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# TWO ARCHEOLOGICAL SITES IN BREVARD COUNTY, FLORIDA

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JOHN M. GOGGIN

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### PREFACE

I wish to express my gratitude to the following individuals who made this work possible. Technical aid and guidance came from Mr. Charles D. Higgs, without whose knowledge of the area and previous explorations this work would never have been attempted. Financial aid was provided by Mr. George A. Zabriskie and Mr. Sidney Lee Smith. Mr. Elmer Denlinger, a student of anthropology at Beloit College, assisted in the excavations. Mr. John W. Griffin aided in planning and organizing the work and gave needed support in many ways, in the field and in the laboratory. Funds remaining from field work aided in the publication of this paper.

The material was analyzed by the author while acting as Assistant Archeologist, Florida Park Service.

Ann Arbor, 1949

Hale G. Smith

Gift J. Carver Harri Mar. 1957

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### THE HIGGS SITE (Br 1)

### DESCRIPTION AND EXCAVATIONS

This historic European-Indian site is located on the off-shore bar, or island, lying between the Indian River and the Atlantic Ocean, 2.4 miles south of Sebastian Inlet, Brevard County, Florida (Figure 1).1

At the site the Atlantic beach escarpment ranges from twelve to fourteen feet in height, and from it the land slopes gradually to the Indian River, some 800 feet to the west. The ocean has been cutting away the eastern escarpment yearly, and since 1942 approximately thirty feet have been croded away, destroying much of the site.2

The entire area of the off-shore bar is covered with a heavy growth of palmetto, sea grape, yucca, and cabbage palm, and due to the cutting action of the waves the primary dune vegetation, such as sea oats, that would be expected is lacking. Because of this dense vegetation the work on the site, for the most part, was conducted along the beach escarpment where a working face might be obtained. Due to the inaccessibility of the surface, the exact area covered by the site is unknown, but test trenches have shown that it extends a minimum of 343 feet along the escarpment and across the whole width of the island, and some 800 feet along the main excavation axis (X-Y line).

The original ground surface, or the first layer of undisturbed sand, is a coarse white sand that has the appearance of fragmented coquing shell. Above this is a dark sand layer impregnated with charcoal and overlain by a white sand layer on the escarpment, but indistinguishable from the top sandy humus farther to the west. The top stratum is a recent dune having a mottled appearance. This dune reaches its maximum height at the escarpment, and undoubtedly was previously higher.

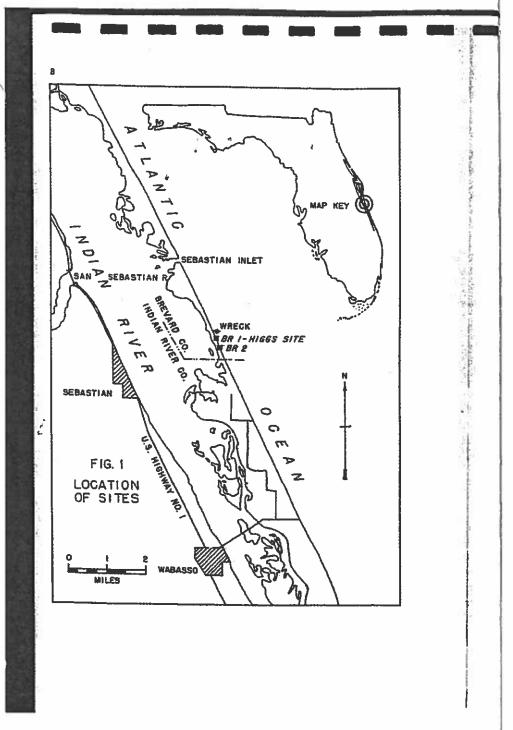
The site was introduced in the literature in 1942 by Charles D. Higgs. He, being interested in early historical materials, has spent many years surveying the Florida area. His researches led him to the Cape Canaveral region, and to this site, where treasure hunters had been finding various articles belonging to the Spanish colonial period. Higgs made some excavations but directed most of his efforts to sifting out the materials left in the treasure hunters' spoil, and to studying Spanish documents relating to the area.

<sup>4</sup> Higgs, 1942.

This inlet, closed at the time of excavation, has since been reopened.

A visit to the site six months after the 1946 excavations revealed that ten feet of the site had been weshed away on the Atlantic side. After the hurricane of 1947 it was noted that more of the site had been cut away in me sections. In other sections dunes had been built up by the wave action.

See Kurz (1942) for a description of dune and scrub vegetation.



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Higgs also established an arbitrary east-west axis at a point which he considered to be the center of the site both in space and in the concentration of cultural materials.

At the center of the station there is/a considerable area of tabby floor at a depth of three and one-half feet. Beneath this floor is found an occasional sherd of incised or stamped indian pottery. The choicest of Spanish remains lie above and scattered around at a higher level; while still higher, about a foot below the surface, there is an abundance of the cruder, undecorated, recent helian pottery. Scattered over a distance of 320 feet along its bioff there are four other deposits rich in brick and mortar fragments. It is only in the vicinity of the floor in the center of the station that the largest assortment of European articles are found, particularly the finer Spanish pottery and Chinese porcelain fragments. Throughout the whole area in places where the china occurs most abundantly and in general where the brick and mortar are concentrated, indian pottery and midden refuse does not appear to any moticaphie exient. On the other hand, adjoining and fringing this concentration of European materials one finds quantities of Indian remains with which there is an occasional admixture of the European, notshy iron, glass, trade pipes and the courser Spanish cooking pottery. 5

The east-west (K-Y) axis established by Higgs was relocated by the writer in the summer of 1946, and all excavations along the escarpment were located either north or south of this line. In addition to the eleven and a quarter five-foot squares excavated along this axis, other five-foot test squares were excavated along the beach escarpment, both north and south of the axis, at intervals of 50 feet for a distance of 400 feet. Tests were also made in the center of the spit and along the Indian River side, consisting of several five-foot squares and two by ten-foot trenches.

We found, as did Higgs, that the east-west axis was the region most prolific in cultural remains and evidences of habitations. The occupational level was concentrated from 9 to 21 inches below the surface, with occasional artifacts being found above and below this zone. This condition seems to indicate that the ground level at the time of occupation was parallel to the present ground surface, although the artifact concentration in squares OW5, OW6, and OW7 was higher, with the majority of artifacts being found from 9 to 16 inches below the surface. This condition is due to the dune overlying the stratum close to the escarpment. The height and angle of this done seem to indicate that it rose even higher to the east, and probably the discrepancy between the depth of the occupational stratum as noted by Higgs and our own measurements may be explained by this factor.

There is a strong correlation in some of the squares, with vertical and horizontal continuance of artifactual material.

<sup>&</sup>lt;sup>5</sup> Higgs. 1942, no. 32-33.

#### MATERIAL CULTURE

### Aboriginal

Pottery. The aboriginal pottery at this site falls into three ware classes: San Marcos, 6 Glades, 7 and St. Johns. 8 San Marcos ware was found to be relatively abundant throughout the excavated area, in association with the other aboriginal wares and European artifacts, and occurred at all levels of the occupational stratum, from 5.5 to 25 inches below the surface. The simple stamped decorative motif predominated. Higgs found a complete San Marcos shallow bowl with a curvilinear complicated stamped decoration (Pi.2,C). The Glades and St. Johns wares were represented by only a few sherds at this site.

### San Marcos Stamped

Method of manufacture, Coil fractures present.

Temper. Small to abundant amounts of medium to large size quartz sand and-or small to moderate amounts of crushed limestone.

Texture. Coarse to medium, slightly contorted paste.

Color. Surfaces are gray to tan, cores are gray to black.

Surface finish. Exterior surfaces were scraped before application of stamped decoration. Interior surfaces were smoothed, and pitted to a certain extent by leaching of tempering material and escape of gas bubbles during firing.

Decoration. Simple stamped; clay was impressed with longitudinally grooved paddle, with grooves averaging 6 mm. in width. Lands are either larger or smaller than grooves. Crossed simple stamping occurs frequently. Some curvilinear and rectilinear complicated stamping also occurs.

Form. Rim is outcurved and folded. Lip is flat to rounded. Body form includes small to large globular vessels and shallow bowls. The base is rounded. No appendages were found. Thickness ranges from 4 in 8 mm.

Plain sherds on the San Marcos paste were also found.

Glades Plain, as described by Goggin, is represented by twenty-one sherds, and twelve sherds of St. Johns Plain were collected. One rim sherd of St. Johns Check Stamped, with incised lines over the check stamping, was found. The rim of this sherd is thickened and the

<sup>&</sup>lt;sup>6</sup> Smith, 1948. This were was found in abundance at St. Augustine by W. J. Winter and has been assigned to the St. Augustine Period (1565-1750). Its affiliations are with coastal Georgia types of a comparable period.

<sup>7</sup> Googin. 1946 and 1944.

<sup>&</sup>lt;sup>7</sup> Goggin, 1940 and 1944. <sup>8</sup> J. D. Griffin, 1945; Goggin, 1939.

Rouse and Goggia (personal communication) believe that the incising was the result of the sherd's having been used as a sharpening instrument. They have similar sherds that probably were used to hone axes. The incised lines are not those typical in the area, but are wedge-shaped grooves.

lip is flat, forming a right angle with the interior of the vessel. This type of rim is common in the chalky ware from Br 2. Both the Glades Plain and St. Johns Plain are types also found at Br 2.

One trade sherd of rather unusual qualities was found. It was sherd and fine grit tempered, of a fine texture which crumbles when broken; and has a hardness on the Mohr scale of 4.5. The color is buff throughout, the surfaces are well smoothed, and the interior has traces of red paint. The form seems to have been a shallow bowl with a straight rim, thianer than the body, and a rounded lip. The thickness of the rim is 4 mm.; that of the body 6 mm.

Stone Artifacts. A partially formed stone pipe was found in the talus along the escarpment 213 feet south of the X-Y axis. It is made of limestone, similar to that found in fragments throughout the excavation, and is a "blank" of the elbow type, squared off, and with rudimentary holes at either end. The top, or bowl, hole is conical, 7 mm, in diameter and 7 mm, deep. The stem, or side, hole is 1 cm, in diameter and 1.5 cm, deep. The base length is 7.2 cm., height is 5 cm., and the diameter of the bowl is 3 by 3.4 cm. The outer surface has been smoothed down, leaving no sharp edges. 10

A limestone fragment with two roughly parallel incised lines was found. One of the lines was 2 mm., the other was 1 mm. in width. The flat surface adjacent to the lines was burned red.

Other stone objects include a square piece of igneous rock, with smoothed edges and sides, which may have been part of a pestle. There were also two rounded sections of igneous rock which may be pestle fragments. A gray-white chert nodule, 2 by 1.8 by 1 cm., with spalls removed-from all surfaces, was found. Limestone and pumice smoothing stones occurred.

Bone Artifacts. A gouge-shaped fragment, cut from a bone of a large animal, was found. The cutting was done at an angle to give a bevel, but the object may or may not have been intended as an artifact. A gouge shaped from a large animal bone, with three sides rounded and the end smoothed down, was also found.

A possible projectile point of bone, triangular in form and sharply pointed, measuring 2.5 cm. long and 1.7 cm. wide at the base, was found. There is a possible bone scraper in the form of a lunar shaped fragment of cut bone with beveled sides. The lower, or scraping edge, is sharply beveled. There is also a triangular shaped perforator formed from the bone of a large animal with two sides worked smooth.

Unworked house from the head of catfish were common. Higgs believes that these may have been kept by the Indians as "fucky stones," but he also acknowledges that they may merely have been midden refuse.

<sup>10</sup> A pipe of similar material and proportions from the St. Asgustine region is in the collections at Castillo de San Marcos National Monument, St. Augustine.

Shell Artifacts. A Busycon sp. shell showing working on both the lip and beak was found. The function of the piece is unknown. The core, or columella, of another conch, which may have been used as a pounder, was also present.

### Mexican Ceramics

Among the more unusual finds at the Higgs site were specimens of two major groups of Mexican earthenware. One group the most prevalent (types A, AI, A2, and B), is a latter day continuance of prehistoric Mexican ware in both paste and decoration. The group employs the same decorative techniques and designs found in the red ware of the late Aztec Period (Aztec IV) at Lake Texcoco. It differs from the Aztec red ware in the presence of handles and in the occurrence of more floral designs. 11 Sherds of this kind were found only in squares adjoining the X-Y axis, with one sherd being found on the surface of the sand road at the X base point. The majority of sherds were from the rim or base of vessels.

The second group of Mexican ware is a glazed earthenware genetically related to Italian majolica, and called Hispano-Mexican ware (Pi. 1, H). It was being made in Mexico by 1570, having been introduced from Spain only four years after the introduction of the tradiction into Spain from Italy. In both Spain and Mexico the style showed similarities to the Italian Renaissance style. At the Higgs site this Hispano-Mexican ware was in a minority, but in other excavated historic sites in Florida it is the only Mexican ware that has been found. The buff paste of this ware is due to the mixing of equal parts of white and red clay, and the glaze is composed of tin and lead. Is

Type A Ware: (Pl. 1, A-D, I, L-M)

Method of Manufacture. Wheel (?).
Temper. None visible.
Temper. Fine, crumbles when broken.
Hardness, Harder than 4.5.
Peste Color. Creem.
Surface Finish, The whole vessel is covered with a cream, red or pink paint, with the latter two being in the majority.

11 1. B. Griffin, personal communication.

trol.
13 Louis Caywood, personal communication.

<sup>13</sup> Information from Louis Caywood. Caywood will soon publish a paper dealing with the whole problem. This type of ware occurs throughout the southern portions of the United States in areas formerly under Spanish control.

Decoration: Red and black or black painted lines and conventional figures form the decoration. Rims are decorated with red or black lines that sometimes extend into vessel interior. Rim lines are sometimes parallel red and black lines; sometimes an area of the colored vessel makes a center line between lip and next applied line, which may be monochrome parallel lines around rim and lip area. Below the lip and rim decoration country the next and to black convent Below the lip and rim decoration occur the red and/or black conventional figures such as roughly drawn spirals, curved lines and broad curvilinear lines drawn to a point. Sometimes three of these lines meet at an apex. The interior of the base generally has three or more raised oval concentric circles, and one specimen has a raised curvilinear design occuring within the raised circles. A ring of cravillnear design occuring within the raised circles also occurs occasionally. The exterior of the base has a red, or occasionally an orange. Here accord to extending unmand to where the horty begins an orange, line around it, extending upward to where the body begins.

Form. Body. Shallow how!.

Rim. Generally straight; one elightly flaring.

Lip. Rounded.

Base. Annular ring, amount of concavity depending on height of base. Interior of base slightly convex.

Thickness, Rim 3-4 mm; body 4-5 mm.

Appendages. Loop bandles, probably paired, occur below the lip.

The one handle found is 7 mm. in diameter and 2.5 cm. long.

#### Type A-1 Ware

The method of manufacture, temper, texture, hardness, and poste The method of manufacture, temper, temper, temper, color are the same as in Type A.

Surface Finish and Decoration: The enterior, or the entire vessel, is covered with a red paint or red slip. Interior when not red slipped or painted has a cream colored glaze. Red surface is decorated with black straight and currillinear lines and spirals. Interior of base generally smooth and lacks raised concentric circles found on Type A, but this treatment does occur on one sherd. One short has a hole in the outer base of the rim made before firing. Diameter of the hole to 4 mm.

is 4 mm.

Form: Same as in Type A.

Thickness: 3-5 mm. for both rim and body.

Appendages: Purely decorative loop handles applied to the vessel, with no opening between body and handle, but with indentations where opening would be. One ing type handle of folded piece of clay applied to vessel just below rim. It has a rounded end, grooved over the top side, and is indented on either side.

### Type A-2 Ware

This type is the same in all respects as Type A, except that it is black in color. The first impression is that of initial black paint, but examination of the whole sample shows that some sherds are not completely black, but show bits of cream and red. It is tentatively concluded that these sherds were not originally black, but have been emblected to see the control of the contr subjected to secondary firing.

### Type B Ware

Method of manufacture, Wheel (?),14
Temper. Small grit fragments.
Texture. Pine.
Hardness, Harder than 4.5
Pasto color. Reddish orange.
Surface Finish, Orange painted interior and exterior.
Decoration. One sherd has two concentric circles.
Parts. Rakmann. Porm, Unknown,

### Clay Figurines and Figurine Appendages

- 1. Torso of human figure; head, arms and legs missing. Around the waist there is a flaring skirt. Specimen is 5.5 cm. high (Pl. 1, J).
- 2. A roughly cylindrical fragment 2.3 cm. long and 1.1 cm. in diameter. Near the center an applique strip 4 mm. wide extends two-thirds of the way around the cylinder (Pl. 1, K).
- 3. A horn-shaped baked clay fragment 2.1 cm. long and 1.1 cm, in diameter at the base end.
- 4. A curved cylindrical piece 2.3 cm. long with an applique strip extending from one side to the other at the angle in the cylindrical piece. The strip is flattened and displays tool marks on one side.
- 5. A baked clay fragment with finger-impressed concave area.
- 6. A small baked clay fragment with an impressed fern-like design. This piece is reminiscent of portions of the "Amerina" figurines found by Higgs, one of which is shown in Plate 3, A.
- 7. A trough-shaped piece, 1.6 cm. long, with an angular flaring projection at one end.

The paste of all of the above objects is line in texture with no visible temper. No glaze or wash is evident.

### European and Oriental Objects

Chinese Porcelain. Porcelain was found in all parts of the site, although it was more abundant along the X-Y axis. Mr. Higgs sent his porcelain specimens to the Milwaukee Public Museum for identification, and they were tentatively placed in the Ming and K'ang Hsi periods. <sup>15</sup> Mrs. Kamer Aga-Oglu<sup>16</sup>, on the checking the porcelain sherds submitted to her for identification, said that she also believed that they dated from Late Ming and K'ang Hei periods. There are a few of the sherds such as the "powder-blue and black wares charac-

<sup>14</sup> Represented by two sherds. 15 Higgs, 1942, p. 39.

<sup>16</sup> Assistant Curator, Division of the Oriest, University Museums, Univeraity of Michigan.

terized by underglaze in fish designs" which look Japanese.17 Mrs. Aga-Ogiu withheld judgment on the underglazed shords until she was able to make a more extended study 18

The Chinese porcelains probably reached this site via an established shipping route used by the Spanish for a considerable time. The Chinese, at this time, were making vast quantities of porcelain for the export trade, and much of it reached the Philippines where there was a ready market. During this period porcelain had become very fashionable in Europe and the Spanish shipped some from their Philippine possession to Acapulco, Mexico, where they were unloaded and carried overland to Vera Cruz, reloaded on ships and sent to Spain. In all probability, the porcelain at the Higgs site came by this western route rather than by the eastern one and Spain itself. A description of the sherds found in 1946 follows:

- 1. A body sherd of considerable size. Exterior surface has a bluewhite glaze which is overglazed with an enameted black scroll line figure and some conventionalized leaves of brown and green, with the veins of the leaves sketched in black. It is of interest to note that a flower rosette and meandering line decorative motif occurs which has the appearance of being stamped upon the glaze before the vessel was fired. The interior, which is blue-white glazed, shows throw marks and gas bubble vents. Thickness of the sherd is 5 mm.
- A body sherd from a plate. Interior and exterior surfaces are glazed white, and on both minute rises caused by non-exploded gas bubbles occur. The interior surface is decorated with a curved line made up of two shades of brown, outside of which are green conventionalized leaf designs between which, and surrounding which, are diamond-shaped underglazed designs. Thickness of the sherd is
- 3. Five specimens of a chalky white glazed ware, three of which are annular ring bases of rice cups. On the bottom of the ring bases the glaze is marred. Thickness ranges from 3 to 4 mm; rims are rounded with a thickness of 2 mm.
- 4. Five rice cup sherds, glazed a bluish-white, and decorated with figures of a darker blue.
  - A. One sherd, interior decorated with two horizontal blue lines encircling vessel at 2.5 mm. below the lip, and another set of parallel lines at 4,5 mm, below the lip. Exterior decorated as in illustration (Pt. 1, E; illustration is reversed). The rim is straight, and the lip is flattened. Thickness 2-3 mm.
  - B. Two rim sherds with a band of decoration just below the lip on the inside. The design consists of hatchures

<sup>17</sup> lliggs, 1942, p. 39. 18 The results of this study will be published in a subsequent paper.



### Hale Smith report

1 message

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16

within parallel lines. Exteriors are decorated with wide blue areas surrounding conventionalized floral designs.

- C. Two body sherds of the same type described above, each with a portion of a design. Thickness 2 mm.
- 5. Three white glazed body sherds and one white glazed annular ring base sherd decorated on the exterior with green, brown, blue, and red conventionalized floral designs (Pl. 1, G). Also a rim section of a small plate (?).
- Most of a rice cup with dull white glaze both inside and out. Glaze has a crackled surface. Annular ring base. Thickness 2 mm.
- 7. Sherd of an annular ring base plate. Both surfaces glazed white. Interior is decorated with a brown flower, 2.5 cm., in diameter, which is surrounded by green conventionalized leaves and vines. The entire design is enclosed in a blue circular line, and the outer border of the plate is decorated with a dark blue glaze with the design brought out in negative in the white surface color (Pl. 1, F).

Delft Earthenware. Delft was made in Holland during the 17th century, and copied the style, form and technique of the Chinese porcelains. It is a gizzed earthenware rather than a true porcelain, but the glaxes very closely approximate those used by the Chinese during this period.

- An animilar ring base sherd of a shallow bowl or "rice cup". The interior and exterior are glazed white, and portions of the bottom are unglazed.
- 2. A body sherd with a white glazed, irregularly checked, exterior surface. The interior white glazed surface is decorated with blue (cobalt?) conventionalized designs. The technique of decoration seems to have involved finishing figures as the hrush ran dry, giving a shaded effect to the figures, which range from light blue to cobalt blue.
- 3. Two body sherds of this ware were decorated on the exterior, rather than the interior as above, but one of these also had a blue line on the interior. Designs are parallel blue lines, horizontally placed, with large blue leaf-shaped lines below. Thickness of this ware varies from 2 to 5.5 mm.

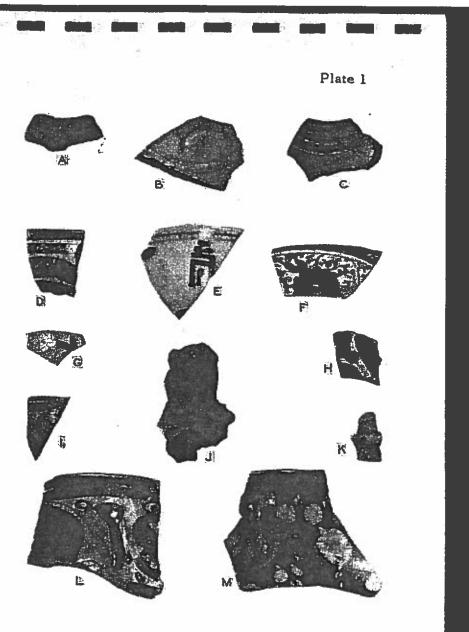
Spanish and Moorish Ceramics. Ware of this type was made in an area from Spain and North Africa to as far east as India, having spread from its place of origin, presumably in Anatolia or Persia about the 5th century B.C. Near Eastern archeologists have given it the name Islamic Ware, and in the common storage ware such as olive oil, grain and water jars the technique of manufacture has not changed very much from the 2nd or 3rd century B.C. to the present day.

Ware of this type made in Spain was influenced by the techniques used

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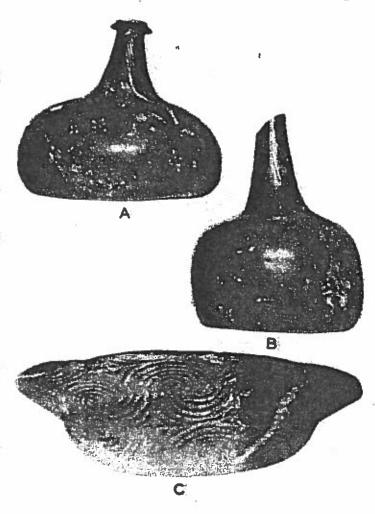
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NON-INDIAN CERAMICS.

-D, Mexican ceramics, Type A; E-G, Chinese ceramics; H, Hispano-exican ware; I, Mexican ceramics. Type A; J-K, Figurine fragments; -M, Mexican ceramics, Type A (A-K, 62/100; L-M, 65/100).

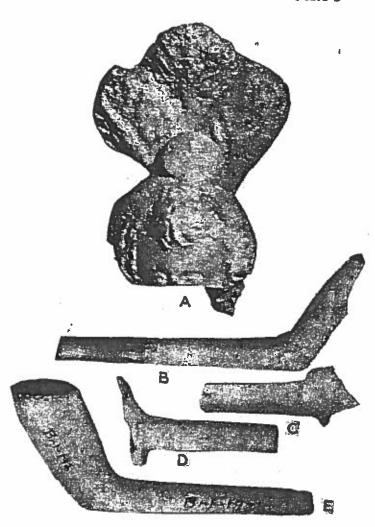
Plate 2



### EUROPEAN BOTTLES AND INDIAN POTTERY

A-B, Glass "wine" bottles; C, San Marcos Stamped vessel (A-B, 4/10; C, approximately 1/3).

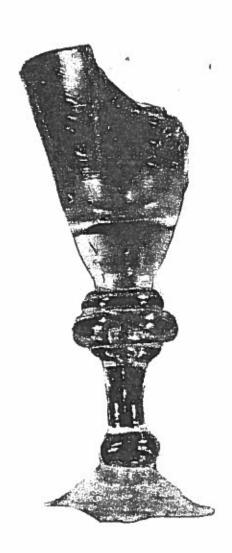
Plate 3



FIGURINE AND CLAY PIPES

A, Figurine; B-E, English Clay Pipes (A, Approximately actual size; B-E, 9/10).

Plate 4



GLASS GOBLET (9/10.)

by the people of North Africa, who in turn had received their ideas from farther east. Since the ware is so standardized it is difficult to state from whence each piece was derived, and its value as a dating device is limited.

Type I Ware

Method of manufacture. Wheel.
Temper. None to some line sand and unidentified grit.
Temper. Pine. Hardness. 3.5.4.0
Color. The core is reddish gray, red or gray. Exterior surfaces are unslipped or gray slipped and are often smudged by fire. Interior surfaces are the same as exterior.
Surfaces inish: Some smooth, some with throw marks.

Decoration: None.
Form, Jar. No rim or lip fragments found.
Thickness: 6-13 mm.

Most of the Spanish-Moorish ware found was of Type 1, with the corrugated appearance caused by unsmoothed throw marks.

#### Type 2 Ware

Method of manufacture. Wheel.

Temper. None to line sand.

Temper. Very line.

Hardness.?

Color. Pasts is duil gray, reddish or cream.

Surface finish. Interiors are glazed jade-green, white, ivory, salmon, greenish white, bluish white, flat white, blue, light green, yallow green and yallow. Claze is sometimes crackled. Interiors of vessels occasionally corrugated (throw marks). Exteriors are either unglazed, glazed from lip to shoulder, or decorated with blue diagonal glazed lines. Glazed drops may appear on the bottom of the base or below the shoulder, but these were probably not intentional. Polychrome effects, such as yellow and blue decoration on a white background, occur occasionally, and combinations such as light green glazed interiors and white glazed exteriors are known.

Form. Flat bottomed jars, curved or straight sided to the shoulder, and incurving above the shoulder.

Rim. Thickness, incurved or sverted.

Ann incurving name the annuaur.

Ring. Thickneed, incurved or everted.

Lip. Rounded.

Thickness, 4-14 mm.

Appendages. Strap handles placed diagonally on the shoulder.

One sherd of Type 2, with a white gluzed interior, has two post-firing incised lines which appear to have been executed with a crude

### Spanish Cooking Ware

Method of manufacture, ?

Temper. Medium to large inclusions of grit and shord temper. Some pieces of grit as much as 6 min. long. Quarts sand in some shords. Texture. Fine to medium. Well-mixed pasts which crumbles when broken.

Bardness. 3.5-4.5

Color. Cores'are black with exterior surface color extending 1-3 mm. into pasts. Interior surfaces range from a burnished black through gray, brown and red. Exterior surfaces range from reddishbrown to a dark red, and are generally samadged.

Surface finish. Interior surfaces cover a range from carelessly smoothed with tool marks evident to washed and smoothed. Some burnishing marks. Exterior surfaces are scraped, but not as smoothly as interiors. Exteriors have a smooth, "altick" feel.

Form. Typical forms are shallow bowls 6.5 to 15.5 cm. in diameter, with slightly curved sides and a rounded bottom. Lips are rounded, and rims are straight or slightly inverted.

Thickness, 5 to 15 mm.
Appendages. None,

### Other Objects

Glass. The glass found is, for the most part, from squat rounded "wine" bottles (Pl. 2, B-C) and tail square "gin" bottles.19 The glass of both types of bottles has a brownish or greenish hue and the outer surface is weathered as might be expected in glass that has been in contact with sail air and water. The necks of the bottles were originally fitted with lead screw tops, although none were found with tops intact, nor were any of the tops found separately in our excavations. However, Higgs reports their presence. Bottles and bottle fragments were found in quantity.

A stemmed goblet of clear hand made glass was found (Pl. 4). It approaches in form the English heavy balusters of the 1680-1710 period. A piece of clear glass, probably the rim of a goblet, has "thumb" depressions equally spaced about its sides.

One piece of light blue glass was found in a shapeless mass, giving the appearance of having been subjected to great heat, and so melted.

Clay Pipes. Many of the clay pipes collected by Higgs bore the name "R. Tippet," an "English pipemaker of presumably early 18th century" in a cartouche on the bowl. Other of Higgs' pipes had the lettering "R. T." or "E. R."21 One of the pipes excavated in the summer of 1946 had part of a cartouche which seemingly had contained either R. T. or R. Tippet. Other bowl fragments had smaller portions of cartouches. Three bowl types are present: 1. flattened lug (Pt. 3, C), 2. teat-like lug (PI. 3, D), and 3. no lug (Pl.3, B, E).

<sup>20</sup> Francis, 1926, Pls. 4-5; Iloney, 1946, Pl. 52.
<sup>21</sup> Higgs, 1942, p. 38.

<sup>19</sup> Squat early eighteenth century wine bottles are illustrated by Simon, 1926 (facing p. 234) and Honey (1946, Pl. 50, D).

<u>Dice</u>. Three bone or ivory dice were found, with holes drilled into the surface in the same arrangement as used today. One pair had sides of different lengths, perhaps a "crooked" set. The remaining die was of unconventional design, with pointed corners and surfaces showing unsmoothed cutting.

Iron. The iron objects excavated are in a bad state of preservation, and many of the pieces are so completely oxidized that their original form is obscured. Those pieces that can be distinguished, and their function thus ascertained, are: fishhooks 3.4 cm. long, nails of various sizes, knife blades, iron bands from chests or sword blades, line snubbers for mooring boats, buckles, parts of flintlocks, and rings of various sizes.

Measurements in the following description are of total length including the rust area. The iron nails range from 2.4 cm. to 5.7 cm. in length. The broad headed nails range from 2.5 cm. long with a head diameter of 2.8 cm. to 3.5 cm. long with a head diameter of 3 cm. A variation of the broad headed nail is the "rosette" nail about 3 cm. long. The head of this type is as broad as the nail is long, and the rosette effect may be the result of hammering or manufacture in this form.

The iron spikes are from 9.2 to 11.7 cm, in length, and iron pins are found ranging from 7.7 to 11.5 cm, long. Some of the pins have one end flattened and the opposite end rounded, with a right angle projection 1.5 cm. long, one-third of the way down the pin from the flat end. One iron pin is curved and has a large head.

Flat pieces of iron include a section of a knife blade with a perforation at one end, square bars of various lengths, widths and thicknesses, rounded bars that may have been sections of sword blades, and pieces with rivet holes.

A striking platform of a flintlock was found. It is oval-shaped, 3.3 by 4.2 cm., with a hollow pin 5.6 cm. long attached at its base.

Cannon. Several cannon found at the site, generally after hurricanes or northeasters, are in local collections. One cannon, found by Higgs, is now in front of Castillo de San Marcos in Saint Augustine. Detailed information on the cannon must await study of the various specimens.

Lead. One lead pistol or musket ball, 1.9 cm. in diameter, was found. An indented line divides the ball into hemispheres. One-half of a pistol ball with a lead projection on the side was also found. Two other shapeless pieces of lead, melted by fire, were probably originally pistol balls.

Building materials. Limestone fragments of a shape and size suitable for building blocks, roughly hewn, and measuring 5 to 7 cm. high, with much variation in length and width, were found. No complete bricks were excavated but fragments, very soft and chalky, of a salmon color, and containing grit, sand, and brick temper, were

in both of the west Florida sites mentioned above, does not seem to be present at the Higgs site. The conclusion seems inescapable that the Higgs site was not a Spanish mission.

A castigatory outpost, manned primarily by soldiers, might present such an assemblage. However, the presence of numbers of English clay pipes is inconsistent with the cultural picture of a Spanish site. Dr. Mark Boyd pointed out to the writer that the Spanish have never been a pipe smoking group, and John M. Goggin has noted that the few presumed Spanish pipes known from Florida are of a reddish clay 32 It is also doubtful that the Spanish at this time were getting pipes from the English in view of the friction between the two groups.

The interpretation that this was an Ais village active in salvaging wreckage along the coast is discredited to some extent by the building materials which suggest a European type of construction.

The site may have been an intermittent hangout for a pirate crew, probably of English or Dutch captainty. It is known that the English and Dutch privateers traded with the Ais and used their inlets as bases for their raids on Spanish shipping. Besides having good harbors, the factor of access to fresh-water away from any Spanish garrison or stronghold was important.

On the whole, the site is culturally Spanish, but in that period on a sea coast when the shifting of goods between vessels was a common occurrence it is not at all unlikely that some crew other than Spanish was using the cultural items found at the site.

One other historic event, falling within the period attributed to the site, must be mentioned. The Romans map of 1774, a portion of which is reproduced in Figure 2, bears a interesting note at the San Sebastian River indicating that the Plate Fleet of 1715 was wrecked, in part, at that point. 33 This is, of course, the immediate area of the Higgs site.

In the year following the Plate Fleet wreck, 1716, Spanish sources mention a pirate's hangout at Palmar of Ays, 34 which is probably to be equated with "el Palmar" shown on the Romans map (Fig. 2), and which is also in the immediate vicinity of the Higgs site.

Earlier, using the Dickinson data and the dating from the artifacts, we came to the conclusion that the site must fall between 1696 and 1726. Here we have two documentary references which would readily explain the amount of European material present in the area, and dating from about the middle of the postulated time range.

12 Both sets of data are from personal communications.

<sup>33</sup> A reproduction of this map was published by the Florida State Historical Society in 1924.
34 From an appublished bibliography on the area by Charles D. Higgs.

Considering all of the data it seems very likely that the Higgs site represents materials from the Plate Fleet wreck of 1715 and/or the pirate's hangout of the following year.

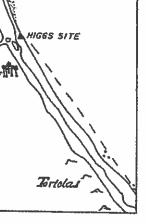
It must also be borne in mind that Indians, possibly Ais, were associated with the site, probably drawn there by the wrecks  $35\,$ 

Opposite this River, perished the Admiral communding the Plate Place yetherest of the First was number.

between this ay Bleech Yard.

FIGURE 2

TRACING OF A PORTION OF ROMANS MAP OF 1774 WITH SOME DETAIL OMITTED AND LOCATION OF HIGGS SITE IN-DICATED.



If Irving Rouse (personal communication) suggests that the Yamasco, who possibly entered the region in 1715, might be the Indian group. Their culture would probably be more consistent with the aboriginal pottery found at the site.

### SITE Br 2

Brevard 2 is an extensive kitchen-midden 0.35 miles south of the Higgs site (Br 1). At the time of excavation it extended some 250 feet along the beach escarpment, but was only the periphery of a midden formerly both larger and higher. Mr. Carter, Brevard County Engineer, can remember when the site extended fifty feet farther east and had a height of approximately thirty feet. The deepest point in 1946 was fourteen feet and was located in the southern section of the midden. Sherds were collected from the slip along the exposed face on the escarpment, and, in addition, one five-foot-square was excavated.

Various shell layers were present in the excavated square, and it was hoped that these various stratigraphic levels would show a corresponding change of pottery types. However, this was not found to be the case; there was no change in the pottery types from the surface to the base of the midden.

In the upper, oyster, levels the split bones of land animals were noted, while the faunal remains of the lower levels were predominately fish and turtle. The shell strata were alternating layers and pockets of the cross-barred Venus (Chione cancellata), coquina (Donax variabilis), and oyster (Ostrea virginica). The oysters were predominately in the central and upper portions of the midden, while the Chione shells were concentrated in the bottom layers. Coulna occurred in sporadic pockets throughout the deposit.

The various layers and pockets of shell were separated from each other by several inches of sand, indicating, perhaps, that the site was not continuously occupied. Seasonal habitation, with the yearly storms covering the site with the sand, may be the explanation. An alternative hypothesis would be that the people did not use the whole midden area at one time, and that sand accumulated on the temporarily deserted portions.

Underlying the shell and sand strata of the midden is a nine inch stratum of sand heavily impregnated with charcoal. This area was undoubtedly in use as a village area while the central portion of the midden was growing.

The superposition of the shell layers may indicate a dietary change from one type of mollusc to another, may reflect that at specific

A visit to the site in March, 1949 revealed only a small section of the

midden remaining, perhaps no more than 6 or 8 feet high. Editor.

Mexia in 1605 referred to the Indian custom of living on the peninsula during the winter and moving to the mainland in the summer. A translation of Mexia's Derrotero by Charles D. Higgs will be published in a forthcoming volume on Florida archaeology by Yale University.

times certain species were more abundant than other species, or may merely reflect selection of different species at different times in the process of collecting food. Since the area left for examination is the periphery of the mound, it is impossible to judge accurately how the entire midden actually was built.

A corner of a prepared clay floor two inches thick was encountered in the northeast quarter of Square 70 (the excavated square) at the base of the midden. Directly below the corner of the floor was a conical post-hole measuring 4 1/2 inches in diameter at floor level and one and three-quarters inches in diameter at its base, 24 inches below the floor. The floor rested on white sand. Another small post-hole, or refuse pit, measuring 8 inches in diameter and extending into the white sand for 10 1/4 inches was noted. Since it was in such close proximity, four inches, to the corner post, it may have been part of the same structure.

Four major pottery types are present at the site; St. Johns Check Stamped, St. Johns Plain, Glades Plain and Belle Glade Plain. Thereis no significant percentile shift of these types in the various levels of the midden. Five unclassified sherds were found that came from areas farther to the north. Four of these are of a type that is common in the shell heaps of Volusia County, and the other is a limestone tempered form of unknown cultural affinity.

### St. Johns Plain at Br 2

Method of manufacture, Segmental colling.

Temper, Untempered to some very fine grit particles, hardly visible to the eye. Occasional lactuation of quarts sand. Some sherds have holes of various sizes throughost core which may be fiber impressions. Texture, Paste has a luminated appearance.

Bardness, 2.5 to 4.0.

Color, Exteriors are buff, brown and gray. Some cores have gray or black carbon streaks while others are uniformly fired and are the same color throughout.

color throughout. Surface Finish. Exterior surfaces range from roughly scraped, through finely smoothed to somewhat burnished. Most interiors are very smooth, but a lew show deep parallel trough-like scraping lines. In these cases the grooves are 4 mm. wide on the average, with the inbetween lands 1 mm. in width.

Form, Rim. Straight or slightly incurved.

Lip: Rounded or flat sometimes beveled downward from

Body. Shallow bowl forms are indicated.

Appendages. None found.

Thickness. 3.5 to 6 mm. Lip is generally 2-3 mm. thicker than body

The St. Johns Check Stamped sherds are like the St. Johns Plain in all respects except decoration. Four kinds of checks were noted; rectangular checks from 2 by 4 mm, to 6 by 18 mm, in size, square checks about 3.5 mm, in size with the checks larger than the lands, rough irregular checks overlapping and in uneven rows, and comparatively small checks with wide lands.

### Glades Plain at Br 2

Method of manufacture. Segmental coiting.
Temper. Sand.
Temper. Compact, crumbles when broken.
Hardness. 3.5 to 4.0.
Color. Exteriors are red, buil and gray, with some brown and black.
Intariors are often red when exteriors are black or buil. Cores are
black with surface color extending inward from i to 2 mm.
Surface Finish. Exteriors are roughly scraped to smooth, a few
have exterior burnished. Exterior surfaces smudged. Interiors
smooth.
Form. Rim. Straight or slightly incurved.
Lip: Flat squared lip occurs, but typical type is slanting
flat lip with an interior overhang, the slant being
from exterior to interior. One sherd appears to

have that a scalloged Up.
Body. Shellow bowl with curved sides.
Base, Rounded.
Appendages. None.
Thickness, 4 to 8 mm.

Artifacts were not common at this site, but those of stone include a limestone sharpening stone, a hemispherical limestone pounder, a limestone net sinker grouved around the top end, and a possible limestone pendant.

A polished pendant-like fragment of a large bone, possibly manatee rib, and two cut triangular sections of bone that are possibly projectile points make up the total of bone artifacts from the site. Shell artifacts are represented by a Busycon hammer and a broken section of a shell celt.

Table 1. Shard Count of Sr 2

	Square	Collect	Total	Percent		
	70	North	Middle	South		
St. Johns Check Stamped	45	10	7	4	66	13.45
St. Johns Plain	84	19	25	15	143	29.1%
Glades Plain	175	40	29	20	264	53.8≴
Selle Glade Plain	10	2	3	2	17	3.4%
Total	314	71	64	42	490	

### PERIOD OF OCCUPANCY OF BR 2

This site is in the Melbourne Region, as defined by Goggin3, the archeology of which will be treated in detail by Rouse in a forthcoming publication. The presence of almost equal amounts of St. Johns ware, the dominant ware of the Northern St. Johns Area, and Glades Plain, the dominant type of the Glades Area, together with the presence of Belle Glade Plain, also identified with the Glades Area, are which gives the Indian River Area a distinctive color.5

So far as the time period is concerned, the introduction of checkstamped pottery in Florida is generally taken as a time marker of about 1200 A.D., and serves to set off Weeden Island II from Weeden Island I in the western part of the state, and St. Johns II from St. Johns I in I in the western part of the state, and of joints if irold of joints I in the Northern St. Johns Area. It is also a marker for distinguishing Malabar II and Malabar I, to use Rouse's terms, in the area under consideration. From the presence of the check-stamped pottery, then, we may conclude that Br 2 falls within the range of time termed Malabar II (roughly 1200 to 1650 A.D.). The absence of historic materials in the site indicate that it was abandoned before contact times, or, before contact materials reached the area.

Goggin, 1947. See also revisions in Goggin (1948).

To be published by Yale University. (The latest revision in terminology is Rouse's replacement of the name Melbourne Region by a more appropriate term, Indian River Area. Editor.)

Strong Rouse, personal communication.

a These new period terms of Rouse have been introduced in the literature by Goggin (1948).



### **Hale Smith report**

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within parallel lines. Exteriors are decorated with wide blue areas surrounding conventionalized floral designs.

C. Two body sherds of the same type described above, each with a portion of a design. Thickness 2 mm.

- 5. Three white glazed body sherds and one white glazed annular ring base sherd decorated on the exterior with green, brown, blue, and red conventionalized floral designs (Pl. 1, G). Also a rim section of a small plate (?).
- $\delta_{\rm *}$  . Most of a rice cup with dull white glaze both inside and out. Glaze has a crackled surface. Annular ring base. Thickness 2 mm.
- 7. Sherd of an annular ring base plate. Both surfaces glased white. Interior is decorated with a brown flower, 2.5 cm., in diameter, which is surrounded by green conventionalized leaves and vines. The entire design is enclosed in a blue circular line, and the outer border of the plate is decorated with a dark blue glaze with the design brought out in negative in the white surface color (Pl. 1, F).

Delft Earthenware, Delft was made in Holland during the 17th century, and copied the style, form and technique of the Chinese porceiains. It is a gizzed earthenware rather than a true porcelain, but the glazes very closely approximate those used by the Chinese during this period.

- An annular ring base sherd of a shallow bowl or "rice cup". The interior and exterior are glazed white, and portions of the bottom are unglazed.
- 2. A body sherd with a white glazed, irregularly checked, exterior surface. The interior white glazed surface is decorated with blue (cobalt?) conventionalized designs. The technique of decoration seems to have involved finishing figures as the brush ran dry, giving a shaded effect to the figures, which range from light blue to cobalt blue.
- 3. Two body sherds of this ware were decorated on the exterior, rather than the interior as above, but one of these also had a blue line on the interior. Designs are parallel blue lines, horizontally placed, with large blue leaf-shaped lines below. Thickness of this ware varies from 2 to 5.5 mm.

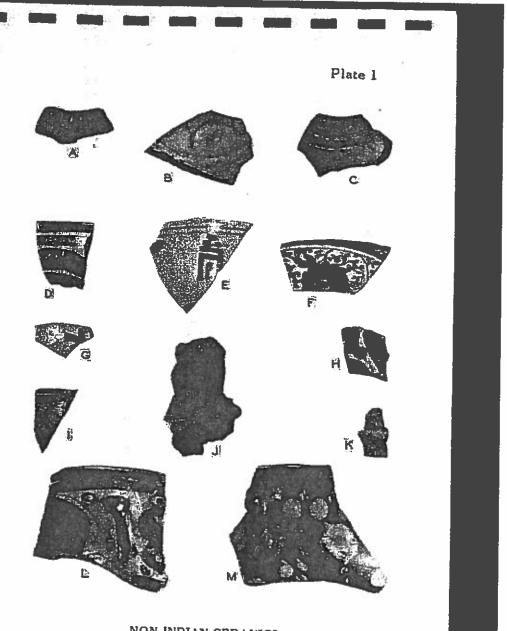
Spanish and Moorish Ceramics. Ware of this type was made in an area from Spain and North Africa to as far east as India, having spread from its place of origin, presumably in Anatolia or Persia about the 5th century B.C. Near Eastern archeologists have given it the name Islamic Ware, and in the common storage ware such as olive oil, grain and water jars the technique of manufacture has not changed very much from the 2nd or 3rd century B.C. to the present day.

Ware of this type made in Spain was influenced by the techniques used

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### NON-INDIAN CERAMICS.

A-D, Mexican ceramics, Type A; E-G, Chinese ceramics; H, Hispano-Mexican ware; I, Mexican ceramics. Type A; J-K. Figurine fragments; L-M, Mexican ceramics, Type A (A-K, 62/100; L-M, 65/100).

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