier.

The results of the shovel test survey noted above indicate that the Luna settlement encompassed a somewhere between about 12.7 and potentially as much as 14.8 hectares, making it unquestionably the largest sixteenth-century Spanish site in the Southeast, and certainly larger than both St. Augustine and Santa Elena. And this is precisely what we would expect based on documentary evidence, since Luna's colonial fleet carried more than twice the number of colonists that initially settled St. Augustine six years later. While we are still accumulating data on the layout and internal configuration of the site, its size appears entirely consistent with what we would expect from Santa María de Ochuse.

In the summer of 2016, UWF terrestrial archaeological field schools also conducted more intensive test excavations on portions of the Luna settlement site, guided both by shovel test results as well as remote sensing surveys that suggested the presence of a few possible rectangular structure configurations below ground.<sup>19</sup> Though much of the fieldwork focused on investigating what turned out to be an ephemeral Luna and later Spanish and British occupations on the lower elevations of the site, and exploring prehistoric and potential contact-era Native American deposits,<sup>20</sup> several units were also opened up in the heart of the Luna settlement on the upper terrace, providing a much more fine-grained look at the intensive 16th-century Spanish occupation. One 1x2 meter unit expanded to a 2x2 encountered an undisturbed shallow horizon literally blanketed with several hundred olive jar sherds along with many other items including a copper balance scale weight, straight pin, a wire-wrapped ring, a hook-and-eye, along with a single posthole containing Luna-era debris and the charred remnants of a post with a wrought iron

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<sup>19</sup> Benchley and Worth (2017).

<sup>20</sup> Gougeon and Boren (2017).

nail still in-place. Subsequent analysis reveals that more than a few of the olive jar sherds mend with each other, including some within the post hole that crossmend with sherds on the surface horizon. Another unit explored a very large and undisturbed 16th-century trash-filled pit containing a dense deposit of broken Spanish and Native American ceramics, broken iron barrel bands, copper wire, aglets, straight pins, and a ring of riveted mail, along with local shellfish and a complete deer antler at the bottom. Though analysis is still ongoing, the 2016 summer field school served to confirm without a doubt that intact features and buried surface deposits directly associated with Luna's settlement are still present at the site.

In sum, after a year and a half of focused archaeological research, the conclusion seems inescapable that the 1559-1561 site of Tristán de Luna's settlement of Santa María de Ochuse has indeed been identified on Emanuel Point, supported by the following facts:

1. The site fits all documentary accounts regarding the location of Luna's settlement.
2. The site is the largest 16th-century Spanish terrestrial site in the entire Southeast.
3. The artifact assemblage is fully consistent with a Spanish residential occupation that originated in Mexico and included Aztec Indians and Spanish cavalry.
4. The site contains subsurface features and architectural traces that are consistent with Luna's two-year occupation.
5. The site is adjacent to a cluster of three 16th-century shipwrecks already attributed to the Luna expedition that contain artifact assemblages that match the terrestrial assemblage.

In light of these facts, we are confident that continuing archaeological and historical research by the University of West Florida will permit new and deeper insights into the settlement and fleet of Tristán de Luna, shedding light on a still little-known chapter in the early colonial history of North America.

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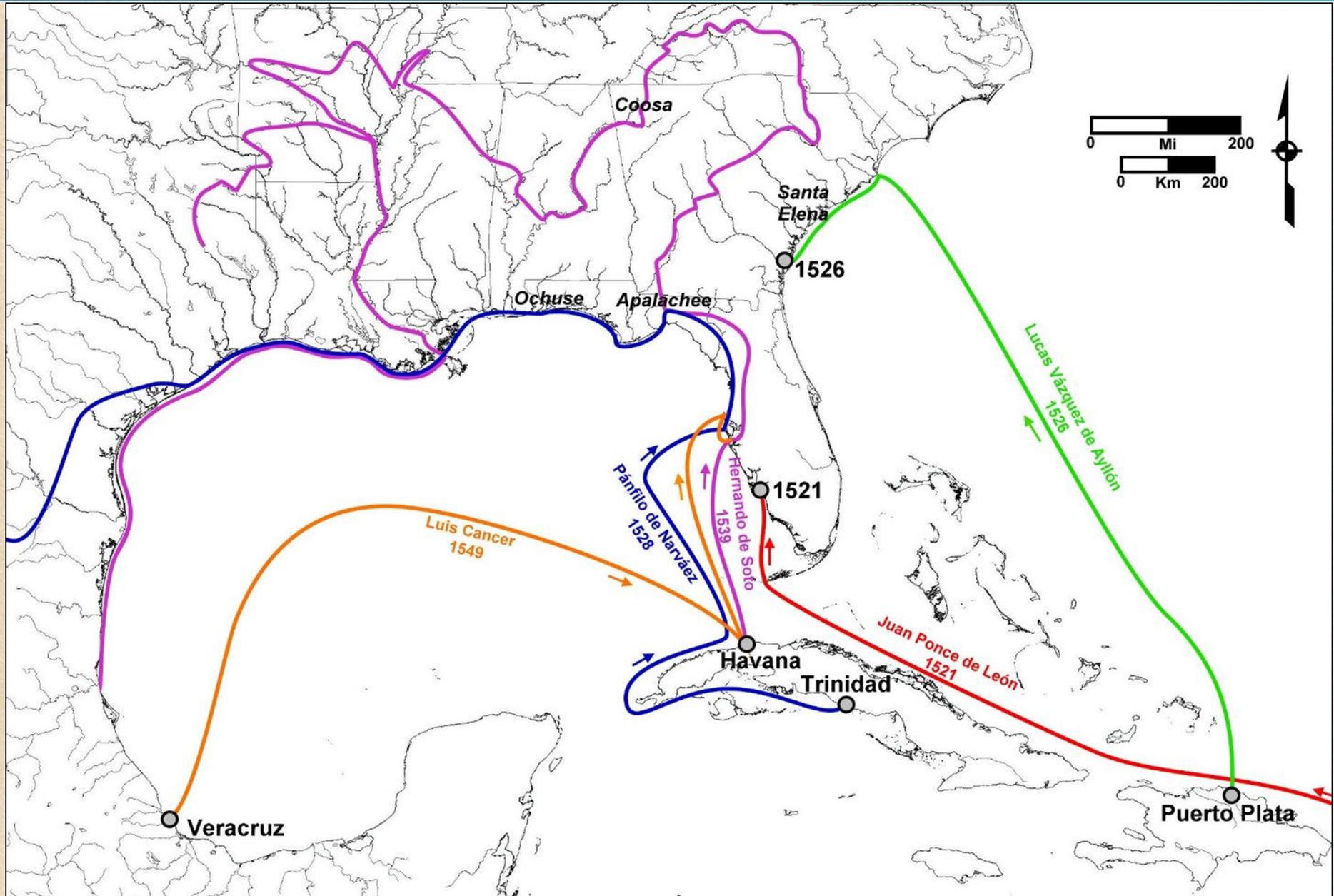
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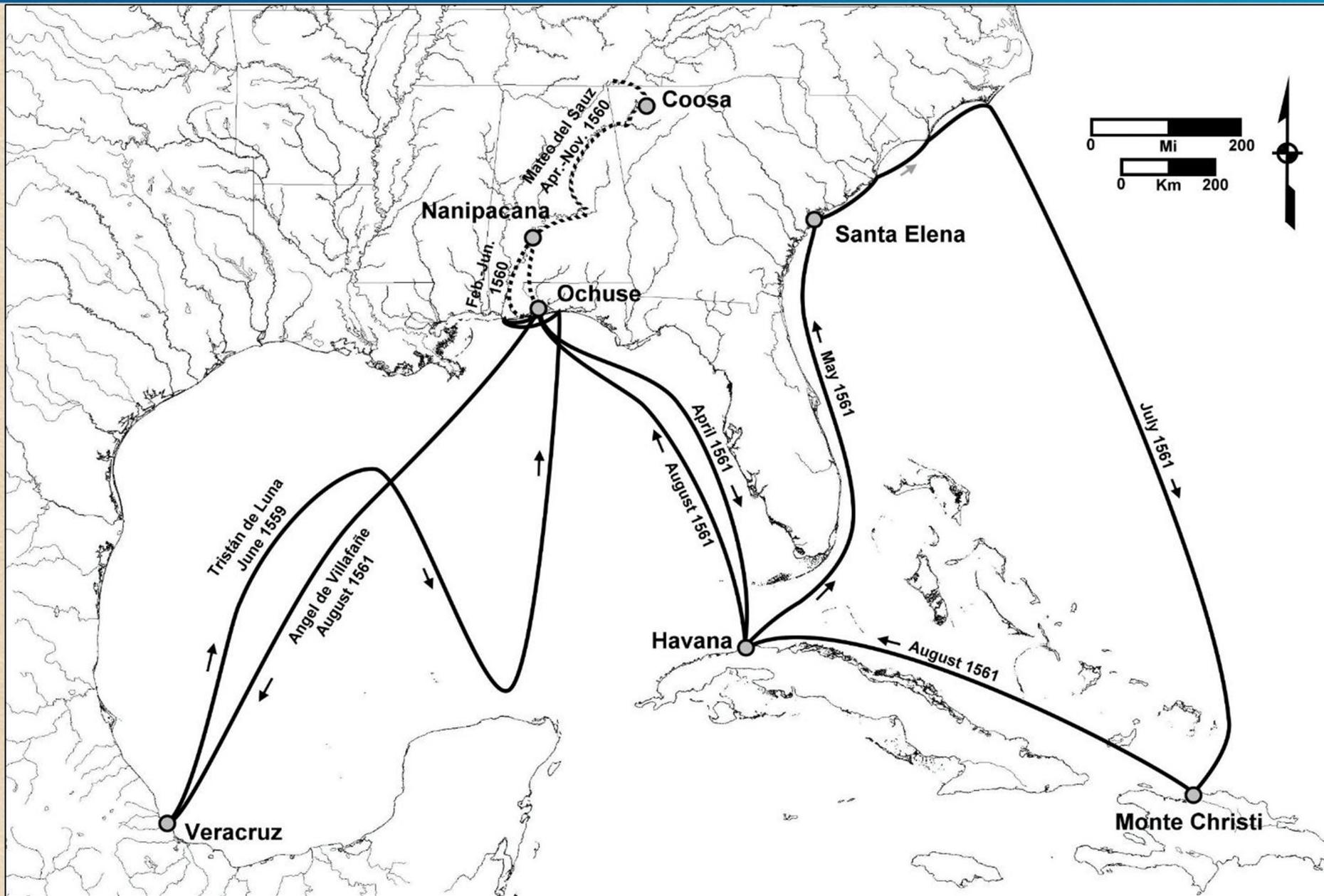
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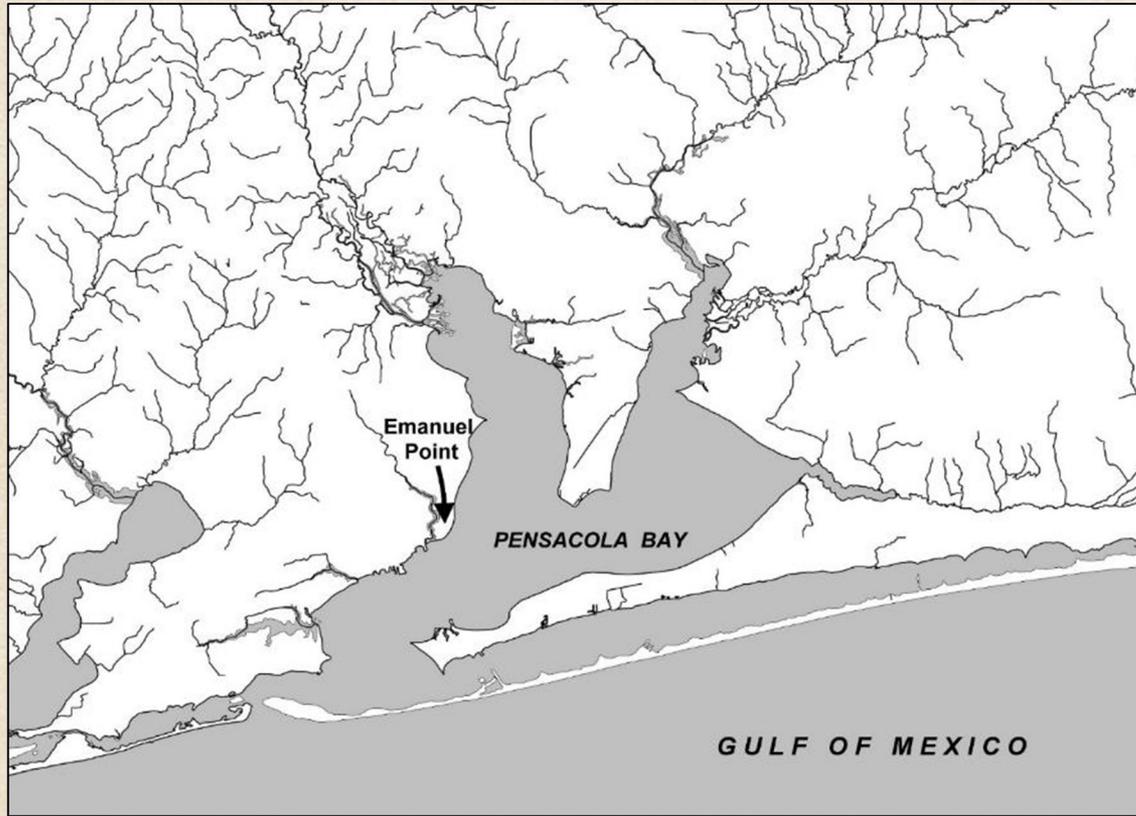


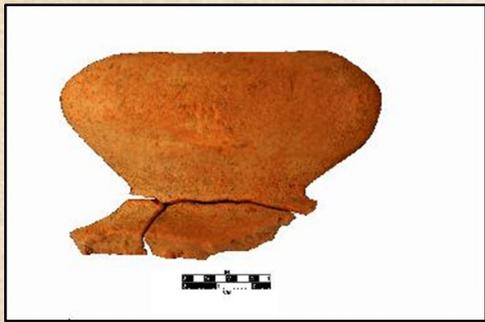
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The 1559-1561 Tristán de Luna Expedition

# Emanuel Point

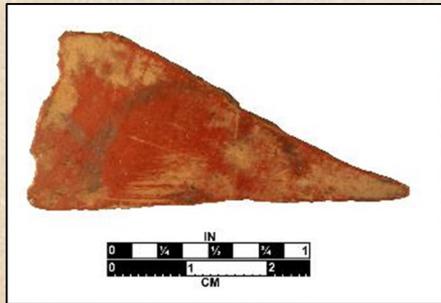




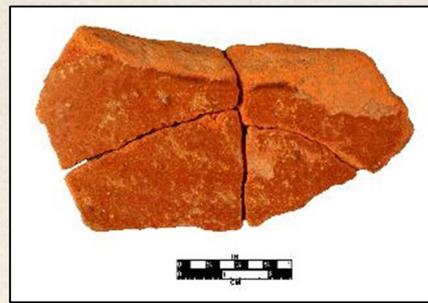
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Majolica



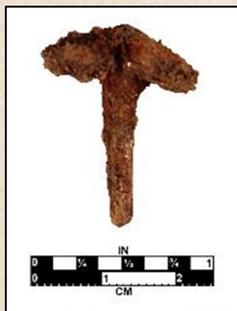
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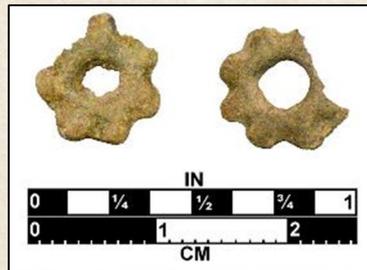
Lead-Glazed Coarse Earthenware



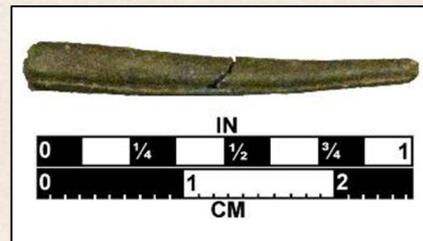
Wrought Iron Nail



Caret-Head Nail



Copper Rosettes

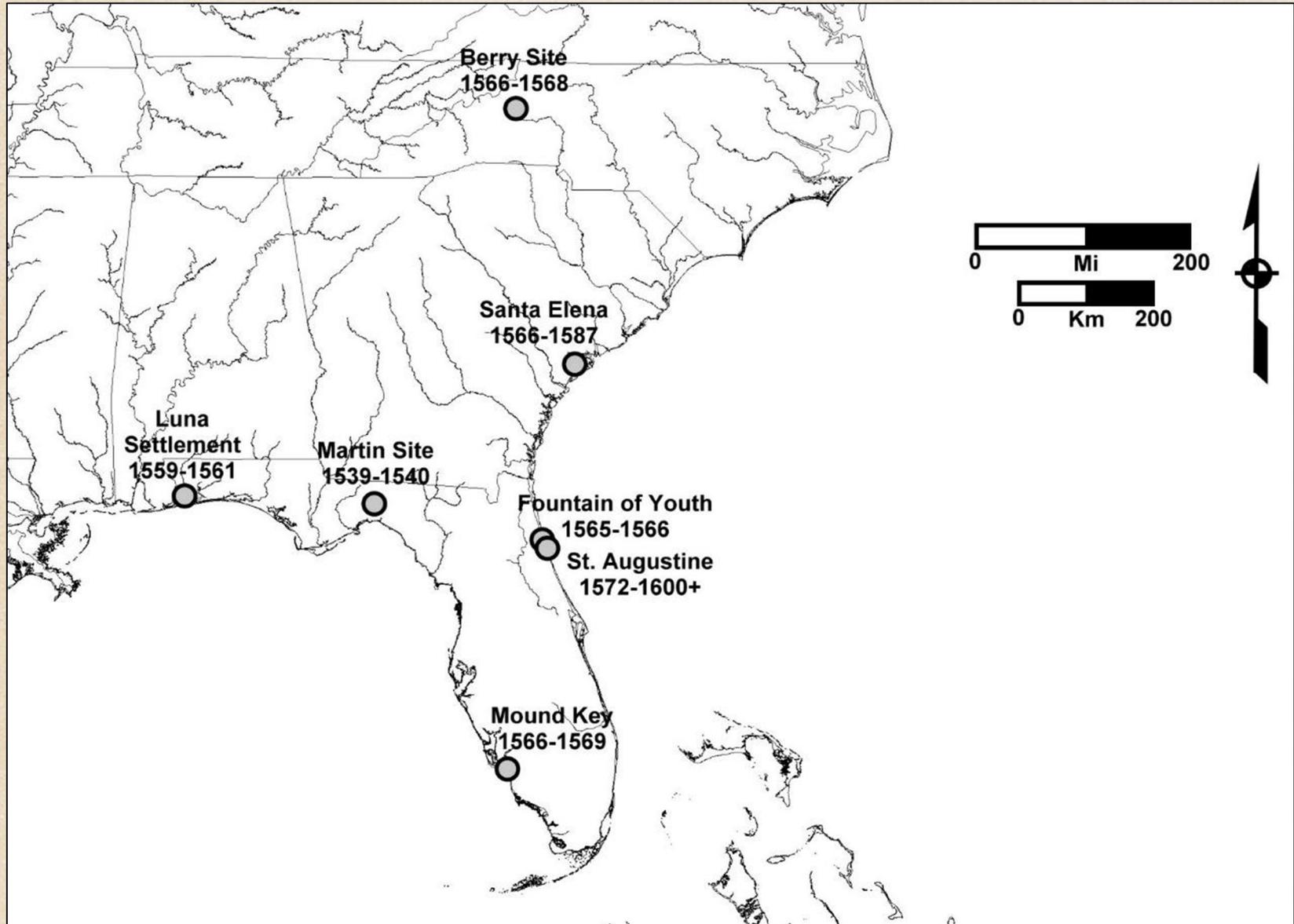


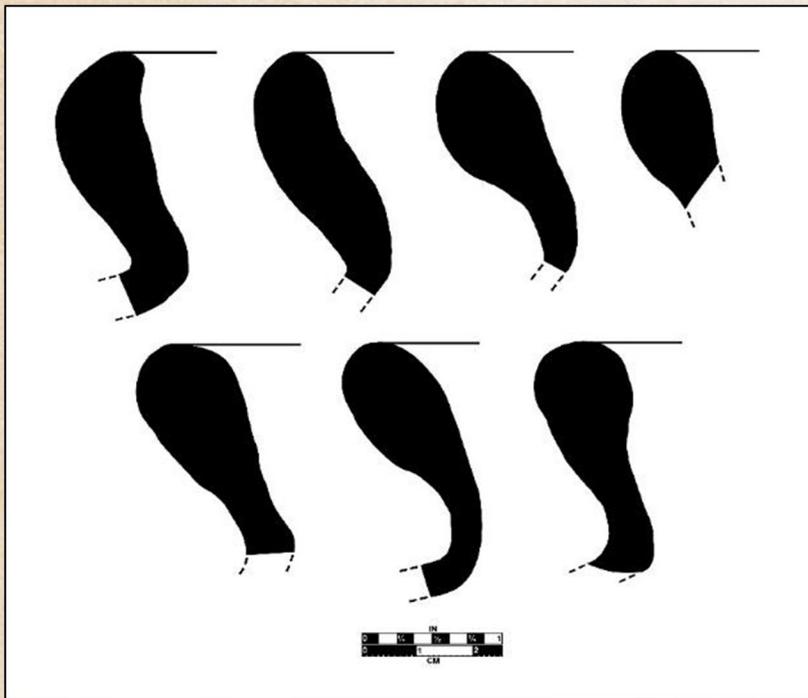
Copper Aglet



7-Layer Chevron and Nueva Cadiz Beads

# 16<sup>th</sup>-Century Residential Spanish Archaeological Sites



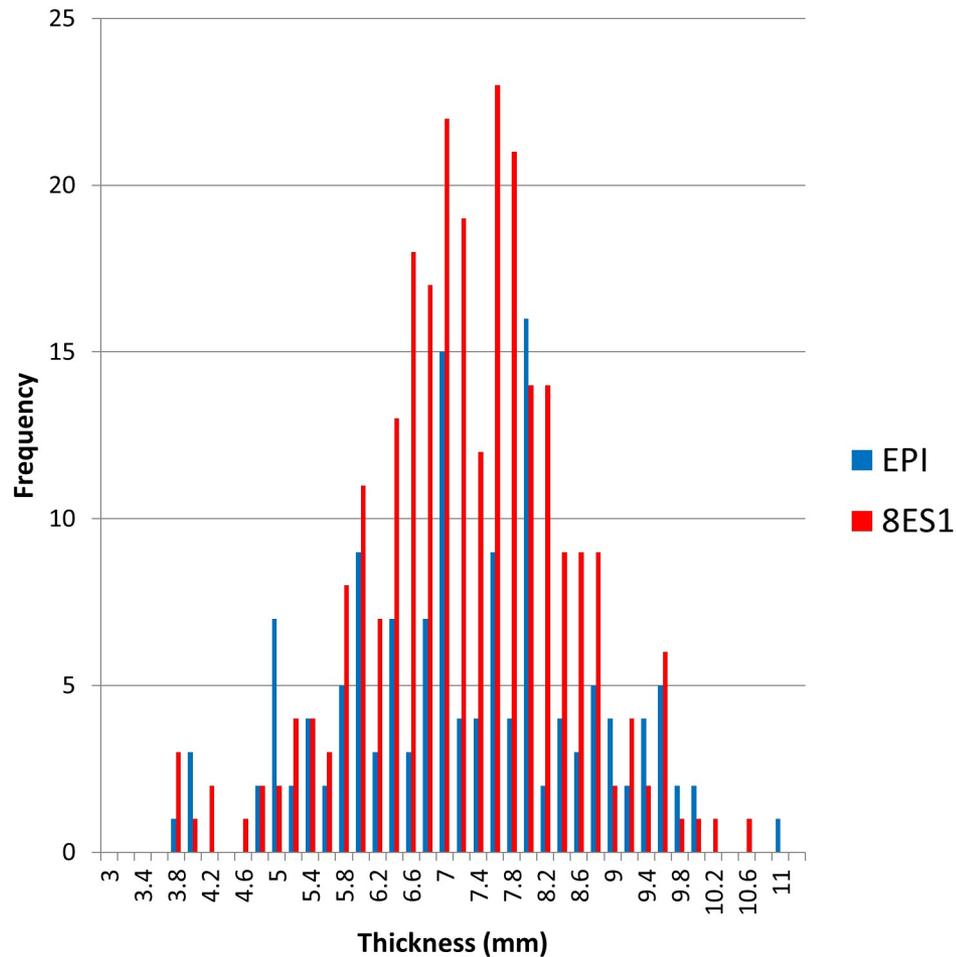


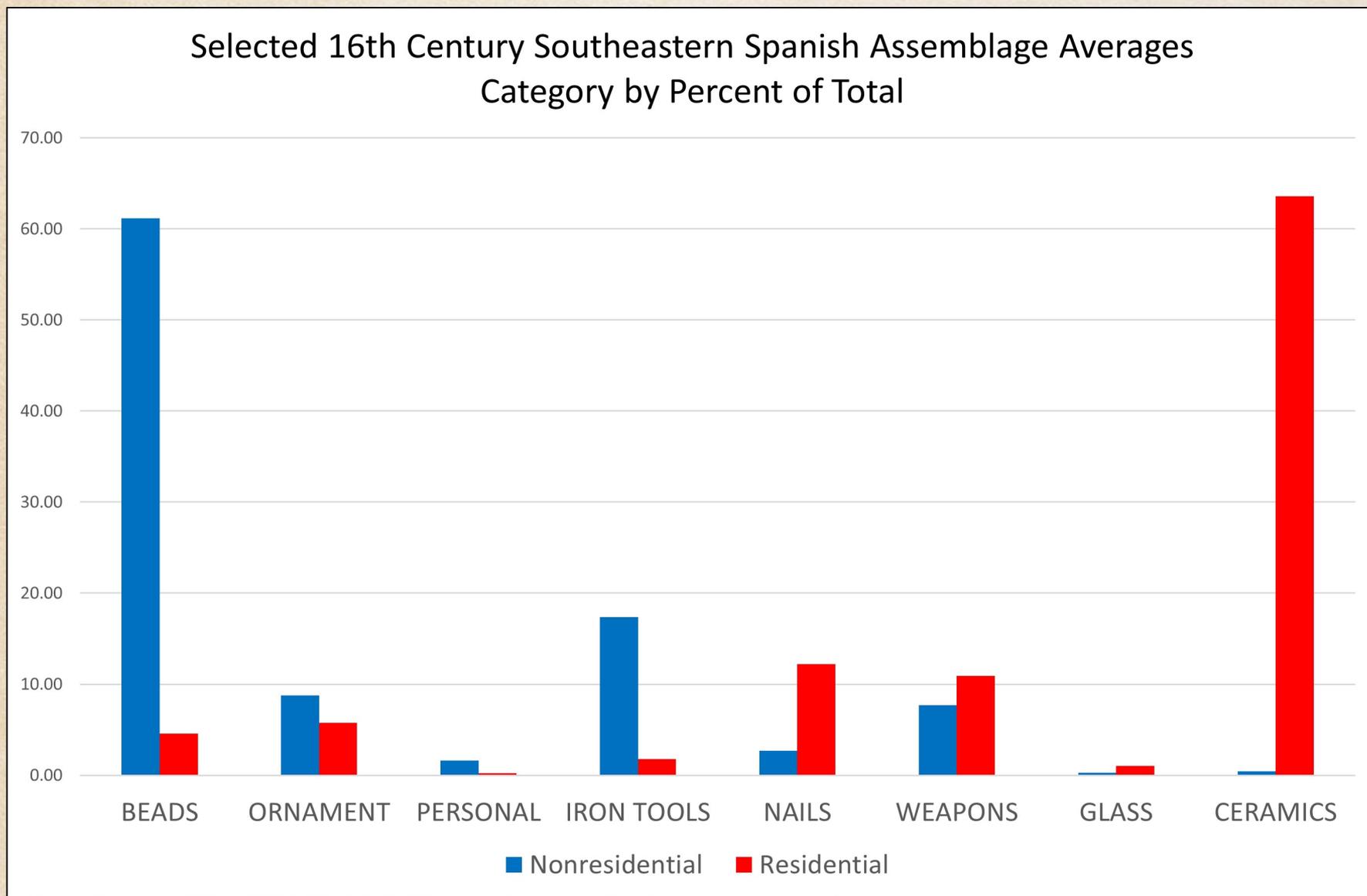
Luna Settlement Olive Jar  
Rim Profiles

## Terrestrial vs. Shipwreck Olive Jar Assemblages

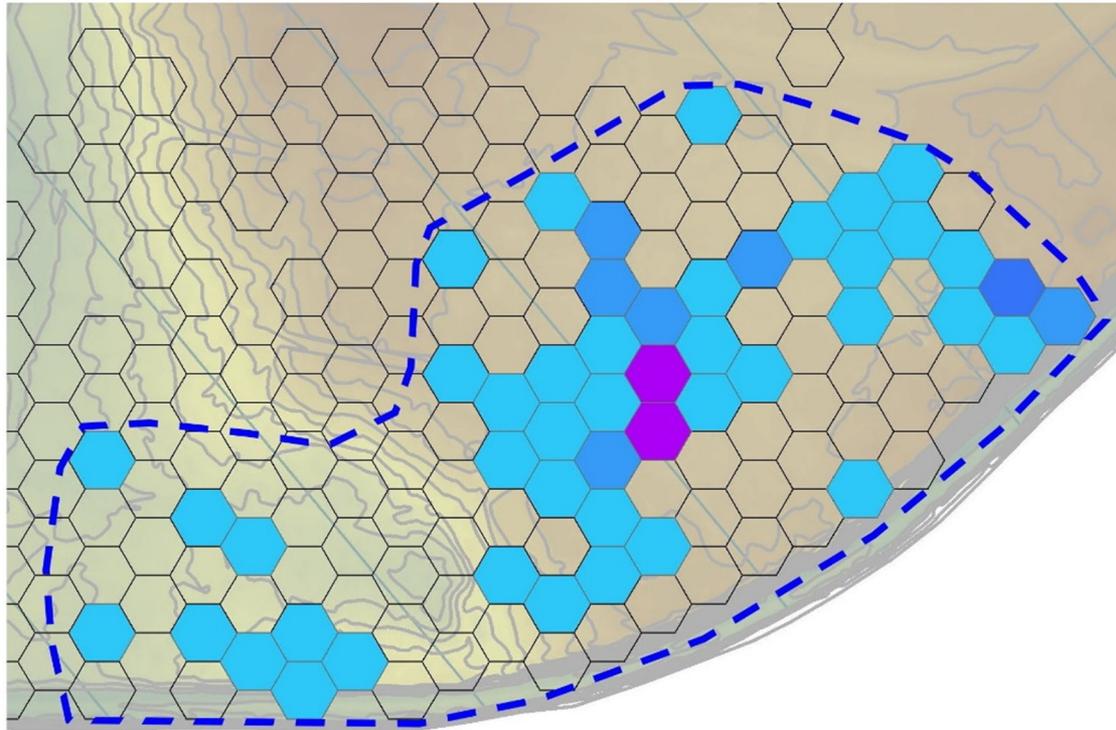
EPI avg = 7.2061 mm ( $N = 148$ )

8ES1 avg = 7.1769 mm ( $N = 492$ )

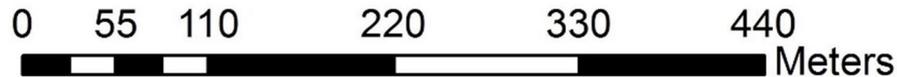




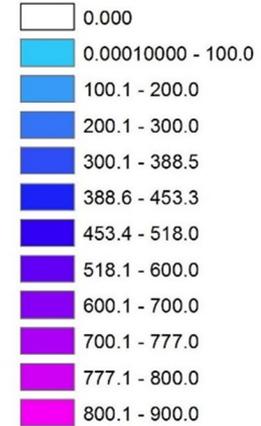
(figure from Worth 2016)



Early Olive Jar



Hex20\_OJ\_Early\_25April17  
Avg\_SumOfW / Avg\_Area



topo2ft\_pds\_escambia

— topo2ft\_pds\_escambia

FL\_EscambiaCo\_2006\_000039\_C12



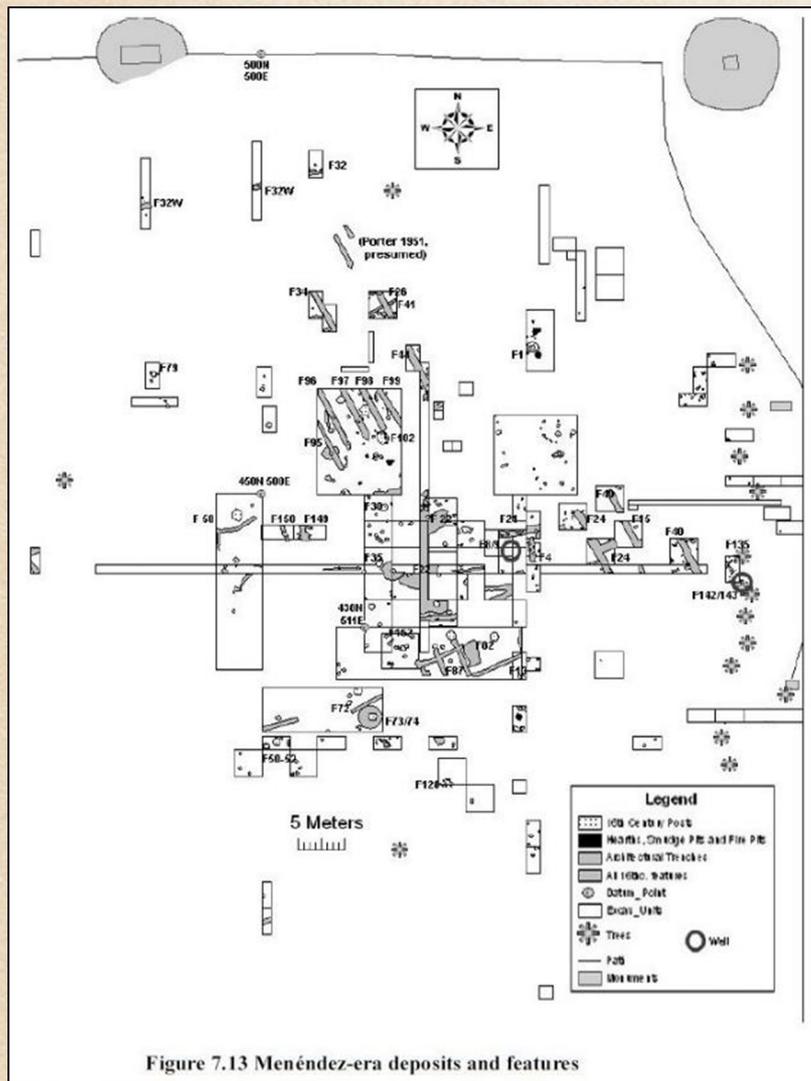
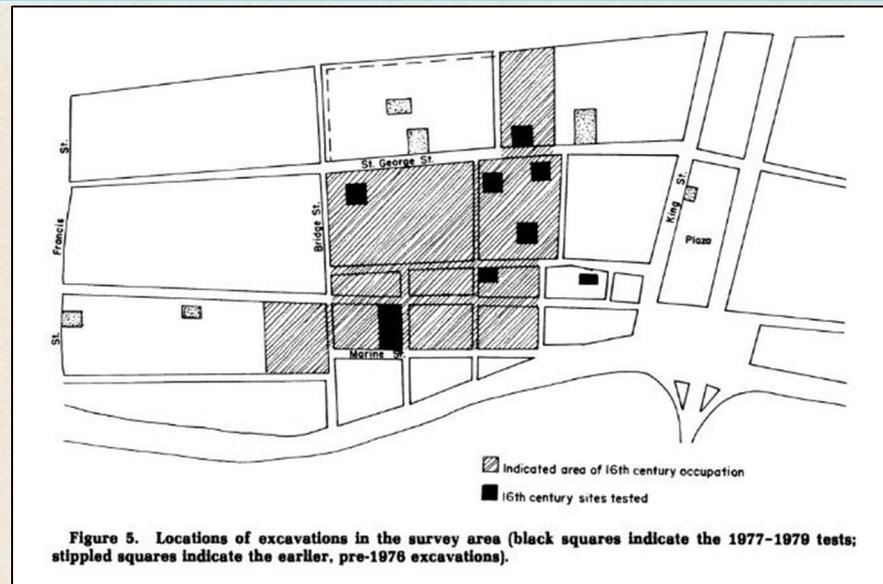
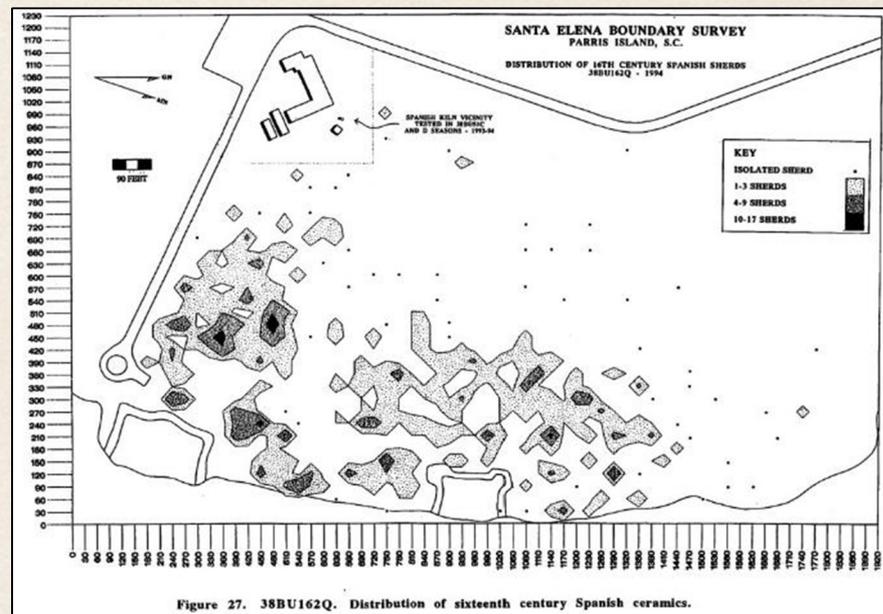


Figure 7.13 Menéndez-era deposits and features

Fountain of Youth, 0.8 hectares (Deagan 2009)

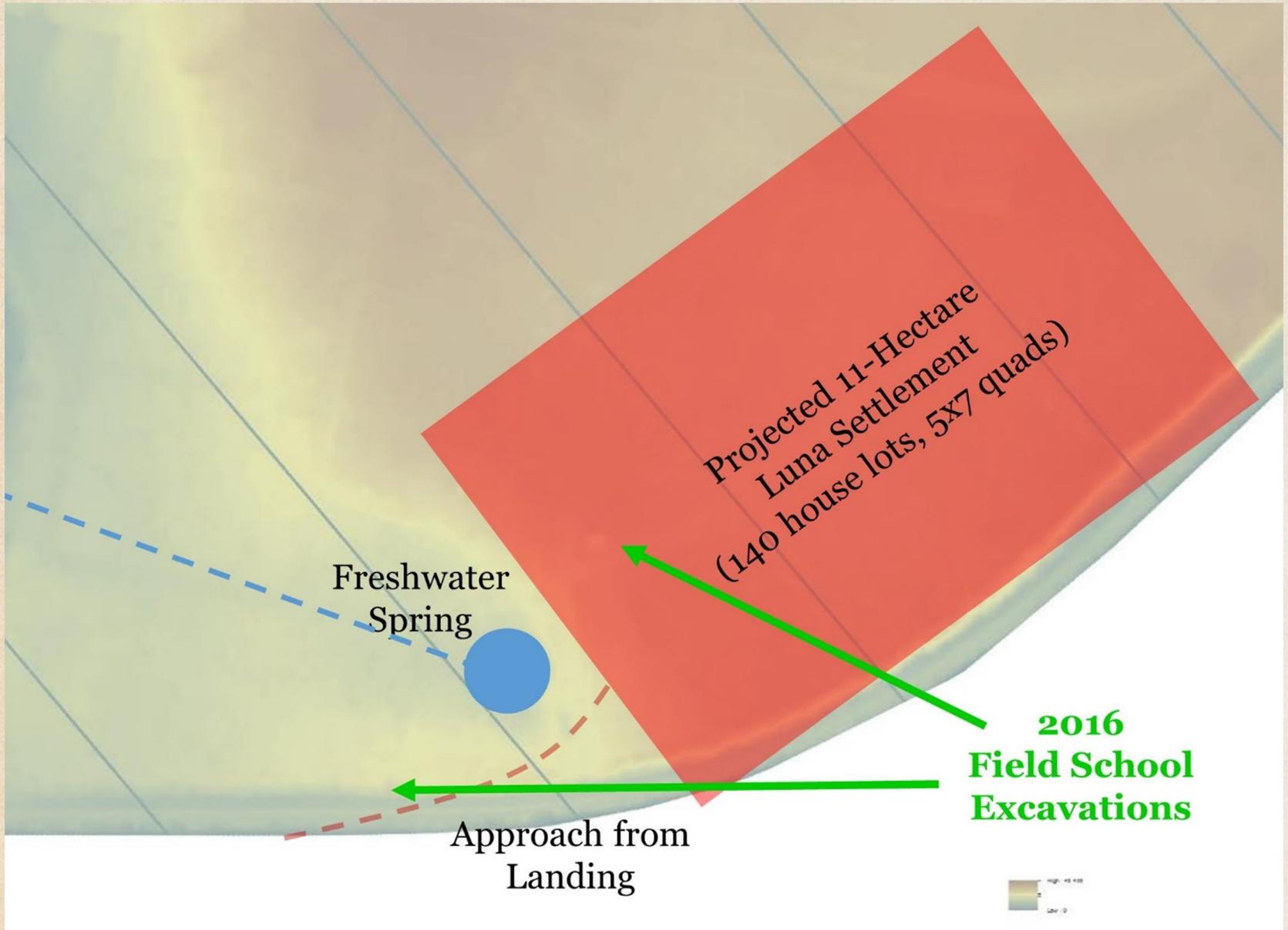


St. Augustine, 4 hectares (Deagan 1981)



Santa Elena, 6 hectares  
(South and DePratter 1995)

# Comparative 16<sup>th</sup>-Century Settlements in Spanish Florida



Hypothetical Original Luna Settlement Layout





Copper Scale Weight



Hook and Eye



Copper Straight Pin



Wire-Wound Ring



# Luna-Era Surface Deposit and Burned Post



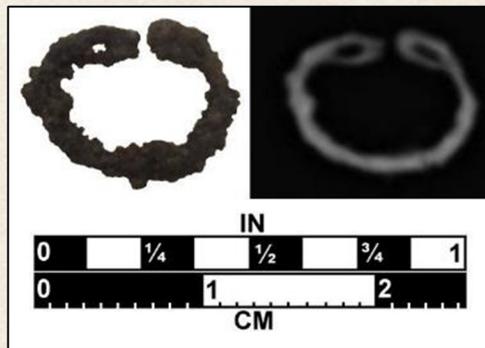
Barrel Band and Pitcher Handle *in situ*



Deer Antler



Bail of Wire



Riveted Mail Link



Wrought Iron Spike

# Luna-Era Trashpit