6-1986

Discovering Santa Elena West of Fort San Felipe

Stanley South  
*University of South Carolina - Columbia*, stansouth@sc.edu

William B. Hunt

Follow this and additional works at: [http://scholarcommons.sc.edu/archanth_books](http://scholarcommons.sc.edu/archanth_books)

Part of the Anthropology Commons

Recommended Citation


This Book is brought to you for free and open access by the Archaeology and Anthropology, South Carolina Institute of at Scholar Commons. It has been accepted for inclusion in Research Manuscript Series by an authorized administrator of Scholar Commons. For more information, please contact SCHOLARC@mailbox.sc.edu.
Discovering Santa Elena West of Fort San Felipe

Keywords
Excavations, Parris Island, Santa Elena, Spanish, Fort San Felipe, South Carolina, Archaeology

Disciplines
Anthropology

Publisher
The South Carolina Institute of Archeology and Anthropology--University of South Carolina

Comments
In USC online Library catalog at: http://www.sc.edu/library/

This book is available at Scholar Commons: http://scholarcommons.sc.edu/archanth_books/213
DISCOVERING SANTA ELENA WEST OF FORT SAN FELIPE

by

Stanley South and William B. Hunt

Research Manuscript Series 200

A Joint Project Of

THE SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY

University of South Carolina

and the

NATIONAL ENDOWMENT FOR THE HUMANITIES
(Grant No. RO-20941)

and the

NATIONAL GEOGRAPHIC MAGAZINE

Under United States Marine Corps
Federal Permit
Under the Archaeological Resources Protection Act

Prepared by the

SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA

JUNE 1986

THIS BOOK DONATED BY ROBERT L. STEPHENSON

South Carolina Institute of Archaeology & Anthropology
1321 PENDLETON STREET
COLUMBIA, SC 29208
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF FIGURES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>PREFACE</td>
<td>viii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>x</td>
</tr>
<tr>
<td>DISCOVERING SANTA ELENA WEST OF FORT SAN FELIPE</td>
<td>1</td>
</tr>
<tr>
<td>Historical Background</td>
<td>1</td>
</tr>
<tr>
<td>Project Background</td>
<td>1</td>
</tr>
<tr>
<td>RESEARCH GOALS AND STRATEGY</td>
<td>5</td>
</tr>
<tr>
<td>METHODS AND TECHNIQUES</td>
<td>6</td>
</tr>
<tr>
<td>ANALYSIS</td>
<td>9</td>
</tr>
<tr>
<td>Fired Clay Daub</td>
<td>9</td>
</tr>
<tr>
<td>Spanish Pottery</td>
<td>9</td>
</tr>
<tr>
<td>The Structural Data Sets</td>
<td>10</td>
</tr>
<tr>
<td>Plantation Artifacts</td>
<td>13</td>
</tr>
<tr>
<td>Marine Corps Artifacts</td>
<td>13</td>
</tr>
<tr>
<td>Other Artifacts</td>
<td>13</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>17</td>
</tr>
<tr>
<td>EXCAVATION OF AREA 162K</td>
<td>19</td>
</tr>
<tr>
<td>ANALYSIS</td>
<td>23</td>
</tr>
<tr>
<td>Artifact Quantity</td>
<td>23</td>
</tr>
<tr>
<td>Burned Bead Pits</td>
<td>26</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>30</td>
</tr>
<tr>
<td>REFERENCES CITED</td>
<td>31</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
</tr>
<tr>
<td>I. Research Design for Sampling West of Ft. San Felipe 1985 by Stanley South</td>
<td>33</td>
</tr>
<tr>
<td>II. Method and Analysis Discussion by William B. Hunt</td>
<td>39</td>
</tr>
<tr>
<td>III. Artifact Analysis Notes by Stanley South</td>
<td>47</td>
</tr>
</tbody>
</table>
IV. Artifact Tabulation for Sample Squares from Research Frame 38BU162J by William B. Hunt.................. 51

V. 162K Compared with Previous Block Excavations at Santa Elena by William B. Hunt.... 55

VI. Beads from Santa Elena: 1985 and Other Contexts by Richard R. Polhemus........... 67
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONTISPICE:</td>
<td>Early faceted chevron bead and a tumbled blue chevron bead</td>
<td>iii</td>
</tr>
<tr>
<td>FIGURE 1:</td>
<td>Archaeological base map showing research frame 162J and area 162K and previous research areas, and the computer projected fired clay daub density</td>
<td>3</td>
</tr>
<tr>
<td>FIGURE 2:</td>
<td>A sample square being excavated at Ft. San Felipe</td>
<td>7</td>
</tr>
<tr>
<td>FIGURE 3:</td>
<td>A sample being excavated on the golf course</td>
<td>7</td>
</tr>
<tr>
<td>FIGURE 4:</td>
<td>SYMAP of Spanish pottery density at Santa Elena</td>
<td>11</td>
</tr>
<tr>
<td>FIGURE 5:</td>
<td>Computer projected SYMAP of the density of plantation period artifacts</td>
<td>12</td>
</tr>
<tr>
<td>FIGURE 6:</td>
<td>Computer projected SYMAP of the density of Marine Corps period artifacts</td>
<td>15</td>
</tr>
<tr>
<td>FIGURE 7:</td>
<td>Marine Corps period artifacts</td>
<td>16</td>
</tr>
<tr>
<td>FIGURE 8:</td>
<td>A view of the excavated area at 162K</td>
<td>16</td>
</tr>
<tr>
<td>FIGURE 9:</td>
<td>Plan view of Excavation Area 162K</td>
<td>28</td>
</tr>
<tr>
<td>FIGURE 10:</td>
<td>Charcoal and bead pit, Feature 100</td>
<td>29</td>
</tr>
<tr>
<td>FIGURE 11:</td>
<td>Detail photograph of charcoal and beads in Fea. 100</td>
<td>29</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE 1:</th>
<th>Comparison of average quantity by 5' square</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 2:</td>
<td>Comparison of average quantity by 5' square from the B levels</td>
<td>25</td>
</tr>
</tbody>
</table>
PREFACE

A sampling project designed to explore the possibility of Spanish structures being located on the eighth fairway of the Parris Island Golf Course was carried out through the excavation of 132 sample squares in the summer of 1985. The results of that project, sponsored by the National Endowment for the Humanities, and the results of a smaller project sponsored by the National Geographic Magazine to explore a potential Spanish house site, are presented here. The NEH project was funded at the $10,000 level, with the National Geographic Magazine project funded at $1,000, with NEH matching that amount.

The principal investigator for the project was Stanley South, with William B. Hunt being the primary assistant for the field work as well as the analysis phase of the project. Assisting Bill Hunt was Guy L. Prentice. Bill and Guy were assisted by Jim Greiner and Ben Zeigler. The Director of the South Carolina Institute of Archaeology and Anthropology, the agency responsible for the work, is Bruce E. Rippeteau.

Research on a site such as Santa Elena requires funding from many sources to address the various questions being asked. Since its discovery in 1979, various agencies have contributed to the research carried out thus far, amounting to $471,756.00. These agencies are: the University of South Carolina, through the South Carolina Institute of Archaeology and Anthropology; the National Geographic Society's Committee for Research and Exploration; the Explorers Club of New York; the National Endowment for the Humanities; the United States Marine Corps; the National Science Foundation; and the National Geographic Magazine.

All projects carried out thus far at the site of Santa Elena and her forts are oriented toward achieving goals relating to site structure, architecture, acculturation, site content, faunal and microfloral analyses, pattern recognition, function, world trade and the Spanish colonial system, status, agricultural practices, documentary research, and testing of archaeological methods. These concerns are oriented toward understanding the processes of culture. Santa Elena provides an excellent opportunity to achieve these goals since it has been only slightly disturbed by later occupations or agricultural activity since the Spaniards called this place home over four hundred years ago. This report represents yet another contribution to our knowledge of this significant colonial capital of Spanish Florida.
Basic to the process of obtaining this information is our continued efforts to test and refine the research methods, techniques and tools that are used in the collecting of the data.

Each project at Santa Elena resulted in a published report (South 1979, 1980, 1982, 1983, 1984, 1985), and this present report (South and Hunt 1986). In spite of the volume of these results it is recognized that further synthesis of artifact data is necessary to address the entire artifact assemblage from Santa Elena that has been accumulated through the years. To do this a grant has been received from the National Science Foundation ($43,078) to analyze all artifacts from Santa Elena recovered since 1979. This project is now underway and will include the artifacts recovered in the sampling project reported here.

For many years a plan has been in effect to carry out transcription and translation of Spanish documents dealing with the history of Santa Elena. The Spanish government, through the office of the Minister of Culture, Carlos Abella, and the Spanish Ambassador, Gabriel Manueco, has provided $10,000 for this research. This amount was matched by the National Endowment for the Humanities. Eugene Lyon, principal investigator for this project, is presently working on the translation and transcription of microfilm copies of these documents.
ACKNOWLEDGEMENTS

Acknowledgement for funding of the project goes to the National Endowment for the Humanities and to Joseph Judge, Associate Editor for the National Geographic Magazine. Important to the success of the research project was the cooperation of United States Marine Corps personnel, particularly Major General Stephen G. Olmstead, Commanding General of the Parris Island Recruit Depot, Colonel D.H. Clark, Acting Commanding General, and Colonel David Townsend, Assistant Chief of Staff-Logistics. Thanks also, to Colonel A.G. Gerwig, Assistant Chief of Staff-Logistics who replaced Colonel Townsend.

Thanks also go to Colonel Wayne A. Coombes, Major James Vance, Public Affairs Officer, and Dr. Steve Wise, Director of the Parris Island Museum, for their support and cooperation throughout the project. As is the case in many museums, the Parris Island Museum has a shortage of space. Nevertheless, Steve has one room solely devoted to displays on Santa Elena. Exhibits in the "Santa Elena Room" are updated as each field season reveals more data on life in the colony. The room thus provides a current capsule report on the state of research at the site to interested visitors. Thanks, too, to John H. McGarry, III, Registrar for the History and Museums Division of the Department of the Navy, Headquarters United States Marine Corps, for his assistance with the logistics of artifact curation.

A major acknowledgement goes to Bill Hunt for his direction of the project and to Guy Prentice, who assisted him during those times when South was involved in washing and analyzing the artifacts being recovered by this remarkable team of dirt movers. Thanks too, go to Guy Prentice for his expertise on the transit, which allowed South to spend time on the demands of artifact analysis. Also, thanks to Bill Hunt for a major involvement of his time in the SYMAP computer programing operation, and as well as other analyses initiated and carried out by him. The degree of his involvement is reflected in the fact that Bill is a joint author of this report. We would like to thank Guy Prentice for the excellent plan view of 162K, figure 9 in this report.

Thanks too, go to volunteers Jim Greiner and Ben Zeigler who worked hard on trying to keep up with the fast pace of dirt moving set by Bill Hunt and Guy Prentice. Their volunteer efforts were outstanding and...
contributed greatly to the successful completion of the project. Without their enthusiastic help in screening, backfilling, moving the screens, and replanting the sod and being sure the grass stayed wet, we would scarcely have had time to finish the 132 sample squares. Their labor enabled us to get ahead of schedule, allowing us time for the block excavation at 162K.

A special thanks of gratitude from all of us involved in the project goes to Dr. Bruce Rippeteau, Director of the South Carolina Institute of Archaeology and Anthropology, who provided a special grant of $1,500 to allow the goals of the project to be met as planned in the research design when an unexpected delay forced an extra two weeks field time onto the project.

Thanks to Mona Grunden, John Goldsborough and Linda Sloan, who helped with one or more days of volunteer work assisting in the hot sun digging sample squares into the eighth fairway of the golf course. Thanks too, to Russ Skowronek and Rich Johnson for their help with artifact processing and analysis, and to Marvin Smith who assisted with in-the-field consultation on beads. We are indebted to Colin Brooker for sharing with us the excitement of examining the tabby built Habersham House in Beaufort, and for giving us advance copies of his and Larry Lepionka's article "Tabby Architecture: Origins and Culmination." Mona, Colin, and Larry also made it possible for the crew to visit sites that are on some of the exclusive, privately owned island in the area which, without proper approval, are inaccessible.

We enjoyed, and appreciate, the visit to the site by Mrs. Martha Moussatos, Parris Island Librarian, and her summer reading class. It is the responsibility of archaeologists working with public funds to explain how and why that money is being spent and to make the resulting data available to people interested in the past. It was therefore a real pleasure to be able to talk to this well-behaved and interested group about the town of Santa Elena.

Thanks to Woodrow Garvin, greens superintendent, for his interest and constant good humor and cooperation on the project. Thanks also to Mike DiPasquale, golf pro at the Parris Island Golf Course for his good natured cooperation in allowing us to dig holes in his eighth fairway. In order to work safely in the fairway we would place the tee markers ahead of us, closer to the green. The eighth hole is the most difficult one on the course so this modification, which made it easier to play, was welcomed by many. However, some of the more skillful players in a foursome may have been
slightly displeased because this tended to reduce their edge and equalize the competition. Happily none of the golfers got teed off at us; the course regulars were used to having summer archaeologists nearby and they took our work in stride and just played on through. We appreciate their indulgence.

The SYMAPS were generated at the Social and Behavioral Sciences Lab at the University of South Carolina. Tim White was responsible for getting the raw numbers entered and digitizing the maps' coordinates and data points using the plotter in the SBS Lab. Lynn Shirley, also of SBS, entered the data into the SYMAP program and produced the map printouts. Without the enthusiastic help and expertise of these men it would not have been possible to obtain the maps before the deadline of the 1985 Santa Elena project.

I would like to thank Richard Polhemus for his analysis of the beads from Santa Elena, included as Appendix VI of this report. Thanks too, to Dot Alford for helping with various financial aspects of the project. We are grateful for the assistance provided by Blanche and James A. Trumps, who helped with locating excellent housing for the project.

We are grateful to Diane Moses for her word processing expertise, to Kenn Pinson for his help with the editing and production of this report, to Gordon Brown for processing and printing the photographs taken in the field by Hunt, to Ann Salter for her help with drawing the frontispiece, and Curt Peterson for metal conservation and seeing that X-rays were made of metal artifacts as needed.

The powerful forces of acculturation relating to the development of land have been felt in the Port Royal Sound area for many years. This florescent cultural phase is in large measure responsible for the rapid increase in the market value of real estate in and around Beaufort. In the summer of 1985 these forces helped cause the demise of a very historic site so far as the archaeologists from the various Santa Elena projects are concerned. The Yankee Restaurant, owned by our good friend Pearl Palmer, closed. The Yankee has been the site of numerous conferences on historic sites archaeology, and other matters of equal or lesser import, since 1979. The food, especially the "damm good chowder," beverages, and atmosphere will be missed. Good luck, Pearl.

Bill Hunt would like to thank Lara and Robert South
for their courteously sharing the South family home with him and Branca while he was in Columbia working on data analysis.

Thanks to Stan's wife, Linda, who again quit her job to accompany him into the field so she and children Christy and Brent could enjoy the summer. Thanks, too, to Joe Judge and his wife, Phylis, who visited us in the field and brought refreshments to share with us.
DISCOVERING SANTA ELENA WEST OF FORT SAN FELIPE

Historical Background

The significance of the occupation of the area of Port Royal Sound, South Carolina, by Spanish colonists at the capital city of Santa Elena (1566-1587), on what is now Parris Island, South Carolina, has been outlined by historians (Connor 1925; Hoffman 1978; Lyon 1976, 1984; Ross 1925; Salley 1925) and in various archaeological reports (South 1979, 1980, 1982, 1983, 1984, 1985). In the archaeological projects, two forts, San Marcos (1577-1587) and San Felipe (1572-1576), have been found. Lying between these two forts, which are 200 yards apart, are the ruins of the city of Santa Elena. These forts and the city of Santa Elena were abandoned in 1587 after Sir Francis Drake burned St. Augustine, bringing to a close the 21-year period of Spanish presence at the site (Hoffman 1978; Connor 1925; Lyon 1976, 1984; Ross 1925; Salley 1925). The nature of the surviving archaeological and documentary record allows a unique opportunity to test archaeological methods in a manner not often seen on sites of the historic period.

Project Background

The sampling of the area of Santa Elena and her forts began in 1979 with the excavation of 42 three-foot squares designed to locate structures in Santa Elena through concentration of Spanish artifacts and architectural data (South 1980). This stratified systematic unaligned subsurface sample was followed in 1981 by other sample frames located on the west side of the eighth fairway of the Parris Island Golf Course, allowing the specific pinpointing of the most intensely occupied area of Santa Elena (South 1980:51). The present project continues this exploration of the site through subsurface sampling through a computer assisted SYMAP program (Dudnick 1971). Both these methods emphasized the distribution of fragments of Spanish pottery and fired clay daub from the walls of the structures burned in Santa Elena in 1576 and 1587 (Lyon 1984: 11, 15). The major goal is to determine the location of Spanish structures as revealed through Spanish pottery and fired clay daub recovered through the use of a 1% subsurface sampling strategy. Since the area to be tested is 210 by 510 feet, the 1% sample will be comprised of 132 three-foot squares. This area covers the middle of the
eighth fairway of the Parris Island Golf Course and "connects" the sampling frames of 1979 (162) and 1981 (1628), as illustrated in Figure 1. Once structural areas have been located through this method, more detailed block excavations can be undertaken with a high expectation that the ruins of Spanish structures will be discovered.
Figure 1. Archaeological base map showing research frame 162J and area 162K and previous research areas. The shaded areas show computer projections of the density of fired clay daub at Santa Elena.
RESEARCH GOALS AND STRATEGY

The primary goal, as mentioned above, is the location of Spanish structures in the eighth fairway area through the excavation of 132 sample squares. Related to this is the goal of discovering the edge of the major concentration of Spanish artifacts and features representing the "downtown" area of Santa Elena versus the "peripheral" occupation area as identified in 1980 (South). This "edge of the central area" of Santa Elena should lie somewhere in the eighth fairway of the golf course (Fig. 1).

The research design and detailed methodological discussion are presented in Appendices I and II, but the major approach addresses the data from two directions, (1) SYMAP displays of the dispersion of Spanish pottery fragments and fired clay daub, and (2) the use of a set of five structural data attributes. These two approaches allow the data pattern from the sample squares to be compared for the maximum interpretive results as to the location of Spanish structures. In addition the distribution of artifacts from the early nineteenth century plantation period occupation of the site, and the late nineteenth and early twentieth century Marine Corps occupation, are of interest.

Also, of direct interest, but funded through a separate, National Geographic Magazine grant, is the excavation of the area of a Spanish structure located on the west edge of the golf course in a previous project (House Area 162K in Fig. 1). This project is reported elsewhere in this publication.

The set of five structural data attributes are:

1. The presence of Spanish pottery.
2. The presence of fired clay daub.
3. The presence of Spanish features.
4. The presence of a hard, baked, firehardened surface.
5. The presence of wrought, Spanish nails and iron spikes.

The presence of three of these five attributes in a three foot sample square has been determined to be a highly reliable indication of a Spanish structure in the immediate area (South 1982). In addition to this basic method the presence of more than 60 grams of fired clay daub is considered to indicate the presence of a burned structure at the sample square. A star is placed on the site plan beside each sample square containing three of
these attributes or more than 60 grams of fired clay daub. The clustering of these stars is usually an indication that there is a burned structure (or structures) in that area of the site.

**Methods and Techniques**

Details of field methods and techniques are seen in Appendices I and II. The three foot squares were excavated after the sod was carefully removed and set aside on a plastic sheet. Two zones were seen in most squares, an A zone or level representing a greater disturbed area, and a B zone or level with less disturbance. In previous excavations on the site the B zone was found to have more Spanish artifacts and less intrusive plantation period and Marine Corps period artifacts than did the A zone.

A power sifter with a quarter inch screen was used to collect the excavated artifacts. The sifter was placed on a sheet of plywood and a wheelbarrow was used to catch the dirt passing through the screen. This procedure allowed the soil taken from the square to be replaced into the hole and the sod placed again on top in a short time, to minimize injury to the grass of the golf course (Figs. 2 and 3). Approximately 500' of hose were needed to bring water from a spigot at Fort San Marcos to keep the replanted grass from drying out.
Figure 2. A sample square being excavated by Jim Greiner, Ben Zeigler, and Guy Prentice, with the northwest bastion stabilization of Ft. San Felipe in the background.

Figure 3. A sample square being excavated in the eighth fairway of the Parris Island Golf Course.
ANALYSIS of 162J

Fired Clay Daub

Computer projected SYMAPs showing the distribution of fired clay daub in quantities greater than 60 grams (per three foot sample square) from the 1979 and 1981 sample frames were connected to the one from 1985 (sample frame 162J) to form a map of the concentrated areas of this material throughout the entire Santa Elena site (Fig. 1). Two major concentrations are shown—the Spanish hut (162A) and the area designated 162C. This season's project, 162J, found another major concentration of fired clay daub in squares 64 and 65, 72 and 73 (Fig. 1). Based on the experience of past excavations, it is thought that a Spanish house, or other Spanish structure, will be found in this location in the center of the eighth fairway. The area seen on the west side of the eighth fairway (162K) is dealt with in a later section of this report, having been excavated as an adjunct project to the present sampling project.

Spanish Pottery

The Spanish pottery SYMAP projection reveals a major concentration at the southeast corner of research frame 162J, adjacent to the area where the Spanish hut was excavated (Fig. 4), with another concentration seen at the northeast corner of the research frame. There is a break in the quantity of Spanish pottery between the central area of Spanish pottery at the southeast corner of the research frame, which is between the two forts, and the smaller amount at the peripheral Spanish pottery area along the west side of the golf course (Fig. 4).

These data clearly reveal the location of the central area of Santa Elena to be between the two forts, supporting the interpretation made on the basis of research frame 162. The edge of the concentration of Spanish pottery between the two forts is seen to fall somewhere around the center of the golf course. There is a "hot spot" of Spanish pottery located at the northeast corner of research frame 162J (Fig. 4).

By comparing Figure 1 with Figure 4, it can be seen that there is not a close correlation between the disposal of broken pottery fragments on the site and the dispersion of fired clay daub from burned structures which shows that different behavioral processes are being monitored by these two data classes.
The Structural Data Sets

When three of the five structural data attributes were present in a sample square a star was placed on the site map in the 30 foot square from which the three foot sample square was taken (Figs. 1 and 4). In addition, when a square had more than 60 grams of fired clay daub it also received a star at the location of the sample square. As mentioned above, this method has proven highly reliable for predicting the location of Spanish structures by excavation in the area of the starred squares. From the location of the 34 starred squares excavated in research frame 162J (Figs. 1 and 4), it can be seen that two major clusters of architecture monitoring squares are seen, one in the central area of Santa Elena, and one along the west side of the golf course in the peripheral area of Santa Elena.

There are only four three-foot squares in 162J with more than 60 gms. of fired clay daub; these are nos. 1, 22, 59, and 73. Roughly speaking, these four squares are located within larger clusters of starred squares having three or more attributes from the structural data set (Fig. 1). Since there are more "three-or-more-attribute" squares than "daub" squares, it appears that the starred square method presents a broader picture of the architectural potential of a sampled area than does the use of SYMAP projection of daub at the more-than-60-gram level. Large block excavation in such areas is needed to further test the thus far highly successful use of starred squares as an indicator of the presence of Spanish structures.
Figure 4. Computer projected Spanish pottery density at Santa Elena with stars showing the location of a sample square having three of five Spanish structural data set attributes, or over 60 grams of fired clay daub.
Figure 5. Computer projected SYMAP of the density of plantation period artifacts in Research Frame 162J.
plantation Artifacts

A large number of plantation period artifacts from the first half of the nineteenth century were recovered from the 132 sample squares (South 1979: 23-24, 1977; Neil Hume: 1970). The analysis form for tabulation of these is seen in Appendix III, and the quantity recovered is seen in the table in Appendix IV. Although plantation period artifacts were not of major interest in this study these artifacts were cataloged and a SYMAP of their distribution at the 37 to 676 count level was drawn (Fig. 5). From this it can be seen that the major concentration of plantation period artifacts is directly west of Ft. San Felipe, toward the western side of the research frame. A brick ruin fragment can be seen at the surface of the grass at the northeast corner of the research frame that may represent the remains of a plantation house.

Marine Corps Artifacts

There are three major periods of occupation at the Santa Elena site: 1) the Spaniards from 1566 to 1587, 2) the plantation period of the early nineteenth century, and 3) the U.S. Marines who began using the site in the World War I period and, of course, still remain here. This occupation is represented by shell casings, coins, bottle glass, buttons, wire nails and tacks, ceramics and miscellaneous hardware and plumbing from the early twentieth century period (Fig. 7). A computer projected SYMAP of the density of the artifacts from this occupation at the 29 to 119 count level is shown in Figure 6. As can be seen from this there are only a few areas of concentrated Marine Corps artifacts in the 162J research frame.

Other Artifacts

The archaeological record of the southern tip of Parris Island does show the presence of prehistoric Indians through the recovery of their artifacts (South 1979: 14). In addition, a large quantity of artifacts from contemporary Indians are found associated with the Spanish occupation. Though the Spaniards and the sixteenth century Indians were living together and interacting in Santa Elena, the Indians themselves did not have a settlement on Parris Island and lived there only in association with the Spanish colonists. The many seasons of excavations have not encountered an independent Indian settlement either pre-dating or post-dating the town. This supports Ross (1925: 354-355, footnote 9) who has reported that there were no Indian villages
on the island when Pedro Menendez de Aviles selected it as the location for the colony. This is why the Indian presence on Parris Island is not considered a period of occupation along with the three mentioned above. See Appendix 4 for tabulation of Indian pottery contemporary with the Spanish occupation. The specific types involved are seen in South (1982:70). The SYMAP distribution of Indian pottery contemporary with the Spanish occupation is seen in Figure 6.

In the sampling project (162J) and in the excavation of the area at 162K, musket balls, iron objects, a silver star, glass fragments and miscellaneous metal objects were recovered. These are reported in a separate monograph dealing with all the artifacts recovered from Santa Elena from 1979 through 1985, under a National Science Foundation grant.
Figure 6. Computer projected SYMAP of the density of Marine Corps period artifacts and Spanish-contemporary Indian pottery at Research Frame 162J.
Figure 7. Marine Corps period artifacts from Santa Elena curated at the Parris Island Museum.

Figure 8. A view of the excavated area at 162K. Note Spanish midden in the upper right of the photograph. Sample square 9 is visible in the upper left corner. It is slightly deeper than the rest of the excavation surface.
SUMMARY

The 1% sample of 132 three foot squares in 162J completes the use of this strategy in the discovery of Santa Elena. The 162B research frame (1981) was beyond the limits of the western boundary of the town as indicated by its lack of sample squares which contained three attributes of the structural data set or over 60 grams of fired clay daub (Fig. 1). The western edge of Santa Elena was thus expected to be somewhere in the eighth fairway. With the cooperation of the United States Marine Corps and the Parris Island Golf Course we were able to test this hypothesis.

The data from the three foot squares show that Spanish occupation did occur in the area surveyed by this research frame. The starred square method of pinpointing concentrations of Spanish material, in the form of spatial data and artifacts, reveals two distinct areas of Spanish activity: One of these areas is on the west side of the golf fairway and the other is on the east side between the two forts (Fig. 1).

The other method used to define spatial configuration and Spanish activity areas was computer projections from SYMAPs. The SYMAP of the density of fired clay daub indicates that a Spanish house, or other structure, is likely located in the center of the fairway.

The SYMAP of Spanish pottery shows that the sherds cluster around the starred structural data set squares in the central and peripheral areas (Fig. 1). An additional concentration of Spanish pottery is seen at the northeast corner of the 162J research frame, indicating a refuse deposit in this area.

The 162K area at Square 9, on the west side of the golf course, was excavated using a 20 by 20 foot research frame to explore the idea that a house or other Spanish structure might be located there based on the SYMAP clustering of fired clay daub (Figs. 1 and 8), and the results of this study are presented in the following section of this report.
EXCAVATION OF AREA 162K

Through a grant from the National Geographic Magazine, a 20 by 20 foot area was excavated around Square 9, where a concentration of fired clay daub was seen in the 1981 season of work on the site (Figs. 1 and 2). The purpose was to test this area to see if a feature seen in Square 9 was part of a structure. The feature in this sample square was thought to be a posthole which had filled with fired clay daub as a result of the burning of the structure. It was expected that when the excavation area around this feature was enlarged other associated fire clay daub filled postholes would be revealed. The pattern of fired clay daub filling postholes after the original timber had burned away had previously been observed in the excavation of structures in the central area of Santa Elena (South 1980, 1982). However, as excavation proceeded at 162K it became clear that this pattern would not be repeated here; if a structure was present its manner of construction was different from those excavated in earlier seasons.

The 162K area was excavated in two ten foot squares and seven five foot squares, revealing at the subsoil level, a number of postholes and features, some of which were thought, through soil color, intrusion, etc., to be Spanish, while others were considered to be from a post-Spanish period (Fig. 9). Only two features were excavated, 100 and 139, which were of particular interest since they contained charcoal and glass beads (Figs. 9, 10, 11). Feature 139 contained a plantation period tobacco pipestem which suggests that the feature dates from that period of the early nineteenth century (South 1979:23-24). The analysis of the burned bead pits follows in a later section of this report.

No dramatic structural data were found in the excavated area. Though several postholes and other features thought to be Spanish were found, no outline for a structure could be discerned; there were no other postholes with large amounts of fired clay daub to go with the first one from Square 9. A possible daub processing pit was found, Fea. 115, but it was much smaller than the ones encountered in other areas of the town in association with the burned structures defined by their daub filled postholes (South 1981:26-28, 37). In the northwest corner of the excavated area an oystershell midden was found, Fea. 114, which does indicate that there was some Spanish activity in the area.

The hypothesis being tested with the block excavated area...
at 162K was that one "posthole" feature with fired clay daub was evidence of a burned Spanish structure. Based on earlier excavations at Santa Elena it was predicted that more postholes with fired clay daub would be found in association with this first one and that through excavation the shape of the structure would be defined (South 1979:4-5; 1980:9-13; 1981:30, 33-36, 38; 1983:41; 1985:30, 33). However, this hypothesis was not supported by the excavation.

There is no doubt that some Spanish activities were performed in this area of the site. This is supported by the clustering of starred squares from the structural set (Fig. 1) and the many likely Spanish features identified in the subsoil floor of the excavated block itself (Figs. 8 and 9). Though no conclusion as to the type of behavior can be reached since the hole that has opened up is so small (cf. South 1981:99), some preliminary hypotheses can be discussed.

Fired clay daub has been found in Square 9 and 2 (1981) which, according to the pattern found elsewhere in Santa Elena, suggests that a Spanish structure was burned. The number of starred squares present in the area reflects a fairly intense Spanish presence, as does the accumulation of the oyster shell (Fea. 114). The focal point of this activity was the type of structure, but it was a structure which was entirely plastered with clay daub. The presence of the small daub processing pit, Fea. 115, suggests that a quantity of daub was not needed in the construction of this shelter. We already know that some daub was used because it appears in the feature in Square 9.

is really all we have to go on at this point; we do not know the shape of the structure nor its function.

The location of 162K, i.e., its distance from the, is also significant. This area is quite a distance from Ft. San Marcos, which means that getting the structure and performing whatever activities were there would have been very risky; following the construction of Fort San Felipe and the first town it was necessary to construct Fort San Marcos with cedar posts "inset" from St. Augustine because of the danger to Spaniards from the Indians should they try to cut local trees (South 1980:72-81; 1984:2). In addition, building San Marcos, the Spaniards also built outposts and blockhouses some distance from the for additional protection (Connor 1925:267 in South 1984:39, 1985:5). However, the evidence so is that any structure at 162K was not very essentially built and so it is unlikely that it would had a military function. Therefore, it seems that was probably used by the Spaniards of the first
town of Santa Elena, 1566-1567. Further excavation will be necessary to test these tentative hypotheses.
ANALYSIS

Artifact Quantity

The block excavation has shown that the architectural construction in 162K is different from that in other areas of the site. Following this discovery, a comparison of the Spanish artifact quantities from 162K and the other areas of the town was made to see if a corresponding difference would exist. In order to compare these various areas Bill Hunt examined previously reported artifact counts (South 1979, 1980, 1982, 1983, 1984, 1985) and calculated the average number of artifacts per five foot square (Appendix V). The main question being addressed is whether the artifact quantity from 162K is consistent with that from other areas where Spanish structures with adjacent concentrations of domestic refuse have been excavated. If the number of artifacts per five foot square is about the same, then a domestic dwelling function would be suggested for the structure or structures in the 162K area (if we assume that the length of occupation is the same in all cases). If the artifact counts differ, then a different function for the area would be suggested (South 1981:5).

A comparison of Spanish artifacts, Indian pottery contemporary with the Spanish occupation, and a total of Spanish artifacts plus Indian pottery by five foot square, is seen in Table 1. This table includes artifacts from both the A and B levels of the squares. The little Spanish hut excavated in 1979 (South 1980) had refuse thrown around it as a result of occupation during the Spanish period. An average of 124 Spanish artifacts per five foot square was recovered from the hut, whereas an average of only 18 was found at area 162K (Table 1), certainly a dramatic contrast. The contemporary Indian pottery from area 162K averaged 8 sherds per five foot square, while that from the Spanish hut was four times that at 34. For the total of Spanish artifacts plus contemporary Indian pottery the amount per five foot square from the hut is almost six times that from area 162K.

The casa fuerte inside Ft. San Felipe is a good example of a Spanish structure around which refuse was discarded during its use (South 1984, 1985). When we compare the averages from area 162K with those from around the casa fuerte we find that there are from three to five times the artifacts associated with the casa fuerte as with area 162K (Table 1).
**TABLE 1**
COMPARISON OF AVERAGE ARTIFACT QUANTITY BY 5' SQUARE FROM VARIOUS PROVENIENCES

<table>
<thead>
<tr>
<th>Site Area</th>
<th>Spanish Artifacts</th>
<th>Contemporary Indian Pottery (Plus Contemporary Indian Pottery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANTA ELENA</td>
<td>18 8 25</td>
<td></td>
</tr>
<tr>
<td>Area 162K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish Hut</td>
<td>124 34 145</td>
<td></td>
</tr>
<tr>
<td>FT. SAN FELIPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West half casa fuerte</td>
<td>57 58 124</td>
<td></td>
</tr>
<tr>
<td>East half casa fuerte</td>
<td>58 27 82</td>
<td></td>
</tr>
</tbody>
</table>

When only the less disturbed B levels are used, representing in most cases primarily Spanish data, we have the result seen in Table 2. Here we compare the 162K area with the area of three structures from Santa Elena (Area 162C), and find that there is five times the quantity of artifacts associated with those structures as with area 162K (Table 2). When the structure found inside Ft. San Felipe is compared with 162K a similar ratio is produced.

Two areas where no good structural data were found (162D Central and 162D East), however, compare very favorably with the data from 162K (Table 2). This suggests that these three areas where firm burned structural data are not present, represent areas where structures were not present. If structures were present, as has been argued for 162K, the data indicate that they would have functioned in an entirely different relationship to the refuse being discarded around them than did those buildings that are surrounded by far more refuse. Since the structures excavated so far in Santa Elena that are surrounded by refuse have been interpreted as domestic dwellings, it follows that 162K is not the site of a Spanish house. This conclusion is reinforced by the large distance between 162K and its nearest neighboring structures, both domestic dwellings.
and the two forts (Fig. 1).

One final conclusion that can be drawn from these data is that, whereas a good quantity of Spanish artifacts, along with iron spikes and nails, plus fired clay daub, is often an indicator of the presence of a domestic dwelling at that sample square, it may instead reveal the site of a structure that had a function different from that of sheltering a domestic occupation.

### TABLE 2
**COMPARISON OF AVERAGE ARTIFACT QUANTITY BY 5' SQUARE FROM THE 8 LEVELS**

<table>
<thead>
<tr>
<th>Site Area</th>
<th>Spanish Artifacts</th>
<th>Contemporary Indian Pottery</th>
<th>Spanish Plus Contemporary Indian Pottery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SANTA ELENA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area 162K</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Town Excavation</td>
<td>43</td>
<td>32</td>
<td>66</td>
</tr>
<tr>
<td>(162C) in the area of structures 3, 4, 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area of 162D West</td>
<td>29</td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td>162D Central</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>162D East</td>
<td>8</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>162D South</td>
<td>27</td>
<td>20</td>
<td>44</td>
</tr>
<tr>
<td><strong>FT. SAN FELIPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West half casa fuerte structure</td>
<td>27</td>
<td>28</td>
<td>54</td>
</tr>
<tr>
<td>East half casa fuerte structure</td>
<td>32</td>
<td>14</td>
<td>44</td>
</tr>
</tbody>
</table>
Burned Bead Pits

During the excavation of the northwest bastion of Ft. San Felipe a charcoal pit containing almost 4,000 glass beads, some fused together from the heat of burning, was found as an intrusive feature in the moat fill after the fort was backfilled by the Spaniards (South 1983:72). These beads were interpreted as a post-Spanish phenomenon, probably associated with the plantation period voodoo funeral ritual involving the cremation of possessions of the dead (South 1983:75).

During the excavation of Area 162K two additional charcoal filled pits containing beads were found (Figs. 9, 10, 11). Designated Features 100 and 139, the former contained 278 beads and fragments, and the latter contained 87. A report on these and other beads from 162K and 162J as well as other Santa Elena proveniences not discussed in earlier manuscripts can be found in Polhemus's report in Appendix VI.

In the 1983 report South and Polhemus discuss the cremated bead pit from the backfilled moat and come to different conclusions regarding the time period of the feature. South placed an early eighteenth century date on the feature at the northwest bastion of Ft. San Felipe, while Polhemus thought the beads could date no later than the middle of the seventeenth century (South 1983:75, 152). The temporal position of these bead pits has been clarified somewhat with the excavation of Fea. 139 because included in its fill is a fragment of a plantation period tobacco pipestem with a hole diameter of 5/64". According to Harrington's data, this size hole would not occur in pipestems earlier than 1680 and would go out of use between 1750 and 1800 (Harrington 1954, from Hume 1970:298). Though accepting a late date for the pipestem would place it in temporal agreement with the majority of the other dated plantation artifacts from the site which generally are from the late eighteenth to mid-nineteenth century (South 1979:15, 23-24; cf. South 1983:42), it is "unwise, on the whole, as well as statistically unthinkable" (Harrington 1978:64) to use one pipestem to date a feature. The major value of the artifact is not to date the feature within the cultural occupation of the plantation period, but rather that it permits the features to be identified as belonging to the plantation rather than Spanish period of occupation.

Oystershell mortar and red lead-glazed earthenware are artifacts "similar" to the beads from the pits in that when they were first recovered at Santa Elena their
cultural associations couldn't be determined. However, the mortar and earthenware enter the archaeological record as refuse materials. Therefore, the areal or spatial distribution for these two artifacts could be mapped and compared with the distribution of other refuse artifacts in the same areas that could be identified to a cultural occupation. In this way it was determined that red lead-glazed earthenware is Spanish (South 1979:19) while the oystershell mortar is from the plantation period of occupation (South 1979:25).

The cremated bead pits did not enter the archaeological record as trash or refuse. Instead, placing the beads and their contents into the ground (where they become features upon excavation) was an intentional act. Burying burned beads in the ground is a swiftly occurring behavioral act that could be performed by anyone who had access to the area (see page 13). Therefore, mapping the distribution of plantation and Spanish artifacts or features in order to link the bead pits with one or the other of these concentrations through areal association is not a valid procedure (cf. Polhemus Appendix VI:6).

On the basis of negative evidence, a plantation origin is suggested for the bead pits since the few unmistakable Spanish beads found at Santa Elena have not been recovered from these features (Polhemus 1983; 1985:228; Appendix VI; South 1983:72-75). In addition, no European clay tobacco pipe stems have been found in Spanish features of any kind anywhere on the site. Therefore, the tobacco pipe stem found in Feature 139 is the most convincing evidence thus far for placing these features in the plantation period of occupation of Parris Island, long after the Spaniards had gone.
Figure 9. Final plan view of Excavation Area 162K at the junction of the B zone with the subsoil. The shaded features are thought to be Spanish and the clear ones post-Spanish in origin. The Spanish oystershell midden discussed in the text is Feature 114, the small daub processing pit is Feature 115.
Figure 10. Charcoal and bead pit, Feature 100 being excavated by Guy Prentice in Area 162K.

Figure 11. Detail photograph of charcoal and beads in Feature 100.
RECOMMENDATIONS

Since 1979 archaeological work has been carried out at Santa Elena and her forts, most of it involving sampling and small area excavation such as that reported here. As a result considerable information has been accumulated as to the location of the major occupation areas in Santa Elena and the nature of domestic occupation areas as opposed to other functional sites such as forts, etc. It is now time to use this information to get a far better picture of Santa Elena's layout than has been possible using the methods utilized thus far. Large block excavations the size of football fields must now be excavated to discover more about the architectural layout of Santa Elena, her buildings, streets, plazas and gardens. This is the next step in research at Santa Elena, the sixteenth century capital of Spanish Florida.
REFERENCES

Connor, Jeannette T.

Dudnick, Elliott E.

Harrington, J.C.

Harrington, J.C.

Hoffman, Paul E.

Lyon, Eugene


Noel Hume, Ivor

Ross, Mary
1925 The Spanish settlement of Santa Elena (Port Royal) in 1578. Georgia Historical Quarterly IX (1925): 352-379. (Essentially
a transaction of the Inspection of Alvaro Flores de Valdes).

Salley, Alexander S., Jr.

South, Stanley

1979 The search for Santa Elena on Parris Island, South Carolina. University of South Carolina, South Carolina Institute of Archaeology and Anthropology, Research Manuscript Series 150. Columbia.


South, Stanley and William B. Hunt (this report)
APPENDIX I

RESEARCH DESIGN FOR SAMPLING WEST OF FT. SAN FELIPE 1985

by

Stanley South

This research design is primarily for the use of members of the Santa Elena crew involved in the project on the eighth fairway of the U.S. Corps golf course on Parris Island from May 13 to July 12, 1985. This project is funded by the National Endowment for the Humanities and the National Geographic Magazine in conjunction with the South Carolina Institute of Archaeology and Anthropology.

The project personnel are Stanley South, Archaeologist and Principal Investigator of the project, Bill Hunt, archaeologist in direct charge of the fieldwork, and Guy Prentice, assistant to Bill Hunt. Volunteers on the project are Ben Zeigler, and Jim Well, as well as others who will help from time to time during the excavation.

The project is made possible through the cooperation of the United States Marine Corps on whose property the site of Santa Elena, the capital of Spanish Florida, is located. This particular project will emphasize the excavation of 132 three-foot sample squares on the eighth fairway of the golf course. The South Carolina Institute of Archaeology and Anthropology through its Director and State Archaeologist, Dr. Bruce Rippeteau, is also a major contributor to the project. Under a grant from the National Geographic Magazine a Spanish structure located in 1981 will be opened and examined more fully than was possible at the time it was discovered. The federal permit for excavating on the property has been obtained from the United States Marine Corps under the Archaeological Resources Protection Act of 1979. The research goals and excavation strategy for the project are outlined here for crew members.

GOALS:

1. Collect data to determine location of Spanish structures in Santa Elena and to search for the edge of the concentration of features and artifacts as predicted by the 1979 trench.

2. Expose a Spanish structure located in 1981.
METHODS:

1. Obtain 1% sample of area of 8th Fairway for SYMAP display of density of Spanish pottery and fired clay daub from occupation of Spanish structures, 132 three-foot squares needed (162J).

2. Open ten-foot squares above area of structure located in 1981 (162K).

EXCAVATION TECHNIQUE:

1. Shoot transit angles and distances for locating SE and SW corners of three-foot squares located by use of a table of random numbers (one three-foot square in each thirty-foot square area). Set one flag at each of these two points with the square number on one flag.

2. Position three-foot square of plywood between the the two flags and set a nail at each of the remaining two corners.

3. Remove sod in blocks cut with Council bush ax and and wet these down with the water hose.

4. Place 4' x 8' plywood sheet beside the square and position power screen above it so the dirt will fall onto it and will easily be shoveled back into the hole.

5. Remove soil with shovel using horizontal schnitting technique as much as possible to locate soil color change at bottom of plowed soil zone. Sift this soil as Zone A. Use root clippers and saw to keep straight, neat profiles. Maintain the integrity of profiles and subsoil level.

6. After all lighter, A Zone soil, has been sifted, bagged and marked as 38BU162J-1A etc., the underlying darker soil Zone B can be removed, with greater care than the A Zone, to the junction with the yellow subsoil sand. Do not go into the subsoil sand! Use a horizontal schnitting shovel technique. Sift this darker zone as Zone B and mark bag 38BU162J-1B.

7. Schnit (cut clean) the subsoil level with shovel or trowel so the features can be seen.

8. Quickly plot the features onto standard size grid square sheets making sure to mark the provenience number on the square sheet with north always at the
10. If Marine Corps fill is seen on top of the A Zone it should be treated as part of the A Zone but its depth should be mentioned. It should also be indicated on the profile drawing of the square, along with the floor plan.

11. Fill out a provenience card for each three-foot square for Zones A and B and make any comments you wish regarding presence of daub, sherds, unique or interesting artifacts, features, etc. Don't go into great detail. If rusting metal artifacts are found, put them into a labelled plastic bag with enough water to keep them wet. These will be sent to the Institute's Conservation Laboratory in Columbia for conservation as soon as possible.

12. The square needs to be coded as to the presence of Spanish architectural attributes as observed in the field. Judgment will have to be used. A small lump of daub might well not qualify.

The attributes of the structural data set are:

1. Presence of Spanish pottery
2. Presence of fired clay daub:
3. Presence of Spanish features (non-Marine Corps)
4. Presence of hard, baked, fire hardened surface
5. Presence of wrought iron spikes and nails.

Put a check mark for each attribute noticed. If any square has 3 or more architectural attributes, place an asterisk in the upper right corner of the provenience card. These cards will be important for designating sites for future excavating to reveal Spanish
structures. Note: Those with both A and B Zones should have one for each zone with any notes relating to features, artifacts, etc., indicated on the card (a re-emphasis of technique #11).

13. Backfill square by shoveling dirt from the 4' x 8' plywood floor. Get all dirt into the hole by tamping with feet as filling proceeds. Use rake to get smooth soil surface.

14. Wet down backfilled square.

15. Replace sod squares over backfilled square and tamp into place with feet, making sure the edges are covered and the replanted grass is flush with surrounding sod.

16. Remove the two flags and leave the two nails flush with the ground, and place used flags in appropriate box.

17. Place artifact bags with top rolled down and taped into cardboard box sealed with duct tape. When box is filled with bags, tape box closed and put into vehicle. Always have box sitting on piece of plywood when it is in the field so that the bottom doesn't get wet. It is not necessary to write anything on the box at this point.

SIFTING TECHNIQUE:

1. The power sifter should be set up over a piece of 4' x 8' plywood about three feet from the square on the down wind side.

2. A double bag (one inside the other) should be used and marked with the site and provenience number for the square and zone (38BU162J-14B). Also put the date and the excavator's initials. Indicate the total number of bags there are from each level.

3. The bag should be placed in a bucket beside the sifter. Never sit it on the sifter while it is running. Don't put trowels or tools on sifter.

4. When the sifter is stopped, remove the roots and cement block fragments and place in the dirt pile beneath the screen. Use a large trowel and scrape all objects in the screen together and load into the bag. When the screen is clear place the bag back in the bucket. Wire nails often get stuck in the screen by their heads, leaving their tips
hanging down underneath. The screener needs to look carefully at the underneath side of the screen to be sure that all these are removed. Be careful of handling the roots since they may be from poison ivy—use glove! Remember—Don't try to examine each clod and artifact being placed in the bag. Keep moving so the shovel man does not have to wait on you to clear the screen!

5. If you happen to see some artifact of particular interest such as a coin, aglet, bead, button, etc., you should place it in a plastic bottle or zip-lock bag with the square and provenience number written on a piece of masking tape fastened to the bottle. These bottles and bags should then be placed in the bag with the other artifacts. The supply of empty bottles and bags should be kept at all times in the bucket where the bag is kept. There should also be in the bucket an indelible magic marker, pencils for taking notes, a clip board with square sheets and provenience cards, a can of starter fluid for the motor, and a tape measure and folding rule for making measurements.

6. At the end of the day the plan maps and profile drawings on the graph paper, as well as the provenience cards, must be transferred to the appropriate notebook binder. Before leaving the site, move the golf tee markers back to their original position. This is especially important on Friday afternoons.

7. At the beginning of each day the oil in the sifter engines must be checked, and all oil changed once each week. The gas should also be checked and filled before the engines are started.

8. Check nuts and moving parts of the sifters periodically during use and tighten and grease as necessary. When rain hits throw a cover over the engine.

9. The main job of the sifter person is to keep artifacts moving from the screen to the bag so the shovel man will not have to wait for the screen to be cleared. The shovel man should never have to wait on the screen to be cleared. The screen should be examined when the shovel man is loosening the soil in the square and piling it up to be thrown into the sifter. When he gets his pile of loose dirt ready to throw, the sifter should be running and ready to receive the dirt. A skillful screen man can keep a shovel man working full time
with no chance to lean on the shovel and wait.

EXPOSING THE SPANISH STRUCTURE:

1. Evidence of a Spanish structure was seen in a sample square in 1981.

2. Opening 10' squares in this area should reveal the size and other details of this building.

3. The topsoil zones will be removed as Zones A and B in five-foot squares. These will be numbered as needed as the area is opened. A 20' x 30' foot area should reveal a good part of the plan of the structure. This area will be designated as BU162K. The area will be expanded as needed based on time available and the position of postholes, structure edges as seen in hard vs. soft sand-soil color, daub and artifact distribution.

4. An attempt will be made to lay out the excavation area so as to monitor the inside vs. the outside of the structure, if possible, as excavation proceeds.

5. There is no plan at present to excavate any features found at this building site since the primary goal is to identify the structure's size and any associated postholes, daub processing pits, etc., as well as recovering associated artifacts. If the structure is thus located, a new proposal will be written to more thoroughly investigate the associated features and possible related structures.
APPENDIX II

METHOD AND ANALYSIS DISCUSSION FOR RESEARCH AREAS 162J AND 162K

by

William E. Hunt

The area to be tested had already been prepared on the site map by Stanley South before the field season began. The sample frame consisted of 132 30' x 30' squares; within each the location of one three-foot square was determined using a random number table. The area to be tested is within the eighth fairway and is bordered on the east and west by areas that have already been tested. The eastern area, 162 (1979), contained 65 three-foot sample squares; the western section, 1628 (1981), had 52 three-foot sample squares (Fig. 1).

The 132 three-foot sample squares of 162J comprise a 1% stratified systematic unaligned subsurface sample. All the squares were plotted using trigonometry and the NW and SE corners were positioned in the field using a transit.

The units were excavated according to natural stratigraphy which consists of an A zone, a B zone, and subsoil. The material was analyzed by zones, but the A and B counts were added and this sum used in the SYMAP. The stratigraphy throughout the site is not uniform. Some areas, notably inside Ft. San Felipe, do not have a B zone because of land moving and disturbing activities associated with the USMC occupation and golf course construction (South 1985:11). In downtown Santa Elena, the L-Shaped excavation, the classic profile consists of a lighter A on top of a darker B. Throughout the sample squares in 162J the B was usually lighter than the upper A. Also in 162J crushed shell from USMC walking paths was ubiquitous. Therefore, the combination of the end of the concentrated crushed shell and the beginning of lighter sand indicated the change to B. (Four squares had no B zone; the A zone extended from the surface to the subsoil). As a review of the analysis sheets shows, this A-B division was not a cultural one; early and late materials are mixed throughout the zones in the sample squares. Since the A and B zones are not uniform with respect to either soil stratigraphy or cultural affiliation in 162J, the artifact counts from A and B were combined for the SYMAPs.
A profile was drawn for each square and the floor mapped. When pieces of possible Spanish features were located at the subsoil, slots were excavated to try to define the feature. This dirt was not screened. Slots were cut from 24 three-foot squares to define possible Spanish features (a list of these can be found in Vol. 1 of the provenience card/map notebook), which is on file at the South Carolina Institute of Archaeology and Anthropology.

Material in the screen was examined only as it was being bagged; it was not field sorted nor was it studied in great detail. Basically the excavator wanted to quickly determine the occupation periods represented in the square—Spanish through USMC. However, some simple Spanish analysis was done during the excavation/screening process (in addition to the feature identification just mentioned). In earlier sampling procedures which have been later followed by block excavations, a Spanish data set that is predictive of house sites has been discovered. This consists of the following attributes: 1) the presence of Spanish pottery, 2) the presence of fired clay daub, 3) the presence of Spanish features, 4) the presence of a hard, baked, fire-hardened surface, and 5) the presence of wrought, Spanish nails and iron spikes. The presence of three or more attributes in a three-foot square usually reveals the presence of a structure.

Therefore, monitoring these attributes as the site is explored enables the excavator to reach an objective assessment of the content of the site as each individual three-foot square is being opened thereby increasing the effectiveness of the field observations.

After washing and analysis was completed the Specimen Identification Record and Provenience Cards were brought together to get a final, thorough count on squares with three or more Spanish attributes (Table 1). The location of all the three-plus attribute squares can then be hand plotted on the site map (Figs. 1 and 4). Comparing these data with the SYMAPs of fired clay daub (Fig. 1) and Spanish Pottery (Fig. 4) is a way of cross checking the two methods of prediction. This is felt to be especially important since the SYMAP intervals used in Area 162J were those originally determined and used in 1979 in Area 162 consisting of 65 sample squares. The 65 sample squares of research frame 162 happened to pass through downtown Santa Elena. These intervals have been reused for each subsequent SYMAP so that all will match. This procedure raises the following questions. Will different activity/behavioral areas of the site produce the same ranges and artifact relationships as the town? The expected answer to this is
no of course. Therefore it may indeed be possible to lose important elements of the settlement pattern by using data originally collected from a particular activity area and attempting to hold this data constant while applying it to other areas which are not necessarily comparable.

The intervals established in 1979 have demonstrated their reliability. However, artifact depositional patterns do vary widely depending upon the activity, the length of the period of occupation, and/or the status of the occupant. This means that there is a danger that the SYMAP intervals based on artifact totals from "downtown" Santa Elena could mask other behavioral centers having different artifact types or counts.

By way of explanation, consider the example of a nineteenth century plantation: The remains of the mansion should be fairly easy to locate; a whole row of slave cabins may be the next easiest to find; the overseer's house could probably be found; single slave cabins would be more difficult to find; ancillary buildings such as sheds or privys would be harder; the location of garden plots could be very difficult to identify. If the attributes of the mansion are allowed to become the plantation data set and this is used to predict the location of other structures or activity areas, not much is likely to be found. If the material remains of the mansion and its occupants according to the Carolina pattern are used to establish intervals for SYMAP mapping, it is likely that many other components of the entire settlement pattern will not be identified.

Since the excavation of the 132 three-foot sample squares in 162J completes the survey of the site, it may now be appropriate to re-do the SYMAP intervals. This concept may be clarified by considering the Spanish component. We know that the majority of Santa Elena, including Fort San Felipe and Fort San Marcos, is located next to the tidal marsh edge, on the east of the site. To the west the intensity of the Spanish occupation decreases. A large difference between artifact counts from the east and west portions of the site may require that the site be divided along gross-density contour lines (see Tables 1 and 2); in other words, different intervals may have to be used for different areas of the site in order to monitor different types of activities.

The ranges for the counts of the various artifact classes from 162 (1979) and 162J (1985) are shown below:
The value ranges used in the 1979 and 1985 SYMAPS for fired clay daub are: 60-250 gms and 251-1712 gms.

The value ranges used in the 1979 SYMAP for Spanish pottery are: 21-30 sherds and 31-40 sherds (South 1979:18). The value ranges used in the 1985 SYMAP for Spanish pottery are: 10-22 sherds, 23-30 sherds, and 31-44 sherds (Fig. 4).

With respect to Spanish pottery, the difference in occupation from the east (between the two forts) to the west has been taken into consideration by including the lower sherd count range of 10-22. If only the two highest ranges were used there would not be much to see on the SYMAP since only 12 three-foot sample squares had over 21 Spanish sherds; and of these 12, only 2 had more than 31. By including the lowest range, a total of 46 three-foot squares figure in the SYMAP of Spanish pottery from 162J (Appendix IV).

As shown, the ranges used in 1979 and 1985 for fired clay daub weight are the same. Only four sample squares in 162J had more than 60 grams of fired clay daub. Large amounts of fired clay daub are indicative of a wattle-and-daub structure that has been burned. However, the excavation at 162K suggests that not all the Spanish structures at Santa Elena contained large quantities of daub in their construction. Therefore, at least in the western section of the site, structures may be present even if quantities of fired clay daub are not. As in the case of Spanish pottery, lower quantities of fired clay daub may have to be used in making SYMAPs in the west in order to accurately detect the Spanish presence.

Of course, it must also be realized that all of this contains a "Catch-22" dimension: If South's recommendation for excavation of large block areas is funded then the structures will be uncovered and can be identified in the ground; if there is no funding in the future for Santa Elena, then fine-tuning SYMAP intervals

<table>
<thead>
<tr>
<th></th>
<th>1979</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish Pottery</td>
<td>0-44</td>
<td>0-77</td>
</tr>
<tr>
<td>Fired Clay Daub (gms)</td>
<td>0-1712</td>
<td>0-395.5</td>
</tr>
<tr>
<td>Contemporary Indian Pottery</td>
<td>0-31</td>
<td>0-18</td>
</tr>
<tr>
<td>Plantation Artifacts</td>
<td>0-100</td>
<td>0-676</td>
</tr>
<tr>
<td>USMC Artifacts</td>
<td>0-91</td>
<td>0-119</td>
</tr>
</tbody>
</table>
would prove to be a rather impotent exercise.

In this report the only SYMAPs displaying Spanish activities are those mapping fired clay daub and pottery, and these only if a lower limit is exceeded. The starred squares of the Spanish structural data set, on the other hand, are more sensitive to less intense areas of Spanish activity because they monitor this cultural component on the basis of presence-absence of attributes rather than on an arbitrarily defined lower threshold.

As Fig. 1 shows, the four three-foot squares in 162J that had over 60 gms. of fired clay daub (nos. 1, 22, 59, and 111) contribute to the clusters of stars indicating three-foots squares with three or more of the attributes from the structural data set. The SYMAP picture for concentrations of Spanish pottery (Fig. 4) is somewhat more dispersed; however, note that everywhere the pottery concentrates, starred squares are nearby. Look especially at square 118. This three-foot square had 77 Spanish sherds, which was the highest number collected from any sample square. Even though it is by itself in the northeast corner, i.e., doesn't form part of a cluster, the sample square itself is starred.

In summary then the evidence since 1979 shows that SYMAPs and the Spanish structural data set compliment one another were used in a subsurface sampling strategy. The 1975 data from 162J suggests that there is more to Santa Elena than what has been revealed so far on the east between the forts; the number of features tentatively identified as Spanish in the excavation at 152X (30 out of a total of 59 in an area approximately 25' x 20', Fig. 9) confirms this. Now that the discovery phase at Santa Elena is over, it is time to explore and reveal the rest of the Spanish colony.
Carolina Patter Total A & B

Abrv. CarPTot
Range: 0 - 97
Four Intervals through Program Default
Option G Class is Default

Spanish Artifacts Total A & B

Abrv. SpArtTot
Range: 0 - 77
Intervals: 0 - 9; 10 - 22; 23 - 30; 31 - 79
Source for intervals: RMS 165 p. 57
Option G Class: 10.0; 13.0; 8.0; 49.0

Spanish Pottery Total A & B

Abrv. SpPotTot
Range: 0 - 77
Intervals: 0 - 9; 10 - 22; 23 - 30; 31 - 77
Source for intervals: RMS 165 p. 57
Option G Class: 10.0; 13.0; 8.0; 49.0

Fired Clay Daub Total Weight (Grams)

Abrv. DaubTot
Range: 0 - 395.5
Intervals: 0 - 30; 31 - 59; 60 - 250; 250 - 395.5
Source for intervals: RMS 165, p. 56
Option G Class: 31.0; 29.0; 191.0; 145.5

Spanish Artifacts Total and Fired Clay Daub (Grams)

Abrv. SpArtDb
Range: 0 - 402.5
Four Intervals through Program Default
Option G Class is Default

Contemporary Indian Pottery Total A & B

Abrv. CIPotTot
Range: 0 - 18
Intervals: 0 - 5; 5 - 15; 16 - 23; 24 - 31
Source for intervals: RMS 150, p. 21
Option G Class: 6.0; 10.0; 8.0; 8.0
Option 5 is 31.0

Plantation Artifacts Total A & B
Abrv.  Art19Tot
Range:  0 - 676
Intervals:  0 - 10; 11 - 20; 21 - 36; 37 - 676
Source for intervals:  RMS 150, p. 25
Option G Class:  10.0; 10.0; 16.0; 640.0

Marine Corp Artifacts Total A & B

Abrv.  MCArtTot
Range:  0 - 119
Intervals:  0 - 9; 10 - 18; 19 - 28; 29 - 91
Source for intervals:  RMS 150, p. 27
Option G Class:  10.0; 9.0; 10.0; 91.0
APPENDIX III

ARTIFACT ANALYSIS NOTES

by

Stanley South

NEH Project Sampling West of Ft. San Felipe 1985

Artifact Analysis Notes:

The primary goal is SYMAP data to monitor the density of Spanish artifacts to determine the location of Spanish structures from refuse disposal.

An additional means of locating Spanish structures is the presence of three of five attributes, especially fired clay daub. These are daub, nails or spikes, baked clay floor, Spanish pottery and features of Spanish origin. Two plus daub will predict the location of a Spanish structure.

Artifacts used in the 1979 SYMAP study:
- fired clay daub
- Spanish pottery
- lead balls
- red lead-glazed earthenware
- Indian pottery
- Chicora pottery (punctated and incised only)
- nineteenth century objects
- oystershell mortar
- unfired daub
- twentieth century artifacts

Artifacts to be used in the 1985 SYMAP study:
- SPANISH OCCUPATION
  - fired clay daub weight
  - Spanish pottery totals
- Other Spanish artifacts
- CONTEMPORARY INDIAN ARTIFACTS

PLANTATION PERIOD

Early 18th century (combed yellow slipware, North Devon, white salt-glazed)
Early 19th century (pearlware, creamware, annular, whiteware, T-printed)
MARINE CORPS PERIOD

Early 20th century

INDIAN (prehistoric)

Comments

Most of the Spanish artifacts are easily identified. The iron nails and spikes are characterized by having large "mushroom" type heads compared to those of the eighteenth century period British manufacture. Spanish glass is rare on the site and is characterized by being very thin, sometimes containing white stripes.

There will likely be almost no artifacts from the early 18th century period, except, perhaps, in the area parallel with the northwest bastion of Ft. San Felipe, where a few were found representing an occupation from ca. 1685-1720 (South 1983:42).

The "Plantation Period" category (group) of artifact classes will be represented by cut nails, pearlware and other early 19th century types of pottery and a very few wrought nails, "T" headed nails (wrought), as well as medicine bottle glass, wine bottle glass, and other identifiable artifacts of the first half of the 19th century.

In the 1979 study it was found that oystershell mortar was concentrated in the same area as the 19th century artifacts (South 1979:25), revealing the cultural affiliation of this type artifact. Therefore, the 1985 analysis will only record the presence of this artifact. These data can then be hand-plotted on the research frame by individual square.

In a similar manner, brick fragments will also be recorded only on a presence basis. No bricks exist from the Spanish period, and although a few bricks would likely have been present in the early 20th century Marine Corps occupation of the site, it was primarily a tent encampment with few if any bricks involved for this occupation. Therefore, the brick fragments are assumed to be primarily from the plantation period when any outbuilding would have had brick footings or foundation walls. One such foundation is seen in the area of the research frame on the surface of the ground on the east side of the fairway in the edge of the woods (Fig. 5).

From excavating the Spanish features we have found that lime lumps are sometimes seen, having been ordered from Havana in 1577 for making lime and for using around the posts in the blockhouse built at that time, and for
making plaster to coat the walls of Ft. San Marcos. Such lumps (South 1984:22) and lime plaster can be associated with the Spanish occupation under a square by square plotting basis since it is expected that little if any of this artifact class will be found in the 1985 sample frame.

Since it will be difficult to determine window glass from the early nineteenth century from that of the early 20th century Marine Corps occupation without considerable attribute analysis, and since the tent city on the site during the World War I period would have had few windows that were glazed, it is generally assumed that the window glass originated with the plantation period on the site.

The objects not definitely assigned to the plantation or the Spanish occupation will be from the Marine Corps occupation of the site in the early 20th century, most likely. These will consist of Marine Corps paraphernalia such as military buttons, canvas grommets of brass, tent rope tighteners of brass, wire nails, coins from the period of the First World War, some hotel porcelain, brown bottles for beer, soft drink bottle fragments, porcelain insulators for electric wires, brass shell casings for small arms, screws, etc. The total of these objects will comprise the early 20th century occupation SYMAP analysis.

Identifiable Indian pottery from the prehistoric period will be separated and not tabulated. Indian pottery of curvilinear or rectilinear stamped surface finishes, incised, or punctated rims, rosettes, rim strips, etc. from Irene, Altamaha and Ocmulgee Fields types, as well as St. Johns types, will be dealt with as contemporary Indian artifacts. This will include shell beads or other identifiable Indian objects from the Spanish contemporary period on the site. The contemporary Indian pottery should cluster where the Spanish pottery clusters in the SYMAP displays (compare Figs. 4 and 6).

Given the above considerations the analysis sheet on the following page is to be used for cataloging the artifacts from the NEH sampling survey project for 1985, as well as for the materials from the 162K excavation area (Table 1).
<table>
<thead>
<tr>
<th>Provenience</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaufort County, S.C. Santa Elena (38BU162J) 1985 Analysis by:</td>
<td></td>
</tr>
</tbody>
</table>

**SPANISH PERIOD**
- Majolica
- Earthenware
- Olive jar
- Porcelain
- Iron spikes, nails, tacks
- Lead balls and sprue

**Lime lumps present**

**Other Spanish artifacts**

**CONTEMPORARY INDIAN**
- Chicora
- Other

**PLANTATION PERIOD**
- Ceramics
- Colonoware
- Cut nails and spikes
- Wrought nails
- Buttons
- Tobacco pipe fragments

**Brick present**

**Bottle Glass**

**Window Glass**

**Oystershell mortar**

**Misc. hardware, etc.**

**MARINE CORPS PERIOD**
- Ceramics
- Wire nails and tacks
- Misc. hardware
- Buttons
- Coins
- Bottle glass
- Shell casings

**SPANISH PERIOD TOTAL**

**CONTEMPORARY INDIAN TOTAL**

**PLANTATION PERIOD TOTAL**

**MARINE CORPS TOTAL**

50
## Appendix IV

**ARTIFACT TABULATION FOR SAMPLE SQUARES FROM RESEARCH FRAME 38BU162J**

by William B. Hunt

<table>
<thead>
<tr>
<th>Area No.</th>
<th>Spanish Pottery</th>
<th>Spanish Artifact Total</th>
<th>Spanish-Contemporary Indian Pottery</th>
<th>Plantation Artifacts</th>
<th>Marine Corps Artifacts</th>
<th>Other Indian Pottery</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>28</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>30</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>51</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>15</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>26</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>26</td>
<td>7</td>
<td>10</td>
<td>1</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>21</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>29</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>33</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>1</td>
<td>6</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>19</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>14</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
<td>19</td>
<td>3</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>3</td>
<td>19</td>
<td>7</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>3</td>
<td>19</td>
<td>7</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>20</td>
<td>2</td>
<td>20</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>0</td>
<td>30</td>
<td>5</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>21</td>
<td>2</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21</td>
<td>2</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>0</td>
<td>8</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>6</td>
<td>15</td>
<td>1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

51
## APPENDIX IV (CONT.)

<table>
<thead>
<tr>
<th>Square No.</th>
<th>Spanish Pottery</th>
<th>Spanish Artifact Total</th>
<th>Spanish Contemporary Indian Pottery</th>
<th>Plantation Artifacts</th>
<th>Marine Corps Indian Artifacts</th>
<th>Other Indian Pottery</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>24</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>41</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>26</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>42</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>43</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>44</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>45</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>47</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>46</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>18</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>47</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>48</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>24</td>
<td>58</td>
<td>7</td>
</tr>
<tr>
<td>49</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>22</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>50</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>51</td>
<td>10</td>
<td>10</td>
<td>1</td>
<td>27</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>52</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>27</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>53</td>
<td>17</td>
<td>18</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>54</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>10</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>55</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>45</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>56</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>20</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>57</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>17</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>58</td>
<td>19</td>
<td>25</td>
<td>4</td>
<td>23</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>59</td>
<td>3</td>
<td>3</td>
<td>10</td>
<td>30</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>60</td>
<td>12</td>
<td>12</td>
<td>1</td>
<td>21</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>61</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>62</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>63</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>40</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>64</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>18</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>65</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>67</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>66</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>40</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>67</td>
<td>10</td>
<td>11</td>
<td>7</td>
<td>39</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>68</td>
<td>14</td>
<td>14</td>
<td>2</td>
<td>41</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>69</td>
<td>6</td>
<td>6</td>
<td>18</td>
<td>16</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>70</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>42</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>71</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>81</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>72</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>52</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>73</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>88</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>74</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>61</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>75</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>84</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>76</td>
<td>6</td>
<td>7</td>
<td>2</td>
<td>75</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>77</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>78</td>
<td>13</td>
<td>15</td>
<td>7</td>
<td>128</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>79</td>
<td>2</td>
<td>3</td>
<td>17</td>
<td>14</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>80</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>33</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>81</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>130</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>82</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>50</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>83</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>51</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Spanish Pottery</td>
<td>Spanish Artifacts Total</td>
<td>Artifacts Contemporaneous with Early Indian Pottery</td>
<td>Plantation Artifacts</td>
<td>Marine Corps Artifacts</td>
<td>Other Indian Pottery</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------</td>
<td>---------------------------------</td>
<td>--------------------</td>
<td>------------------------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>70</td>
<td>3</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>27</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>2</td>
<td>54</td>
<td>61</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>11</td>
<td>17</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>17</td>
<td>14</td>
<td>1</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>4</td>
<td>676</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>6</td>
<td>60</td>
<td>4</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>4</td>
<td>68</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>4</td>
<td>54</td>
<td>5</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>2</td>
<td>32</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>9</td>
<td>1</td>
<td>14</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>1</td>
<td>12</td>
<td>119</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>1</td>
<td>45</td>
<td>22</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>0</td>
<td>118</td>
<td>7</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>8</td>
<td>36</td>
<td>0</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
<td>66</td>
<td>10</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0</td>
<td>6</td>
<td>22</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>16</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>8</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>0</td>
<td>26</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>2</td>
<td>2</td>
<td>16</td>
<td>5</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>9</td>
<td>9</td>
<td>61</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>6</td>
<td>6</td>
<td>22</td>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>14</td>
<td>15</td>
<td>22</td>
<td>15</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>6</td>
<td>22</td>
<td>1</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3</td>
<td>3</td>
<td>10</td>
<td>14</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>5</td>
<td>174</td>
<td>17</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>12</td>
<td>21</td>
<td>11</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>15</td>
<td>15</td>
<td>54</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>13</td>
<td>26</td>
<td>52</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>18</td>
<td>77</td>
<td>20</td>
<td>15</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>19</td>
<td>23</td>
<td>9</td>
<td>3</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>10</td>
<td>11</td>
<td>14</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>21</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>22</td>
<td>21</td>
<td>6</td>
<td>21</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>23</td>
<td>8</td>
<td>14</td>
<td>11</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>24</td>
<td>8</td>
<td>31</td>
<td>2</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>25</td>
<td>12</td>
<td>10</td>
<td>18</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>26</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>27</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>28</td>
<td>3</td>
<td>5</td>
<td>14</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>5</td>
<td>2</td>
<td>28</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

53
### APPENDIX IV (CONT.)

<table>
<thead>
<tr>
<th>Square No.</th>
<th>Spanish Pottery</th>
<th>Spanish Artifact Total</th>
<th>Spanish-Contemporary</th>
<th>Plantation Artifacts</th>
<th>Marine Corps Indian Artifacts</th>
<th>Other Indian Pottery</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>12</td>
<td>12</td>
<td>5</td>
<td>93</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>131</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>132</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Total:

- Spanish Pottery: 39
- Spanish Artifact Total: 23
- Spanish-Contemporary: 29
- Plantation Artifacts: 192
- Marine Corps Indian Artifacts: 42
- Other Indian Pottery: 25

Total:

- 39 + 23 + 29 + 192 + 42 + 25 = 352 artifacts

Page 54
APPENDIX V

38BU162K: Block Excavation of 15 5'x5' Squares
Compared with Previous Block Excavations in Santa Elena

by

William B. Hunt

Area: D-Shaped Hut 162A
Size: 9, 5'x5' units


Source: South 1979.

Spanish Artifacts Total A & B:
1313 Sp. artifacts - 302 Cont. Indian sherds 9, 5' sqs.
= 1011/9 = 112.33 artifacts/5' sq.


Spanish Pottery Total A & B:
1003 Sp. sherds ÷ 9 5' sqs.
1003/9 = 111.44 sherds/5' sq.

Source: South 1979:36.

Contemporary Indian Pottery Total A & B:
302 Cont. Ind. sherds ÷ 9, 5' sqs.
302/9 = 33.55 sherds/5' sq.


Spanish Pottery and Contemporary Indian Pottery Total A & B:
1003 Sp. sherds + 302 Cont. Ind. Sherds = 1305 sherds ÷ 9, 5' sqs.
1305/9 = 145 sherds/5' sq.

Source: South 1979:26,36.

Spanish Pottery B Zone:
760 Sp. sherds 9, 5' sqs.
760/9 = 84.44 sherds/5' sq.

Source: South 1979:36. (760 comes from subtracting the A zone counts from Square Total of 1003. This B value isn't exact because Sq. 48 is given as a total of A & B)

Area: L-Shaped Excavation in the Town 162C

55
Size: 127, 5' x 5' squares

Carolina Pattern for B Level:

9523 artifacts ÷ 127, 5' sqs.
9523/127 = 74.98 artifacts/5' sq.

Source: South 1982:64.

Spanish Artifacts Total from B Level:

Spanish Pottery from B Level:

4459 Sp. sherds ÷ 127, 5' sqs.
4459/127 = 35.11 sherds/5' sq.

Source: South 1982:64 (4459 comes from Kitchen Group Artifacts Total - 15 Glass Fragments)

5455 Sp. artifacts ÷ 127, 5' sqs.
5455/127 = 42.95 artifacts/5' sq.

Source: South 1982:64, (5455 comes from Artifacts Total 9523 - Activities Total (Indian) 4068 = 9523 - 4068 = 5455.)

Contemporary Indian Pottery from B Level:

4068 Cont. Ind. sherds ÷ 127, 5' sqs.
4068/127 = 32.03 sherds/5' sq.

Source: South 1982:64.

Spanish Pottery and Contemporary Indian Pottery Total B Level:

4459 Sp. sherds + 3911 Cont. Ind. sherds = 8370 ÷ 127, 5' sqs.
8370/127 = 65.905 sherds/5' sq.

Source: South 1982:64.

Area: L-Shape Town Excavation: North area east of Structure #5 162C

Size: 52 5'x5' squares

Spanish Pottery from B Level:

2214 Sp. sherds ÷ 52 5' sqs.
2214/52 = 42.5769 sherds/5' sq.

Source: South 1982:139.
Contemporary Indian Pottery from B Level:

1713 Cont. Ind. Sherds ÷ 52 5' sqs.
1713/52 = 32.942 sherds/5' sq.

Source: South 1982: 139.

Spanish Pottery and Contemporary Indian Pottery Total B Level:

2214 Sp. sherds + 1713 Cont. Ind. sherds ÷ 52 5' sqs.
3927/52 = 75.5.9 sherds/5' sq.

Source: South 1982: 139.

Area: L-Shaped Town Excavation: South area near Structures 3 & 4 162C
Size: 75, 5'x5' squares

Spanish Pottery from B Level:

2114 Sp. sherds ÷ 75, 5' sqs.
2114/75 = 28.186 sherds/5' sq.

Source: South 1982:142.

Contemporary Indian Pottery from B Level:

2398 Cont. Ind. sherds ÷ 75, 5' sqs.
2398/75 = 31.97 sherds/5' sq.

Source: South 1982:142

Spanish Pottery and Contemporary Indian Pottery Total B Level:

2114 Sp. sherds + 2398 Cont. Ind. sherds ÷ 75, 5' sqs.
4512/75 = 60.16 sherds/5' sq.

Source: South 1982:142

Area: The four blocks in the town 162D
Area: West 162D
Size: 20' x 30' 24, 5'x5' squares

Carolina Pattern B Level:
1183 artifacts ÷ 24, 5' sqs.
1183/24 = 49.29 artifacts/5' sq.

Source: South 1983:30.
Spanish Artifacts Total from B Level:
703 Sp. artifacts ÷ 24, 5' sqs.
703/24 = 29.21 artifacts/5' sq.

Source: South 1983:30, (703 comes from Total 1183 -
Total Indian 480.)

Spanish Pottery B Level:
603 Sp. sherds ÷ 24, 5' sqs.
603/24 = 25.125 sherds/5' sq.

Source: South 1983:27, (603 comes from Kitchen Group
Total 605 - 2 Glass Fragments.)

Contemporary Indian Pottery B Level:
480 Cont. Ind. sherds 24, 5' sqs.
480/24 = 20 sherds/5' sq.

Source: South 1983:27.

Spanish Pottery and Contemporary Indian Pottery from B
Level:
603 Sp. sherds + 480 Cont. Ind. sherds = 1083 sherds ÷ 24
5' sqs.
1083/24 = 45.125 sherds/5' sq.

Source: South 1983:27.

Area: Central 1620
Size: 20, 5' x 5' squares

Carolina Pattern B Level:
133 artifacts ÷ 20, 5' sqs.
133/20 = 6.65 artifacts/5' sq.

Source: South 1983:30.

Spanish Artifacts Total from B Level
73 Sp. artifacts ÷ 20, 5' sqs.
73/20 = 3.65 artifacts/5' sq.

Source: South 1983:30. (73 comes from Total 133 Total
Indian 60.)

Spanish Pottery B Level:
62 Sp. sherds ÷ 20, 5' sqs.
62/20 = 3.1 sherds/5' sq.

Source: South 1983:27.

Contemporary Indian Pottery B Level:
60 Cont. Ind. sherds ÷ 20, 5' sqs.
60/20 = 3 sherds/5' sq.
Source: South 1983:27.

Spanish Pottery and Contemporary Indian Pottery from B Level:
62 Sp. sherds + 60 Cont. Ind. Sherds 122 sqs. ÷ 20, 5' sqs.
122/20 = 6.1 sherds/5' sq.

Source: South 1983:27.

Area: East 1620
Size: 20' x 30' 24, 5' x 5' squares

Carolina Pattern B Level:
286 artifacts ÷ 24, 5' sqs.
286/24 = 11.91 artifacts/5' sq.

Source: South 1983:30.

Spanish Artifacts Total from B Level:
184 Sp. artifacts ÷ 24, 5' sqs.
184/24 = 7.666 artifacts/5' sq.

Source: South 1983:30 (184 comes from Total 236 - Total Indian 102.)

Spanish Pottery B Level:
184 Sp. sherds ÷ 24, 5' sqs.
184/24 = 7.666 artifacts/5' sq.

Source: South 1983:30 (184 comes from Total 236 - Total Indian 102.)

Spanish Pottery B Level:
128 Sp. sherds ÷ 24, 5' sqs.
128/24 = 5.33 sherds/5' sq.

Source: South 1983:30 (128 comes from Kitchen Group Total 130 - 2 Glass Fragments.)

Contemporary Indian Pottery B Level:
102 Cont. Ind. sherds ÷ 24, 5' sqs.
102/24 = 4.25 sherds/5' sq.

Source: South 1983:27.

Spanish Pottery and Contemporary Indian Pottery from B Level:
128 Sp. sherds + 102 Cont. Ind. sherds = 230 sherds ÷ 24, 5' sq.
230/24 = 9.58 sherds/5' sq.

Source: South 1983:27.
Area: South 1620  
Size: 20' x 30' 24, 5'x5' squares

Carolina Pattern B Level:  
1124 artifacts ÷ 24, 5' sqs.  
1124/24 = 46.83 artifacts/5' sq.

Source: South 1983:30.

Spanish Artifacts Total from B Level:  
646 Sp. artifacts ÷ 24, 5' sq.  
646/24 = 26.916 artifacts/5' sq.

Source: South 1983:30, (646 comes from Total 1124 - Total Indian 478.)

Spanish Pottery B Level:  
580 Sp. sherds ÷ 24, 5' sqs.  
580/24 = 24.166 sherds/5' sq.

Source: South 1983:27.

Contemporary Indian Pottery B Level:  
478 Cont. Ind. sherds ÷ 24, 5' sqs.  
478/24 = 19.916 sherds/5' sq.

Source: South 1983:27.

Spanish Pottery and Contemporary Indian Pottery from B Level:  
580 Sp. sherds + 478 Cont. Ind. sherds = 1058 sherds ÷ 24, 5' sqs.  
1058/24 = 44.083 sherds/5' sq.

Source: South 1983:27.

Area: NW Bastion of Ft. San Felipe  
Size: 20' by 20' = 16 5'x5' squares (scaled from South 1983:52. Figure 15)

Spanish Pottery from B Zone (note: sometimes zone, and sometimes level is used in the RMS's)  
124 Sp. sherds ÷ 16, 5' sqs.  
124/16 = 7.75 sherds/5' sq.

Source: South 1983:69.

Contemporary Indian Pottery from B zone  
707 Cont. Ind. sherds ÷ 16, 5' sqs.  
707/16 = 44.1875 sherds/5' sq.

707 Cont. Ind. sherds includes 262 plain, 87 simple stamped, and 235 unidentifiable. If these are
considered "other Indian" instead of "contemporary Indian" then the value is

123 Cont. Ind. sherds ÷ 16 5' sqs.
123/16 = 7.6875 sherds/5' sq.

Source: South 1983:69.

Spanish Pottery and Contemporary Indian Pottery from B Zone
124 Sp. sherds + 707 Cont. Ind. sherds = 831 sherds ÷ 16, 5' sqs.
831/16 = 51.9375 sherds/5' sq.

Source: South 1983:69.

Value if plain, simple stamped, and unidentifiable are not considered "contemporary Indian":
124 Sp. sherds + 123 Cont. Ind. Sherds = 247 sherds ÷ 16, 5' sqs.
247/16 = 15.4375 sherds/5' sq.

Area: Moat at the NW Bastion of Fort San Felipe
Size: 63 5' sqs. as scaled from South 1983:52, Figure 15
Area of Moat by Provenience:

104 10' x 10' 4 5' x 5' squares
102 10' x 10' 4 5' x 5' squares
101 10' x 10' 4 5' x 5' squares
37 10' x 15' 6 5' x 5' squares
38 10' x 15' 6 5' x 5' squares
39 15' x 15' 9 5' x 5' squares
40 10' x 15' 6 5' x 5' squares
41 10' x 15' 6 5' x 5' squares
42 10' x 15' 6 5' x 5' squares
43 10' x 15' 6 5' x 5' squares
44 10' x 15' 6 5' x 5' squares
63 5' x 5' squares

Carolina Pattern for Layers C, D, E
6725 Sp. Artifacts ÷ 63, 5' sqs.
6725/63 = 106.74 artifacts/5' sq.

Source: South 1983:65

Spanish Artifacts from Layers C, D, E
1314 Sp. Artifacts ÷ 63, 5' sqs.
1314/63 = 20.857 artifacts/5' sq.
Spanish Pottery from Layers C, D, E
995 Sp. sherds ÷ 63 5' sqs.
995/63 = 15,793 sherds/5' sq.

Total Contemporary Indian Pottery from Layers C, D, E
5314 Cont. Ind. sherds ÷ 63, 5' sqs.
5314/63 = 84.349 sherds/5' sq.
Source: South 1983:67, (Includes 844 plain, 190 simple stamped, 3123 indeterminate)

Total Contemporary Indian Pottery from Layers C, D, E with plain, simple stamped, and indeterminate left out:
1157 Cont. Ind. sherds ÷ 63, 5' sqs.
1157/63 = 18.365 sherds/5' sq.

Spanish Pottery and Contemporary Indian Pottery Total for Layers C, D, E
995 Sp. sherds + 5314 Cont. Ind. sherds = 6309 sherds ÷ 63, 5' sqs.
6309/63 = 100.143 sherds/5' sq.

Spanish Pottery and Contemporary Indian Pottery Total for Layers C, D, E without plain, simple stamped, and indeterminate
995 Sp. sherds + 1157 Cont. Ind. sherds. = 2152 sherds ÷ 63, 5' sqs.
2152/63 = 34.158 sherds/5' sq.


Area: Western portion of the Interior of Ft. San Felipe
Size: 30' x 120' = 144, 5'x5' squares

Carolina Pattern Total A & B
16,400 artifacts ÷ 144 5' sqs.
16,400/144 = 113.88 artifacts/5' sq.

Source: South 1984:66.

Spanish Artifacts Total A & B
8168 Sp. artifacts ÷ 144, 5' sqs.
8168/144 = 56.72 artifacts/5' sq.

*Table 10, p. 65 and Table 11, p. 67 do not agree on the Indian Pottery Totals. Table 10 has total Contemporary Indian as being 5411; Table 11 has Total Contemporary Indian as being 5314.
Source: South 1984:66, (8168 comes from Total Artifacts 16,400 - Total Aboriginal 8,232.)

Spanish Pottery Total A & B
9434 Sp. sherds ÷ 144, 5' sqs.
9434/144 = 65.513 sherds/5' sq.
Source: South 1984:78.

Contemporary Indian Pottery Total A & B
8359 Cont. Ind. sherds ÷ 144, 5' sqs.
8359/144 = 58.048 sherds/5' sq.
Source: South 1984:83.

Spanish Pottery and Contemporary Indian Pottery Total A & B
9434 Sp. sherds + 8359 Cont. Ind. sherds = 17,793 sherds ÷ 144, 5' sqs.
17,793/144 = 123.5625 sherds/5' sq.

The Computations for B Zone Data Come from South 1984, Appendix VIII, pages 137-146. B is made of 15, 10' sqs. = 60, 5' sqs.

Carolina Pattern for B Level
3301 artifacts ÷ 60, 5' sqs.
3301/60 = 55.016 artifacts/5' sq.

Spanish Artifacts for B Level
1636 Sp. artifacts ÷ 60, 5' sqs.
1636/60 = 27.266 artifacts/5' sq.
(1636 comes from 3301 Total Artifacts - 1665 Total Aboriginal)

Spanish Pottery for B Level
1574 Sp. sherds ÷ 60, 5' sqs.
1574/60 = 26.233 sherds/5' sq.

Contemporary Indian Pottery for B Level
1665 Cont. Ind. sherds ÷ 60, 5' sqs.
1665/60 = 27.75 sherds/5' sq.

Spanish Pottery and Contemporary Indian Pottery for B Level
1574 Sp. sherds + 1665 Cont. Indian sherds = 3239 sherds ÷ 60, 5' sqs.
3239/60 = 53.98 sherds/5' sq.
Ft. San Felipe East Interior

38BU162H

= 44 10' x 10'
= 176 5' x 5' sqs.

Carolina Pattern -
all levels

= 527 Total Artifacts (South 1985, App. II)
14,934 ÷ 176 5' sqs. = 84.852 art/5' sq.

Spanish Artifacts -
all levels

= 527 Total Artifacts
9,645 Spanish Ceramics (App. III)
10,172 ÷ 176 5' sqs. = 57.795 art/5' sq.

Spanish Pottery -
all levels

= 9645 ÷ 176 = 54.80 sherds/5' sq.

Contemporary Indians -
all levels

= 4,762 16th Century Ind. (South 1985, App. III)
4,762 ÷ 176 5' sqs. = 27.05 sherds/5' sq.

Spanish & Contemporary Indian Pottery -
all levels

= 14,407 16th C. Ceramics
14,407 ÷ 176 5' sqs. = 81.85 sherds/5' sq.

Ft. San Felipe East Interior 162H
B Levels (and some C)
23 10' x 10' = 92.5' squares

Carolina Pattern
= 152 Sp. artifacts + 2796 Sp. sherds + 1260 Contemporary Indian sherds
= 4208 artifacts ÷ 92 5' sqs. = 45.73 artifacts/5' sq.

Spanish Artifacts
= 152 Sp. Artifact + 2796 Sp. sherds
= 2948 ÷ 92 5' sqs. = 32.04 artifacts/5' sq.

Spanish Pottery
= 2796 Sp. sherds
note 112 is A+B
= 347

2796 ÷ 92 5' sqs. =
30.39 sherds/5' sq.

16th Century Indian Ceramics = 1260 Cont. Ind. sherds =
1260 ÷ 92 5' sqs. =
13.69 sherds/5' sq.

Total Sp. Cont. Ind. Ceramics = 2796 + 1260 = 4056 ÷ 92
44.08 sherds/5' sq.
Six hundred sixty-five beads are classified by the author in the present study and are listed by type and provenience unit in the accompanying tables. The bead sample, made up of 636 glass, 24 shell, 4 bone, and 1 jet beads, is similar in many respects to that previously reported from Santa Elena. The beads were classified to the type level utilizing the Kidd system (Kidd and Kidd: 1970). General color designations are provided in the following descriptions rather than Kidd color variations due to variability in the condition of the beads described. The beads were examined while wet to reduce the effect of surface oxidation and to determine more easily if each bead was clear, translucent, or opaque with respect to clarity. A uniform light source, and the examination of each bead utilizing both transmitted as well as reflected light, maintained uniformity in classifying the collection. The diameter, length, and the diameter of perforation for each bead represented by less than one hundred examples were measured with metric vernier calipers. Fifty to seventy-five percent of each type represented by more than one hundred examples were measured in the same manner.

A small group of glass beads, types Ia' (n=1), If (n=3), and IIIf(n=3), are characteristic of the last decade of the eighteenth century through much of the nineteenth century. A second small group of glass beads, types IIIk(n=1), IVk(n=1), as well as shell beads (n=24), a distinctive form of bone bead (n=4), and a single jet bead, are clearly associated with the sixteenth century occupation of Santa Elena. As with previous samples the great majority of the glass beads have been derived from nonfeature A zone units, burned "bead pits" containing little or no diagnostic materials, as well as from a small number of B or lower zone units. The temporal and cultural associations of these beads, particularly the tube drawn, spherical, translucent turquoise blue bead type, has been the subject of much
discussion and will not be clarified in this summary discussion of beads not previously examined. Such clarification awaits an examination of the spacial and vertical distribution of each bead type with regard to other, presently more diagnostic, artifact types across the site. If these beads are associated with the Spanish occupation of Santa Elena they should co-occur with other materials of Spanish origin and not with the small number of known later bead types such as IIf and IIIIf. If these beads are associated with a post-Santa Elena Indian occupation or visita dating to the early part of the seventeenth century they should co-occur with aboriginal ceramics which may or may not be distinguishable from aboriginal ceramics associated with the Spanish occupation. If these beads are associated with a later, colonial period, plantation occupation they should co-occur with both the known late bead types and other colonial period materials. On typological grounds and the association of these bead types with aboriginal sites in the interior Southeast this group of bead types, shapes, and colors, should not date later than the middle of the seventeenth century.

Bead types that have been previously described from Santa Elena (Polhemus 1983; 1984; 1985) occurring in the accompanying tables were found to be similar in all respects and so will not be further described at this time. Bead types not previously described are discussed below.

IIIk Early Faceted Chevron (162J - 111B) (frontispiece)

This Early Faceted Chevron bead has six facets cut on each end, is 6.3mm in diameter, and has a length of 7.4mm. The five layers making up the bead, beginning with a clear green core, are opaque white, opaque red, opaque white, and a clear navy blue exterior. The perforation is 1.8mm in diameter. This bead type has been found at a number of aboriginal sites in the interior Southeast and is generally attributed to the sixteenth century.

IVk Tumbled Blue Chevron (162J - 57A) (frontispiece)

One half of a tumbled blue chevron bead was found in the A zone of sample unit 57. The bead is 8.4mm in diameter, 8.1mm in length, and has a perforation 2.0mm in diameter. The five bead layers are, beginning with a clear colorless core, opaque white, opaque red, opaque white, and a clear navy blue exterior. Tumbled chevron beads are generally attributed to the latter part of the sixteenth century and the first half of the seventeenth century.
Oblong With Stripes and Metal Caps (162 - 660)

This bead is of complex construction and is in rather poor condition. The bead is 13.5mm in length, 8.0mm in greatest diameter, and has a perforation formed of a brass tube 2.5mm in diameter. The core of the bead is formed of what appears to have been an applied mass of rather unstable clear green glass. This core was covered by an opaque white surface layer decorated by the application of three sets of longitudinal stripes. The bead is tear drop shaped and possesses small six lobed sheet brass caps on each end. The stripes consist of pairs of closely spaced gold lines. Through the tube making up the perforation, a link of brass wire, 0.5mm in diameter and attached to a shorter link on one end, 16.0mm in length, is preserved. This bead is probably part of a rosary and is associated with the Spanish occupation of Santa Elena.

Shell beads - Class III Cylindrical

Twelve marine shell beads of cylindrical form, manufactured from the wall of a marine gastropod and having a biconically drilled perforation perpendicular to the shell wall, were recovered from three provenience units within Fort San Felipe (Table 3). None of the beads were burned, in contrast to the marine shell disk beads described next. The beads range from 2.9mm to 5.8mm in diameter and 3.6mm to 6.0mm in length. Eleven of the twelve beads were recovered from Spanish feature 337.

Shell beads - Class III Disk

Twelve marine shell beads, all also recovered within Fort San Felipe (Table 3), are manufactured from somewhat thinner sections of the wall of a marine gastropod than the preceeding type. The beads range from 4.0mm to 7.1mm in diameter and 2.3mm to 3.1mm in length and possess biconically drilled perforations. Eight marine shell disk beads are burned, and nine of the twelve beads were recovered from Spanish feature 337.

Bone Beads - Tapered Barrel

Four beads of this type are in the sample, all of which were recovered from separate Spanish features or excavation units (Table 3) in the town. Three of the four are burned or stained black. These beads, which at first examination appeared to be drilled drum fish teeth, are actually manufactured from the shaft wall of
animal long bones in a manner similar to bone buttons of later periods. A narrow tubular drill was used to cut each previously perforated bead from the bone resulting in a slightly tapered form through wear of the interior of the tube. These bone beads range from 3.1mm to 6.4mm in diameter and 2.7mm to 5.3mm in length. These beads are not biconically drilled and the method of manufacture suggests a European source for this distinctive bead type which, to my knowledge, has not been previously described. The black color of three specimens suggests that they may have been stained or treated rather than burned, and they also may represent portions of rosaries.

Jet Bead (162G - 57A)

The single stone bead in this sample consists of a highly polished spherical bead of jet. The bead is 6.2mm in diameter and 5.1mm in length with a drilled perforation 1.6mm in diameter. This bead was recovered from a ten foot by ten foot excavation unit within Fort San Felipe.

DISCUSSION

The distinct spatial distribution of the known Spanish bead types described above suggests that the next step in examining those beads not clearly attributed to a particular occupation of the site is to compare the spatial patterning of glass beads by type to other classes of archaeological data across the site. The presence of two additional "bead pits" in area 162K is of some interest as such features have not been reported at any other site in the Southeast, and the uniformity of content is striking.
SANTA ELENA (38BU162)
GLASS BEAD TABLE 1
162 - 162E

<table>
<thead>
<tr>
<th></th>
<th>162</th>
<th>162</th>
<th>162A</th>
<th>162A</th>
<th>162B</th>
<th>162C</th>
<th>162C</th>
<th>162C</th>
<th>162C</th>
<th>162C</th>
<th>162D</th>
<th>162D</th>
<th>162E</th>
<th>162E</th>
</tr>
</thead>
<tbody>
<tr>
<td>52B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>139B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>163B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ia' St. Tumbled Cane Cl. Lt. Rose Brown
If Faceted Barrel Cl. Blue
If Faceted Barrel Cl. Lavender
If Faceted Barrel Op. Black
Ila Spher. Tr. Turquoise Blue
Ila Oblong Tr. Turquoise Blue
Ila Spher. Cl. Navy Blue
Ila Spher. Cl. Lt. Blue
Ila Spher. Cl. Aqua Blue
Ila Spher. Cl. Cerulean Blue
Ila Oblong Op. White
Ila Spher. Cl. Lt. Rose Brown
Ila Spher. Cl. Dk. Rose Brown
Ila Spher. Cl. Emerald Green
IIIf Faceted Barrel Cl. Navy over White
IVb Oblong Op. Blue/White over Lt. Blue W/S
Early Faceted Chevron Blue
Tumbled Chevron Blue
Oblong with Stripes and Metal Caps
WI Spher. Cl. Amber
WI Spher. Cl. Colorless

UNIT TOTAL

<p>|   |  1 |  1 |  5 |  1 |  1 |  1 |  1 |  1 |  1 |  1 |  1 |  1 |  1 |  3 |</p>
<table>
<thead>
<tr>
<th>SANTA ELENA (38BU162)</th>
<th>GLASS BEAD TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>18A 19A 24A 25A 26A 31A 31B 32A 33A 37C 37D 39C 40C</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia' St. Tumbled Cane Cl.Lt. Rose Brown</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>17</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Cl.Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Cl.Lavender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Op.Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Tr.Turquoise Blue</td>
<td>10</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Oblong Tr.Turquoise Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Navy Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Lt.Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Aqua Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Cerulean Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Op.White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Oblong Op.White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Lt.Rose Brown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Dk.Rose Brown</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Op.Black</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl.Emerald Green</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III If Faceted Barrel Cl.Navy over White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVb Oblong Op.Bluewhite over Lt.Blue W/S</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Faceted Chevron Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tumbled Chevron Blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oblong with Stripes and Metal Caps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WI Spher. Cl.Amber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WI Spher. Cl.Colorless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| UNIT TOTAL | 12 | 1 | 1 | 2 | 13 | 2 | 2 | 6 | 2 | 4 | 32 | 1 | 18 |
### SANTA ELENA (38BU162)
### GLASS BEAD TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>162E</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40D</td>
<td>41C</td>
<td>44C</td>
<td>55</td>
<td>71</td>
<td>101B</td>
<td>102B</td>
<td>103B</td>
<td>104B</td>
<td>118</td>
<td>-------</td>
</tr>
<tr>
<td><strong>UNIT TOTAL</strong></td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>18</td>
<td>1</td>
<td>86</td>
<td>1</td>
<td>242</td>
</tr>
</tbody>
</table>

- **Ia' S1. Tumbled Cane Cl. Lt. Rose Brown**
- **If Faceted Barrel Cl. Blue**
- **If Faceted Barrel Cl. Lavender**
- **If Faceted Barrel Op. Black**
- **IIa Spher. Tr. Turquoise Blue**
- **IIa Oblong Tr. Turquoise Blue**
- **IIa Spher. Cl. Navy Blue**
- **IIa Spher. Cl. Lt. Blue**
- **IIa Spher. Cl. Aqua Blue**
- **IIa Spher. Cl. Cerulean Blue**
- **IIa Spher. Op. White**
- **IIa Oblong Op. White**
- **IIa Spher. Cl. Lt. Rose Brown**
- **IIa Spher. Cl. Dk. Rose Brown**
- **IIa Spher. Op. Black**
- **IIa Spher. Cl. Emerald Green**
- **IIIf Faceted Barrel Cl. Navy over White**
- **IVb Oblong Op. Blue White over Lt. Blue W/S**
- **Early Faceted Chevron Blue**
- **Tumbled Chevron Blue**
- **Oblong with Stripes and Metal Caps**
- **WI Spher. Cl. Amber**
- **WI Spher. Cl. Colorless**
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia' S1. Tumbled Cane Cl. Lt. Rose Brown</td>
<td>1</td>
</tr>
<tr>
<td>If Faceted Barrel Cl. Blue</td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Cl. Lavender</td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Op. Black</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Tr. Turquoise Blue</td>
<td>1</td>
</tr>
<tr>
<td>IIa Oblong Tr. Turquoise Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Navy Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Lt. Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Aqua Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Cerulean Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Op. White</td>
<td></td>
</tr>
<tr>
<td>IIa Oblong Op. White</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Lt. Rose Brown</td>
<td>1</td>
</tr>
<tr>
<td>IIa Spher. Tr. Dk. Rose Brown</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Emerald Green</td>
<td>1</td>
</tr>
<tr>
<td>IIIIf Faceted Barrel Cl. Navy over White</td>
<td>1</td>
</tr>
<tr>
<td>IVb Oblong Op. BlueWhite over Lt. Blue W/S</td>
<td></td>
</tr>
<tr>
<td>Early Faceted Chevron Blue</td>
<td></td>
</tr>
<tr>
<td>Tumbled Chevron Blue</td>
<td>1</td>
</tr>
<tr>
<td>Oblong with Stripes and Metal Caps</td>
<td></td>
</tr>
<tr>
<td>WI Spher. Cl. Amber</td>
<td></td>
</tr>
<tr>
<td>WI Spher. Cl. Colorless</td>
<td>1</td>
</tr>
<tr>
<td><strong>UNIT TOTAL</strong></td>
<td>1</td>
</tr>
</tbody>
</table>
### SANTA ELENA (38BU162)
#### GLASS BEAD TABLE 2

<table>
<thead>
<tr>
<th>162J</th>
<th>162J</th>
<th>162J</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>162K</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>81B</td>
<td>102A</td>
<td>111B</td>
<td>139B</td>
<td>1A</td>
<td>1B</td>
<td>2B</td>
<td>5A</td>
<td>6A</td>
<td>6B</td>
<td>8B</td>
<td>100</td>
<td>139</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia' St. Tumbled Cane Cl. Lt. Rose Brown</td>
<td>1</td>
</tr>
<tr>
<td>If Faceted Barrel Cl. Blue</td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Cl. Lavender</td>
<td></td>
</tr>
<tr>
<td>If Faceted Barrel Op. Black</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Tr. Turquoise Blue</td>
<td>1</td>
</tr>
<tr>
<td>IIa Oblong Tr. Turquoise Blue</td>
<td>1</td>
</tr>
<tr>
<td>IIa Spher. Cl. Navy Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Lt. Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Aqua Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Cerulean Blue</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Op. White</td>
<td></td>
</tr>
<tr>
<td>IIa Oblong Op. White</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Lt. Rose Brown</td>
<td>1</td>
</tr>
<tr>
<td>IIa Spher. Tr. Dk. Rose Brown</td>
<td></td>
</tr>
<tr>
<td>IIa Spher. Cl. Emerald Green</td>
<td></td>
</tr>
<tr>
<td>IIif Faceted Barrel Cl. Navy over White</td>
<td>1</td>
</tr>
<tr>
<td>IVb Oblong Op. Bluewhite over Lt. Blue W/S</td>
<td></td>
</tr>
<tr>
<td>Early Faceted Chevron Blue</td>
<td>1</td>
</tr>
<tr>
<td>Tumbled Chevron Blue</td>
<td></td>
</tr>
<tr>
<td>Oblong with Stripes and Metal Caps</td>
<td>1</td>
</tr>
<tr>
<td>WI Spher. Cl. Amber</td>
<td></td>
</tr>
<tr>
<td>WI Spher. Cl. Colorless</td>
<td></td>
</tr>
<tr>
<td><strong>UNIT TOTAL</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
SANTA ELENA (38BU162)
BONE, SHELL, AND STONE BEADS
162 - 162E

<table>
<thead>
<tr>
<th>Type</th>
<th>162C</th>
<th>162D</th>
<th>162E</th>
<th>162F</th>
<th>162G</th>
<th>162H</th>
<th>162I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone</td>
<td>105</td>
<td>38</td>
<td>66</td>
<td>68</td>
<td>57A</td>
<td>146A</td>
<td>172A</td>
</tr>
<tr>
<td>Tapered Barrel</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tapered Barrel - Burned</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shell Class III</td>
<td>1</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Cylindrical</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disk</td>
<td>6</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disk - Burned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jet</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spherical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNIT TOTAL</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL: 14 6 2 29