THE FORT AT FREDERICA

THE FLORIDA STATE UNIVERSITY

VOL. 5 1962

NOTES IN ANTHROPOLOGY

THE FORT AT FREDERICA

By

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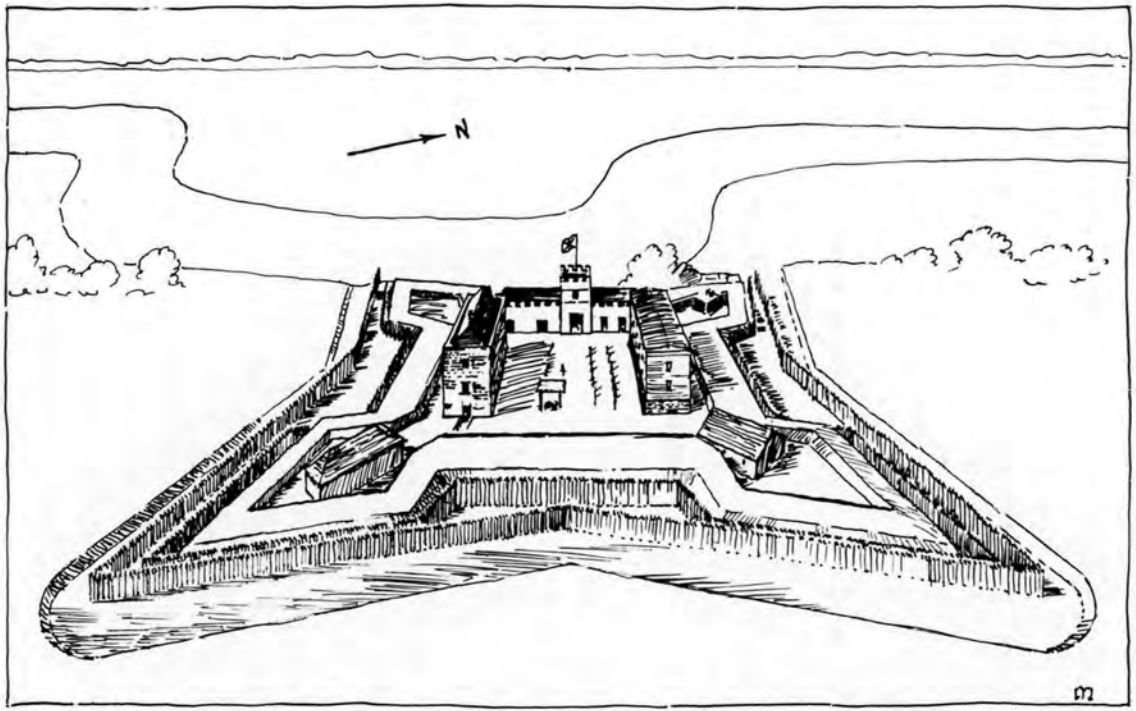
Notes in Anthropology, Vol. 5

The Florida State University
Tallahassee, Florida
1962

In memory of

Margaret Davis Cate



FORT FREDERICA IN 1742
(CONJECTURAL)

Frontispiece

PREFACE

I first saw Fort Frederica about 1940, when the lonely little tabby ruin on the river bank was "the fort." The earthworks of the true fort were no longer visible, but the great live oaks and the broad span of the unchanged marshes gave the place a quality of quiet antiquity which promised a rewarding experience for those who would learn more of the story. The promised experience has indeed been rewarding, and the present report is an attempt to set down what we have learned about Frederica's fort.* Thus the store of knowledge, to which so many have contributed, may readily be available to others, in measure large or small, as they wish.

To understand historic ruins, people need help -- especially when the structures are fragmentary, buried, or otherwise obscured. In the case of Fort Frederica, it was impossible to visualize the original fortification from the small masonry ruin standing in 1945 when the National Monument was established. Therefore, the objective of our study was to learn as much as possible about construction and use of the fort -- to do a "paper restoration," if you please, from which park interpreters could pull accurate information for presenting the story of Ft. Frederica effectively to the public.

The foundation for the study had already been laid. The story of the settlement and its people had been worked out through painstaking research by Margaret Davis Cate, recognized authority on the history of this region.

The technical study was divided into three phases:

1) Re-study of the historical records by a specialist in military fortification.
2) Archeological examination of the site, and correlation of archeological and historical evidence.

*This study deals only with the fort. Other aspects of Frederica are treated in separate monographs.

3) Projection of the findings in the light of engineering and military practices of the 1740 period.

The results, we hoped, would show what Fort Frederica looked like and reveal more clearly the part it played in the lives of the people who manned it.

Phase 1 got under way in 1945 with the preparation of a historic site report by Albert Manucy. Phase 2 began in 1953 when excavation of the fort area was started by Dr. Charles H. Fairbanks. Additional excavations were completed 1956-1958 by Dr. Joel L. Shiner. Phase 3 is reported in the following pages, along with summaries of the historical and archeological findings.

However, two additional phases were required to complete the project.

4) Stabilization of ruins.

5) Interpretive development of the site.

Ruins stabilization will not always wait for completion of a research project, especially when fragile structures long buried have been suddenly uncovered and exposed to exhibition in a public park. Hence, the preservation work has already been completed. It was carried out (as were all other projects) under the sharp eye of Superintendent W. H. Glover, a public relations expert who also speaks the practical language of the artisan. Bill Osborne did the painstaking, meticulous work on the ruins that could not be entrusted to others. John R. (Bob) Stevens cleaned and preserved the specimens. This tedious task was enlivened with many surprises, thanks to his flair for recognizing the identity of uncommon pieces.

Because it is imperative to keep the easily-lost atmosphere of antiquity at the fort, the development of the site has been gradual, with much experimentation. Some of the experiments were put into permanent form as they proved effective; others have been discarded. To complete the development, this report proposes a comprehensive plan that is based on the earlier experiments. We believe the proposals will help our visitor to understand what Fort Frederica is today, and also what it was

like when it functioned as the heart of the Southern Frontier.

Margaret Cate, who graciously accepted appointment as Collaborator with our Service, was of vital and continuous help in planning and carrying out the program. Virginia Harris patiently tended to the production of this report.

Working with Archeologists Fairbanks and Shiner has been variously stimulating, painful, disconcerting, and exciting, but withal productive and pleasant. Because much of this report had to be written after the archeologists had left the scene, I necessarily assume responsibility for certain simplifications and interpretations of their work. We are especially beholden to J. C. Harrington, Regional Chief of Interpretation for the National Park Service. He left us room to work, even while he guided, led, prodded and pushed the project, all without loss of good humor.

CONTENTS

ILLUSTRATIONS

FREDERICA HISTORY IN BRIEF

Frederica was a British settlement made in 1736 on St. Simons Island, Georgia. It played a notable role in the Anglo-Spanish hostilities of the 1740 period, both as the major defense on the "Southern Frontier" of the Colonies, and as a pivot for warfare against Spanish Florida. The citadel of this town, and the heart of the frontier defense system, was Fort Frederica.

Soon after the founding of Savannah in 1733, James Oglethorpe scanned the coast and picked locations for the forts he needed to protect the southern boundaries of Georgia. The strongest of the defenses was to be Fort Frederica. It lay on the inland waterway, that navigable channel lying behind the coastal islands of the Atlantic.

The first settlers for Frederica arrived in February 1736. These men and women had been hand-picked in England by the Trustees of the Colony of Georgia, in order to supply this frontier settlement the essential trades and talents. The town site was an old Indian field, where the men put up temporary shelters which soon gave way to permanent homes.

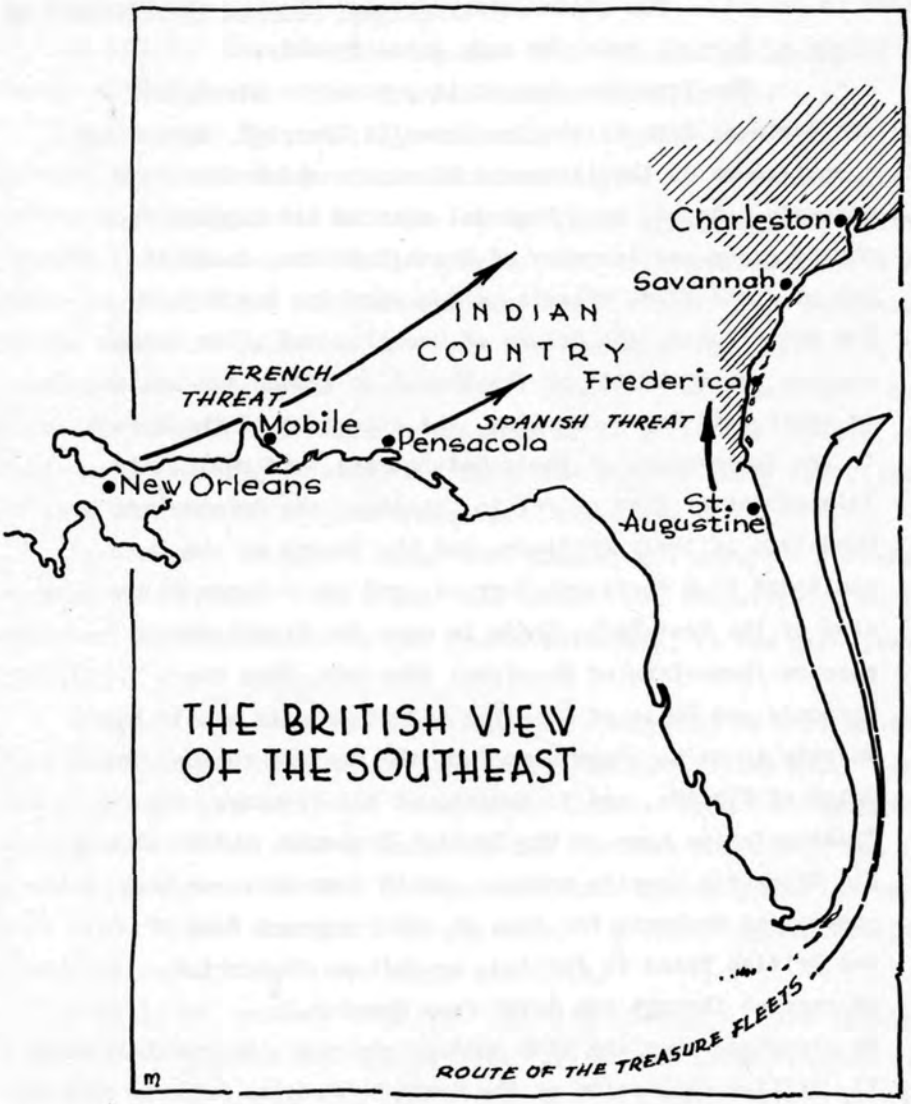
Beyond Frederica to the south and west Oglethorpe established other outposts. In 1738 a British regiment manned this new frontier.

With the onset of the War of Jenkins' Ear in 1739, Oglethorpe led forces into Spanish Florida, but failed to take St. Augustine. Back at the Frederica base, he strengthened his own defenses, and directed additional forays against the Spaniards.

The Spanish attack he expected came in July 1742. Frederica was the prime target in this move to push the British out of the Southeast. A powerful fleet forced the harbor defenses leading to Frederica, and the Spanish army came ashore. But they failed to reach the town. The British defenders repelled three advances, and at last the enemy forces returned to Florida.

Frederica flourished as a military town until after the peace of 1748. Oglethorpe's regiment was disbanded the following year, in line with British policy to treat the land south of the Altamaha

River as neutral ground. Without the money brought in by the soldiers, the shopkeepers and tradesmen at Frederica had to move elsewhere. The town did not long survive these losses.


Charleston
Savannah
INDIAN
COUNTRY
FRENCH
THREAT
Frederica
Mobile
SPANISH THREAT
Pensacola
New Orleans
St.
Augustine
THE BRITISH VIEW
OF THE SOUTHEAST
ROUTE OF THE TREASURE FLEETS

2

The Strategy of Frederica. At the outset of this study it would be helpful to know just how the men who planned Frederica intended to use it. The contemporary Account Shewing the Progress of the Colony of Georgia puts the case quite frankly:

> ". . . The Trustees thought it prudent to strengthen the Southern Part of the Province /of Georgia/, by making a Settlement on the Alatamaha River, to which they were strongly induced, by a Memorial sent to his Majesty from the Governor and Assembly of South Carolina, dated the 9th of April 1734, wherein, after thanking his Majesty... for establishing the Colony of Georgia, and after representing the Practices of the French to seduce the Indians in Amity with South Carolina, the Attention of the French to the Improvement of their Settlements, and their late Inlargement of them nearer to Carolina; the defenceless Condition of their Province, and the Danger of the Inhabitants from their own Negroes, and the ruinous Situation of the West-India Trade in case the French should possess themselves of Carolina; they add, That the Harbours and Ports of Carolina and of Georgia enable his Majesty to be absolute Master of the Passage through the Gulph of Florida, and to impede, at his Pleasure, the Transportation home of the Spanish Treasure, which, should his Majesty's Enemies possess, would then prove so many convenient Harbours for them to annoy a great Part of the British Trade to America, as well as that which is carried through the Gulph from Jamaica."[1]

By sloughing away the 18th century rhetoric, we conclude that:

1) British possession of the Georgia-Carolina harbors will enable King George to lock the gate on the treasure fleets of Spain. (The homeward route of the galleons parallels the Florida-Georgia coast.)

2) But these harbors, if in enemy hands, will ruin British

trade with America and the West Indies. (In other words, the shoe would be on the other foot.)

3) The French are making alarming progress in the Indian country beyond the Apalachians. What's to keep them from taking over Carolina?

4) Hence the Georgia Trustees have wisely strengthened the Southern Frontier by planting Frederica on the Altamaha.

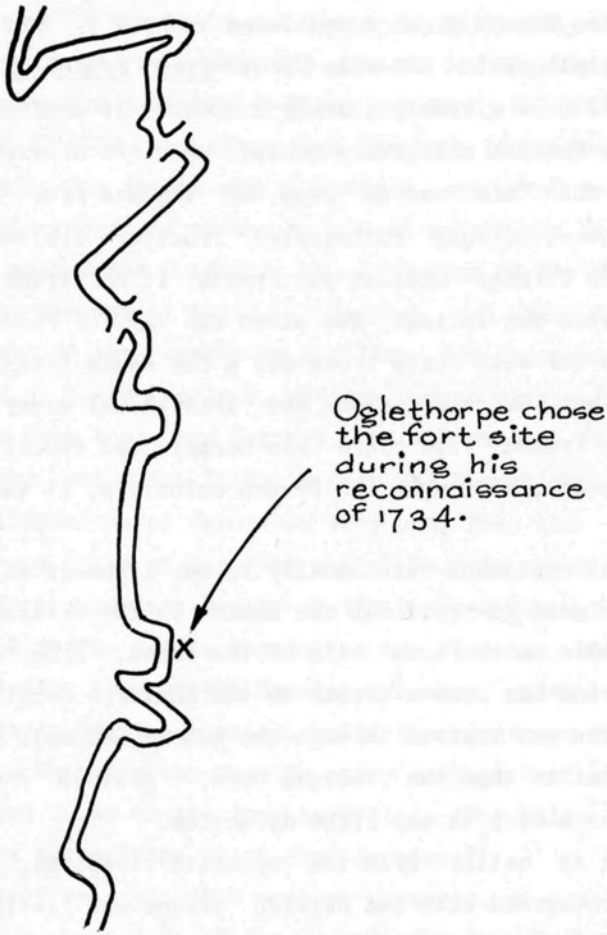
If, on the face of it, item number 4 appears to have little bearing on the French problem mentioned in item 3, you need only to remember Oglethorpe's 500-mile trip from Frederica to western Georgia in 1739 -- a timely journey indeed. It confirmed 7,000 Indians to the British allegiance on the very eve of war. Ostensible reason for this talk was to keep the Indians from attacking the French. Actually, such foresighted frontier diplomacy not only firmed up the barrier against the French; it nullified Spanish efforts to entice the Indians, and paved the way for ready recruitment of them when war with Spain broke out a few weeks later.[2]

France was Britain's close and traditional enemy. Therefore viewing the French with alarm was normal and evocative. On the basis of previous action by the French colonials, it was even justified.

Spain is mentioned but casually in the argument we have quoted. What was the need to spell out the name? In the British mind, Spain and France were on the same side of the fence. From the beginning, Spanish Florida had been a threat to the Southern Frontier. And for control of the sea traffic through the Bahama Channel, Florida ports were even better than the Georgia ones. Britain wanted Florida. Frederica was a step in the right direction.[3]

Looking at matters from the opposite viewpoint, the Spaniard seems to have agreed with the British writer who flatly stated that "Georgia is the Key of all North America."[4] Spanish orders for the attack on Georgia pinpointed the prime target: St.Simons Island.[5] And the heart of the St. Simons defense was Fort Frederica.

Choosing the Site. When Oglethorpe brought the first settlers to Frederica in 1736, clearly he was returning to a site already



CAPTAIN STOLLARD'S CHART
OF THE FREDERICA RIVER IN 1722

3

marked on his map. Two years earlier he had made a reconnaissance of St. Simons; doubtless he had pored over the old waterway survey made by Captain Stollard. At one point in the river, Stollard's chart showed a sharp U-bend. Here Oglethorpe had gone ashore.

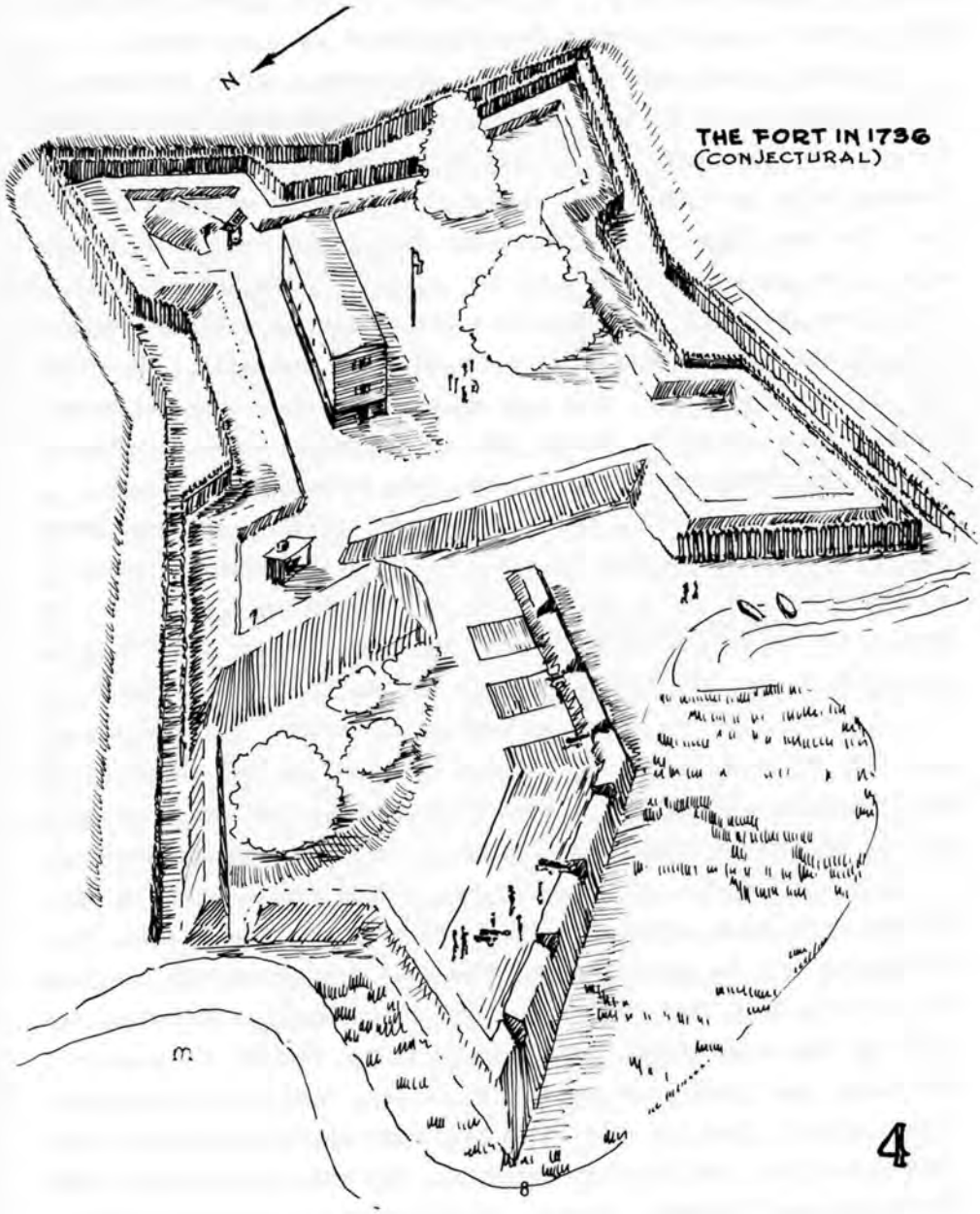
Despite a cold rain which drove him under a great oak tree on that January day of 1734, Oglethorpe saw the advantages of the place for a fortified settlement. The right-angle turns in the river channel would put approaching vessels at the mercy of shore batteries. The east bank of the river was fairly high ground with deep water close inshore. A fort at the river would be only a stone's throw from the homes that could be built in a broad clearing nearby--old Indian fields which offered a ready-made town site. The other side of the river was a vast open marsh, impassable for the enemy. On the winding waterway, hidden from the ocean, an infant settlement and its fort would be reasonably safe from detection and attack.[6]

So, on February 18, 1736, Oglethorpe returned to the chosen place. Early next morning he set some 30 men to work, building an earthwork defense. To guide them, he "traced out a Fort . . . by cutting up the Turf from the Ground, dug enough of the Ditch & raised enough of the Rampart for a Sample for the Men to work upon."[7]

Since no time was lost in making the start, Oglethorpe must have been carrying out a plan (Figure 12) drawn up long before reaching Frederica. In any event, Fort Frederica was big enough to shelter all the town's inhabitants, which in 1736 numbered 116 people.[8]

<u>The Early Fort -- February to June 1736</u>. Construction of the defense works took about 4 months. By the beginning of June, when Oglethorpe left to survey the frontier near Spanish Florida, he told the settlers that their fort was "in a good condition to make a defence if men should land, and force their way through the country"; and there was "sufficient provision in the fort of all kinds for eight months"; they had only to be "vigilant against surprises." He left orders for the civilian soldiers, and admonished Captain John Mackintosh and Engineer Samuel Augspourguer to "instruct them in their military duty."[9]

Augspourguer, a Swiss, seems to have been the man responsible



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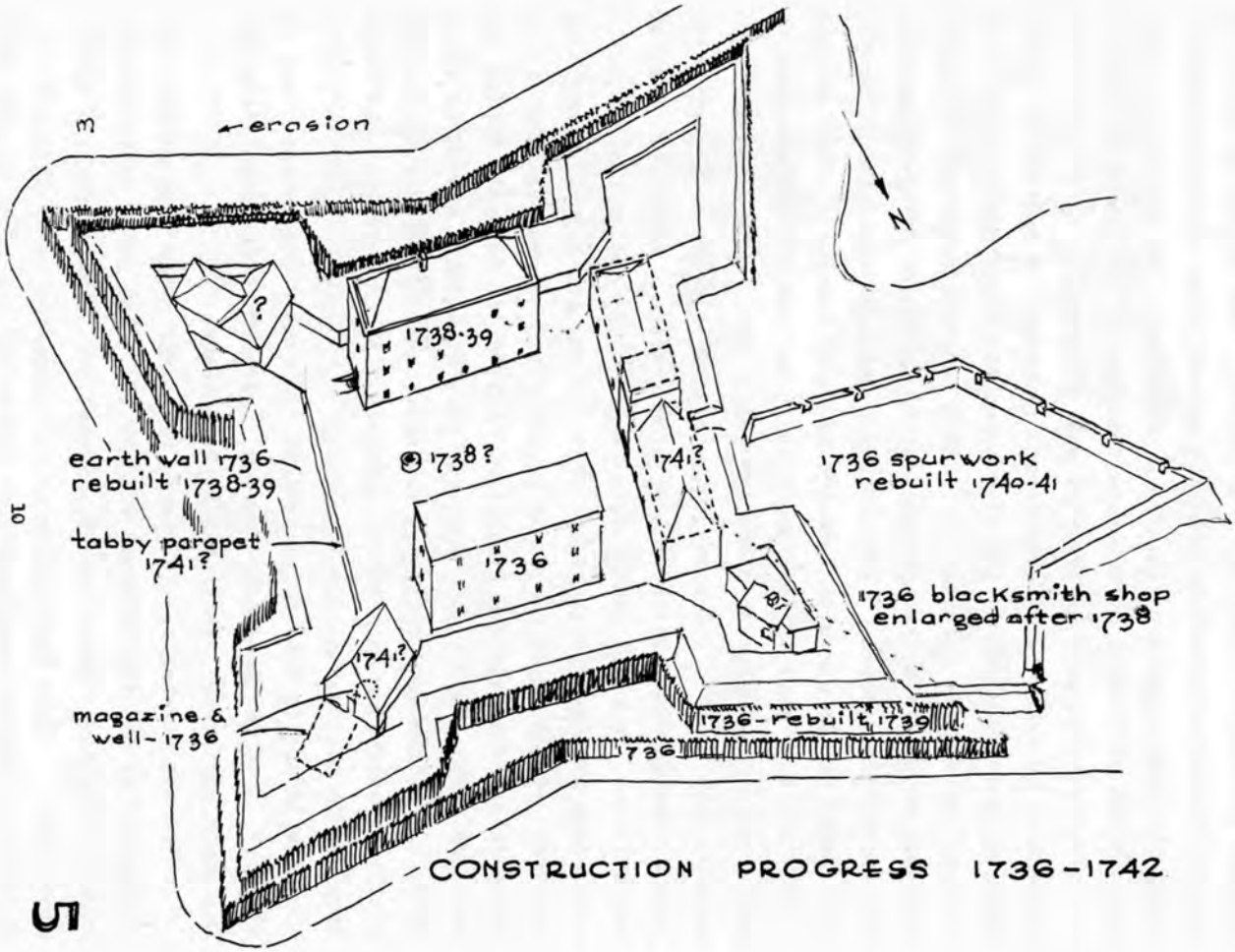
for construction of the fort. Most of the work was done by the indentured "servants" of the Georgia Trustees. These people had agreed to work for a term of years on public projects in return for passage to Georgia, supplies, subsistence, and grants of land. In the early months before the planting season, other settlers also welcomed the opportunity of earning a daily wage by laboring at the fort, which was a public structure financed by the Trustees.[10]

The heaviest part of the work was finished in hardly more than a month. On March 23 an eyewitness reported "a battery of cannon mounted, which commanded the river, and the fort almost built, the rampart raised with green sod."[11] This succinct description requires explanation before we can appreciate the amount of horny-handed work the settlers had done. They had dug a moat to about 6-foot depth, and thrown up the earth to form the walls of the fort. From the old fields nearby, they cut sod and laid it on the 45-degree slopes to hold the sandy earth in place; or where even steeper slopes were needed, they stacked the sods like building blocks.[12] Spring rains caused the "green" (fresh) sod to grow well.[13] Later, by digging the moat to its full width, they would have additional earth to strengthen critical parts of the fort. Along the natural shore line just west of the main fort, the diggers had thrown up other earth walls to make an angular projection called the "spur." Behind the walls of this spurwork they emplaced several cannon almost at water level, thus insuring control of the water approaches. By April, gun platforms were also laid on the bastions. It appears that the total armament at this period was 15 cannon.[14]

A well dug in the fort provided "tolerable good water, and in plenty,"[15] and as the weather warmed, pleasant shade came from the big oaks that were left in the fort enclosure.[16]

With the earthworks in shape, the next step was setting up a palisade at the foot of them (Figure 18). The cedar posts served both as a barrier fence and "to prevent our enemies turning up the green sod."[17] This inner palisade was completed early in April. By November, a second palisade was erected a few yards outside the first one.[18]



CONSTRUCTION PROGRESS 1736-1742

5

The North Storehouse. Hardly less important than walls and guns was a large storehouse for life's necessities. This was a substantial 3-story structure of brick and timber 18 x 60 feet in size. By the latter part of March it was up one story -- enough of a shelter to serve the Wesley brothers as a "Tabernacle" until a more suitable meeting place could be provided. The lumber and workmen expected from the northern settlement were late, and part of the work crew was pulled off the storehouse job and put on a more urgent project -- probably the raising of the palisade. Despite delays, however, the storehouse was finished by the middle of May except for tarring the flat roof (the tar shipment from Carolina was late). Cargoes from waiting vessels had to be unloaded and stored anyway, and rain came through the roof planks and spoiled some of the provisions. The leaky roof was fixed early in June.[19]

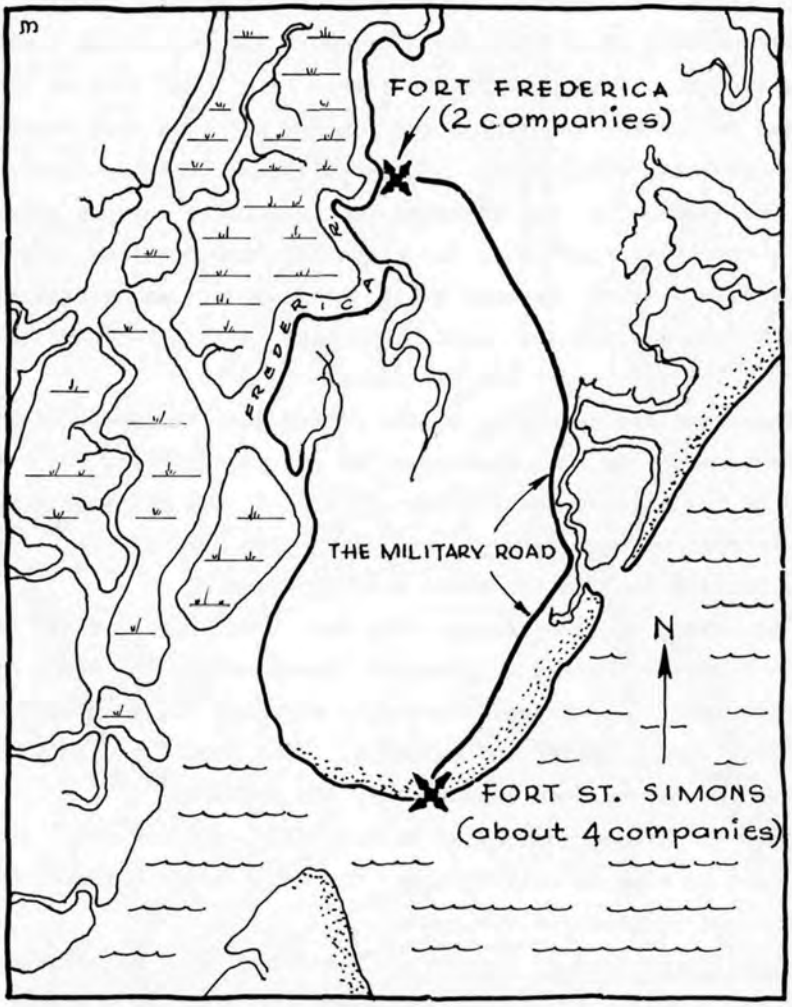
The premature unloading of the stores into the new building may have been caused by the appearance of an unidentified ship off the island on May 16. No hostilities developed, but Oglethorpe set all hands to work on the defenses and brought in several parties of Indians, posting them in the woods near the town.

The advent of the strange ship was ideal for a civil defense drill. Secretly taking a group of "invaders" to the woods east of the settlement, Oglethorpe "thoroughly alarmed" the town with shouts in Spanish and a volley of musketry. The people ran to the fort, and "the very women took arms to help the defense."[20]

With an obvious hazard so dramatically pointed out, the settlers lost no time in cutting down the small woods between the town and the open savannah to the east.

Other Structures in the Fort. The alarm also stimulated other construction inside the fort. In one of the bastions a powder magazine of heavy timber covered with earth was built; in another was a bombproof room (for sheltering personnel). A forge for the blacksmith was established. All these works were completed by the end of May.[21]

Later in the summer, the settlers built a shop for the wheelwright and a storehouse for Indian corn, but we are not sure these



SPANISH TARGETS:

The forts on St. Simons Island.

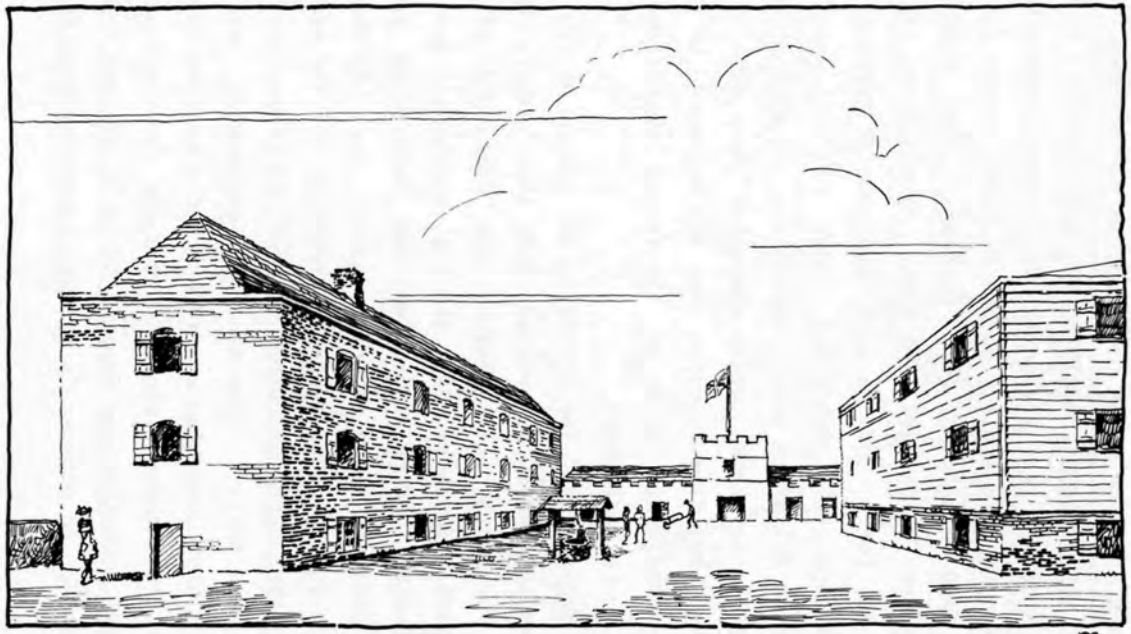
6

structures were at the fort. Nor does it seem likely that another "large storehouse" reported under construction in November can be identified with the fort building.[22] Limeburnings at this period were producing up to 300 bushels of lime at a time, although much of it must have been used for house construction in the town.[23]

Arrival of the Regiment. Oglethorpe left Georgia in November 1736. Back in England, his arguments for men and matériel to man the Georgia defenses bore fruit. On May 8, 1738, George II instructed "Our Trusty and Welbeloved James Oglethorpe," as Commander-in-Chief of the troops in Georgia and South Carolina, to station his troops and put the forts into "a good Condition of Defense." Three companies of troops from Gibraltar under Lt. Col. James Cochran reached St. Simons Island in June. Oglethorpe got back to Frederica September 21, 1738, and three other companies were with him. His first concern was building quarters for the Regiment at Frederica and St. Simons (the south point of the island where four of the companies were to be stationed).[24]

The South Storehouse. The coming to the island of 700 soldiers plus their women and children created more than simply a housing problem. They had to be fed, clothed, and furnished with tools, weapons and other equipment; and the old warehouse was not big enough. In December 1738 Oglethorpe set the indentured workmen to sawing timber, getting ready to build another one. He referred to it -- perhaps in order to use funds contributed for the erection of a church -- as "the Church or rather Chappel at Frederica, which I have agreed to have built." Like the first storehouse, this 20 x 60 foot brick and timber building was to be three stories high, with the "Chappel" on the topmost floor.[25] The new year was well under way before actual construction began. In July it was reported about half finished, so presumably it was completed near the end of 1739.[26]

After his two-year absence, Oglethorpe decided on a number of changes to be made at the fort. Despite the king's failure to provide funds, he "prevailed with the Soldiers to work on the Fortifications, with hopes that they will merit his Majesty's gracious favor."[27]



THE KING'S STOREHOUSES -

They made the fort a depot for the Southern Frontier.

7

Remember the double palisade in the moat? Now the inner one was pushed out a bit, to make room for thicker walls. To get the new sand for these walls, the shovelmen dug the moat a little deeper (Figure 20).[28] To hold the sand in place, they plastered the face of the wall thickly with clay-like mud from the marsh (Figure 16). The work was completed before March of 1739, at which time Lieutenant Delegal in London called it a "strong mud wall."[29]

War is Declared. The tension building up between Britain and Spain was somewhat relaxed as the Convention of Pardo was signed on January 14, 1739. Two commissioners from each country were to meet in Madrid and negotiate the issues.[30] In due time, Oglethorpe received word to halt work on the frontier defenses. Two of his engineers, Samuel Augspourguer and John Thomas, left Frederica.[31] Oglethorpe himself used the break to advantage by making a 500-mile trip to the Indian country. There he firmly cemented relations with the people who would be his allies in the war to come.[32]

From July to October, Oglethorpe was absent on this mission. On his return to Savannah, orders were waiting. The negotiations with Spain had broken down. He was now instructed to "put the Colonies of Carolina and Georgia in the best Posture of Defence."[33]

"I instantly obeyed," he wrote.[34] Britain declared war on October 23, and punitive action in America would not long be delayed.

Despite his preoccupation with plans for action against the Florida Spaniards, late in 1739 Oglethorpe began to enlarge the Frederica defenses. The new earthworks (Figure 8) were to enclose the entire town.[35] Then came the Florida campaigns of 1740. Afterward Oglethorpe was abed for weeks with a fever. Engineer Sanford Mace died and surveyor John Calwell was sick.[36] Nothing seemed to go right. Yet the certainty of a Spanish reprisal gave new urgency to defense improvements at Frederica.

The Tabby Fort. Probably it was near the end of 1740 when the workmen began to convert Fort Frederica into what a later observer called " a pretty strong Fort of Tappy."[37] In January 1741 Oglethorpe said that work on the fort was 25 percent along,[38] in spite

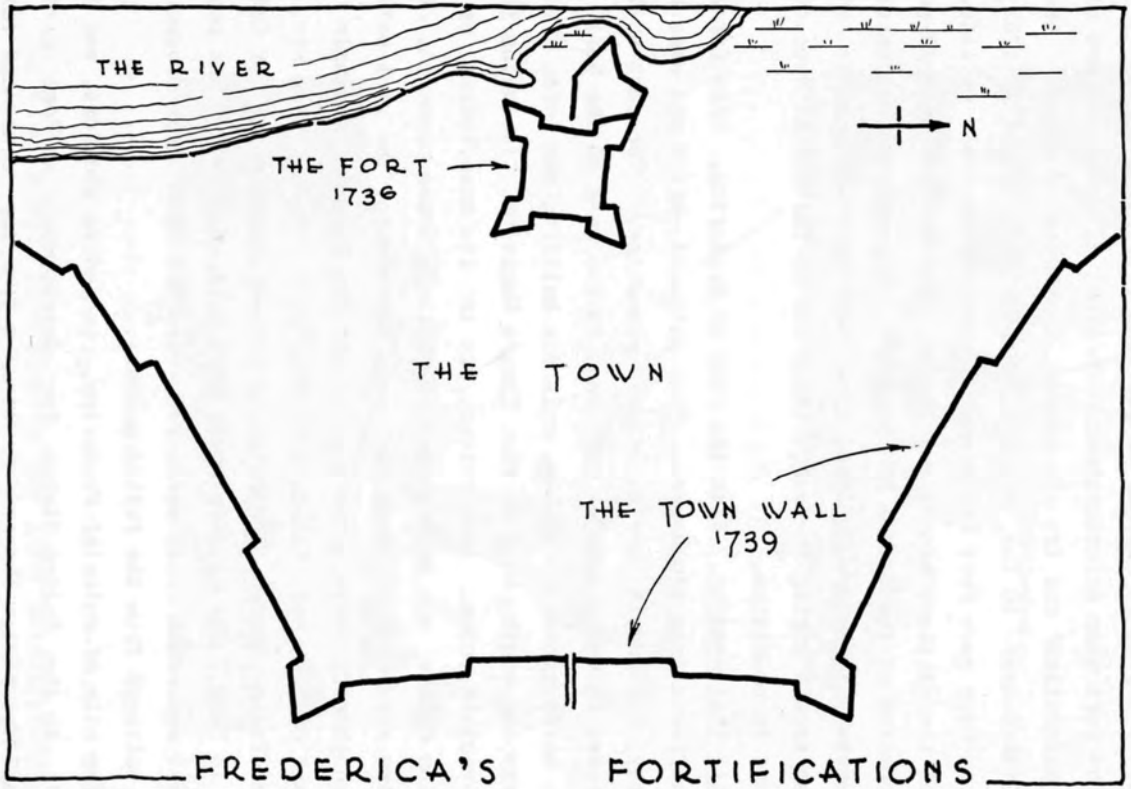
of the reluctance of both soldiers and settlers to work on the fortifications ("Though it is to make them safe")[39] at the going wage of twelvepence per day.

The alterations were evidently completed in 1741, however, for in October Captain William Thompson called the fort "very strong," and finished except for the gun platforms.[40] That the changes were extensive is shown in a contemporary (1743) description of the renovated defense as

> a pretty strong Fort of Tappy, which has several 18 Pounders mounted on a Ravelin in its Front, and commands the River both upwards and downwards; and is surrounded by a quadrangular Rampart, with 4 bastions, of Earth, well stockaded and turfed, and a palisadoed Ditch which include also the King's Storehouses (in which are kept the Arsenal, The Court of Justice, and Chapel) two large and spacious buildings of Brick and Timber . . . On the Rampart are mounted a considerable Quantity of Ordnance of several sizes.[41]

The sudden metamorphosis from earthwork to tabby fort was due to the addition of two new and conspicuous units built of tabby: 1) breastheight walls to hold the inner slope of the earth parapets; and 2) the King's Magazine, a massive 20 x 96-foot building along the west side of the parade. About this time changes were also made along the river shore, with the development of a "water-port" (presumably a whorf)[42] and "a bluff . . . made to preserve the fortification from the tide."[43]

An Hour of Action. Thus was the fort readied against attack. Happily, there was no real test of its strength, for in 1742 the Spanish thrusts were turned back well before they reached the town. The only battle action at Frederica came when three enemy galleys probed the waterway on July 11. Oglethorpe lined the town walls and river banks with musketry while he "went to the Fort and himself seeing the Guns and Howitzers, Pointed and Fired so warmly upon the Spanish Vessels that they seemed Disabled, upon which the General immediately went on board his Cutter and Rowed towards them with the Boats . . ." The Spaniards returned downriver "with great Precepi-



FREDERICA'S FORTIFICATIONS

8

tation" /sic/. Oglethorpe pursued them halfway back to their fleet.[44]

Although there were complaints that the fort should have more guns, cannon were not needed after 1742. War with Spain ended in 1748. A year later the Regiment was disbanded, leaving only part of a single Independent Company to garrison Frederica.[45]

The fort soon deteriorated. In 1756, it was described as "totally dismantled" and its 20 cannon unmounted. Some of the guns were taken away to the defenses on Cockspur Island in 1762, but major repairs gave Fort Frederica another short lease on life. The last of the military stores and guns (except for a single 12-pounder) were removed at the outset of the War of Independence and carried to Ft. Morris at Sunbury. Aside from half-hearted repairs made by British troops during the war, there was no further attempt to keep the fort in condition.[46]

All that Remains. With the rest of Frederica, this fortification suffered from plunderers. They salvaged brick and even blocks of tabby, for use in new structures elsewhere. The fort buildings were razed to the ground -- and even, in the case of the North Storehouse, below ground. Finally, only one building was left. This remnant was the south half of the King's Magazine, including the two brick-vaulted rooms. It survived, due to its massiveness or to a decision by the new proprietors to build a house upon it. But by 1880 the river had cut into the shore and toppled the west wall. Before another 20 years, the south vault had fallen. A single vault and part of the east facade were all that remained when Mrs. Belle Stevens Taylor deeded the ruins to the Georgia Society of Colonial Dames in 1903. The next year the lost arch was rebuilt and parts of the west and south walls were reconstructed with large fragments of tabby salvaged from the fallen masonry.[47]

The site of colonial Frederica, including the fort, was deeded in 1941 to the United States for development as Fort Frederica National Monument. The action stemmed from the continued interest of the Colonial Dames, and was made possible by the enlightened efforts of conservationists banded together as the Fort Frederica Association.

9. The King's Magazine before the 1904 Reconstruction

But except for the crumbling ruins of its last building, Fort Frederica was gone. Time had flattened the earth walls, and a wagon track cut across their slopes. Giant oaks had changed the earth contours with up-thrusting roots and down-drifting leaves; gradually the ruined rubble had been covered with humus. A weather-beaten shed crowned a hummock that once was a proud bastion.

10. The Fort Site in 1950

Modern structures had been removed and the grounds were receiving maintenance. Notice that contours of the earthwork are no longer visible.

STUDYING THE FORT RUINS

Purpose of the Archeology. Historical records gave a lot of information about Fort Frederica. But for physical description of the fort, these records at best were fragmentary. We hoped archeology would help to fill in the structural picture, and also recover relics that would give valuable clues on human use.

Specifically, we were depending on archeology for the answers to a number of questions posed by the documents:

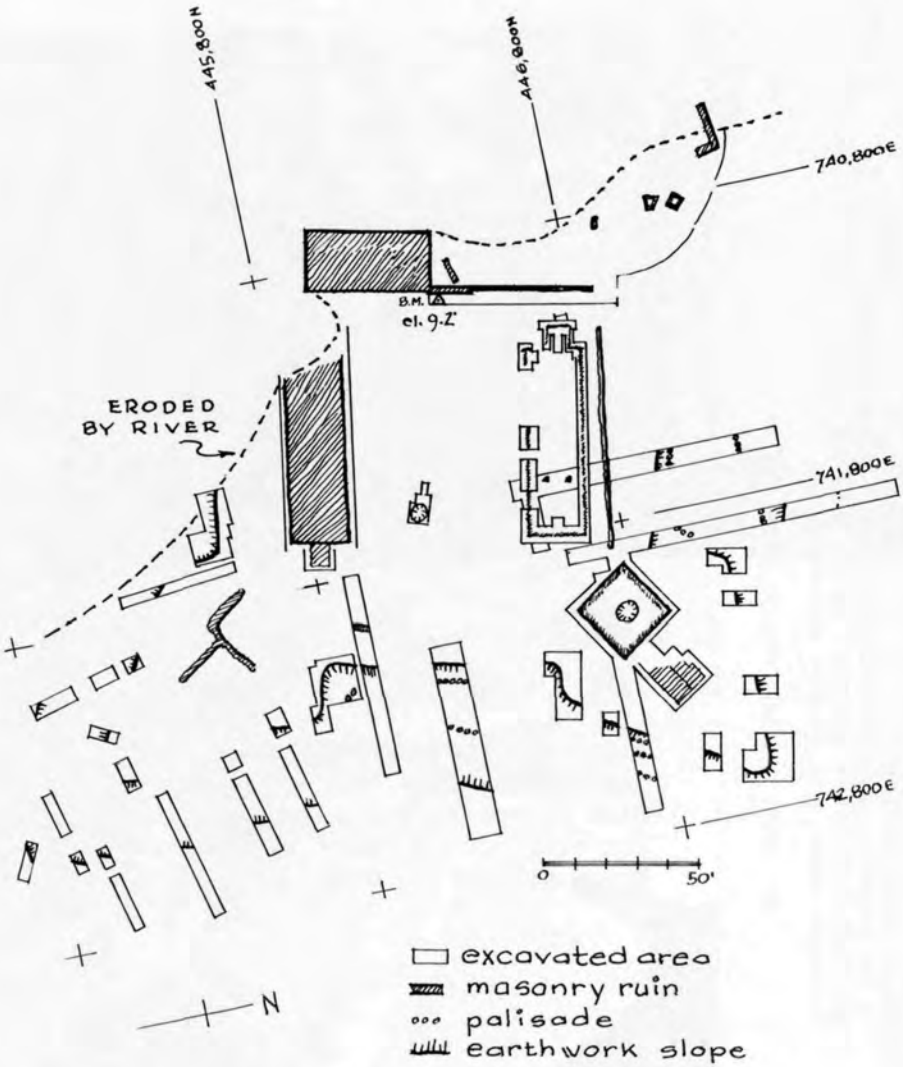
1) According to the records, this was a "regular fort with four bastions. But exactly what was its shape, and how big was it?
2) The records mentioned a moat and two palisades. How deep and wide was the moat, and where were the palisades?
3) How many buildings were in the fort? Exactly where were they? What materials? How were they used?

It was not feasible to excavate the fort completely,so features were located by means fo suitably spaced exploratory trenches. Important features were then completely excavated. To get cross-sections of the earthwork, we ran deep profile trenches across the moat.

Figure 11 is the key map of excavations in the fort area.

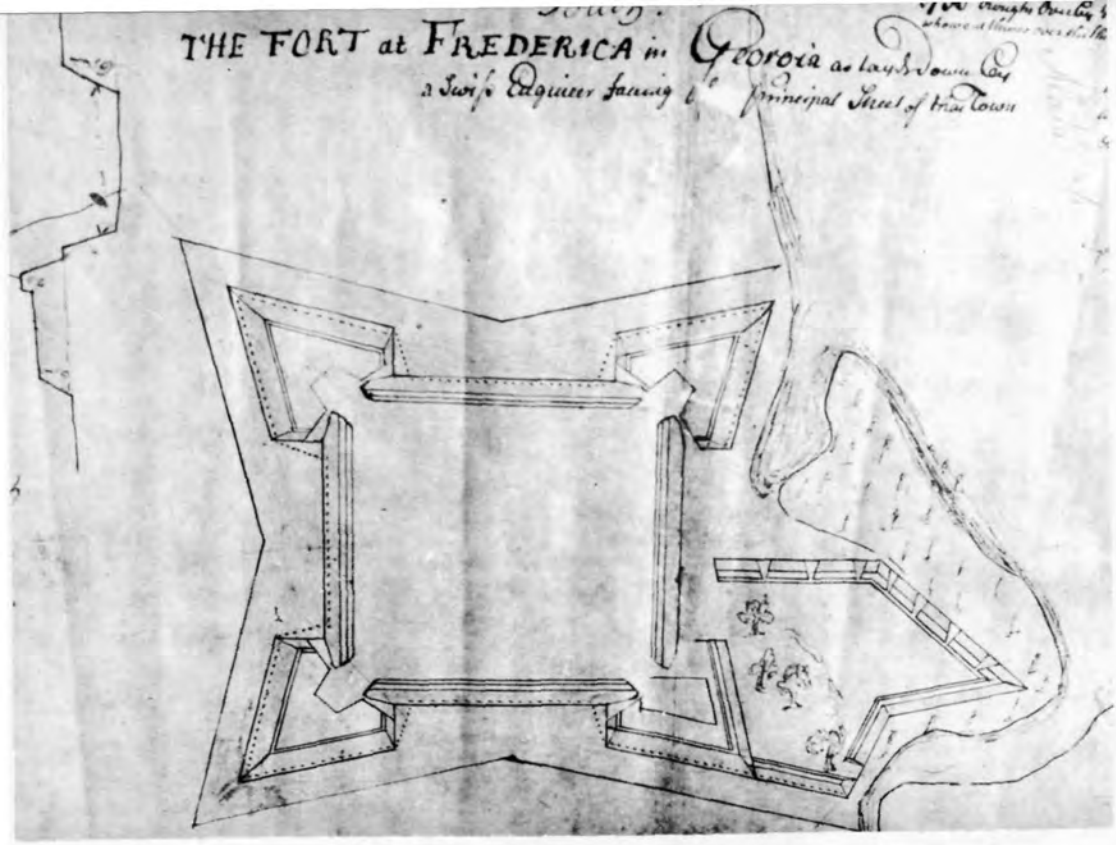
The Fort Trace. In the art of fortification, the word "trace" means the full-sized outline of the fort, just as the engineer walked out and scratched its lines on the ground with the point of a stick. Thus, when you encounter the works hereafter, please know that it refers to the basic layout -- to the lines of the walls and the bastions the way they were marked out when the settlers heaved up the first shovelfuls of earth. Knowledge of the trace, or basic plan, is fundamental to study of a fortification.

The first approaches to this problem were frustrating. The written records agreed that Frederica was a "regular" fort with four bastions, all without dimensions. The search for a plan of the fort was unavailing. It was too early for archeology, so all we could do was measure the contours on the site and hypothesize a plan based on 18th century practice. Theoretical as it was, the mental exercise



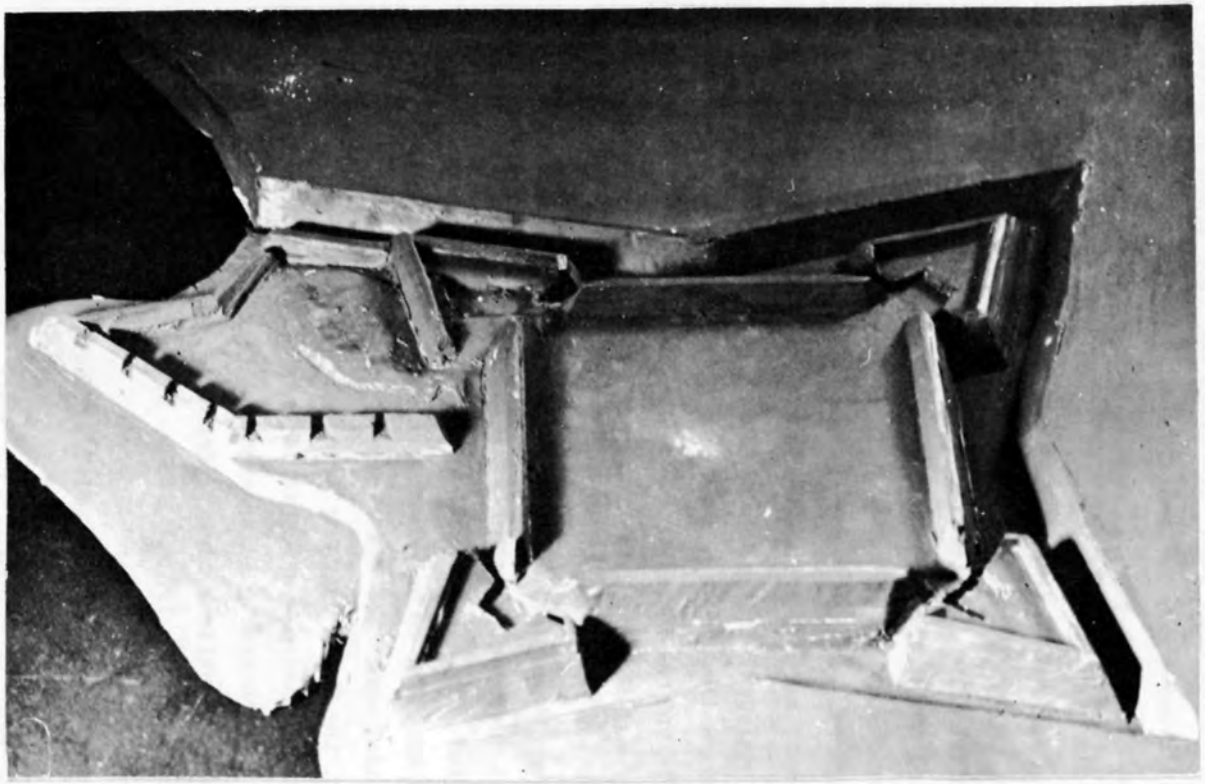
KEY MAP OF THE EXCAVATIONS

II



12. The 1736 Plan for Fort Frederica

Although other drawings were no doubt made, this is the only early plan of the fort thus far located. The original is in the John Carter Brown Library at Brown University.



13. Model of Fort Frederica from the 1736 Plan

Archeology showed that the fort followed this design closely, but the walls were less steep and there were no openings on the sides of the bastions. Not reproduced in the model is the palisade called for in the plan.

was productive because it translated the technical language of the records into simple drawings which explained the fundamental nature of the fort. Later it would help the archeologist to anticipate some of the structural features he would encounter.

Our first break came when Librarian Lawrence Wroth of Brown University informed the Georgia Historical Society about certain Georgia manuscripts at Brown. One of them turned out to be a long-sought plan of Fort Frederica (Figure 12). Oglethorpe had sent such a plan back to London, but somehow it had been lost.

This was a find of first importance. Here was the only known plan of the fort. An explanatory note pencilled on it, and the absence of buildings, showed its date to be early 1736. It confirmed our hypothesis about the fort design, and the dimensions were surprisingly close to our conjectural dimensions. A special outwork, which the records called a "spur" but failed to describe, appeared clearly in the drawing, and in a sense was compensation for the lack of buildings.

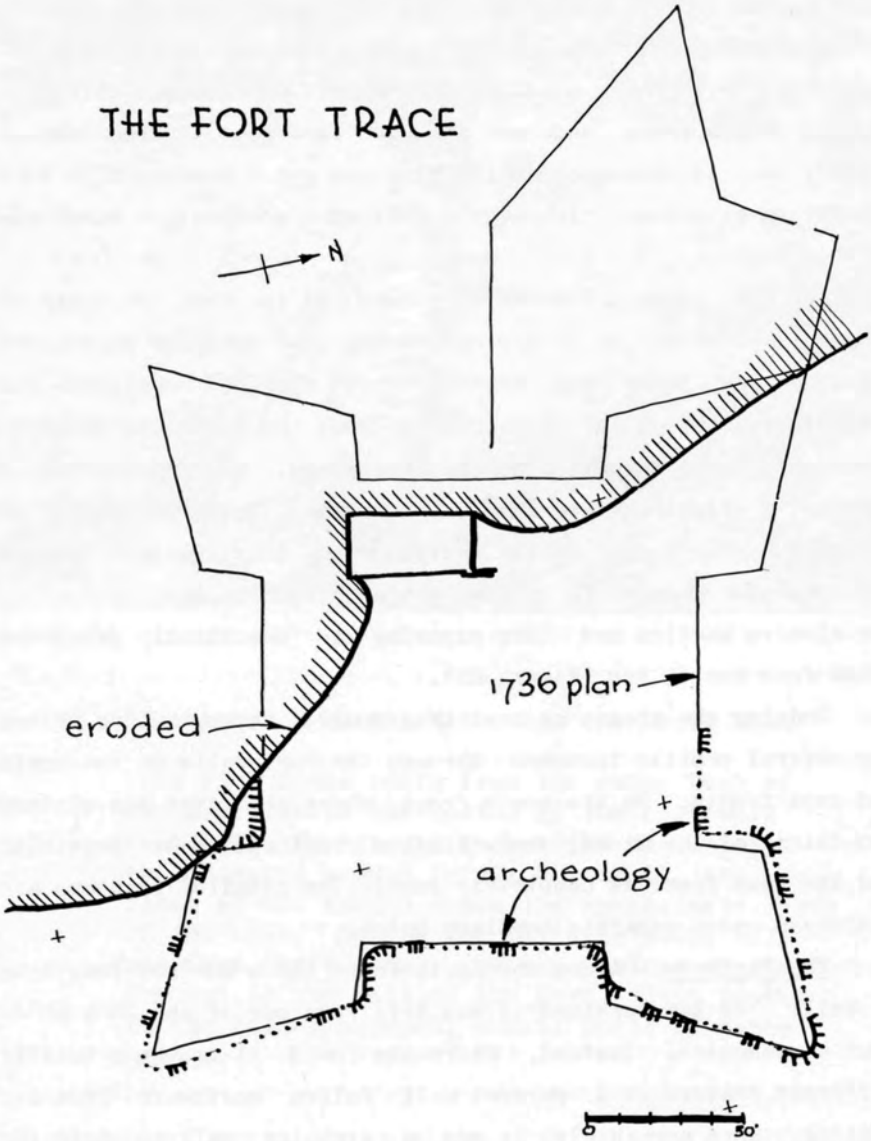
Indeed it was more than compensation, for we knew there was a reasonably good chance of finding the buildings archeologically. But the spur-work was permanently lost to the river.

When funds became available, archeology was used to expose the trace at numerous points. Plotting these points on paper gave an outline closely resembling the 1736 plan -- except that the old plan appeared to be somewhat smaller than the actual fort. After reflecting upon the discrepancy, we realized that Samuel Augspourguer, the Swiss engineer credited with drafting the plan, had used French measure, which is in ratio of 1.066:1.000 to the English foot. Converting Augspourguer's French measure to English made the two outlines almost identical, as Figure 14 shows.[49]

Comparison of the two outlines by actual measurement is given in the following table:

COMPARATIVE DIMENSIONS

	East Front		North Front	
	On Site	On Plan	On Site	On Plan
Exterior Side	223'	212'	223'	221'
Bastion Face	70'	67'	70'	67'



14

Since it is difficult to measure ruined earthworks accurately -- just as it was hard to build them accurately in the first place -- the incidence of agreement was gratifying. Even more, it was significant. The similarities established a positive relationship between the plan and the actual structure. Although certain differences between the two (see post, "The Bastion Flank") made it obvious that the plan was not a drawing of a fort already in existence, clearly the fort at Frederica was based upon this plan.

The Fort Walls. The big live oaks on the fort site are an intrinsic part of the historical scene (the builders themselves retained oak trees for shade),[50] but they do complicate the archeology. Once, for instance, we lost the southeast bastion, to the utter consternation of the historians. Happily, it turned out that a slight engineering error had put our trenches out in the moat -- instead of on the bastion where they should have been. The excavator made up for the strain on his colleagues by finding the elusive bastion and then exposing its beautifully preserved flank from toe to top (Figure 21).

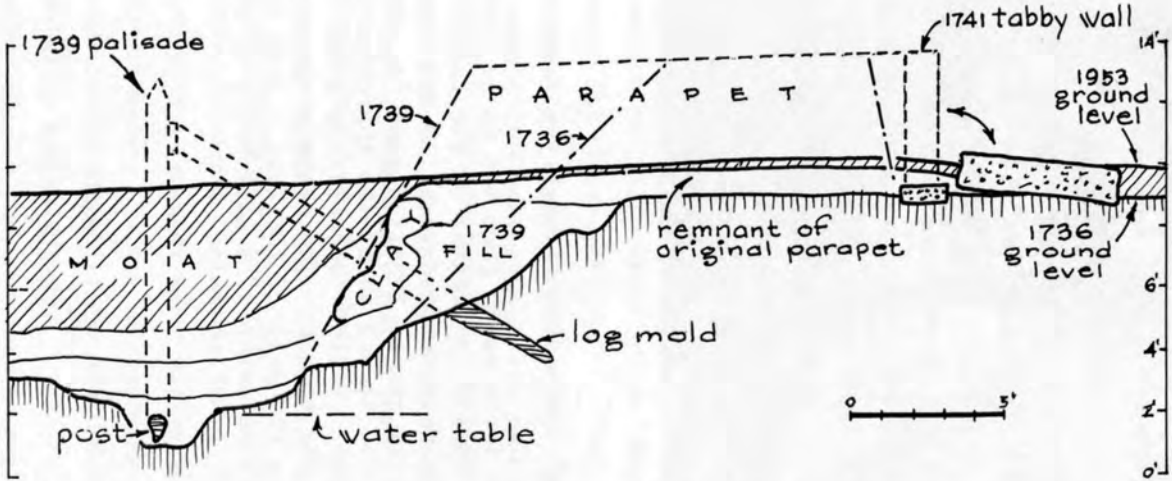
Dodging the trees as best they could, Fairbanks and Shiner dug several profile trenches through the fort walls on the north and east fronts. On the south front, where the river has claimed two-thirds of the trace, only limited exploration was possible; and the west front is completely gone. The detailed findings are discussed under separate headings below.

The Parapets. Along the north front lay a 60-foot-long tabby wall.[51] We had surmised it was left from one of the 20 x 60 - foot storehouses. Instead, Fairbanks found it to be a totally different feature -- a parapet wall fallen southward from its footing. More accurately, it was a retaining wall to hold the earth of the parapet in place (Figure 16). No doubt it was added during the 1740-1741 modernization.[52]

It extended the full 60-foot length of the parapet, was about 15 inches wide by some 5 feet high, and formed the inner face of the parapet. It has been made in "pours," as evidenced

15. Fairbanks' Excavation through the North Moat

This view looks south from the outer bank of the moat toward the center of the earthwork fort. The foreground excavation has exposed the colonial ground level; beyond it, the floor of the trench shows the approximate floor of the moat. Notice the palisade stubs half-way down the trench. The steep slope at the far end is the wall of the fort. Just beyond is the fallen parapet, a wall built of tabby masonry.



TYPICAL SECTION OF THE FORT WALL
(NORTH FRONT)

16

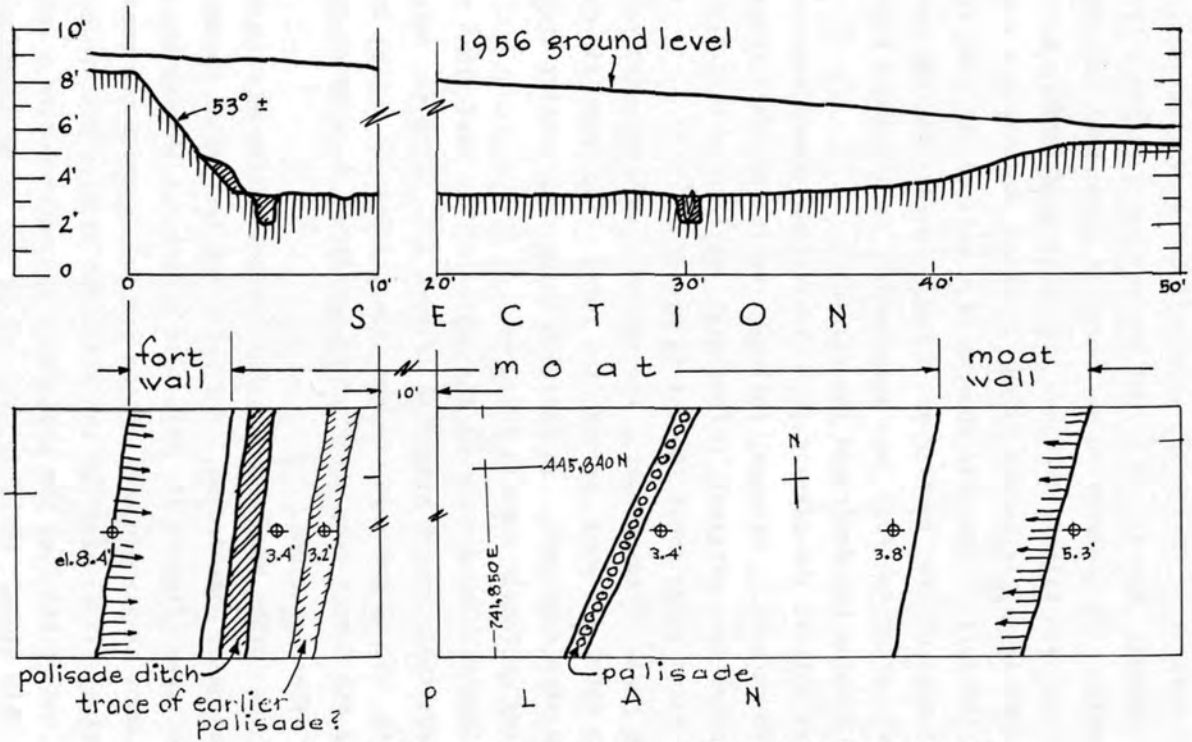
in slight separations caused by the fall. The footing, a tabby sheet about 3 inches thick and 18 inches wide, had been poured into a shallow trench. At east and west ends it was exactly at the colonial surface. Obviously, this wall had no firing step. Nor was one needed. The 4½- to 5-foot parapet was a standard breast-height wall. It appeared to be complete throughout its length. The footing was tilted, because the entire structure had been pulled down in fairly recent times in order to extend a roadway through the fort.[53] Complete absence of a wall on the east front-although part of its footing was found -- points to the work of salvagers after the fort was abandoned. On the south and west fronts, erosion had destroyed the evidence.

Just outside the tabby wall, excavations showed vestiges of the earth parapet. Erosion, followed by intentional leveling, had reduced the original 5-foot-high wall to a thin (12-inch) band of mixed sands about 16 feet in breadth.

The Moat. Going deeper, the archeologists obtained revealing data about the moat around the fort. Two complete cross-sections were excavated, in addition to several shorter trenches to examine or locate certain features.

Shiner's cross-section at the center of the east front showed a beautifully simple situation (Figure 17). From the parapet, the earth sloped downward at the traditional 45° angle to the floor of the 5-foot-deep moat. Similar slopes were confirmed at several other locations.[54]

On the other hand, Fairbanks' cross-section on the north front was quite complicated, and reflected two major changes in the structures (Figures 15, 16). His trench cut through the parapet and moat at right center of the front. Beneath the parapet, the original (1736) slope of the ditch had slumped and eroded unevenly, and at its foot the moat floor was covered with a foot or more of this slump. Under it, the toe of the slope showed clearly. By projecting the slope upward at 45°, its parapet would have been 12 feet thick at the base; that is, from the edge of the moat to the tabby wall. Beyond doubt, on this front the toe



THE EAST MOAT EXCAVATION

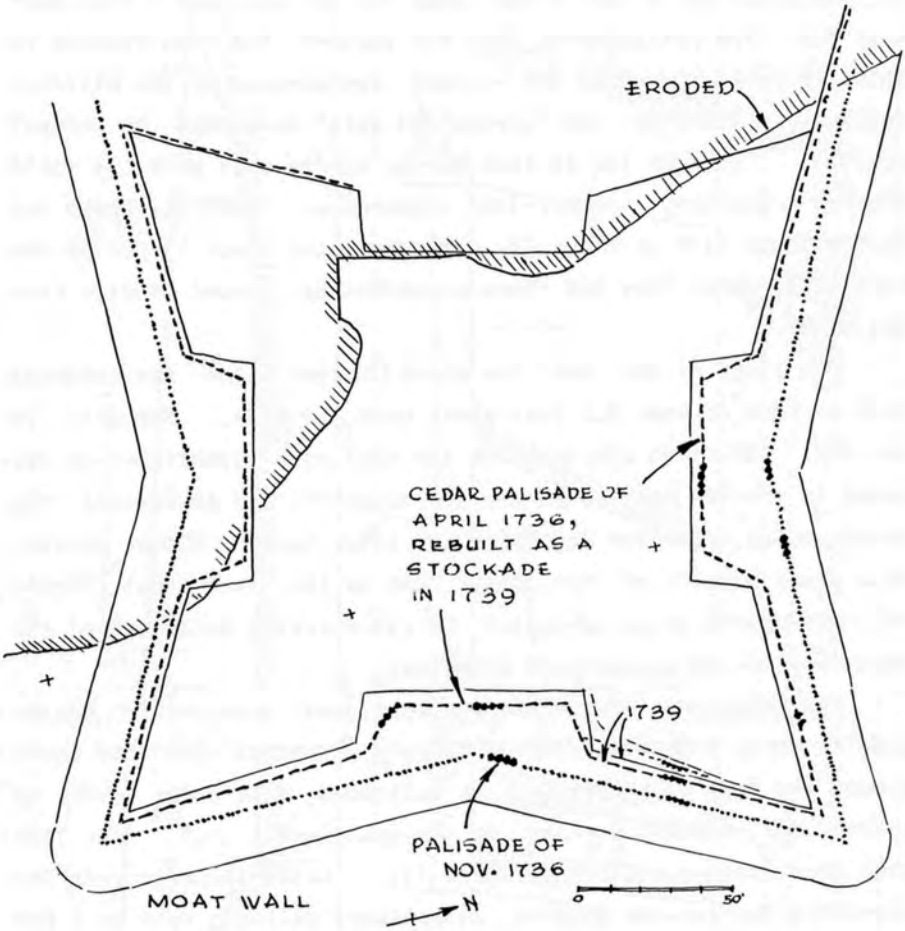
of the slope was the only remnant of the sodded wall of 1736.[55]

But over this eroded face, Fairbanks saw that new fill had been piled on and held to a steep 65° slope with a thick facing of blue clay -- or, in less elegant terms, marsh mud. The toe of the new slope was a foot deeper than the old one, and 2 feet farther out. The change meant that the parapet had been widened to about 18 feet, which was the minimum recommended by the military textbooks. This was the "strong mud wall" described by Delegal in 1739.[56] Held by its 18-inch facing of dry salt muck, it would present a massive, masonry-like appearance. Both Fairbanks and Shiner found bits of blue clay throughout the lower levels of the moat fill, where they had been deposited by normal erosion from the slope.[57]

The floor of the moat was about 5 feet below the colonial land surface or some 3.5 feet above mean low tide. Normally, it was dry. The width and depth of the moat were established by evidence in the two main cross-section trenches, and in several spot trenches dug to locate its inner and outer banks. Shiner obtained a clear profile of the outer bank on the east front (Figure 17). It proved to be essential in interpreting badly eroded and obscure evidence encountered elsewhere.

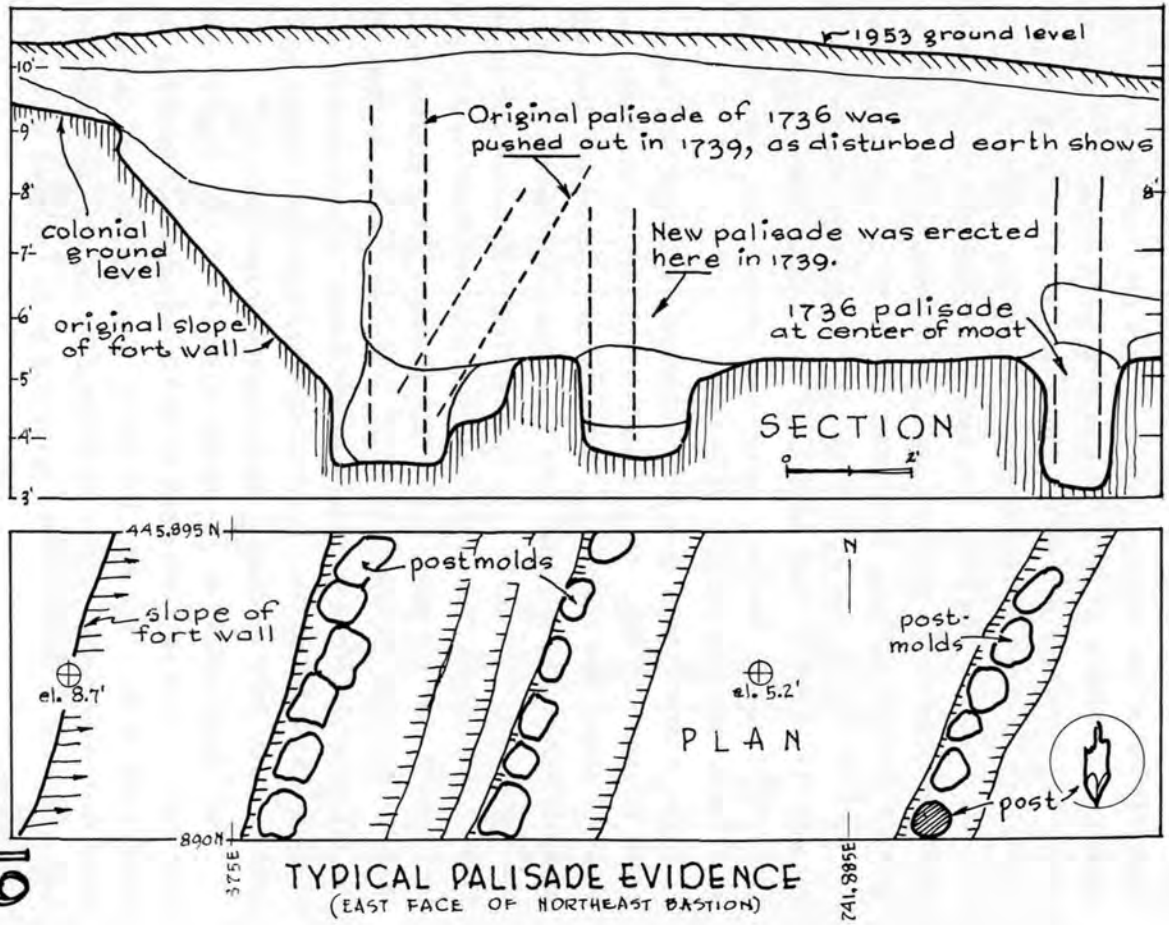
The Palisades. Palisades are mentioned prominently, beginning in April 1736 with Francis Moore's statement that "the works around the fort [were] frased or palisaded with cedar posts, to prevent our enemies turning up the green sod . . ."[58] The 1736 plan shows such a palisade (Figure 12). Later the same year the defensive barrier was doubled, as another palisade went up a few yards outside the first. The pair of palisades, with several variations for good measure, were uncovered in the course of the archeology (Figure 18).

The inner palisade was, according to Moore, the first one to be built. We found it just outside the toe of the wall (figure 19), precisely as shown on the 1736 map. Post molds were clear; in fact, below groundwater a number of post ends were still in place, rather well preserved. The workmen had split pine logs in



THE PALISADES

18



TYPICAL PALISADE EVIDENCE
(EAST FACE OF NORTHEAST BASTION)

19

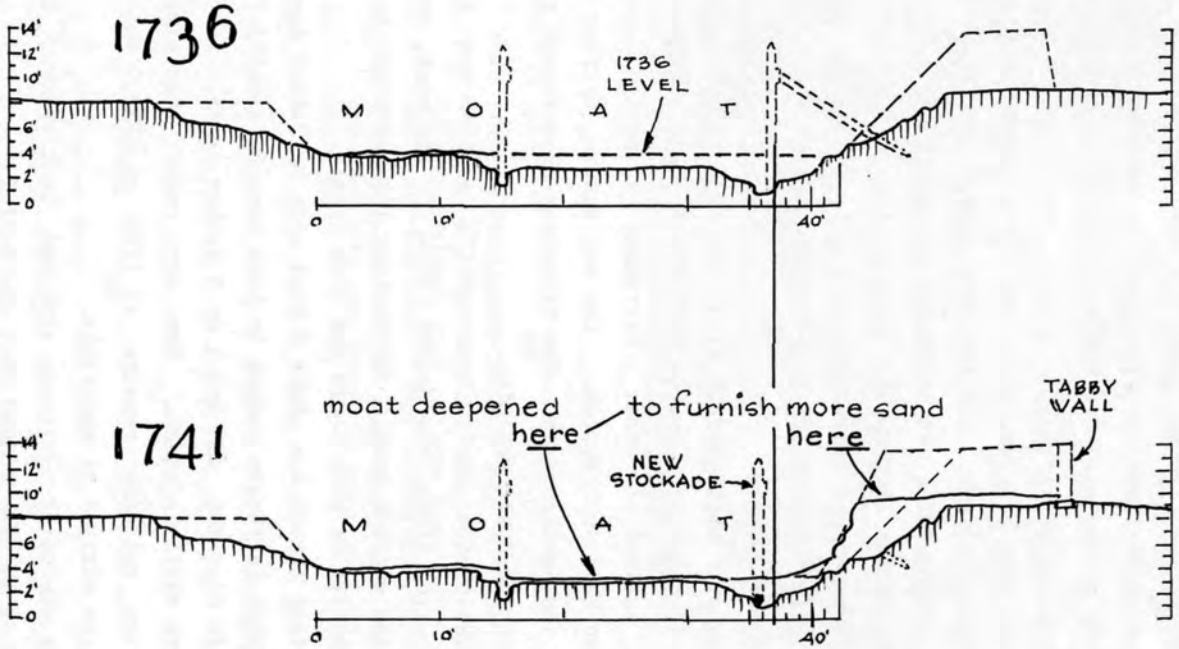
half and trimmed the edges, leaving roughly squared timbers with one rounded face. This face was set away from the fort, toward the enemy. The posts averaged 9 inches in width and were from 3½ to 7 inches thick. They had been set vertically in a footing trench about 2 feet deep, and were spaced up to 3 inches apart.[59] Edge trimming of the timbers suggests that the narrow split-offs were used as liners to fill the cracks between posts.[60] The palisade would have been at least 9 feet high, except where it interfered with the line of fire over the top of the parapet.

The observer who said the first palisade was cedar could hardly mistake this aromatic and rot-resistant wood. Yet we found a palisade of pine, not cedar. Why? We can guess that the old palisade was in the way of the dirt gang when the fort wall was rebuilt in 1739. All or part of it would be taken down for this reason alone. However, after only three years, cedar would still be sound. Why not use it again?

The answer comes from archeological evidence and common sense (Figures 19, 20). To get sand for thickening the wall, the handiest place was the moat. But another palisade ran down the middle, separating the moat into inner and outer sections. The inner moat was, therefore, the only really convenient borrowing place. Archeology showed that it actually had been dug about a foot deeper than the outer one. This excavation had greatly weakened the palisade between the inner and outer moats, because on the low side the posts were left in the ground only 12 inches instead of the original 24. Despite this weakness, the middle palisade had been left in place. Angle braces helped hold it.

Now, think again of the inner palisade at the foot of the fort wall. This palisade had to be moved anyway, in order to broaden the wall. The moat was now a foot deeper. If the old posts were sunk deeper, their tops would be too low for proper defense. So the original cedar posts had to be replaced by longer pine posts.

The proof of the change lay in the footing trench, which Fairbanks found to be considerably wider than average, with the



CROSS SECTION OF THE MOAT
SHOWING STRUCTURAL CHANGES
(NORTH FRONT)

20

post molds against its outer side rather than in the center as usual (Figure 20). A similar but slightly more radical change took place at the northeast bastion, where Fairbanks' excavation revealed two separate trenches along the east face (Figure 19).[61]

Here, too, were found two wine bottles, upright and unbroken (and empty when found, said Fairbanks), carefully cached behind the mud facing.[62]

So the palisade was replaced, and by a stockade. In 1739 Lieutenant Philip Delegal said the fort had "a dry fosse /moat/ palisaded on the outside and stockaded on the inside."[63] In the military mind of the 1700's, the distinction was obvious. A stockade was heavier and tighter than a palisade. The hewn-log construction with liners which I mentioned earlier would certainly qualify as a stockade.

Palisades were strengthened with braces angling up from the ground, much like the back braces which hold today's highway billboards rigid against the wind. Fairbanks found two postholds which may have held such braces. One was square, halfway up the moat wall of the east curtain. The other was down toward the toe of the wall on the north curtain.[64]

The second of the two palisades built in 1736 was erected (as we have said) along the center line of the moat, roughly paralleling its outside bank. Archeology located this palisade without difficulty on both north and east fronts.

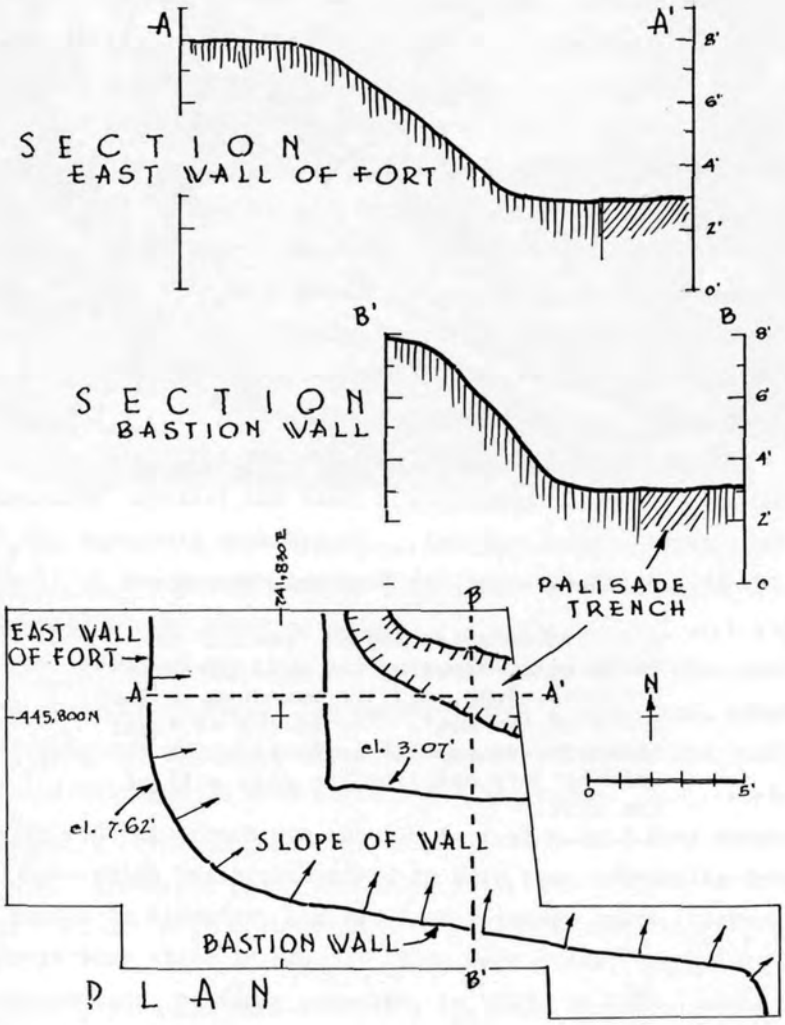
Its footing trench was about 2 feet wide by 2 feet deep with round posts which Fairbanks judged to have been originally from 5 to 7 inches in diameter, and set 1 or 2 inches apart. Bases of a few posts were still in place. Some were cedar, some pine. The records mention palisade repairs in 1738 or 1739, which may account for the mixture of materials.[65]

No doubt the outer palisade also had back braces, but the excavators seem to have dodged them successfully.

The Bastion Flank. Puzzling features of the 1736 map were openings in each of the bastion flanks (Figures 12, 13). Presumably, these were ramps. Since they are uncommon in small field

21. North Flank of the Southeast Bastion

Here Archeologist Shiner "peeled" the earth wall, exposing its well-preserved original slope, all the way down to the floor of the moat. The string at right shows the almost 90° angle at which the bastion juts out from the east wall of the fort.



SHOULDER OF THE SOUTHEAST BASTION

22

forts, Shiner "peeled off" the east flank of the southeast bastion to see how it was actually built. The original slopes came beautifully to light (Figure 21). There was no opening and no ramp. Since cross-section trenches had already shown this front to be little changed since 1736 (except for the face of the north bastion), we concluded that the flank openings were never built. Hence, the 1736 drawing was a preliminary, rather than a progress plan.

The Parade. The central area of the fort is called the "parade," a name which suggests its drill ground use and the British ensign flying from a tall staff. Calculations based on archeological findings show it to have been 124 x 125 feet. However, step by step large buildings were erected around the parade, finally reducing it to a mere 60 x 105 feet. Average elevation of the colonial land surface was about 8 feet (present elevation ranges from 8.8 to 9.2) above mean low tide. The old surface was unpaved and doubtless quite sandy.

Most of the excavations intersected the parade at one point or another. The story was as easy to read as the pages in a book. The top layer of soil was brown sand 3 to 6 inches thick, with some humus development. In it were quantities of refuse, from pop bottle caps to the blue feather-edge chinaware of the early 1800's. This was the page recording the reoccupation of the land in modern times.

Beneath the brown sand was a layer of grey mixed sand from 2 to 7 inches thick, containing brick and shell fragments. Here was page 2, the record of decay and abandonment from about 1770 to 1850.

Under the mixed sand was a 4- to 7-inch bank of grey-black humus -- the slowly-built-up surface containing the record of prehistoric and colonial times. It was there long before the fort was built. When the settlers and soldiers came, this humus accepted the white clay tobacco pipes they broke and tossed aside, just as it had taken the potsherds and shells discarded by Indians of earlier days. The local concentrations of clam and oys-

ter shells and the few sherds, Fairbanks was certain, were from Indian occupation preceding the fort.[66]

The Wells. Francis Moore in 1736 mentioned a well for the fort;[67] the archeologists found two. Moore's well could be the very early one Fairbanks[68] discovered in the gorge of the northeast bastion (Figure 41). Since this is a rather constricted area, I think all of us were surprised to find one here. But there it was, complete (at one time) with roofed shelter. Upon reflection, the advantage of having water convenient to a powder magazine or bombproof shelter, one or the other of which was evidently in this bastion, becomes obvious.

To build their well, the settlers had dug down about 8 feet, stacked up several barrels to make a casing, then back-filled around the barrels. The lowest barrel was thus about 2 feet into ground-water. Actually, the bottom consisted of two barrels, one 24 inches in diameter set inside a wooden-hooped 30-incher. Both were intact up to the waterline. Of the upper casing, nothing was left except an iron hoop found at the 5-foot level. Two large postmolds, one east and one west, were evidence of supports for a roof and perhaps a windlass.

In the well at the waterline, Fairbanks found a quantity of iron shot and flint nodules. Since there was too much to be interpreted as the floor of the well, he thought perhaps the flint was supposely stored in the well by flint-knappers. This suggestion does not imply anything illegal; the nearby ground was littered with chips incident to the knapping (chipping) of gun flints, and some folks say that wet flint knaps better than dry. However, the presende of the iron probably means that these materials were merely thrown in as part of the fill.

For this well was soon filled in and abandoned. Over it went a tabby building, the sand floor of which was unbroken over the old well. The tabby structure may belong to the "tabby period" of 1740-1741, which could mean that the well was in use no later than 1741.

Aside from the need to move the well out of the way of the

new building, the coming of the Regiment in 1738 was good enough reason for digging a deeper, better well in a more open location.

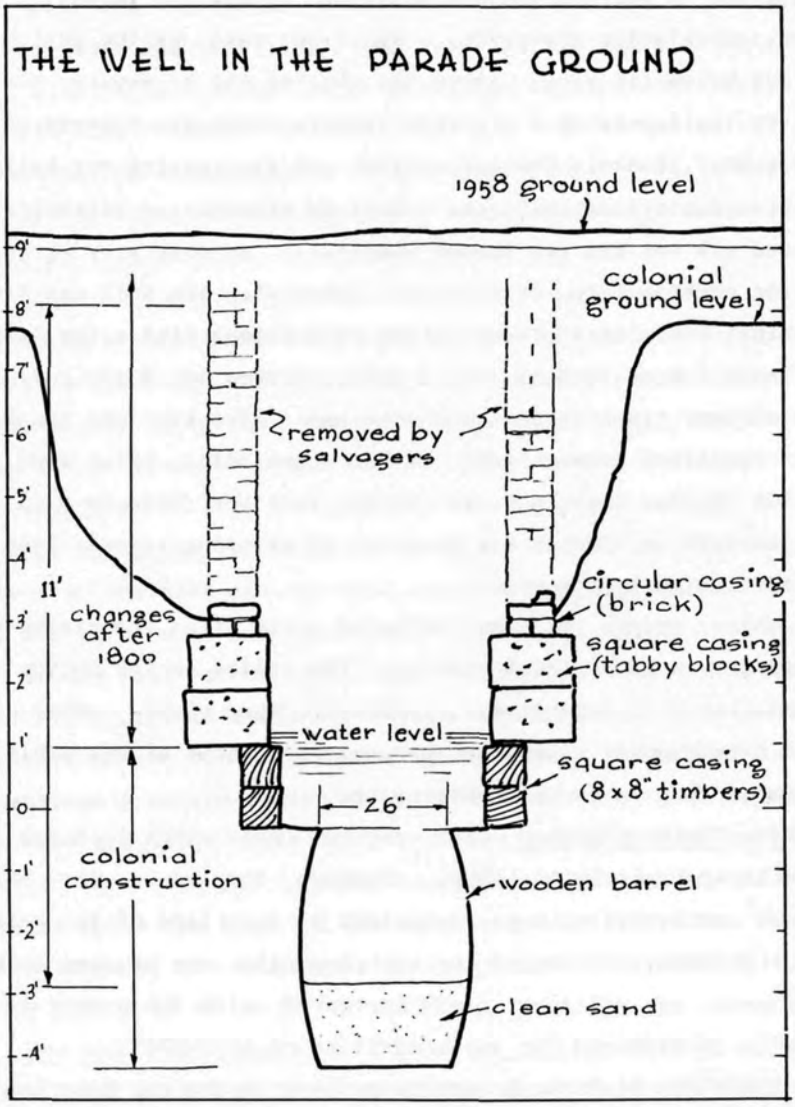
The second well (Figure 23) was found beneath a slight depression in the center of the parade.[69] It was about 11 feet deep. The bottom of the casing was a wooden barrel 26 inches in diameter, excellently preserved. The clean sand at the bottom was 2½ feet below its rim. Above the barrel was a square casing, made by two layers of 8 x 8-inch timbers under two courses of 10-inch tabby blocks. The top section of the casing was built of brick, again cylindrical, and 4 feet in diameter. Salvagers had removed all but the two bottom courses.

As a repository of colonial material, the well was disappointing. Only in the very bottom did Shiner find a few bits of Delftware unquestionably from early times; it must have been cleaned many times during its long use. The kind of trash the well contained proves that it was open until after 1900; and Captain Charles Gray, a waterboatman, told Mrs. Cate he used this well as late as 1922 in his business of watering vessels that put into Brunswick harbor.

Shiner points out that colonial wells often consisted of a barrel topped by a brick casing. The relics on the bottom show this to be a colonial well. However, the casing above water level is obviously later, because salvaged tabby blocks would not have been used in early construction.

The Blacksmith Shop. The records show that a forge was built in the fort by May 1736.[70] Through the years the smith, armorer and artificer were important in the life of the settlement. A smithy, essential in any community, was of even greater importance as military needs increased with the coming of the Regiment in 1738 and the war activities of 1739-1743.

Since the historical records neither locate nor describe the blacksmith shop, discovery of its ruins came about by methodical exploration[71] in the northwest bastion area (Figure 25). Actually, Shiner was looking for the north wall of the King's Magazine when he encountered a 6-inch-deep layer of cinders and iron,


THE WELL IN THE PARADE GROUND
1958 ground level
colonial ground level
removed by salvagers
circular casing (brick)
square casing (tabby blocks)
changes after 1800
water level
square casing (8 x 8" timbers)
26"
colonial construction
wooden barrel
clean sand
11'
9'
8'
7'
6'
5'
4'
3'
2'
1'
0
-1'
-2'
-3'
-4'

23

about 2 feet below ground. When completely excavated, this layer marked out an area of littered floor about 15 x 25 feet in size. Not far from the center was the ruin of a brick forge -- a simple 4 x 5 foot rectangular structure with foot-thick walls. Only the bottom 3 or 4 courses of the large greyish brick were left. From brickbats found in the fill we could tell that the structure was razed in later years to salvage the materials.

The colonial floor was covered with about 4 inches of sand fill. Near the forge was a smaller hearth, built on the sand above the colonial floor, and thus unmistakably of later period. Its brick was smaller, redder, and less sandy than the brick in the forge.*

Near the center of the floor was a trash pit about 2 feet deep and 2½ feet in diameter. Since it contained the same refuse as the floor, the pit no doubt represents an early good housekeeping resolution, soon forgotten as each day piled up the work.

At the edge of the floor to one side of the old forge had been a small keg containing about 50 pounds of orange-grey, metallic powder, coarse and lumpy. Only the iron hoops and nails of the wooden keg remained, and the chemical had slumped into a pile. The stuff might have been blacksmith's welding flux, except that the borax in it would long since have leached away. Sprinkling some of the 200-year-old powder on hot iron soon identified it. A whiff of rosin assailed the nostrils, and the coarse stuff metamorphosed into a golden powder which then seemed to dissolve magically into silver droplets of solder.

On another side of the forge was a small stockpile of coal. Scattered among the floor debris were clinkers in abundance, bits

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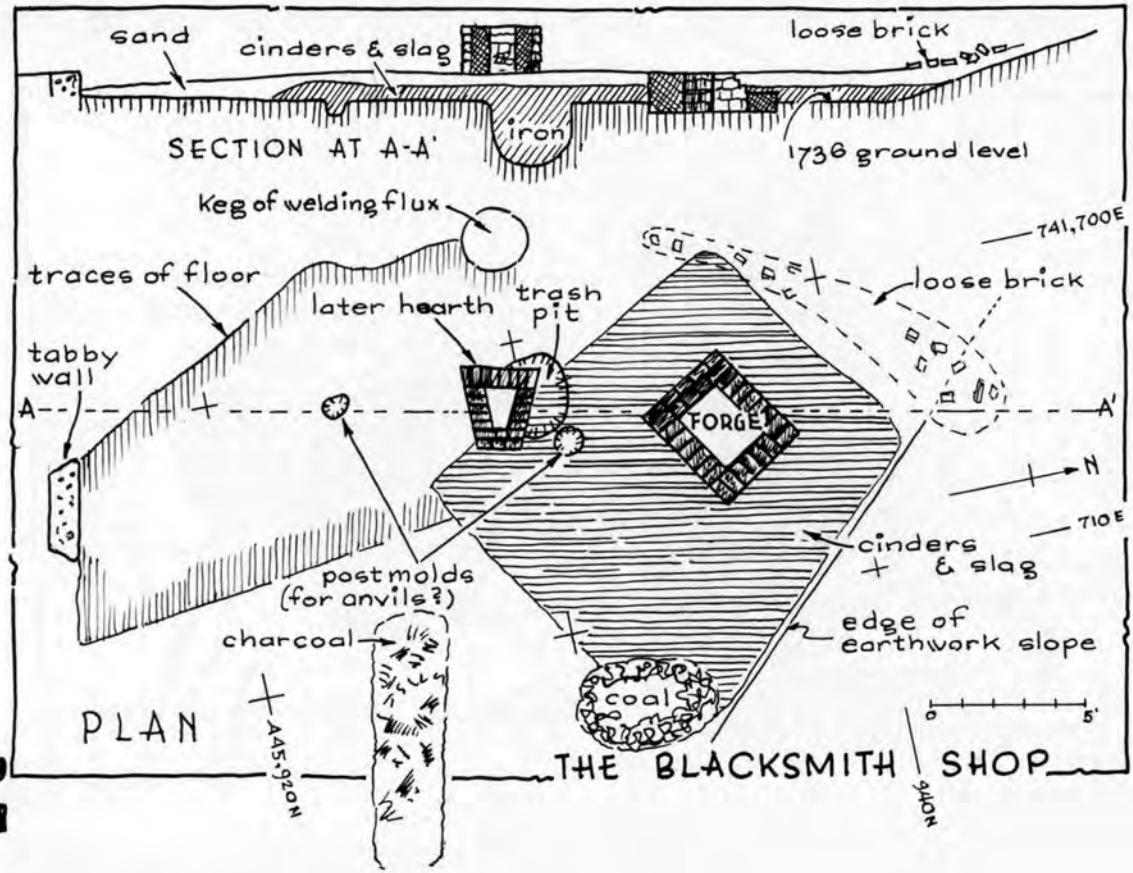
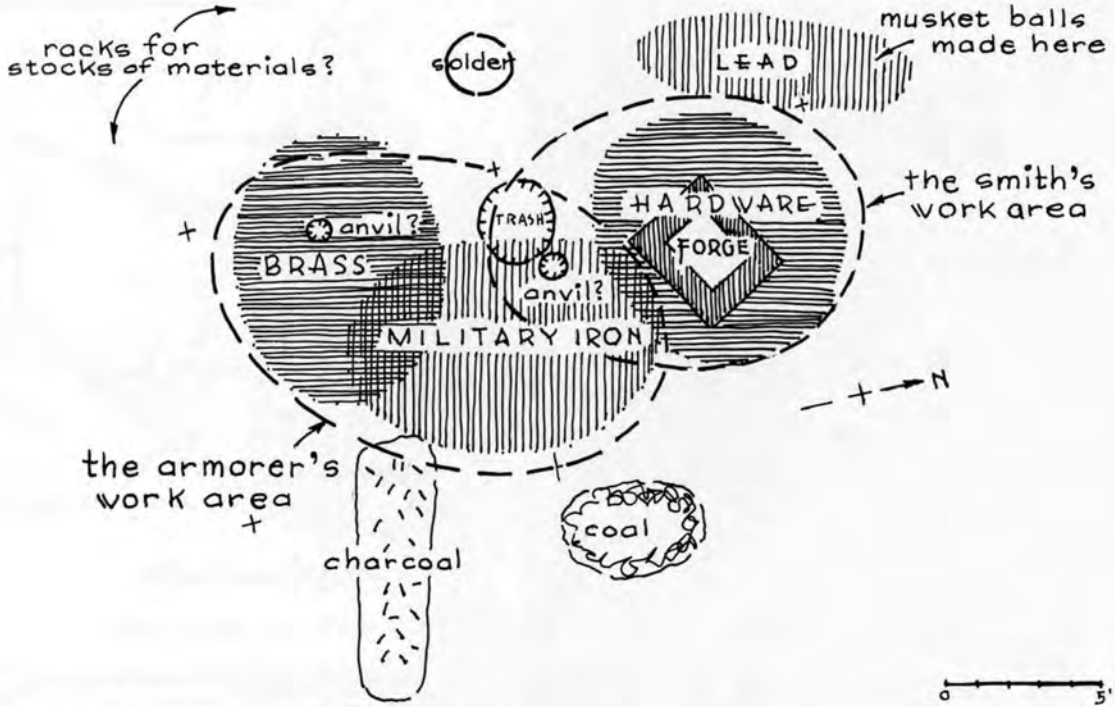
*A British archival plan, obtained by Mrs. Cate since the above was written, shows the hearth was one of eight built around a central chimney in a detached, octagonal kitchen. The plan was notarized in 1763, but represents 1762 construction. (See Public Record Office Papers, War Office 34/95 - Alexander Gray et al, "Fort George /at/ Frederica.")

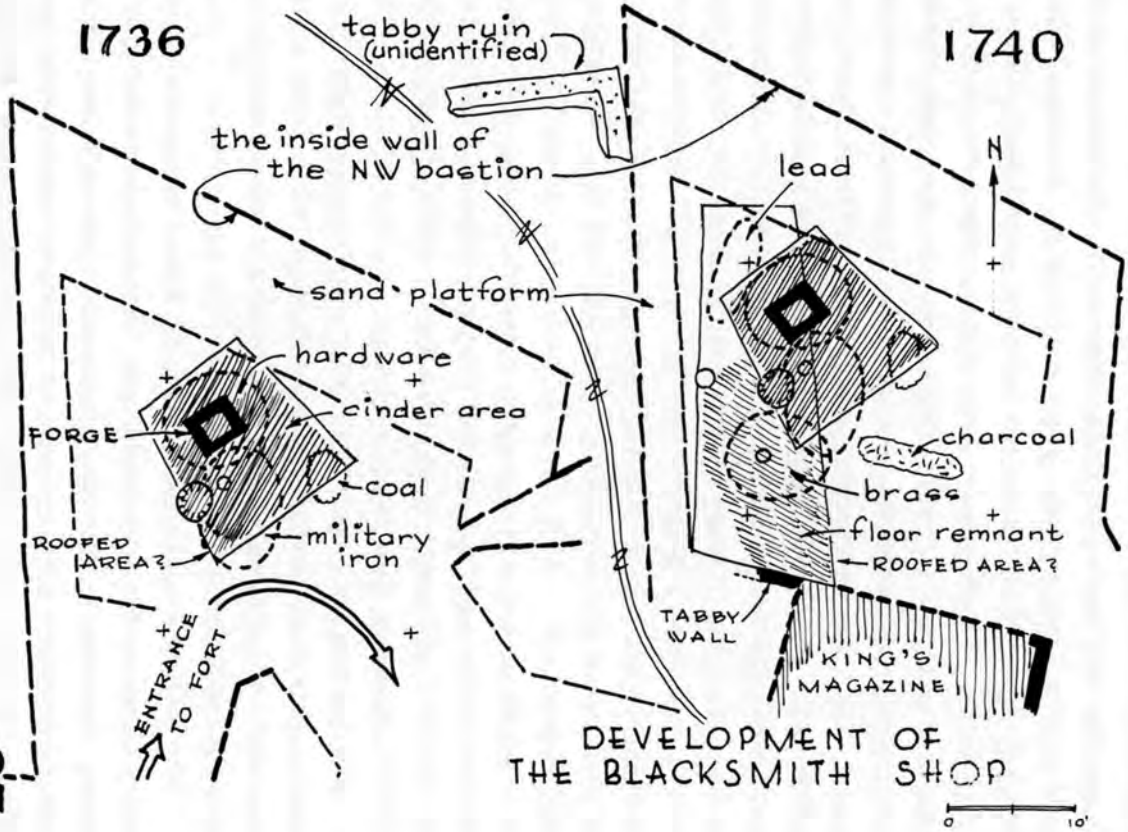
24. The Forge Ruins

The 4x5-foot colonial forge is in the foreground. Back of it is a later hearth built on top of the colonial strata.


sand
cinders & slag
loose brick
iron
SECTION AT A-A'
1736 ground level
Keg of welding flux
741,700E
traces of floor
later hearth
trash pit
loose brick
tabby wall
A
A'
FORGE
N
710E
cinders & slag
post molds (for anvils?)
edge of earthwork slope
charcoal
coal
0
5'
PLAN
A45,920N
THE BLACKSMITH SHOP
940N



26 ZONES OF REFUSE SHOW HOW THE SHOP WAS USED



DEVELOPMENT OF THE BLACKSMITH SHOP

of coal, and charcoal (mostly pine). Shiner suggests that the charcoal was essentially an igniter for the coal.

Over 5,000 artifacts were recovered from the floor. Not only do they reveal the kind of business done in the shop, but the concentrations even delineate the several zones of work and suggest the work bench locations (Figure 26). The armorer worked in the southern and eastern areas of the shop, because in these locations over 600 peices of gun furniture were found -- parts of musket locks, trigger guards, butt plates, and so on. Most brass and copper objects, including scrap, were in the south section; iron pieces were toward the east, thus zoning the work quite precisely. The kinds of objects, of course, spell out the work the armorer did: repair and replacement of brass thimbles and tips for ramrods, the breech screws which seal the after end of the gun barrel, locks (firing mechanisms), butt plates, and trigger guards. Some were fabricated from raw material right in the shop, for Shiner found ramrod thimbles together with scraps of the ribbed sheet brass from which they were cut, and lock springs only partly worked.

Weapons passing through the armorer's hands included not only the Brown Bess (the standard military musket of the period), but transitional muskets of 1710-1720, fusils (light military muskets), sporting pieces and pistols.

The northwest corner of the shop was the musket ball manufactory. Six feet northwest of the forge, Shiner found a small area relatively free of cinders and iron, but with plenty of spattered lead and nearly 100 balls.

The northeast section, including the forge area, was the smith's domain. Here he made and repaired hardware (nails, hinges, shutter hold-backs, hasps and staples, drawer pulls, knives and tools). The presence of scissors, roundhead dressmaking pins, buckles and an upholstery tack suggests that the smith was often helpful in household emergencies. Perhaps he even had a musical ear, since a jew's-harp was there too.

Metal stock recovered from the excavation included ¼-,½-,1-

and 2-inch bar iron, 1/8-inch strap iron of 1- to 1¼-inch widths (much of it obviously scraps from barrel hoops and strap hinges), copper pigs and sheets, brass sheets of .005- to .09-inch guage, copper or brass wire, and lead.

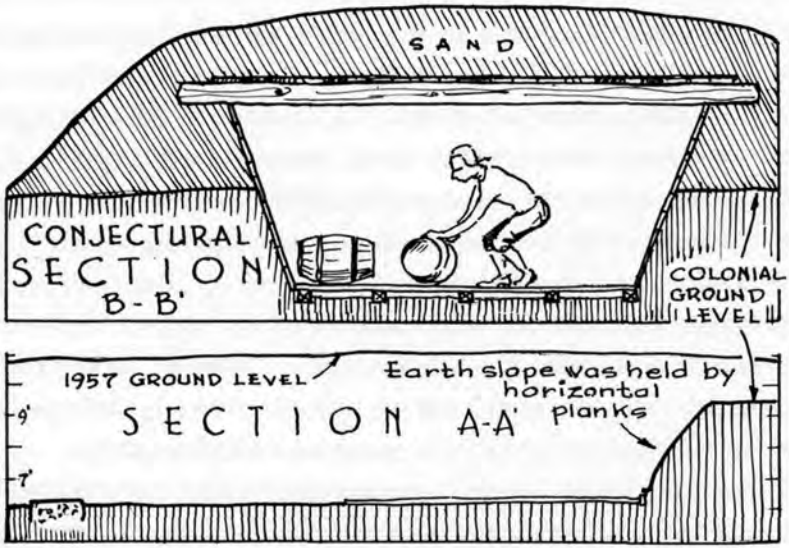
In the very center of the shop is a circular postmold which I think may well have been the location for the post holding the smith's anvil. A similar postmold is in the armorer's work area.

Although the borders of the shop floor were not well defined except on the northeast side, it is reasonably certain that the shop area was sheltered from the weather. Evidence of a shelter was not found, so it must have been an above-ground wooden structure. Inasmuch as the fort entrance at first seems to have been through the blacksmith's bastion, the shelter could not have been large enough to obstruct this entrance. The shelter must have covered only the immediate area around the forge. Perhaps it was a tarred-roof shed, open to the southeast (Figure 27).

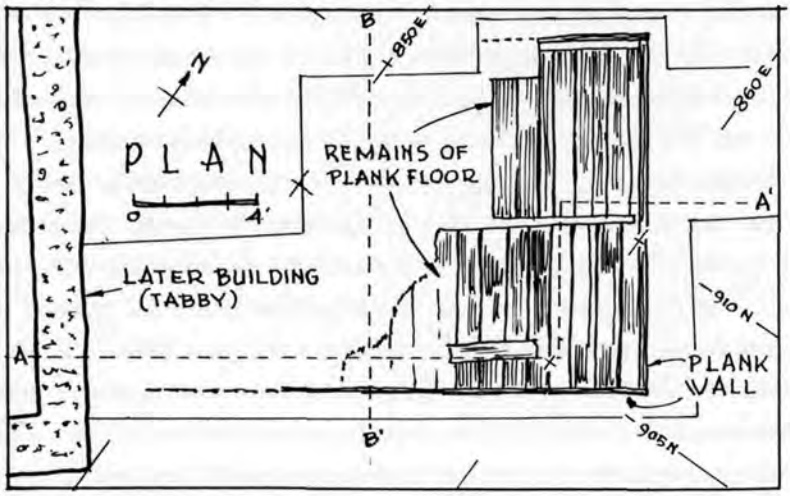
When the regiment came, the armorer's work area pushed outward, and most of the bastion was taken over by the shop. The condition suggests a greatly enlarged shed. The smith's bench would remain just north of the forge; the northwest corner became the location for molding musket balls. In the south half of the shop, the armorer set up one or two work benches. Perhaps the racks for the stocks of metal were on the long west wall.

Powder Magazine of 1736. Among other structures erected by the end of May 1736 were an earth-covered powder magazine of heavy timber in one of the bastions, and a bombproof room in another.[72] Shiner's work in the northeast bastion uncovered what appears to be the remnant of a magazine (Figure 28).[73]

In the center of the bastion 3½ feet below the colonial ground level, he found a nailed floor of 6- to 8-inch planks, covering a sizable portion of a sunken room 12 feet wide and perhaps 16 feet long. The exact length was indeterminate, due to intrusion of a tabby building which supplanted the wooden structure in later years. Toward the parade, the planks had been removed. The wood was badly decayed, but was probably 2-inch material.



THE POWDER MAGAZINE OF 1736



28

Similar planking, laid horizontally, was on the walls, which sloped outward at an angle of 65°. Evidently these boards were a revetment to hold the earth in place, and do not seem to have been tied into any structural members. The likelihood is that the magazine was a dugout, with timbers upon thick earth walls to form a roof covered with several feet of earth.

There is, of course, the possibility this structure was the bombproof rather than the magazine. But the wooden floor, essential for dryness in a magazine, would not have been necessary in a bombproof. And while best practice used wooden pegs or copper nails instead of the iron ones found here (from which fatal sparks might be struck), the magazine was built, not under best conditions, but under the duress of a Spanish alarm.

Two other possibilities were also rejected. The 1736 map represents a U-shaped open area at ground level in the bastions. The floor we excavated was not strictly U-shaped and was 3½ feet below the colonial level. Nor could the floor have been a gun platform. It was weakened by numerous joints, did not conform to standard measurements, and was too far below the parapet for any gun except a mortar.

Presumably, the old magazine was torn down and leveled about 1740, as the brick-arched King's Magazine was readied. Steep-angled striations of vari-colored earth showed that the dugout was intentionally filled by earth thrown in with hand tools.[74]

The North Storehouse. The historical records describe the storehouse built in 1736 as a 3-story brick-and-timber structure 18 x 60 feet in size, with a tarred flat roof. The Wesleys preached in it -- Charles Wesley called it "our tabernacle at present."[75] And John Wesley set down these notes in his journal for Sunday, April 11, 1736:

> I preached at the new store-house on the first verse of the Gospel for the day: "Which of you convinceth Me of sin? And if I say the truth, why do ye not believe Me?" There was a large congregation, whome I endeavored to convince of unbelief, by simply proposing the conditions of salvation as they are laid down in Scripture, and appealing to their own hearts whether they believed they could be saved on no other terms.[76]

The North Storehouse seems to have been the only meeting place until John Wesley himself built a house some months later. By 1739, however, more commodious chapel space seems to have been provided in the South Storehouse.[77]

In addition to spiritual food, the storehouse furnished the material needs of the community. As part of the agreement with recruits for the Colony of Georgia, the Trustees agreed to furnish the head of each family a year's provisions as follows:

meat - - -	312	pounds
rice - - -	104	"
pease - - -	104	"
flour - - -	104	"
cheese - - -	16	"
butter - - -	8	"
sugar - - -	8	"
salt - - -	24	"
soap - - -	12	"
spun cotton	1	"
spice - - -	8	ounces
lamp oil - -	12	quarts
molasses - -	52	"
vinegar - -	4	gallons
strong beer-	49	"

The same amount of supplies, except for lesser quantities of meat, lamp oil, cotton and <u>no</u> beer, was allotted to other "heads"; that is, members of the family aged 12 or older. In the early days, there were about 40 families, totaling some 116 people. Francis Moore, the storekeeper, spent £1489 to stock the storehouse with tools, provisions and other equipment in 1736, and the estimate of provisions for the year 1737 amounted to 20,586 pounds of meat, 15,980 pounds of rice, 877½ bushels of corn and 2,340 quarts of molasses at a cost of over £413. No wonder a 3-story building was needed! And in addition to these staples were the 70 pipes of Madeira wine which arrived aboard the snow <u>Martha</u>.[78]

When the period of free supplies ended in 1738, many of the settlers were not yet able to support themselves, and petitioned for the weekly "loan" of bread, meat and molasses. The Trustees agreed to furnish temporary relief, but avowed their intent to close the storehouse as soon as possible. The imminence of war and the arrival of the Regiment changed both the situation and the minds of the Trustees. They did, however, take care to specify that their stores should be issued "in the first place to the

Trustees' servants [i. e., to indentured persons who did public work], in the second to the windows and orphans, and afterwards to such planters who are in necessity from sickness or any unavoidable calamity."[78]

To show the tremendous change which took place during the war years, we have only to glance at the list of provisions on hand when the Regiment was disbanded:

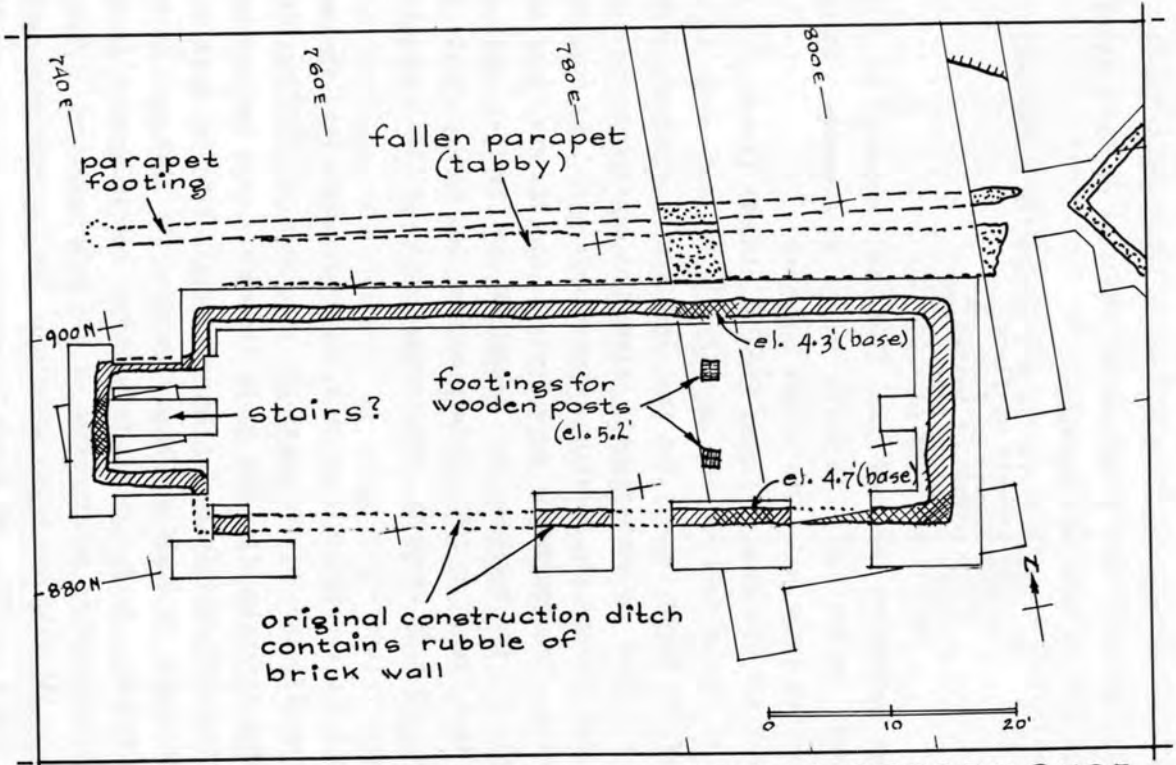
244 barrels (51,972 pounds) of Irish beef
244 barrels of flour
5,209 pounds of rice
3,622 pounds of butter
2,752 pints of pease [80]
15,104 pints of oatmeal

Such huge quantities of food and increased amounts of other stores made it necessary to build other storehouses, which I shall discuss later under the proper headings.

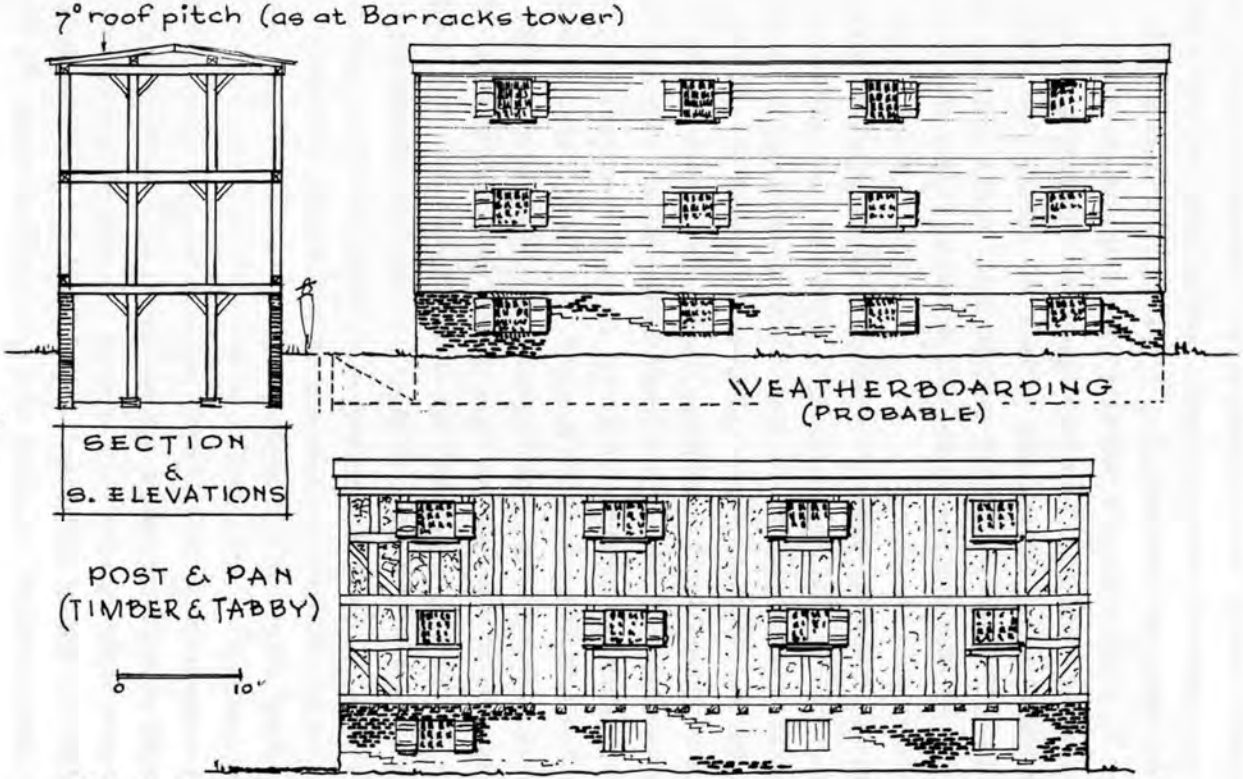
The first storehouse (Figure 29), so closely linked with the precarious first days of the settlement, is gone even to the bricks of the foundations. Yet its location is precisely known, clearly revealed by archeology. Fairbanks' exploratory trenches in 1953 established the location, approximate size and condition of the site. Because funds were limited and it was clear that the fabric of the building was destroyed, no further work was done at that time. In 1957, Shiner worked out more accurate dimensions (18 x 60 feet) by uncovering most of its foundation trenches.[81]

Since the records tell us that two storehouses were the same size, identification of the northerly site with the 1736 building became positive only after the South Storehouse ruin was excavated and found to contain roof tile and flint. Tile is used only on gabled roofs; it could not have come from the flat roof of the 1736 storehouse. As for flint, Oglethorpe was thoughtful enough to say it was used in construction of the 1739 building.[82] Therefore, since the tile and flint identified the South Storehouse as the one built in 1739, the North Storehouse must be the earlier one of 1736.

Its hard-packed sand floor lay nearly 4 feet below the parade level and was 3 feet deep with brick rubble-- rubble full



29 PLAN OF EXCAVATIONS AT NORTH STOREHOUSE



30 CONJECTURAL RECONSTRUCTIONS OF THE NORTH STOREHOUSE

of the strap-iron ties used in brickmasonry, a quantity of green bottle glass, Delftware sherds, unused gun flints, a grenade and numerous grenade and hollow shot fragments.

The wall footing trenches were about 6 inches lower than the floor. So completely were the walls removed that it was difficult to determine their dimensions. Fairbanks estimates them to have been 1½ bricks (about 12 inches) wide. Shiner concurs.

Centered on the west end, there had been projecting masonry walls, perhaps for giving access to ramp or stairway to a door. If, as the 1736 map indicates, the original fort entrance was through the northwest bastion, such a door would have been quite convenient at this location.

Although the floor was not completely excavated, Fairbanks' trench across it did uncover a pair of brick foundations, 18 inches square and 5 feet apart, for posts supporting the upper floors. On top of each foundation was a spread of mortar, 9 inches square, bearing the end grain imprint of a wooden post.

A tiny sketch (Figure 38) on the Miller map of 1796 may depict this building, although I believe it is rather intended to show the South Storehouse and the King's Magazine. Even without this sketch, however, the archeological and documentary evidence together give us a fairly clear idea of how it looked (Figure 30).

This was said to be a brick and timber structure. Its brick foundation was narrow -- only 12 inches -- so it is unlikely that the brick portion was more than one story high. This was probably the section that was completed in March 1736.[83] Since the wall was about 4 feet in the ground, only 6 feet or so would show above the parade.

Boards and frames for the building were brought by ship, and supplemented with lumber sawed by the settlers.[84] We conjecture that the two upper stories were framed in timber and weatherboarded, as was the church build a few decades later at Midway. However, post and tabby construction of a sort was found in Dr. Hawkins' house (1736) on Lot 1 South, and also on Lot 5 North[85] so perhaps the upper stories of the Storehouse were of the post-

and-pan type of construction with plaster or tabby as the "pan." The roof was flat, sheathed with boards and covered with sand and tar.[86]

There are no data on openings, except for the probable doorway on the west end.

The post foundations set 5 feet apart on the floor are a good clue to the interior construction.

We cannot, of course, determine the ceiling heights with certainty. A 10-foot first story is logical for a storehouse. In the upper stories, ceilings were probably closer to 8 feet,[87] which could mean that the building had a height from ground to roof of about 25 feet.

The South Storehouse. Construction of this building, made of "Brick and Timber,"[88] took place in 1738-1739.[89] The brick for it was "burnt" on the island;[90] as for the lumber, Oglethorpe wrote that "The Men Servants . . . are now sawing Timber for the Church or rather Chappel at Frederica, which I have agreed to have built. The whole Building will be Sixty foot long by twenty foot wide, three Stories, the two Lowermost Cellars and Rooms for Provisions, Books & ca: and the Uppermost a Chappel. The Assistance of ye Timber, the work of the Trustees Servants, & the Flints I brought over, will make such a saving that I think I shall get the whole finish'd for less than 150Ł Money, exclusive of ye Timber and Labour of the Trustees Servants . . ."[91] Later he said this building had one story underground, the next story for a chapel, and "the uppermost for an armory."[92]

The Trustees instructed him that the chapel should have "no Pews but for the Minister and Magistracy, and the rest to be Benches as is at Tunbridge Chappel, which will be more capacious and less Subject to Disputes for Places."[93] To equip this meeting room, from time to time the Trustees sent such alpha and omega articles as a basin and a pall -- the one for christenings and the other for burials -- as well as the large Book of Common Prayer and 8 brass candlesticks "to hold candles at Evening Publick Worship."[94]

As with the earlier storehouse, the materials in the South Storehouse were salvaged. But the building itself was more substantial than its precursor and the salvage was not so thoroughly done. Fortunately, too, its site was clear of trees. Shiner was able to excavate it completely and obtain a detailed floor plan (Figure 33).[95]

For three of the four exterior walls, much was still in place. It was plain to see how Oglethorpe's flint was used to economize on construction costs. The 24-inch-thick walls contained a core of flint-and-mortar, with brick veneer on each face. The salvagers had removed almost all the brick. The only solid brickwork was around the doorway ih the center of the east wall.

The stub of an unplastered brick partition divided the storehouse into a pair of rooms. One, at the east end, was 17 x 17 feet, paved with 10-inch red clay tile or "paving brick"[96] laid on a mortar base. The larger room was 17 x 39 feet with a floor of cleft "kidney" flints set in sand much like cobblestones (Figure 32). The flint was the lower of the two floors by 9 inches and was 2.8 feet below the colonial ground level.

Entrance to the smaller room was by means of the east doorway. Its brick jambs, 4 feet apart, were sufficiently intact to show they were built over a 6 x 6-inch wooden door sill. From the parade level, a ramp sloped down to a small level area, apparently paved with mortar, in front of the doorway.

At the south end of the partition was a doorway about 5 feet wide connecting the two rooms. Again, there was trace of a 6 x 6-inch wooden threshold. The office-like character of the small tile-floored room suggests that there should be another door to the large storeroom, possibly in the west wall, for bringing in bulky stores. But erosion by the river has completely claimed the west wall.

In the east room at the center of the partition a few blackened bricks were faint evidence of a fireplace hearth.

Symmetrically spaced in the west room were six brick foundations for the wooden posts that supported the second floor beams.

31. View of the Excavation at the South Storehouse

In the foreground is the tile-floored "office;" beyond the brick partition stub in the center is a flint-floored storeroom. Of the north wall at right, the rubble core was still in place, though salvagers had long ago removed the brick veneer from both sides of it.

The spacing of these posts conforms quite precisely to that required in construction of a roof truss;[97] obviously the posts carried upward from foundation to roof rafters.

The thickness (2 feet) of the outside walls is an indication that they were masonry all the way up, and our conjectural reconstruction conforms remarkably well to the proportions of the sketch on the 1796 map (Figure 34).

The presence of roof tile fragments amongst the rubble covering the floors not only certifies the type of roof, but established its pitch, since contemporary practice dictated a slope of between 45 to 50° for plaintiles.[98]

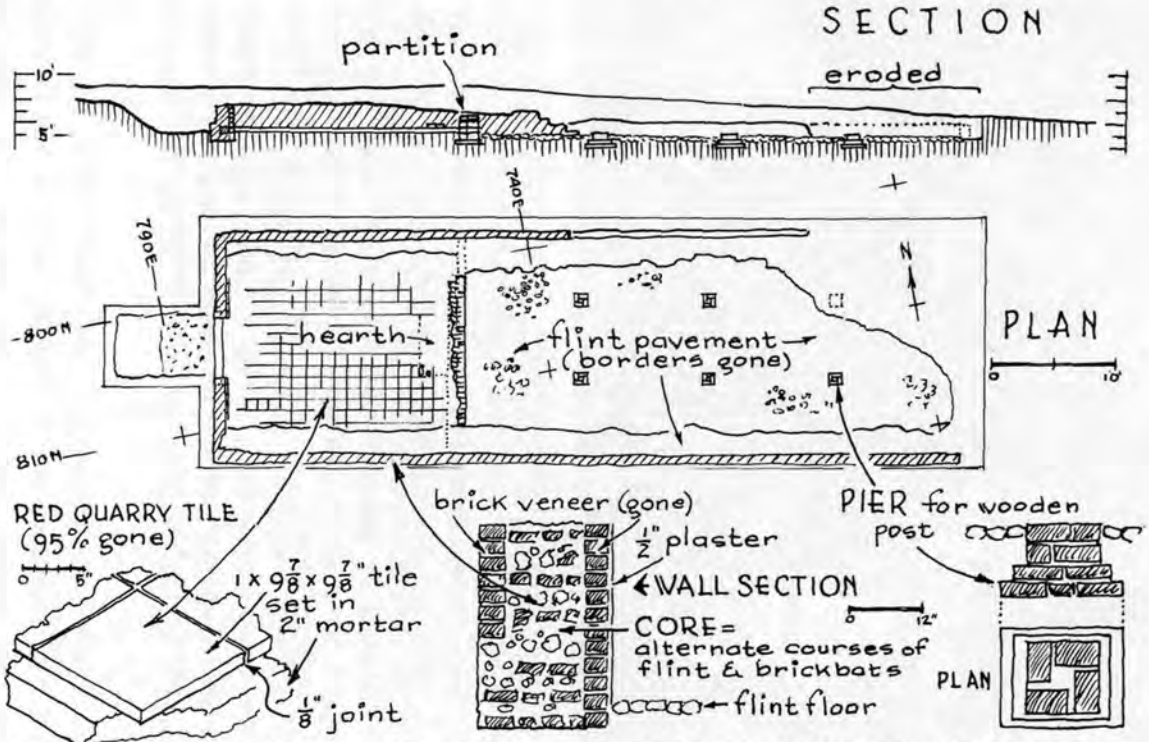
The King's Magazine. This is the mystery ruin. Of all the masonry structures in the fort, it alone has weathered the years. It was a very substantial building. Yet, in the records it is a ghost.[99] Nowhere is its construction specifically mentioned. Neither is it described. There is not even a name for it; we agree to call it the King's Magazine in order to distinguish it from the King's Storehouses, but we do so with full realization that the entire government warehouse system at Frederica -- the storehouses, powder magazines, and this mystery building -- is properly comprised in the term "King's Magazine."[100]

What we know of its early history is gleaned from inference. Tabby construction at the fort was under way in 1740 and 1741.[101] Therefore, this building must be of that period. By now, the island kilns were producing brick and lime, and sawpits had long been in operation.[102] So the basic construction materials must have been local. Beyond these simple conclusions, the written record does not lead us. Perforce we turn to the building itself.

When the study began, the only original masonry standing above ground was a 40-foot length of the east wall, and a brick-vaulted room with all its walls intact except the west one (Figures 36, 37). Against these originals, workmen in 1903 had reconstructed the vault of the adjacent southerly room, and built new exterior walls on the south and west by using tabby

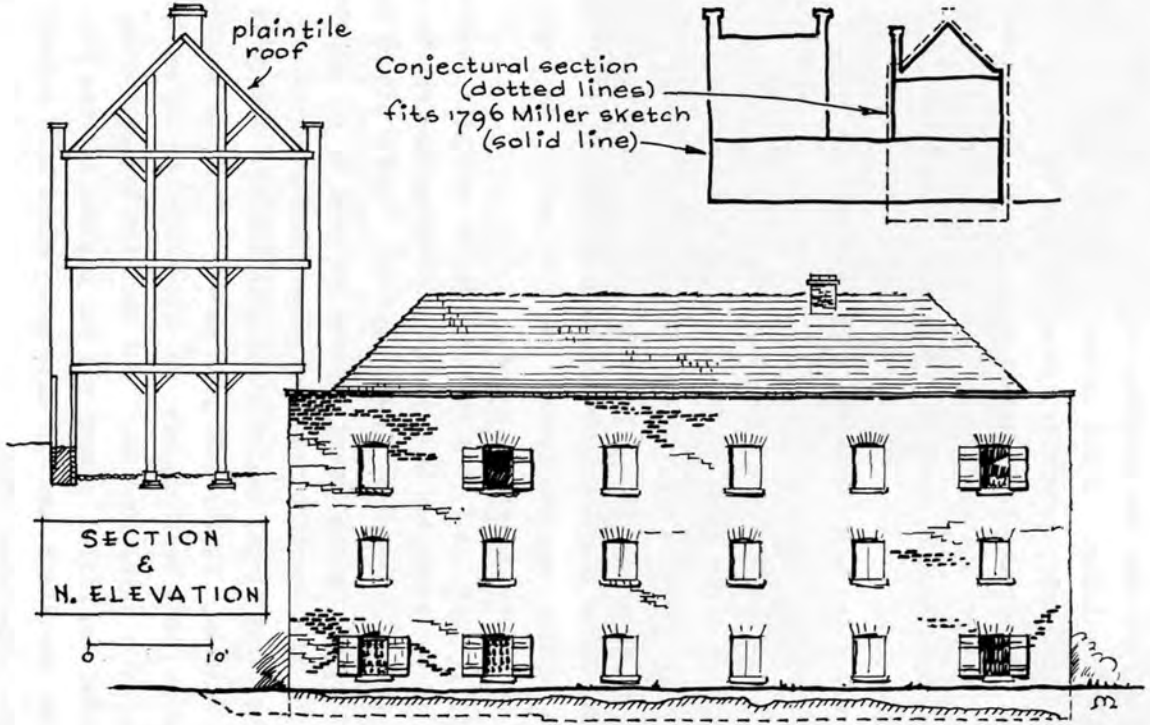
32. Closeup of the Flint Floor, South Storehouse

The number card is two inches square. Notice that the stones are laid flat side up in sand. The 12x12-inch brick pier at center has a thin spread of mortar which bears the butt imprint of the wooden post which helped support the upper floors. Oglethorpe's mention of "the Flints I brought over" helped establish the construction date of this storehouse (1739). Flint stones were also used, along with brickbats, as aggregate in the masonry walls.



EXCAVATIONS AT THE SOUTH STOREHOUSE

33



CONJECTURAL RECONSTRUCTION OF THE SOUTH STOREHOUSE

34

blocks from the original walls, which had fallen. Then the walls were crowned with tabby-concrete merlons.[103] These were removed prior to our stabilization of the walls and vaults in 1956-1957.[104]

In 1956 Shiner began digging at the north end of the ruin. It soon developed that the standing ruin comprised less than half the original building. A few inches below the ground was the base of an east wall, generally intact up to the level of the thresholds. Unfortunately, salvage and erosion had claimed the west wall, most of the north wall, and the floors. But enough masonry was uncovered to reveal the plan of the building and define its function.

Originally the edifice was some 20 feet wide by 96 feet long. It was divided into three parts: 1) The 20-foot central section projected 6 inches outward from the main wall, and evidently housed a single large room. Evidence points to this room as a sally port, or the main gate to the fort.* 2) The north section, 38 feet long, was apparently a guardroom unit. It was separated into 4 rooms, each with a door opening to the parade. 3) The 38-foot south section was the powder magazine unit. As today, it consisted of two brick-vaulted rooms.

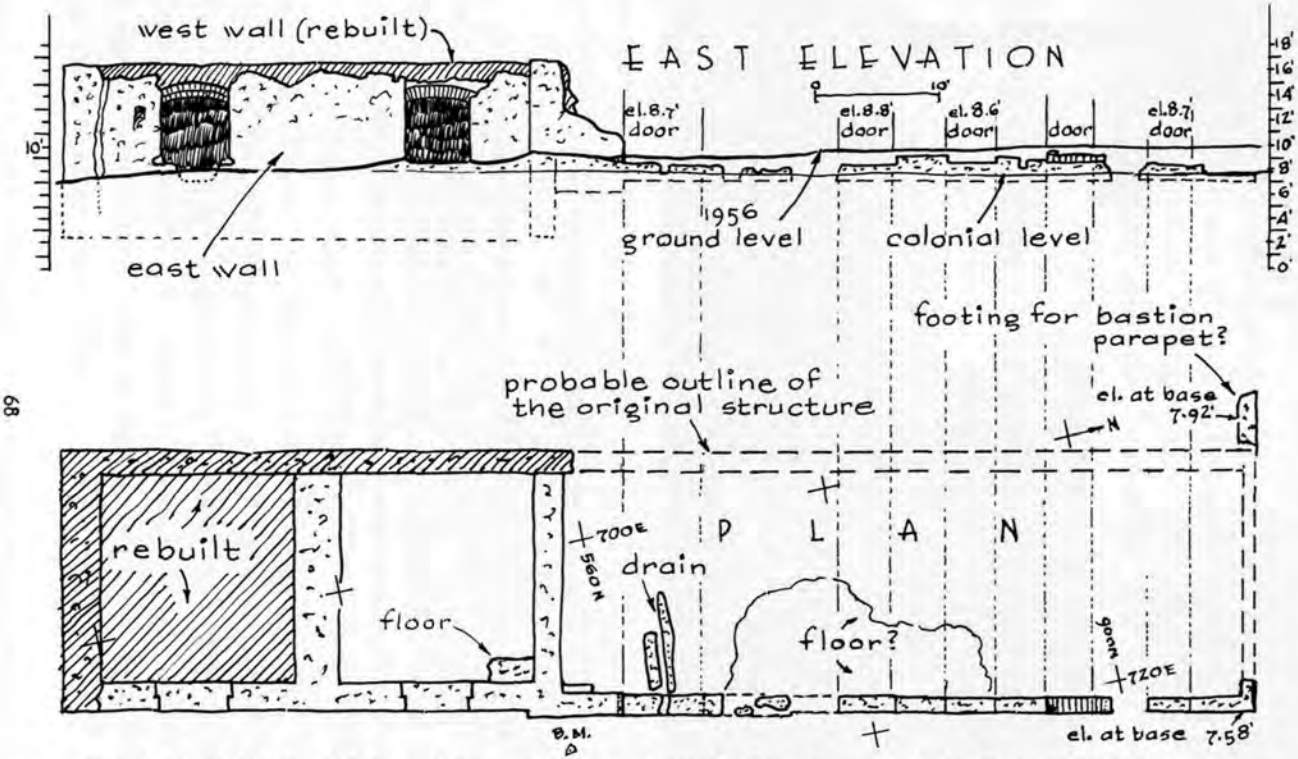
The Sally Port. All that is left in the probable gate area are parts of the south and east walls, including some of the east doorway, perhaps a trace of shell subfloor, and a bit of floor gutter. But the combination of factors pointing to the existence of a gate at this location are fairly conclusive.

In the first place, the original gate was most likely in the northwest bastion, as the 1736 plan shows. The tiny blacksmith shop, also in this bastion, was no hindrance to the entrance. Not in the early days, that is. But when the Regiment came, the shop expanded and filled almost all the bastion (Figure 27). We can say with certainty that no main gate could have existed in this bastion after about 1740.

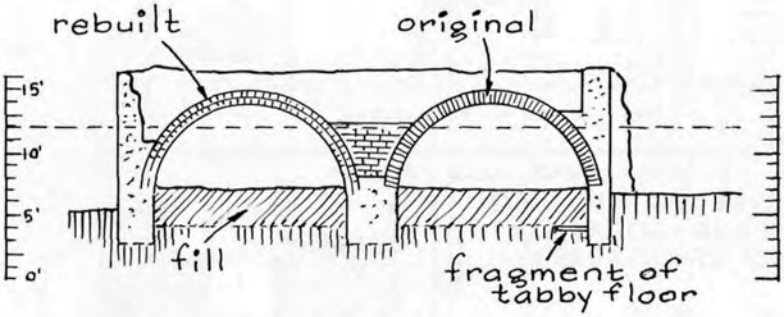
*Since the above was written, the 1762 map obtained by Mrs. Cate shows that the gate was at the center of the building, as postulated here.

35. View of the King's Magazine

Originally this building was a symmetrical structure 96 feet long. The wall stubs in the foreground, uncovered by archeology, are the only remains of the northern half. In the south end, the massiveness of the construction helped to preserve the ruin.

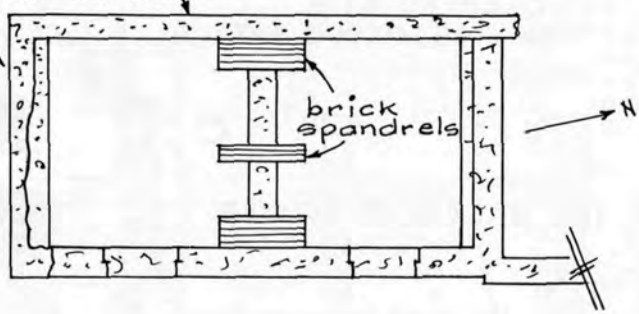


36 EXCAVATIONS AT THE KING'S MAGAZINE



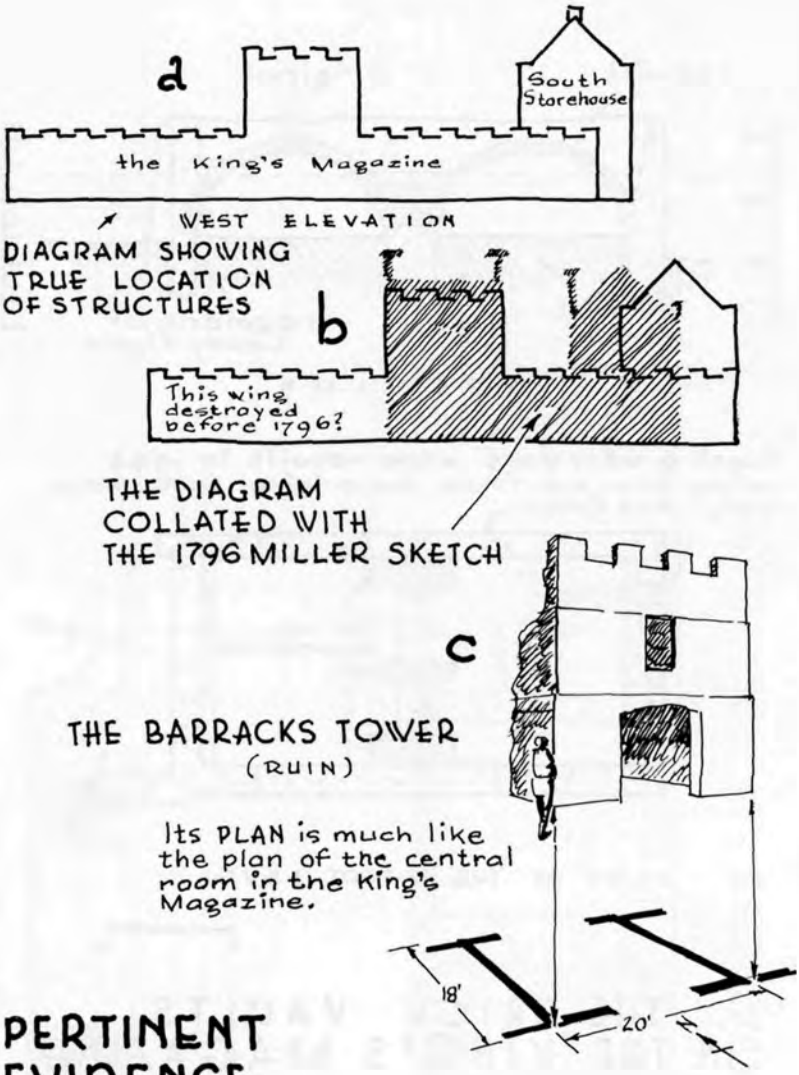
SECTION

South & west walls were rebuilt in 1904 using blocks from the original tabby walls, which had fallen.



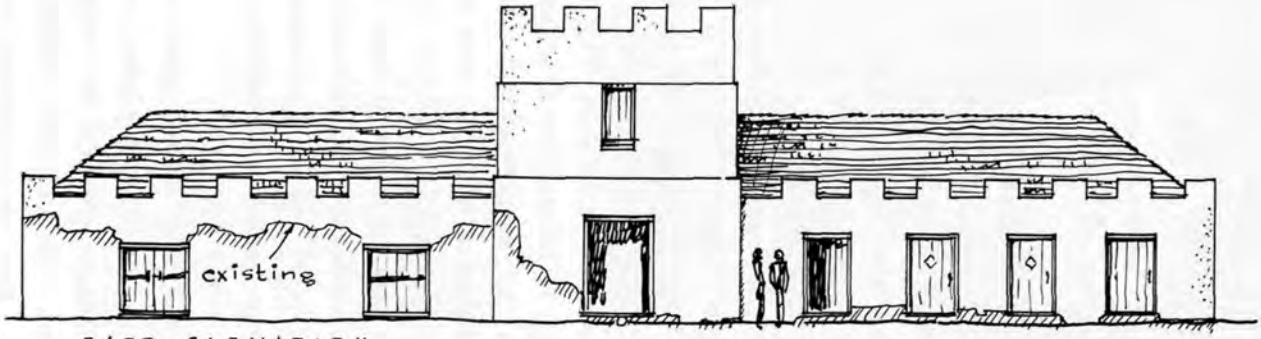
PLAN AT THE 12-FOOT LEVEL

THE BRICK VAULTS IN THE KING'S MAGAZINE

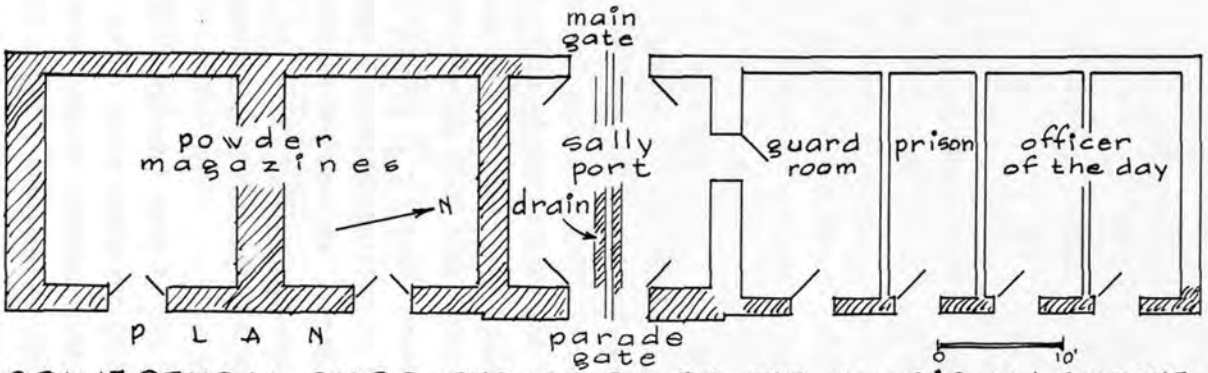


PERTINENT EVIDENCE

38



EAST ELEVATION



PLAN

CONJECTURAL RECONSTRUCTION OF THE KING'S MAGAZINE

From the standpoint of the military engineer, the main gate to a fort must be protected by outworks. An outwork is known to have existed at the west wall. It was called the spur-work and consisted of an earth salient enclosing a gun battery.[105] Archeological checks proved that neither gate nor outworks were in the north or east walls. The south wall was taken by erosion, but there is no reason to believe that it was different from the other two.

The spur was built on low ground at the foot of Frederica's miniature bluff. It was several feet lower than the main fort, and its walls could, therefore, offer little or no protection to the fort gate. Perhaps for this reason the original gate was tucked away in the flank of the bastion, and there it no doubt remained until the strengthening of the fort after 1738.

Available records do not describe the post-1738 riverfront construction, but there is prominent mention of a "Ravelin" and "Water-port" /gate/,[106] as well as "a bluff which is made to preserve the fortification from the tide . . ."[107] The corner of a substantial tabby structure exists in the spur-work area (Figures 11, 27) and should not be overlooked.* These are enough to show that important changes were made in the waterfront; there is strong likelihood that the spur was modified in order to meet new conditions. Possibly it evolved into a conventional ravelin capable of protecting the gate. A passage sloping downward from the parade ground through the King's Magazine would set the west or outer doorway somewhat below the parade level and at an elevation which could more easily be covered by an earthwork ravelin in front of it.

Should it seem strange that the one gate to the fort was located on the water side, quite inaccessible from the town, remember its proximity to the river landing, convenient for bringing water freight into the storehouses. In the 18th century, heavy traffic could move only by water. Even more important than convenience, however, was the military advantage that water trans-

*The 1762 plan shows it to have been newly built quarters.

40. The Tabby Gutter

This conduit pierced the wide threshold at the center of the east wall of the King's Magazine. It was intended to draw surface water from the fort parade. Standard practice located such drains in sally ports. Here the slope is downward toward the river, the calm waters of which are reflecting a cloudy sky.

port could reinforce the garrison even if the town were in enemy hands.[108]

Since the King's Magazine extended the full length of the west curtain, an entrance on this side was obliged to pierce the building. In military practice, a gate is usually placed midway of the curtain, to be in plain view of the soldiers in adjacent bastions. Such a central location is provided by the 20 x 20-foot central section of the King's Magazine.

Having gate, guardroom and magazine in close proximity was accepted practice during the 1700's.[109] The fact that the center of the building projects beyond the main facade is prima facie evidence that the designer had some reason to feature this unit. Its doorway, as evidenced by an imprint left in the tabby by a wooden threshold, was close to 7 feet wide. This is the minimum width for a fort gate.

Under the center of the threshold was a tabby gutter. About 10 feet of the gutter was present and erosion had pulled it out of line but obviously it was intended for drainage of surface water from the parade to the riverbank. It was a U-shaped drain, probably planked on top to form a conduit through the tabby floor. Presence of such a drain through the sally port was standard military practice.[110]

In the southeast corner of the room, Shiner found indication of a packed shell stratum. It may have been the remnant of a tabby floor.

The sally port was probably about 16 feet square (Figure 39). It would have had two doors -- the outer gate through the west wall and the inner gate through the east wall, opening onto the parade. Both would be double-leaf doors, swinging inward. The outer door would be faced with iron straps over the structural members and studded with nails to discourage enemy axes.[111]

There may also have been a side door, opening into the adjacent guardroom.

<u>The Guardroom Unit</u>. The north section of the building was built with 15 inch walls instead of the 2 foot-thick ones found

elsewhere in the building. All evidences of floors and partitions were gone; but unmistakable traces of four doorways were in the east wall at parade level, and the northeast corner was in place so that we could ascertain the overall length of the building (96 feet).

The spacing of the doorways (Figure 39) shows that the area was divided into four rooms, the three northern ones about 8 feet wide and the southerly one 12. One doorway was bricked up, indicating that the four rooms were later converted to three. Perhaps the partitions had been built of wood, and could be modified or even torn out without structurally weakening the building. The latter assumption in turn suggests that the roof load was carried on posts and beams as was done in the storehouses.

Beneath about two feet of 19th century trash, Shiner recovered wine bottle fragments, flint, pipe stems and Delftware sherds. These are typical items associated with the soldier at Frederica. And if the guardroom establishment were likewise typical of the times, it might have consisted of a guardroom, a prison cell, and a room for the officer of the day. The large room next to the Sally port would be the guardroom. The cell would be the next to the north, leaving the two northernmost rooms for the officer of the day or other use. Since six glass vials were recovered from the northernmost room, one of them labeled "Essence of Peppermint by the Kings Patent," Shiner thought it may have been a dispensary. Mrs. Cate tends toward the theory that the O.D. had indigestion.

Except for a few inches at the east corner, the north wall is completely gone. However, just west of the area occupied by the original building, and in line with the north wall, was a 4-foot-long section of tabby footing. The base of this piece of masonry was 4 inches <u>higher</u> than the base of the north wall. It was also 5 inches <u>wider</u>, so it does not seem to have been part of this wall and hence was not part of the King's Magazine. As Figure 27 shows, the wall in question is in the proper location for a parapet of the northwest bastion. This it may

have been, although it is slightly wider than the parapet footing Fairbanks found along the north curtain.

Powder Magazines. Though much weathered, the east and north walls of the magazine section are essentially intact. So is the north vault.

After the west and south walls had fallen, the two rooms stood open for many years, and shore erosion has stolen almost all of their floor surfaces, even under the original vault of the northerly room. Excavation here uncovered a substantial little patch of tabby floor clinging to the northeast corner. This floor was at elevation 4.1 feet, or 4.4 feet below the colonial land level. Eighteenth century magazine design required construction of a plank floor 2 feet off the ground for dryness. Such a floor in these rooms would still be 2.4 feet below the threshold and thus leave 8 feet of headroom for the powder handlers. Powder casks were laid -- or stacked -- on their sides directly on the floor. Each room probably had an indirect vent through the west wall for air circulation. Entrance doors opened inward, had substantial hardware, and may have been either single or double leaf.[112]

Conjectural View of the King's Magazine. Traces of stucco on the weathered walls indicate this to have been the exterior finish. Window-glass fragments were plentiful along the east wall of the north section, although not in concentrations that would pinpoint window locations. Nor is it certain that the glass is not from a post-colonial house on the site.

Existing walls stand about 8 feet (elevation 16.5 feet) above the colonial ground level. This height would permit covering the magazine vaults with about 2 feet of sand. While 3 feet was the minimum recommended in 18th century practice,[113] frontier conditions may have dictated a lesser amount; or a gable roof (instead of a flat one) over the vault would permit the use of the standard amount of sand. Considered along with other factors discussed below, the 8-foot height seems to be acceptable as the original dimension of the walls.

This conclusion is bolstered by evidence in the Barracks tower, a contemporary structure[114] a short distance northeast of the fort. Scars of ceiling joists are plainly seen in the tabby, 8 feet above the floor in the Barracks ruin.

Aside from their having been built about the same time and of the same materials, the King's Magazine and the Barracks have other striking similarities. Comparative dimensions are alike: the north section of the Barracks is almost identical in size (20 x 90 feet) with the King's Magazine. The central room of each is about 20 x 20 feet. Comparable walls are 24:22 and 15:12 inches, with the Magazine having the slightly thicker walls, as would be natural in a fort building.

Each has a strongly emphasized central feature. At the Barracks, this feature was a 20 x 20-foot tower. At the King's Magazine, the plan plus 24-inch wide foundations for the center unit indicate a similar tower, which may, incidentally, be represented in the 1796 sketch (Figure 38).*

I have pointed out that the center unit of the King's Magazine projects eastward a few inches beyond its companion walls. Its doorway was about 7 feet in width, or slightly narrower than the Barracks tower doorway. A fort gate was required to be wide enough to admit a gun carriage, and 8 to 9 feet high. The 7-foot width gave adequate clearance for all carriage types except the so-called "traveling carriage" used only to transport cannon tubes overland.[115] As to height, the Barracks doorway is approximately 8 feet high, and the Magazine doorway was probably the same.

Because a tower was the gateway to the Barracks, there is considerable justification for the hypothesis that the central feature of the King's Magazine was also a tower, and that it, too, was a gate -- the entrance to the fort. The projecting façade, the wide doorway, the thick walls, the floor drain, the central location behind an outwork on the river front -- all these point

*The 1762 plan shows the center unit to have had an upper floor.

to this room as the fort entrance. It is true that the Barracks tower is described in the documents, whereas, in the records so far available, there is no mention of the Magazine tower. But for that matter, the records apparently fail to mention the tabby building in the fort at all, except in the general terms of construction under way at the site. Yet, the facts of its existence and its antiquity are unquestionable.

The similarities between the two buildings suggest that the same engineer planned them. Hence, we assume a likeness in design of the gate towers (Figures 38, 39).* The Barracks tower has exterior setbacks, due to reductions in the wall thickness at first and second story levels. These setbacks form horizontal lines around the tower (Figure 38c). The lower setback is 10 feet high, or 2 feet above the roof plate of the adjacent quarters. When this design is applied to the King's Magazine, a similar horizontal line is established (Figure 39). Esthetically, this line should set the height of the topmost features of adjacent walls.

Research by Margaret Davis Cate marshalls strong evidence for the existence of merlons on the King's Magazine.[116] An 1851 sketch shows merlons on a ruin by the river shore at Frederica (the King's Magazine is by the river shore); information for the sketch came from a local man (W. W. Hazzard) who knew the area from the early 1800's and who was sufficiently interested in antiquities to write a history of the county (1826). The merlons placed on the building during the 1904 reconstruction were built by a well-known local engineer and author (Capt. Charles Spalding Wylly), a former Confederate officer who had known the building intimately since the 1840's. These people would hardly have put merlons on the building if there were no precedent for them.

Assuming that merlons did exist on the original building, they were, of course, built upon the 8-foot-high walls that are

*"This argument is buttressed by the 1762 plan, which makes it clear that the center unit of the King's Magazine did have an upper floor.

still standing. It is unlikely that they projected above the horizontal line formed by the lower setback of the gate tower. A logical relationship between the wing walls and the tower is shown in Figure 39, with merlons to fill the space between. The height of the crenelations for the wing walls is, therefore, less than the height of the tower merlons, although the other dimensions are about the same. The merlons on the tower are naturally facsimiles of the existing ones at the Barracks tower.

It should be made clear that by the 18th century, crenelated walls served no defensive purpose. They were merely a traditional decoration, useful to a designer who wanted his building to have a pseudo-military appearance. The tradition still survives on many modern armory structures.

There is no evidence at all on roof design and materials for the King's Magazine, but certain information from the Barracks is of interest in examining the problem. The records state that the Barracks had wood-shingled roofs. No physical evidence of the roof design is left at the Barracks (except in the tower, where the roof was too flat for shingles). Shingles were also used to roof the contemporary bastion towers in the town wall.[117]

No roof tile was noted in the excavation of the King's Magazine, so it would appear that the roofing material was perishable (i.e., wood). Perhaps there was a tarred flat roof of boards as was on the North Storehouse; but it seems more likely to have been a shingled roof, because a sloping roof was not only dryer than a flat one, but permitted a thicker bed of sand over the brick arches for "bomb-proofing." Dryness and protection from shell bursts were essential for a powder magazine. Furthermore, shingles are known to have been used on other important structures such as the Barracks and the town bastions at this same period. In Figure 39, I have suggested a shingle roof with a slope of about 48°, which was the "true" or "common" pitch used in contemporary England.[118]

Figure 38a-b diagrams a previously mentioned fragment of evidence which may also bear upon the exterior appearance of the

King's Magazine. On the Joshua Miller map of 1796 is a tiny sketch of the fort. Since Miller's real concern was with reestablishing the property lines in the town, he was casually cryptic about the fortifications. The fort bastions are mere squiggles of his pen.

However, he represents two substantial buildings inside the fort, presumably as he saw them from the river in the year of 1796. It has been shown (Figure 34) that one of them has a gabled roof conforming rather well to our knowledge of the South Storehouse. The other has a flat roof and could represent the North Storehouse. But the sketch shows parapet-like projections which seem unlikely for the wooden superstructure of the North Storehouse. In addition, the space between the two buildings in the sketch is the space between the South Storehouse and the tower gate, rather than the much greater distance between the two storehouses.

Perhaps we may assume that by 1796 the wooden upper stories of North Storehouse had been razed. Perhaps too, the thin-walled north wing of the King's Magazine was gone, leaving only the gate tower, the powder magazine and the South Storehouse visible from the river. On the other hand, as Mrs. Cate points out, the fact that the Stevens family lived here c. 1830-1850 indicates that the building was still habitable.

The Bastion "Guardroom." In the gorge of the northeast bastion, Fairbanks found the tabby walls of an almost-square 22-foot building (Figure 41). He cleared it horizontally down to the well in its center.[119]

Archeology shows it was built after the well and also after an earth-and-timber magazine (Figure 28) which it seems to have replaced. Both well and magazine have been described earlier.

We have found no documents to explain the tabby building. Being of tabby, presumably it was built in 1740-1741.

Archeology revealed how the builders went about the job. They dug a rectangular pit 3.4 feet deep, probably taking advantage of the excavation already made for the old magazine. The wall footings were poured in a shallow trench about 2 feet wide,

just inside the slope of the pit. For the inner face of the walls, the carpenters built a wooden form; for the outer face, they used boards in some places and the side of the trench in others. Wet tabby, temped into this rough-and-ready mold, made a wall about 1.2 feet thick. The northwesterly half of the wall was still in place, up to a height of about 2 feet. The wall is of single-story thickness, yet thicker than necessary for either brick or timber superstructure; so it seems likely that the walls were entirely of tabby to their full height of eight feet or more.

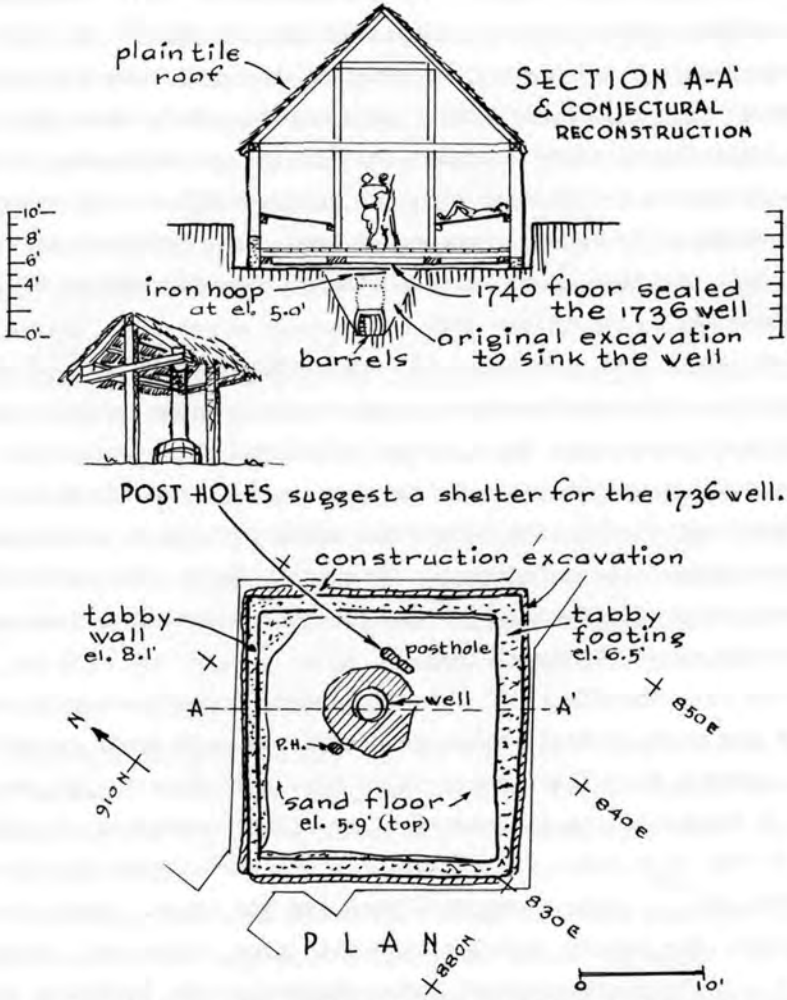
Fairbanks was certain that the roof was tiled. On the packed sand floor he found a number of roof tile sherds, many with nail holes in them. None of the pieces was big enough to indicate the full size of the tile.

Evidence for doorways is not definitive. But since the building occupies the entire gorge of the bastion, access to the bastion was obviously through the building. The orientation of the ruin suggests that one 5-foot door opened into the parade and another into the bastion. The thin tabby footing is unbroken all the way around the building; obviously there was additional masonry atop this footing, so the thresholds must have been considerably above the sand floor.

As with the floor of the old powder magazine nearby, this floor was about 3 feet below ground level. It could also have had a wooden floor (but there is no certainty that it did have).

A trashpile in the center of the floor contained, in addition to the roof tile, the sherds of a big earthenware utility jar (Figure 42)[120], pipe stems, and beef and pig bones. Just outside the door, the parade was littered with pipe stems and chips of flint. As Fairbanks pointed out, obviously the building was a center for chipping flint (probably to make gun flints), smoking, and eating. Beyond that, we know nothing about its use. But chipping gunflints, smoking and eating are soldierly activities ; taken with the building's manifest location as a shelter at the bastion, they tend to identify it as a guardroom.

There was no evidence of room partitions.



EXCAVATION OF "GUARDROOM" IN THE NORTHEAST BASTION

41

In summarizing the rather scanty information on this structure, we can say it was a one-story, single-room, tabby building with an excavated sand floor and a gabled roof of tile. One doorway opened to the parade, and another to the bastion. Presumably, it functioned as a guardroom.

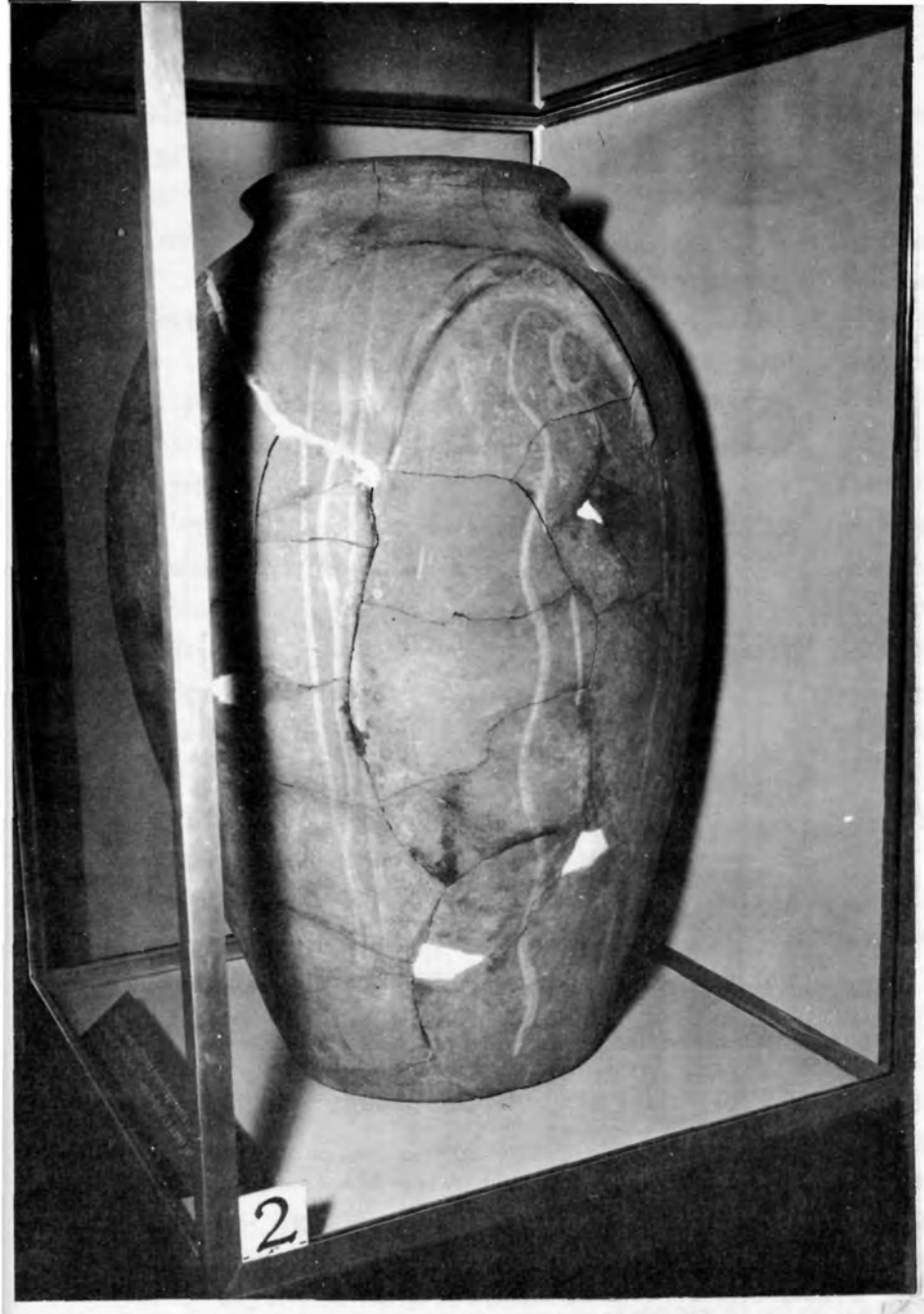
Other Tabby Buildings. On top of the ground in the gorge of the southeast bastion was a fragmentary tabby foundation. Because it was a surface-built structure, archeology could not tell us much about it, except that it was not like the tabby building in the northeast bastion.[121] The footings still in place suggest that it was a one-story building with a main room about 20 feet square in the gorge and an attached 15-foot square room extending into the bastion.

Another fragmentary tabby foundation is in the northwest bastion. Only a good-sized piece of the structure's massive northeast corner is left, and even this bit was dislocated as the river cut away the bank.

The Lost Spurwork. The river has taken all of the spurwork, water battery, or ravelin that was built on the shore just beneath the main fort. Likewise lost to the water is the southwest bastion and half of the northwest bastion. Hence, our study can add nothing to the documentary information that the spurwork was built in 1736, is probably represented with fair accuracy in the Augspourguer plan of that date, and may have been strengthened or otherwise modified during the 1740-1741 period of construction.

No archeological evidence of a latrine was discovered during the excavations in the fort. Wherever possible, the "boghouse" was located over water. Perhaps this one was in the spurwork along the north parapet.

Cannon. In 1739 Fort Frederica had "four Bastions, a Ditch palisadoed, and a covered Way /i.e, the outer moat/ defended by fifteen Pieces of Cannon."[122] The statement was made by Samuel Augspourguer, the engineer who was probably responsible for mounting these guns. So we judge his count of 15 to be reason-



42. Earthenware Jar from the Bastion "Guardroom"

This is the British equivalent of the Spanish "olive jar," a utility storage vessel. A pile of trash in the middle of the room yielded the sherds from which Archeologist Fairbanks restored this specimen. As the two-inch numeral card shows, the jar is almost three feet high.

ably accurate.

The first gun emplacements seem to have been in the spur-work, where "the cannon are upon a level with the water's edge."[123] Here they had good command of the river.[124] The 1736 plan shows seven embrasures in the spur, although the two middle ones, being at the angle of this work, probably served only a single cannon.

We know that guns were also mounted in the bastions, since an observer noted that 2-inch plank platforms were being laid there.[125] It was standard practice to construct such platforms in field batteries to keep the wheels of the gun carriage from sinking into the ground. The planking was nailed to joists, forming a deck about 9 x 18 feet with a rise of 9 inches from fore to rear to check the recoil of the gun. This platform was carefully leveled to insure accuracy in laying the gun on its target.[126]

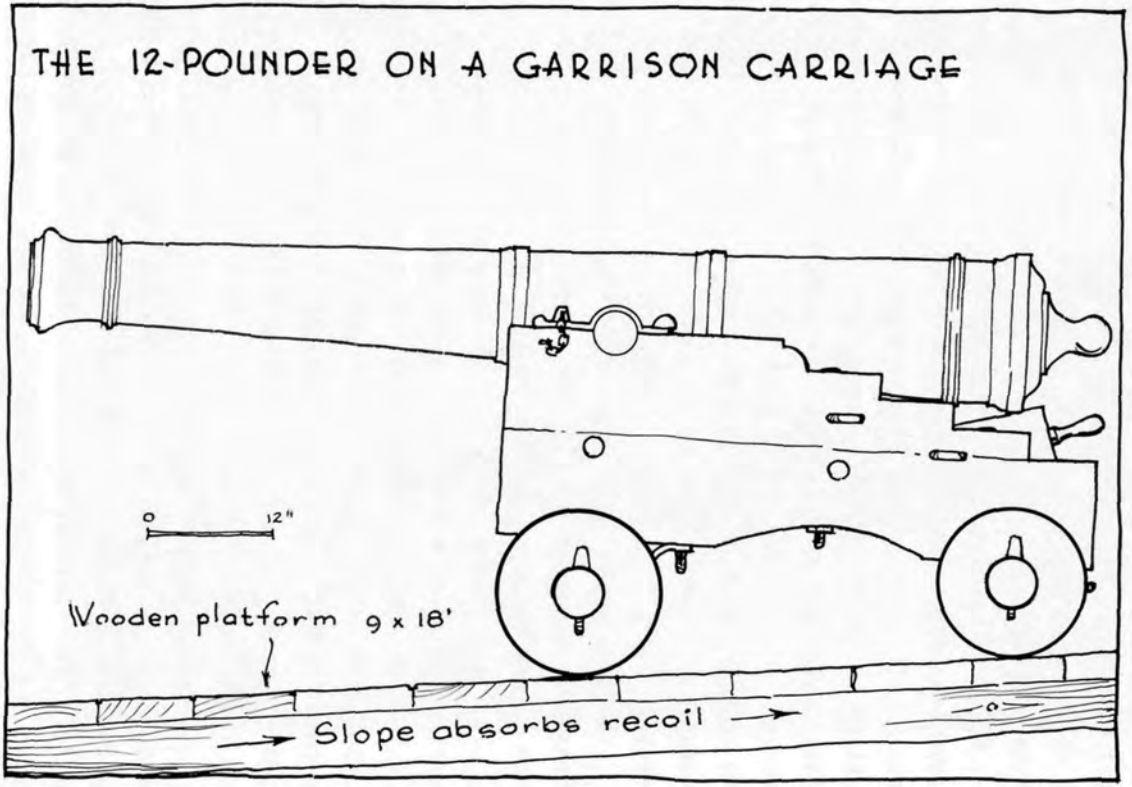
The spur would also have had such platforms behind each embrasure. Conceivably, the whole spur may have been decked, since it was built on marsh ground.

In forts, where space was usually at a premium, compact "garrison" carriages were used for mounting the guns (Figure 43).

Through the years there were complaints about the artillery at Fort Frederica. Oglethorpe pointed out that he had "no cannon from the King" -- only some small iron guns bought by the Trustees.[127] But it does not appear that his armament was ever much increased. Perhaps it reached 20 guns.[128]

Important changes were made in 1741, however, because the records mention the building of new gun platforms at that time. The changes seem to have provided a total of 20 embrasures at the fort for "several 18 Pounders mounted on a Ravelin in its Front" and for a "considerable Quantity of Ordnance of several sizes" on the fort "Rampart."[129]

In addition to these guns there was the Point Battery, a short way south of the fort. This battery mounted twelve 12-pounders.[130] They are probably the pieces which spoke to the


THE 12-POUNDER ON A GARRISON CARRIAGE
0
12"
Wooden platform 9 x 18'
Slope absorbs recoil

43

Spanish galleys on July 11, 1742, although the record specifically mentions only the "Guns and Howitzers" at the fort.[131]

Except for a single 12-pounder, all of Frederica's guns have been removed. About 1750, some were taken to Savannah where they were ruined by rust. In 1762, others were shipped to Fort George on Cockspur Island. At the outbreak of the Revolution some pieces from Frederica went to Fort Morris near Sunbury; later one was sent to the 1893 Chicago Exposition. No further trace of them has been found. Three other pieces can be accounted for. One, used as a salute gun at Hinesville, burst. A second burst at Frederica about 1830. Another is said to be yet at the Augusta home of C. C. Jones, Jr.[132]

The main purpose of the guns at the fort was to command the river approaches to the town. To do so, one water battery was built on the shore right at the fort, and a second battery was on a point of land a short distance south of the fort. The records indicate that these batteries, as finally developed, consisted of 18-pounders at the fort and 12-pounders at the Point Battery. In addition, ordnance of various sizes was mounted on the fort rampart.

The Point Battery is not within the park boundaries. The water battery at the fort has been washed away by the river, along with the southwest bastion and half of the northwest one. This loss leaves only limited areas where cannon can be replaced to show some degree of the original function.

For instance, the west curtain was occupied by the King's Magazine, the north curtain by the North Storehouse, and the south one by the South Storehouse. Only the east curtain (which faces the town) seems to have been clear. Of the bastions, the Blacksmith Shop was in the northwest one, the "guardroom" in the northeast, and an unidentified building in the southeast. Perhaps the southwest one (now gone) was clear.

However, the bastion buildings did not completely fill the bastions. It is possible that small platforms -- or even moving platforms such as were at Fort William on Cumberland Island[133]

-- were in the bastions. Swivel guns were probably at Frederica; they required no platforms, but only a good heavy post in the ground or in the parapet. Howitzers are mentioned in the description of the bombardment of the Spanish galleys. They would have been mounted on field carriages, movable to any location where there was a clear field of fire and enough room for recoil.

PRESERVING THE RUINS

The fragility of the Frederica ruins, combined with their importance for exhibition purposes, makes the problem of preservation an extremely important one.

The most spectacular ruins are built of tabby, a masonry composed of shell lime (which is the cementing agent), sand, and shell aggregate. It is quite similar to modern concrete, but relatively soft. In wall construction, wooden forms were used, which enabled the pouring and tamping of about one foot of wall height at a time. The form boards were moved up as the tabby hardened.

At Frederica, oyster shell was used as the aggregate in this masonry and the result was a rather rough-textured wall. The exterior usually received a thin finish of smooth stucco, which in the judgment of the builders no doubt improved appearance and aided in waterproofing. Interior surfaces were plastered.

Virtually all the protective stucco and plaster have been lost and the rough tabby has been exposed to weather for a long time. Rainfall leaches out the lime, plant roots pry into voids and crevices, and occasional frosts slowly crumble away the surface. The material appears to be especially sensitive to deterioration at the pour lines. It has very little tensile strength, but most of what has survived still has considerable firmness and "life."

General. With a knowledge of these factors, the techniques of tabby preservation were developed through experimentation. Moisture is obviously the major enemy, so cracks and voids are cleaned and filled and the tops of walls are capped (Figure 47). Where structural failure is imminent due to loss of original material, the loss is reconstructed.

Such repair should be inconspicuous so that the antique quality of the ruin is not lost, yet it must be sufficiently different from the original so that interested persons can easily

distinguish new from old. During extensive stabilization work on the Barracks in 1950, Park Maintenanceman Bill Osborne and Manucy developed a basic formula for a mortar to be used in filling and capping tabby ruins. This calls for 1 part by volume of white Portland cement, 2 parts Altamaha river sand, and 2 to 3 parts of oyster shell. To match the shade of adjacent old work, a portion of grey cement is substituted for the white as needed.

The old work is thoroughly cleaned, wet, and painted with a grout of neat cement. Then the new mortar is applied, using form boards if necessary. After about four hours the forms are removed so that exposed faces of the mortar can be scrubbed with bristle brushes and water (if necessary) to bring out shell texture similar to the adjacent old work.

Not all tabby walls have been capped, because some are actually in excellent condition. These surfaces are to be closely watched, and caps will be added when necessary.

A standard technique was also worked out for stabilization of brick masonry. This involved repointing or ever re-laying where necessary, anchoring broken bonds with new brick, and adding one or two capping courses.

The protection of masonry edges, ends and corners sometimes dictated the replacement of a missing wooden member, such as a threshold.

Periodic, careful examination of the ruins is essential to detect the telltale signs of deterioration -- growth of vegetation, masonry dusting away or cracking or crumbling, wear from visitor traffic. Repairs should be made at once.

The King's Magazine. As for the specific measures that have been taken to preserve the ruins at the fort, I might point out that perhaps the earliest project was "a bluff. . . made to preserve the fortification from the tide" during the 1740's. The work of the Colonial Dames in 1904 reconstructed fallen portions of the King's Magazine and was of vital importance in saving this ruin from the river (Figure 9). Actually, the King's Magazine has three aspects of stabilization: 1) control of river

erosion, 2) tabby preservation, and 3) preservation of the brick arches or vaults.

The initial preservation work on the structure by the National Park Service was the sealing of various cracks in the walls (1948). Beginning in 1950, much attention was given to the effects of erosion. At high tide, the river touched the building. Tidewater was passing in and out of the southwest room through the voids in the 1904 wall (Figure 45A). This wall was excavated and the voids filled with masonry. Small groins were installed on the bank to help arrest erosion; the shore around the southwest corner was riprapped. Eventually Superintendent Glover was able to put in fill, faced with substantial riprap, that pushed the river some distance away from the ruin (Figure 45B). Careful maintenance of the riprap should keep erosion in check at this point.

To preserve the brick masonry of the vaults, the earth over them was removed and the brick work was repointed. A 2-inch coat of "gunite" concrete was sprayed over the vaults by the Western Waterproofing Company of Atlanta, Georgia. This concrete roof "floats" over the ruin on a plastic membrane. It is tied to the old work with copper flashing. Rainwater is drained through inconspicuous roof spouts and deposited away from the building. The gunite work is hot seen by visitors (Figure 46) .

Guardroom. Of the "guardroom" in the northeast bastion there remained the tabby footing and a small portion of the wall in good condition. This ruin was given the standard attention described earlier.

Forge. At the Blacksmith Shop, the cinder and slag floor was destroyed by excavation, leaving only the bases of two brick hearths (Figure 24). One was an intrusion of 1762 so it was removed. The other was repointed and protected by adding another course of brick (Figure 61).

The South Storehouse presented a special problem. It was a spectacular and revealing ruin with an excellent flint floor which could be exposed without fear of deterioration. But what

44. View of the King's Magazine about 1950

45. Erosion Control

A--By 1950 the river had swept away Shoreline fill and exposed the masonry of the foundations. Tidewater, entering the magazine vaults, opened mortar joints.

45. Erosion Control

B--Earth and rubble fill pushed the river away from the ruin. The new shoreline was riprapped with bags of concrete mix which hardened in place.

46. Waterproofing over the Arches

This view of the King's Magazine roof shows the 2-inch coating of reinforced concrete, applied by the pressure-gun method over the brick vaults. Between old brick and new concrete is a plastic waterproof membrane.

47. Masonry Cap for Old Tabby Walls

Portland Cement "tabby" (top), developed at the park, protects old lime tabby from weather erosion and occasionally careless foot traffic. Cement tabby blends well with old work, but upon close inspection is readily distinguishable by its texture and hardness.

was left of the walls was very fragile, for they had been stripped of their brick veneer generations ago by salvagers. In order to protect the soft rubble core that remained, it was necessary to replace the veneer of brick. Thus, the walls were reconstructed up to ground level (Figures 48, 49). In line with the policy of distinguishing between old and new work, "Savannah grey" brick was used in the reconstructed veneer. Protection courses were also laid on the partition wall.

The east room of this ruin was formerly floored with paving tile. Most of the tile were gone, leaving only an easily damaged bed of mortar. Clean sand was spread over this floor to protect it from the harsh impact of weathering forces and to retard the excessive surface drying which tends to crumble the material.

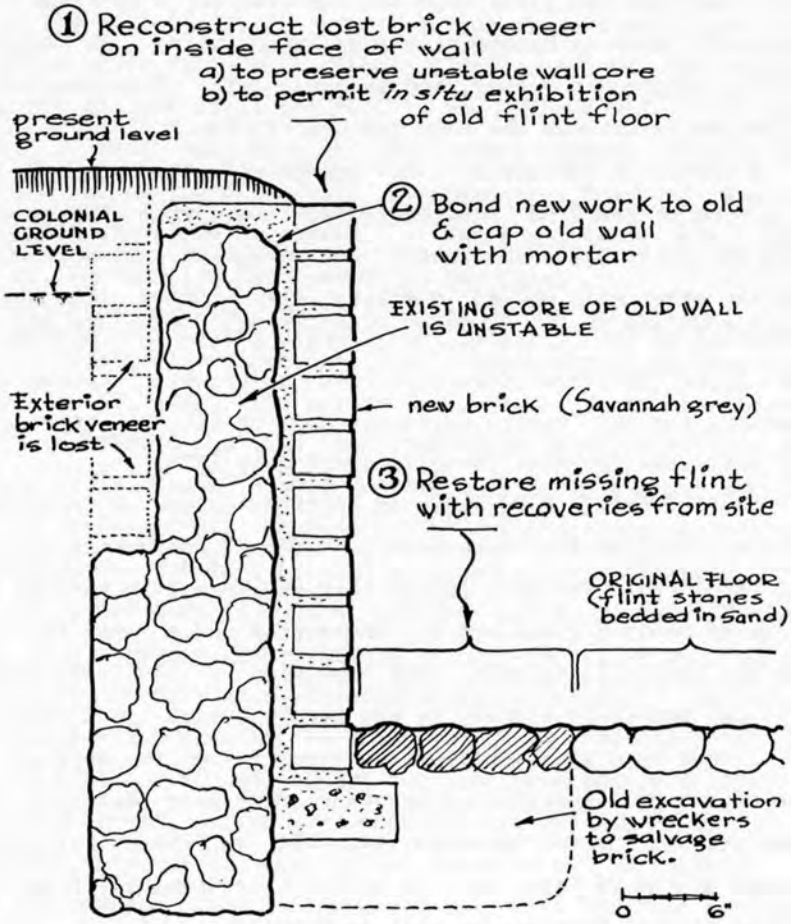
No other exhibitable ruins were uncovered.

48. View of the South Storehouse after Stabilization

Salvagers had long ago removed the brick veneer that covered the walls. Only the soft masonry core was left. To preserve it, the interior veneer was reconstructed. The near room at one time was floored with paving tiles, but only a few of them have survived the salvagers. Under a protecting layer of clean sand is the old mortar, which still bears the imprint of the tiles.

STABILIZATION AT THE SOUTH STOREHOUSE

TYPICAL CROSS-SECTION



49

Citizen Soldiers. Frederica was a well-planned project. "Hand-picked" settlers gave Frederica the trades it needed. Coming to the Colonies called for adventuresome spirit, but the Trustees made sure that the spirit also had both feet on the ground in the form of a useful trade. Self-reliance was essential. Each man was given food and clothing for a year and other necessaries such as kitchenware and basic tools. In addition, he got a watchcoat, musket, and bayonet. The Trustees wanted men who would take up the land and hold it for Britain.

A number of the settlers had indentured themselves to work for a term of years on public projects; they were the ones who built the fort; sawed the lumber, and worked on the public farm. With the other able bodied settlers, they formed the militia maintained by the Trustees for Georgia's defense. Oglethorpe gave these "Trustees Servants," who "so frankly risqued their substance for the Public service," much credit for staying on duty until the Regiment formally arrived in 1738.[136]

"This Province," he wrote in another eulogy of the citizen militia, "bridles the Spaniards in America and covers the English Frontiers. The poor people that are here have been so harrassed by their threats and so constantly under arms that they have not been able to make that Provision for their subsistence which was necessary though it was far from want of Industry in them. They have been sometimes obliged to be two days out of five on guard, notwithstanding which they have laboured their lands and made some Improvements. It is the vigilance and courage of the Militia that prevented the Spaniards from being Masters of this Province as well as Carolina. . ."[137]

The watchcoat, musket and bayonet saw regular use at Frederica. In February 1738 one observer reported that 10 men mounted guard at the fort every night. It was done "with great exactness," and "at their coming to relieve [the guard], they were always exercised in ye manual Use of their arms for half an hour,

by an expert person . . ." This was said to be the constant practice. The duty was rotated among the settlers so that each man served every fifth night.[138]

Experienced military men such as Capt. John Mackintosh Mohr of the Highland Company at Darien and Engineer Samuel Augspourguer were appointed by Oglethorpe to train the men.[139] It has already been related how Oglethorpe himself took a hand in this training by alarming the town with Spanish shouts and musketry to see how efficiently the people betook themselves to the fort.

Even after the professional fighting men of the Regiment came, the militia still had work to do. Henceforth, said Oglethorpe, "I shall ease them of their heavy guards and only keep such a Watch or Guard as will preserve the Peace of the Town which will always be necessary."[140] Mending militia arms was a task of the "publick Blacksmith" at the fort.[141]

The Regiment. Oglethorpe's Regiment was established August 25, 1737 (the date of the officers' commissions), and was disbanded May 29, 1749. The unit participated in the Florida campaigns of 1739-40 and 1743, the 1740 siege of St. Augustine, the defense of St. Simons Island in 1742, and various minor actions.

In forming the Regiment, 250 men (three companies) were drafted out of the Earl of Roth's Regiment at Gibraltar. Under Lt. Col. James Cochran, they arrived at St. Simons Island in June, 1738. Others, including a number recruited in England, arrived in Georgia with Oglethorpe in September. Two of the Regiment's six companies were stationed at Frederica; the rest were at Fort St. Simons, except for the detachments assigned to various outposts. After the outbreak of war in 1739, other companies were raised, both in the colonies and in England.[142]

Our present study is concerned only with the Fort Frederica part of the Regiment, but it is necessary to provide a certain amount of information in order to see the Frederica garrison in correct relationship to the rest of the troops.

THE ESTABLISHMENT OF 1743[143]

Unit	Authorized No. of Men		Cost	
Oglethorpe's Regiment of Foot	804	£ 14,435	15s.	-5d.
2 Ranger troops	140	4,215	-	-
Independent Highland Company	115	2,366	8	4
Marine Company of Boatmen	108	3,227	10	-
Half Galleys or Schooners	180	9,360	-	-
General and Commander-in-Chief	1	1,000	-	-

Excluding Indian allies, this establishment provided for some 1,300 men under Oglethorpe's command. Although not all the rosters were filled, Britain was spending about £34,600 annually to man the Southern Frontier.

The regimental organization was as follows in 1738:

Staff
- Gen. Oglethorpe's Company (at Frederica)
- Lt. Col. Cochran's Company
- Major Cook's Company
- Capt. Norbury's Company
- Capt. Heron's Company
- Capt. Mackay's Company (at Frederica)

These were 100-man companies. So was the Grenadier Company under Capt. William Horton, which was added in 1742.[144]

Field and staff officers included:

Colonel
Lieutenant Colonel
Major
Adjutant
Quartermaster
Chaplain
Surgeon and 2 surgeon's mates

According to the military manuals of the day, responsibilities of officers and non-commissioned officers included:

The colonel was regimental commander. He must have understanding of fortification and field engineering, plus a good store of military knowledge and experience. He must know the

qualifications of all his officers and be able to preserve union and harmony among them. He was responsible for clothing his men. General Oglethorpe served as colonel of his own regiment.

In the colonel's absence, the lieutenant colonel (James Cochran) took over. According to the book, the lieutenant colonel must have qualifications similar to those of the colonel.

The major (William Cook) was a key man, active, vigilant. He had to be versed in all regimental details, and grounded in maneuvers so that he could see the regiment well exercised. He was assisted by an adjutant, subaltern assigned to staff duty.

The quartermaster, like the adjutant, was usually a lieutenant assigned to staff duty. His job was to look after quarters, clothing, bread and ammunition.

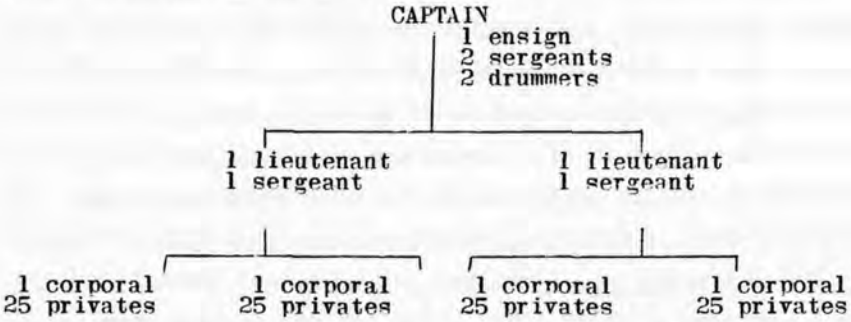
The chaplain was the spiritual counselor for the men. Company officers were required to march the men to services each Sunday, and the chaplain was to preach a sermon. The dissertation should be on subjects that would help bolster discipline. In fact, discipline forced attendance at the services. Absent or ill-behaved men could be court-martialed (if officers) or fined (if NCO(s or enlisted men). A second offense clapped a man in irons for 12 hours.[145]

However, the religious situation at Frederica does not seem to have followed the book. There were numerous complaints about Frederica's chaplain, a Mr. Dyson, though in truth he was seldom at Frederica. As Capt. Hugh Mackay summed it up, it was "a sad thing to be so long without a church or Preacher, except the Regiment's Chaplain, Mr. Dyson who is a very drunken man."[146]

The surgeon and the surgeon's mate ministered to the physical ills of the men. Dr. Thomas Hawkins, the physician who built his home at Frederica in 1736, joined the Regiment as surgeon soon after its arrival. Of the doctor's work, Oglethorpe praised him for attending the sick "very carefully." Then he added: "Though he is very capable of doing his duty as Surgeon he is very ignorant in accounts."[147]

Company officers. The fort at Frederica was garrisoned by

two companies -- about 200 men -- from the Regiment. These were Oglethorpe's (the General's) Company and Capt. Hugh Mackay's Company.[148] From their monthly reports, the organization of these companies can be diagrammed thus:



The captain commanded a company of about 100 men. His responsibilities included maintenance of good order, and the care of his men. He had to know the names, dispositions, and potentialities of his soldiers. He was to visit them in their quarters or at the infirmary. He had to see they were properly equipped, promptly paid, clean, neat; that they were taught their exercises, kept regular messes, and had their arms and equipment in serviceable order. He marched at the head of his men.

The lieutenants had the same duty details as the captain, and the senior lieutenant commanded the company when the captain was absent.

From reports of the battle actions which took place on St. Simons in 1742, it is clear that in Oglethorpe's Regiment a Lieutenant's normal command consisted of one platoon. In a 100-man company with two lieutenants, obviously a platoon numbered 50 men.[149]

The ensign carried the colors. He was usually the youngest of the company officers.

The non-commissioned officers (sergeants, corporals, drummers, etc.) were nominated by their respective captains and appointed by the colonel.

Sergeants were responsible for discipline and instruction

of their men in drills and exercises. They were to be sober, active and vigilant. They had to read and write, in order to prepare returns. They were detailed to lead patrols. Usually there were two to a company, but the Regiment had four.[150] As our diagram on page shows, two of them headed detachments at other posts. The other two were platoon sergeants under the lieutenants.

Corporals had charge of a squad. (Since there were four corporals for each company in Oglethorpe's Regiment, a squad was half a platoon, or 25 men.) The corporals posted and relieved the sentries. While the guard was relieving the corporal of the old guard gave the orders to the new corporal. It was proper for a corporal to carry a brush on the parade to see that the soldiers' clothes were freshly brushed.

The drummers amplified command orders into sound which the entire company could hear. Customary duties also included keeping the guardroom clean, and administering disciplinary floggings.[151]

The private soldier, who was required to carry the orders issued by those in authority over him, had no easy life, as we shall later point out in more detail. His daily wage was only eightpence, but, of course, eightpence had more purchasing power in 1740 than it has today.

Rates of Pay Since pay rates are always of interest, here are the more important ones from the Establishment of 1743:[152]

Daily Wages

Private soldier		8 d.	
Drummer	1 s.		
Corporal	1 s.		
Sergeant	1 s.	6 d.	
Ensign	3 s.		(Plus 8d.servant allowance)
Lieutenant	4 s.		(Plus 8d.servant allowance)
Captain	8 s.		(Plus 8d.servant allowance)
Surgeon's mate	2 s.	6 d.	
Surgeon	4 s.		
Quarter Master	4 s.		(Plus 8d.servant allowance)
Adjutant	4 s.		
Chaplain	6 s.	8 d.	
Major	5 s.		
Lt. Colonel	7 s.		
Colonel	12 s.		(Plus 2s.servant allowance)

Maj. Gen. Oglethorpe, as General and Commander-in-Chief of the forces in South Carolina and Georgia, was paid £2.14s. 9½d. daily or £1000 annually, in addition to his salary as regimental colonel.

Uniforms. The uniform of the 42nd Foot (Oglethorpe's Regiment), as shown in the official "Clothing Book" for 1742 is the standard red of the British Army, with "Popinjay" (olive green) facings. The private's dress was trimmed with plain white lace and white stitching around the buttonholes. Above-the knee spatterdashes of canvas (white for dress, brown for field service) and black felt cocked hats were standard. In marching order, each man would carry a grey canvas haversack, cowskin knapsack and tin water bottle, in addition to the usual musket, cartridge box, sword and bayonet.

Corporals were dressed and equipped the same as privates, but wore a white worsted shoulder knot as a badge of rank.

Sergeants' uniforms had a better grade cloth. The badge of rank was a crimson sash with a central stripe of Popinjay green, silver lace on the hat and a silver-hilted sword.

Drummers wore Popinjay green coats, lapelled and lined with scarlet. Lace was set on as per the colonel's orders, so there could be much variation from one regiment to another. Extra sleeves, hanging down the back from the shoulders, were a typical feature of the period uniform for drummers. The headpiece was a peaked cloth cap, unstiffened so that the bag, ending in a white tassel, hung down in back. The cap had a stiffened, mitre-shaped shield in front, bearing heraldric devices worked in worsted. The drum carrier and waist belt were striped with regimental lace, Drum hoops were red; the front of the shell was Popinjay green with the crown and the regimental number.

The soldiers had long hair, either brushed up under their hats or tied in a small knot at the back of the neck. Grenadiers and drummers plaited theirs in a queue and tucked it up under their caps.

Officers wore their hair in a short queue or else "clubbed"

after C.C.P. Lawson

50

the queue by tying the end back on itself. Officers' coats were scarlet and laced with either gold or silver, but in no regulation fashion and with no indication of rank. On the right shoulder was a gold or silver shoulder knot and a sash of crimson silk. Often the waistcoat was buff, edged with silver or gold lace. Regimental lapels and cuffs for officers came into use about 1740.[153]

Supplies and Equipment. England sent out an amazing amount of "Warlike Stores" for the use of the Regiment. A 1737 list came to a total of £6295 (including the pay of an engineer at 20 shillings per day).[154] Below we quote numerous items from the list:

724 muskets
624 bayonets
624 "cartouch" (cartridge) boxes
12 wall pieces (probably heavy firearms or small caliber cannon)
24 "halberts" (Sergeants carried these as insigne of rank)
12 drums
12 prs. drumsticks
100 bbls. corn powder (gunpowder granules)
102 cwt. musket shot
1200 flints
336 flock beds (Mattresses filled with "flock," a processed woolen or cotton refuse. Notice that 336 "beds" would sleep only part of the regiment at a time. The other part was always working.)
336 flock bolsters (pillows)
336 "coverletts" (mattress covers?)
336 prs. blankets
672 prs. sheets
168 trench tents (plus ridge poles, standpoles, pins and mallets)

Armourer's tools, including forge bellows, 5 kinds of anvils, vises, wrenches, tew irons (pincers), sledge; hand- and small-hammers, 11 kinds of files, rubbers (probably rubstones), emory (emery) fine and coarse, "glew" (glue) and copper glue pot, 5 bushels of "hardning" (probably hardening, a material used for converting the face of iron into steel), and 5 gallons of "oyl."

Carpenter's tools, including more than 24 kinds of "plains" (planes capable of both heavy and finish work, tongue-and-grooves for flooring, decorative mouldings, etc.), "stocks" (braces) and "bitts" (bits for boring holes), drawbores (tapered drills), broad axes, adzes, 6 kinds of chisels, 3 kinds of hammers, pincers, various "gimlets," chalk rolls and lines, squares, compasses, rules, pencils, sharpening stones, saw sets, sawyer's dogs (for gripping timber), cant hooks, 6 kinds of saws, and 1500 files of various kinds.

Bricklayers' tools: trowels, plasterers' trowels, lathing hammers (hatchets), brick axes, rules, bobs, squares, bevels, levels, jointers, plasterers' servers (small spades), sieves, screens, hods, ladders and cordage.

Coopers' tools: frows, saws, axes and felling axes, jointers, adzes, various knives and shaves, bung borers and taps, "stocks" and bits, vises, climbing irons, etc.

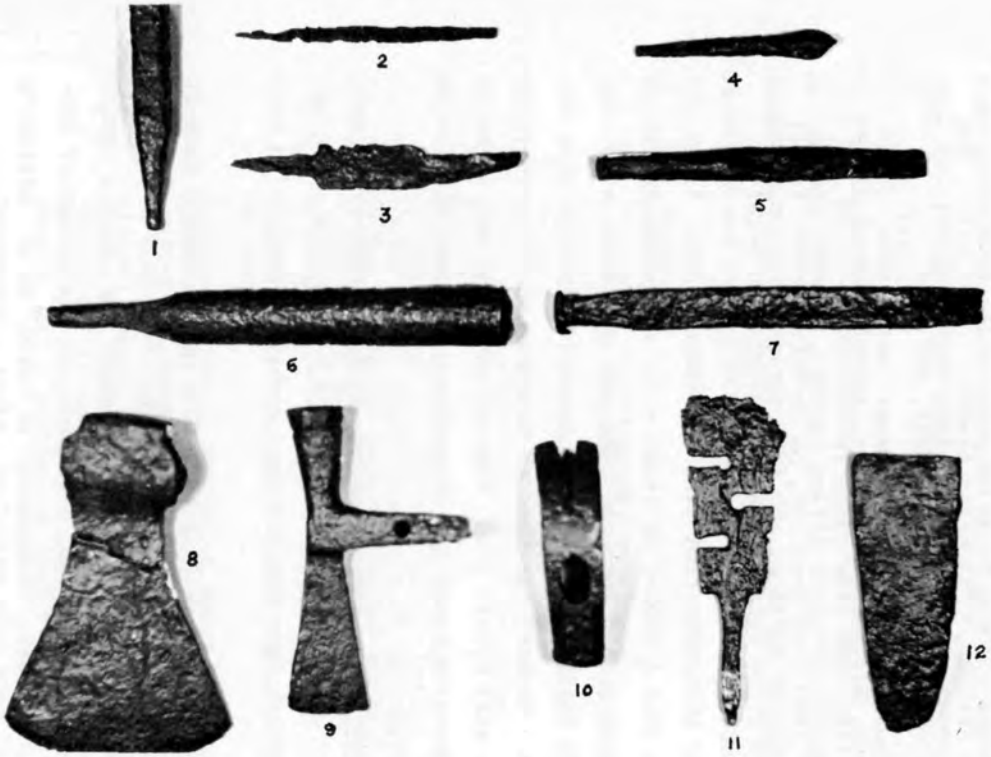
Hardware or "Stores" included 8 kinds of locks; plain-, spring-, and thumb-latches, miscellaneous hinges and hooks, 100 lbs. of "glew" and 2 lead pots for it; fish skins (probably sharkskin for polishing wood), 5- to 9-inch spikes (2100), 3- to 40-penny nails (400,000), as well as "bradds," "flooring bradds," clout nails, dog nails, "round-headed" nails, lath nails, 60 cwt. of stock iron and 12 of stock steel, and coal.

Miscellaneous tools and equipment: broad hoes, grubbing hoes, bills and pole axes, shovels, steel spades for cutting sods (for field fortifications), 12 cwt. of slowmatch (used in firing cannon), 6 small "Union Flags," 1800 hand grenades, 36 Coehorn mortars (small bronze 6-inch mortars) and 1800 shells for them, hand mills to grind corn, 40-gallon boilers and 4-gallon pots.

In perusing the manuscript list of these items, I was interested to see that a number of items were evidently tacked on as an afterthought -- and probably by one familiar with the country. The 12 "wall pieces" and an extra 100 muskets were obbious additions. So were the Coehorn mortars and the corn-grinding mills. You will recall that many of the smaller items in the list were actually found in excavation of the Blacksmith Shop at the fort.

Garrison Duty. The normal duties of foot soldiers in garrison have been well summarized by M.E.S. Laws, a retired officer of the British Army who has done archival research on Frederica:

1. Guard Duty -- Very much more of a business than it is today. Every garrison would want a Main Guard, normally at the town or fort gate. The strength of such a guard might run to 25 or 30 men, depending on the number of sentries to be mounted. Sometimes it would be an officer's guard commanded by a subaltern. Then there was normally a Magazine Guard in addition, which might find three or four sentries. Often another guard was mounted on the commanding officer's quarters. Extra guards would be mounted according to local requirements -- for example, on the galleys or boats manned by Oglethorpe's men.



51. Tools Found in the Blacksmith Shop

Over 5,000 artifacts were recovered in this area. Their wide variety showed the nature of the shop and its vital importance to the community. Out of the many classes of objects found, this illustration shows some specimens from the tool category. 1--Punch. 2--Triangular file. 3--Flat file. 4--Star drill. 5,7--Chisels. 6--Pod auger. 8--Axe. 9--Lathing hatchet. 10--Claw hammer. 11--Saw set. 12--Wedge.

2. Drills -- Usually there was a daily parade lasting an hour or two, devoted to drill. The handling, loading and aiming of a musket was a tedious and complicated job and needed much practice to attain perfection. In the same way, maneuvers of an infantry battalion were by no means simple, and it was only by constant drill that the various movements became so well known that men could be relied upon to carry them out almost unconsciously on the battlefield and under fire. Drill, of course, included shooting at a target, drum and bugle practice, elementary gun drill, and bayonet drill.

3. Fatigues -- Under this head came innumerable chores: cleaning uniform and equipment, cookhouse fatigues, gathering fuel, building and repairing barracks, roads and defence works. Probably in America it also included some farming to raise food.[155]

The most revealing summary of actual duty at Frederica, however, comes from the monthly returns of the Regiment. Extracts involving the two companies assigned to Frederica are charted on the following page:

MONTHLY RETURN OF TWO COMPANIES OF THE REGIMENT

May 31, 1742

		General Oglethorpe's Company	Captain Mackay's Company
Sergeants	for duty on the spot	2	2
	on command	-	-
	at Fort Frederick /S.C./	1	-
	at New Hampton	1	-
	sick	-	1
Corporals	for duty on the spot	2	3
	on command	1	1
Drummers	for duty on the spot	1	1
	on command	1	1
Private Centinels	on command	8	8
	taken prisoner by the Spaniards	-	-
	invalids	-	-
	prisoners at Frederica	-	-
	at Fort Frederick /S.C./	3	1
	on command on the main/land/	-	2
	at New Hampton	7	10
	with the Captain	-	1
	deserted	1	2
	at Skidoway Narrows	1	-
	sick	2	1
	in England	-	-
	for duty on the spot	68	69
	total effectives	90	94

Upon this return it is further noted that in the General's Company, "Thomas Griffin, Corporal, was broke by a Court Martial" and of Captain Mackay's Company, one man had died and two had deserted from Fort Frederick in South Carolina.[156]

The garrison day in the British Army began at sunrise with the firing of the morning gun, usually a 12-pounder. The morning gun (as well as the evening gun and other signals) was customarily part of the Frederica routine.[157] Indeed, most conventions typical of the Army elsewhere were very likely practiced at Frederica, although documentation is lacking except in some instances as noted below.

By Army custom the morning gun was the signal for the drums to beat reveille. At the drumbeat, fortification gates were unlocked. In the barracks, the men got up, washed, dressed and put their quarters in order. The drums beat assembly, and the men formed on the parade (outside the fort) for roll call, inspection, review, to hear orders of the day, to be exercised, and assigned to duty. Drums also signalled when it was time to go to breakfast.

Military duty actually began at the hour of guard mount. The prerogative of choosing this time belonged to the senior commander. On most posts it was 8:00, 9:00 or 10:00 a. m.

The men assigned to guard duty assembled at their captain's quarters and marched to the parade. From the whole guard thus lined up, small parties were detached for their respective posts, and the subalterns drew lots for their own particular assignments. After morning exercises, they were marched off.

For the rest of the garrison, after breakfast would come special training, awkward squads, and work parties to do special jobs, usually under the sergeant or corporal. (Sometimes one of these NCO's also conducted classes in reading, writing and arithmetic.)[158] Practice at Frederica was similar, for in the day the Spanish pushed toward the town, the Highland Company was on parade at 10 in the morning.[159] A like occasion was described in 1743: the men paraded at Frederica, underwent inspection and

were issued cartridges. Afterward they marched out of town and had target practice by platoons in the moat around the town walls. The mark was 100 yards away. Oglethorpe was present, gave a hat and machete to the best shot, and beer to the whole troop. They were to be ready to march for Florida at 9:00 a. m. the next day, with haversacks and water bottles.[160]

On most Army posts, the men who were not on sentry duty assembled about noon at the barracks for inspection and roll call. Then they had dinner. The guards were to close the gates of the fortifications from 12:00 to 1:00 p.m., while the garrison was eating.

Half an hour before sunset, when the defense gates were again to be locked, the drummers went upon the ramparts to beat retreat. At 8:00 p. m. (or 10:00 p. m. in summer), the evening gun was fired and the drums beat tattoo, which was the signal for the men to repair to the barracks for bed.[161]

Quarters and families. Although there may have been bunks in the guardroom at Fort Frederica for use of the detachment on duty, it does not appear that soldiers were quartered at the fort. We have seen from the list of "Warlike Stores" that tents and bedding were provided for the Regiment, along with all the tools needed to build more permanent quarters. The records indicate that 30 "cleft Board Houses" were built for each company on St. Simons Island in 1739 -- or a total of 150 houses for "Five hundred Men . . . with their Wives and Children and Officers."[162] With two companies in garrison, Frederica had its own share of the "very good clapboard huts."[163] A contemporary observer said that "the Huts are built generally of Clapboards and Palmetto's, and are each of them capable to contain a Family, or Half a Dozen single Men."[164] Later, more imposing quarters were erected for barracks, the ruins of which are yet visible today.

Soldiers were permitted to cut timber and build houses for their families, and many did so. Oglethorpe, though a bachelor himself, urged matrimony upon his men. While William Horton was back in England recruiting 30 men for the Regiment, Ogle-

thorpe asked the Trustees to pay passage for the wives of the recruits. It would be a cheap way to increase the colony by 30 families. Besides, he said, "from single men there are very great Inconveniences and their being obliged to leave their wives behind plunges them into great difficulties."[165]

Later he pointed out that Frederica had 700 single men, and "most of these would marry if they could get Wives." He did not want women sent over indiscriminately (it might be "attended with Indecencys"); rather he suggested giving passage and maintenance to wives, daughters, and sisters of recruits. "We have found also," he wrote, "that the married soldiers live easiest many of them having turned out to be very industrious Planters."[166]

Food and Drink. The soldiers ate in messes of four, six or eight men, depending on the number quartered in a barracks room. Since the St. Simons huts housed six, a mess at Frederica probably comprised of six men. Breakfast and dinner were eaten in messes, but supper seems to have been an informal snack, rather than a meal. Food from the mess was taken to sentries on duty and to special work details.

Although provisions were supplies from the King's Storehouses, customary Army practice made the soldiers pay for it. This situation caused serious trouble soon after the Regiment arrived. The troops from Gibraltar had been accustomed to getting provisions free, but in Georgia they were allotted only a half year's supply. (Later their allotments were extended.) When they found themselves obliged to buy food, they asked Oglethorpe for continuance of their rations. He refused. Thereupon, wrote the General, "they took Arms. One of them fired upon me. After a short skirmish, we got the better of them. One of the Officers was slightly, and one of the Mutineers dangerously wounded, & five are secured Prisoners to be tried by Court Martial."[167] Oglethorpe laid part of the trouble to spies among his men. Since many of the Gibraltar troops could speak Spanish, he suspected them of trafficking with the Florida Spaniards.

The assessment for food was made every payday; it was hand-

ed over to one man in the mess who spent it to best advantage under the eyes of the sergeants and corporals. The NCO's were also charged with seeing that each mess "boiled the pot" every day. A subaltern was also assigned to visit the messes daily between 10:00 and 12:00 a. m. and report to the commandant on the number in each company and the state of their provisions.[168]

No doubt the food allotment was stretched by supplementing the provisions obtained from the King's Storehouse (see discussion under North Storehouse) with fish, game and garden stuff. In 1744 the area was described as having a "great plenty" of both sea and river fish. There were also "considerable numbers" of cattle, hogs and poultry. In fact, a man could more than double his pay by farming an acre or two of land and selling off the produce; and a number of them did so.[169] Captain Mackay once boasted to the Earl of Egmont that "the soldiers labour heartily on the acre lotts survey'd to them."[170] Master William Thompson also remarked their industry; "they are become very orderly," he said, "and of quite another spirit than at their first Arrival.. .."[171] Evidently productive work did wonders for their morale.

Beer was sold to the men at cost. Oglethorpe reported that at Frederica six barrels a day were drawn. He wanted plenty of beer on hand, because it was cheap and would keep out the demon rum. In Frederica, "the people have been healthy. . ./but/ I can assure you," wrote the General, "if Rum is allowed in any shape here the soldiers will be unfit for action . . ." He cited the losses at posts where rum was permitted. In fact, he said, "The Mortality in America is chiefly owing to distilled Liquors, the mixing with Water makes them less hurtful but is very far from making them wholesome."[172]

It would appear from the evidence of bottles found buried in the earthwork[173] that a certain amount of clandestine drinking went on at Fort Frederica.

Guard Mount. Routine work at the fort consisted mainly of sentry duty. Each day, usually just after regimental parade,

the New Guard was marched to the location where the change of guard took place. At Fort Frederica, most likely the ceremony was on the fort parade. A contemporary authority prescribes the procedure:

> The Officers who are to be reliev'd, are to order their Men to stand to their Arms as soon as they hear the Drum of those who are coming to relieve them; and when they come in Sight, they are to order their Men to Shoulder their Arms. When the New Guard approaches very near, the Officer of the Old One orders his Men to rest their Firelocks, and the Drummers to beat a March.
>
> The Officer who comes to relieve, is to draw up his Guard opposite to the Old One, in the same Manner that they are, whether six or three Deep, or in a Rank entire; and when the Ranks are dress'd, he then orders his Men to rest their firelocks; in which Position both Guards are to remain 'till those who mount in the Outworks have march'd past them, which they are to do between the two Guards . . . After this, the Officers advance toward one another, paying the usual Ceremony with their Hats, and the Officer who is to be reliev'd delivers all the Orders relating to the Guard to the Officer who come to relieve him . . . The Sergeants and Corporals of the Old Guard deliver their Orders to those of the New at the same Time; and when that is over, the Men of both Guards should be order'd to Shoulder; the Corporal of the new Guard is to number his Men, and to draw out the Number of Sentrys who are then to be posted, forming them into Ranks, and being conducted by the Corporal of the old Guard, march with them to Relieve the Sentrys. They go first to the Sentry who is posted the furthest from the Guard, and Relieve him, and so one after another 'till they end with him at the Guard-Room door.[174]

The same authority points out that:

> All Sentrys are to be Vigilant on their post; neither are they to Sing, smoke tobacco, nor suffer any Noise to be made near them. They are not to sit down, lay their Arms out of their Hands, or sleep; but to keep moving about their Posts, if the Weather will allow of it.[175]

The usual custom at Frederica was to change sentries every two hours.[176] In the British Army of the time, guard duty never exceeded 24 hours. Not more than two men at a time could leave this duty, and then only to get food and drink. It was customary to arrange duty so that a man mounted guard every third day. In establishments of any size, there was a Main Guard of:

1 captain
2 subalterns
2 corporals
2 drummers
50 privates

Each gate (Frederica had two: a "Land-port" and a "Water-port"[177]) had its own guard of:

subaltern
sergeant
corporal
drummer
25 privates

Frontier towns (Frederica was obviously one) also had a Reserve Guard of the same size and make-up as the Main Guard. No doubt it was the Reserve Guard, traditionally required to be on momentary alert, which Oglethorpe ordered out against the Spanish scouting party on the morning of July 7, 1742.[178] Sixty men were sent. This may have been the actual number serving in the Reserve Guard. If so, Frederica was very near the contemporary standard of 50 men plus as many more as the circumstances warranted.[179]

<u>Other Work</u>. There was plenty of work for the soldiers to do. According to Lt. George Dunbar, they did many of the chores incident to setting up housekeeping for their Regiment, such as unloading vessels (working in the shallow salt water for hours at a time), carrying lumber and bricks, clearing land, and build-

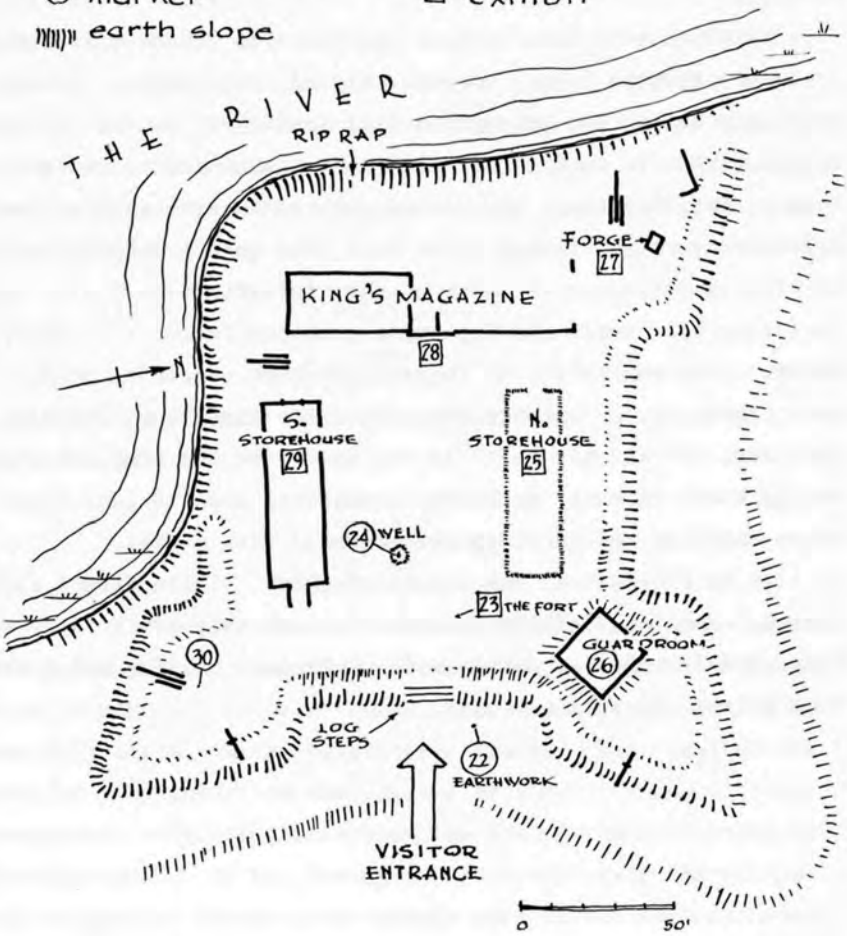
ing the clapboard huts that were to be their quarters. Their work day lasted from daylight to dark, with two or three hours respite at noon.

"All the time the men kept so healthy," said Dunbar, "that often no man in the camp ailed in the least . . . nor did I ever hear that any of the men ever made the heat a pretence for not working."[180]

Soldiers were also used in building the defenses, especially in the tedious labor of constructing earthworks. Certainly these men helped to strengthen Fort Frederica, as well as throw up the half mile or more of wall that was needed to enclose the town. Not that they approached such work with willing hands! Oglethorpe wrote, "though I have no fund to pay, I have prevailed with the soldiers to work on the fortifications, with hopes that they will merit his Majesty's gracious favour."[181] Later he added: "the generality of the soldiers are averse to work,"[181] even though they evidently received extra wages for labour on the defenses. It is only fair to say that the men were not averse to <u>all</u> kinds of work; on personal projects such as land-clearing, house-building and farming, they labored with a will.

As to recreation, the records furnish little direct information. However, Oglethorpe made it clear that the taverns were busy, and John Wesley complained of Sunday hunting and fishing long before the soldiers came.

INTERPRETIVE PLAN



52

INTERPRETIVE DEVELOPMENT

Policy. The purpose of development is to help the visitor learn what Fort Frederica was like. The job will be done by exhibiting and explaining the ruins.

The Frederica Museum gives the visitor an overall view of Frederica history, including the strategy of the fort. At the fort itself, then, broad aspects of the story need only be touched upon lightly. Major emphasis will be upon physical aspects and human use. This approach in turn is guided by the following precept:

> Crumbling ruins, giant moss-hung trees, and broad marshes characterize the antiquity of Frederica. Saving this antiquity must be the foundation of our planning.

The Fort. Retention of antiquity *per se* was not our goal. Ruins may be romantic, but without interpretation they are too often meaningless; and features which remain hidden beneath the soil can tell us nothing of the past. In our study of the site we had found and uncovered the major physical features of the fort -- the moat, the palisades, the earth walls, the structures on the parade ground. Can these finds be exhibited so that people can understand them?

It is of major importance to convey the information that the fort was an earthwork of a certain size. Policy rules out full scale restoration, but with the knowledge of the site gained from archeology, to some extent it was possible to re-emphasize the lost contours of the earthwork. The job was done very simply by replacing on the parapets some of the earth which had washed into the moat. The earthwork slopes are maintained in grass (Figures 55, 56).

With regard to above-ground masonry ruins, development policy is to stabilize, rather than restore. Excavated ruins, if exhibitable (and provided they contribute significantly to the story), are to be stabilized. Otherwise they are backfilled.

At the Blacksmith Shop, the 1736 forge is the only exhibit-

53. The Fort before Excavation (1950)

54. The Fort after Excavation (1959)

Notice that the site has been carefully opened to view by a slight lifting of the tree canopy and by removing a large dead mulberry and several small trees. The earthwork walls, where lost, were reemphasized to show the shape and size of the fortification.

55. The North Front of the Fort

The contours of the earthwork, though leveled by man and obscured by a wagon trail, were still quite visible even before excavation. Except for repair in the compacted area of the trail, little reemphasis of the earthwork was necessary on this front.

56. Earthworks Emphasized: The East Front

Contours on this side of the fort were completely gone. They were reestablished on the basis of archeological findings.

57. The Entrance Trail

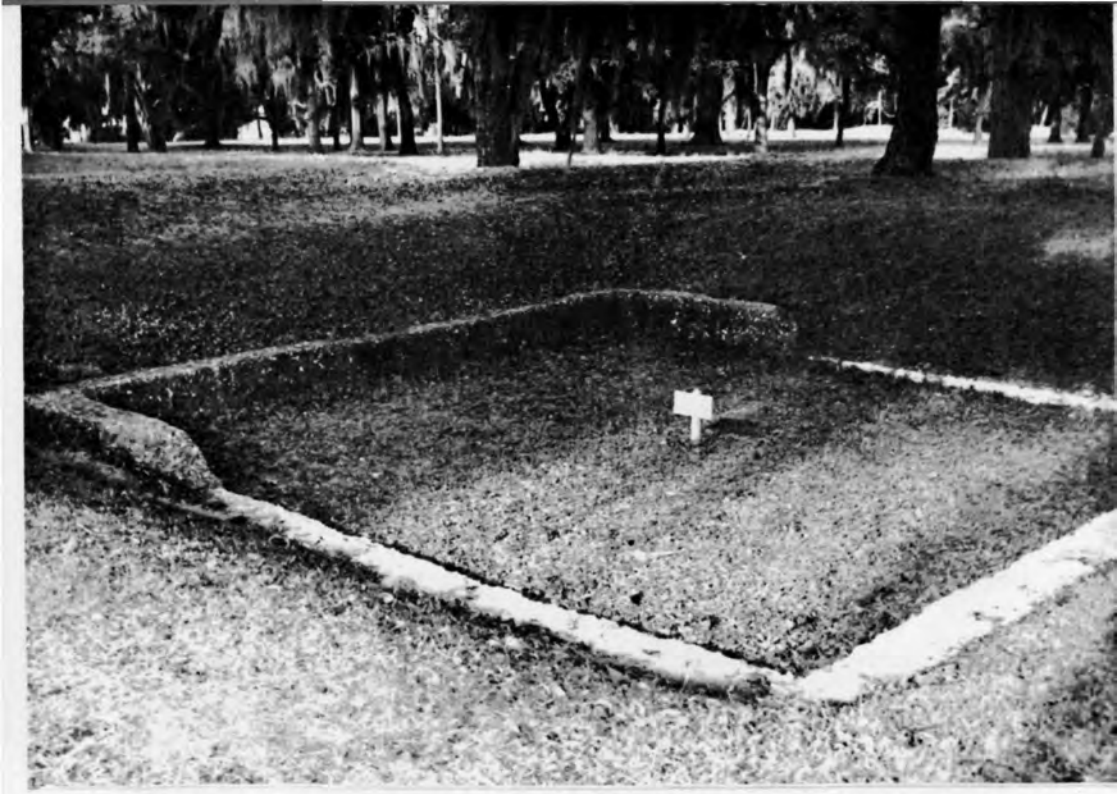
Visitor entrance to the fort is over puncheon steps in the east wall. (The colonial entrance was through the west wall, where now the river flows.) Formal walks are not used in the historic sections of the park. Spots which receive heavy traffic (as the approaches to the fort steps) are stabilized with crushed oyster shell or soil cement.

58. Visitor's View from the Entrance Trail

The South Storehouse (left), the 32-pounder cannon on a reconstructed carriage, powder vaults of the King's Magazine, and the well site marked with a brick curb (right foreground).

59. Site of the North Storehouse

There was nothing exhibitable here -- only the rubble of the original building. Its site and shape are shown by the depressed area outlined in brick. A case exhibit here will describe the original building and explain its use.



60. Ruin of the "Guardroom" in the Northeast Bastion

61. Site of the Blacksmith Shop

The stabilized ruin of the brick forge is at left. A hearth of later date was removed. An on-site exhibit case replaces the temporary sign at the forge.

able feature. The later hearth was removed as an anachronism. The shop area was excavated to the colonial floor level. This level was retained and grassed (Figure 61).

The South Storehouse was also exhibitable, although some of the brick veneer formerly on its walls had to be reconstructed (Figure 48) in order to protect the core of these walls. The brick was also necessary to outline the shape of the building, since some of the walls were entirely missing.

Bastion "Guardroom." Another excavated ruin is the "guardroom" in the northeast bastion (Figure 60). The interior was leveled off at the colonial floor level and kept in sand. Grass slopes are maintained from the high ground of the bastion to the top of the low tabby walls, which are stabilized.

King's Magazine. The most spectacular of the ruins is the King's Magazine (Figure 58). Its stabilization has already been described. After archeology discovered the north half of this building, it was possible to keep the low ruins on exhibit by lowering the ground level at the building to the actual colonial grade (Figure 35). This was a matter of scraping off about six inches of soil that had accumulated since the 18th century.

Several excavations, including the North Storehouse, the parade well, and a foundation in the southeast bastion, were not exhibitable. They were backfilled. However, the North Storehouse and the well were deemed so important to the fort story that the sites were specially marked.

The North Storehouse site, after backfilling, was marked on the ground as follows: A depression about 6 inches deep was left to show the area of the original structure. Then the exact outline of the original walls was constructed with Savannah grey bricks, laid in mortar and extending one course above ground level. This wall was the same width as the original foundation (Figure 59).

A similar device was used to mark the parade well: A circular curb was built at ground level over the site (Figure 58).

Landscaping. No formal landscaping is proposed. In the

vicinity outside the fort, a small amount of grading was necessary to insure drainage and to eliminate unsightly humps that had developed during recent human occupation. Grass will be maintained where possible, and no attempt will be made to cut up the small site with artificial walks. An occasional sprinkling of crushed shell over heavily used areas, or stabilization with soil cement, is simple and adequate maintenance. Inconspicuous puncheon steps are provided for climbing the earthwork slope into the fort.

Small indigenous shrubs may be used sparingly to screen intrusive markers or cases. The big trees should be carefully preserved. For their eventual replacement, nearby small trees in suitable locations should be encouraged.

Interpretive Devices. For adequate interpretation of the ruins and the sites marked in the fort area, certain devices are proposed. Again, it should be remembered that overall interpretation of the settlement has been done in the Visitor Center museum, and the museum exhibits include a large layout of the town and its fortifications.

The tour route from Visitor Center to fort is natural and direct -- straight down the main street, past house ruins on each side. Once the visitor is near the fort, our objective is to suggest the size and nature of the fortification and encourage his coming inside. Within the fort he visits the various sections in whatever sequence he may choose.

Markers and exhibits to explain the fort features are outlined below. The numbers are keyed to the park interpretive plan.

The markers are cast aluminum with raised lettering. Throughout the park, the color scheme is ivory on dark brown. For the exhibits, there are aluminum on-site cases about 18 x 24 inches and 6 inches deep, mounted at a convenient viewing angle about 3 feet above ground. The case has a glass top through which the exhibit is seen. When possible, the exhibit will consist of meaningful specimens recovered from the actual site.

Over the glass top is a hinged lid which must be lifted in order to view the exhibit. The top of the lid is a cast aluminum marker; its underside is a small exhibit panel (drawing or photograph).

22. Sign 12 x 15" at foot of fort wall.

> These slopes outline the moat and the palisaded walls of the earth fort built in 1736 to protect Frederica.

23. On-site exhibit on fort parade. Sign 15 x 23" on lid to read:

> FORT FREDERICA
>
> This was the heart of the Southern Frontier. It was built in 1736, to protect the 116 souls of the early settlement.
>
> To train the early settlers, Oglethorpe once "thoroughly alarmed" the town with "Spanish" shouts and shots. All the people ran to the fort, and "the very women took arms to help the defence."

Panel under lid to contain sketch diagram explaining the strategy of the fort location on the waterway, labeled to include the statement that although the Spanish probed to within sight of it in 1742, it has never been attacked.

Case exhibit to contain model or sketch to show the fort as a unit, with labels or diagrams to explain the use of the various features, and point out that the fort was originally a simple earthwork.

24. Sign 4 x 8" at Parade well.

> WELL

25. On-site exhibit at North Storehouse. Sign 15 x 23" on lid to read:

> NORTH STOREHOUSE -- 1736
>
> The bricks show the site of the first public building. Food and supplies were stored in this brick and timber building. On the second floor, the Magistrates held court. The Wesleys conducted Church of England services in the chapel on the third floor.

Panel under lid to contain conjectural sketch of North Storehouse.

Label may include Moore's description of the building and its first leaky roof.

Exhibit case to contain excavated specimens suggesting the character of the building, and perhaps portraits of the Wesleys.

26. Sign 6 x 16" in north-east bastion.

GUARDROOM

27. On-site exhibit at Blacksmith Shop. Sign 15 x 23" on lid to read:

THE BLACKSMITH SHOP

Around this brick forge, over 5,000 metal objects were excavated.

Here the Blacksmith made hardware and the King's Armourer repaired guns. It was one of the busiest places in town.

Panel under lid to contain conjectural sketch of the smithy in operation.

Case exhibit to contain excavated specimens showing type of work done in the shop, and a diagram showing the work areas. Specimens may include gun furniture from the armorer; balls and lead spatter from the musket ball manufactory; hardware, iron stock and perhaps a jew's-harp from the smith; with labels to explain the kind of work done.

28. On-site exhibit at the King's Magazine. Sign 15 x 23" on top to read:

THE KING'S MAGAZINE

The Spanish threat led Oglethorpe to strengthen his fort, and his tabby building was one of the additions. Originally it was 96 feet long. The thick-walled rooms standing today were vaults for gunpowder.

Panel under lid to contain a use plan and conjectural sketch of the King's Magazine.

Case exhibit to contain excavated specimens (bottle, pipe and crockery fragments, and musket flints) typically associated with the soldier, and a sketch of an infantryman labeled to suggest the nature of the garrison.

29. On-site exhibit at South Storehouse. Sign 15 x 23" on lid to read:

SOUTH STOREHOUSE

With the coming of the Regiment in 1738, more space was needed for food and supplies,

so this storehouse was built across from the earlier one.

Both storehouses were three stories high. They were an important supply depot for the Southern Frontier.

Panel under lid to contain conjectural sketch of South Storehouse, with label suggesting use of tile-floored room as office for the Keeper of the King's Stores.

Case exhibit to contain excavated specimens. These should be of structural significance, such as flint (labeled as brought over by Oglethorpe, and diagrammed to show its use) and room tile. Also included may be charts showing kind and quantity of annual provisions for one family head, and of stores on hand when the Regiment was disbanded.

30. Sign 15x20" in southeast bastion at 12-pounder cannon. Diagram, low relief, of mounted cannon. Labels around diagram to explain loading and firing process, to read:

    1. Load here (arrow).
    2. Then roll gun up to wall (arrow).
    3. To fire -- touch match to vent (arrow).

    Text of sign to read:

    This 12-pounder cannon is from
    the original armament of the fort.
    It could shoot about a mile.

Cannon are an integral part of a fortification exhibit, and conventional policy is to display suitable antique guns at locations which will help explain the defensive purposes of the fort, and perhaps highlight a battle event. Where possible and practical, the guns should be mounted on historically correct reconstructed carriages.

The 12-pounder iron gun associated with the fort site is much oxidized, but in exhibitable condition. A 6-pounder iron piece with its trunnions and cascabel broken off was purchased from a Charleston salvage yard in 1950. This gun is judged to date from the 1770's. The Island of Jamaica, B. W. I., through the interest of the Jamaica Historical Society, in 1956 presented a 12-pounder and a 32-pounder, both iron guns, founded respectively in 1719 and 1712. Some years ago the Brunswick, Ga., Chamber of Commerce was instrumental in donating another iron

62. The 32-Pounder Overlooks the South Channel

Upon a reconstructed carriage, this gun silently explains why this particular spot was a good place for a fort.

gun which appears to be a U. S. piece of the early 1800's. In 1959 the Fort Frederica Association purchased a pair of 18th century iron ½-pounders for the park.

Of this ordnance, the three pieces which date prior to 1750 are obviously well suited for display at the fort. While the 32-pounder is somewhat heavier than guns which happen to be mentioned in the records, it is an excellent piece and should be used. All ought to be mounted on garrison carriages (Figure 43).

The 6-pounder and 19th century piece are less desirable, but can be used to reinforce the effect of the better guns. In appearance they are much like the earlier tubes. Carriages are not required for them; they may be displayed on simple concrete blocks. The ½-pounders, being subject to larceny because of their lightness, should not be used at the fort.

For interpretation, the guns are 3-purpose weapons:

1) They can aid mightily in suggesting the appearance of a fort to the visitor as he approaches. This means that as the visitor walks down the main street toward the fort, he will see cannon in position behind the fort "walls." The "walls" are only shallow slopes of earth, but the presence of cannon not only creates the illusion of a defense wall, but tacitly explains many features of the fort design. To achieve the desired effect, the 6-pounder and the 19th century piece can be blocked up behind the east parapets of the two east bastions. Here they will point at the visitor as he walks into the fort area.

2) The cannon should also emphasize the fort's command of the river. To do so, one tube should be pointed along the west arm of the river and another along the south. The tubes should be on gun carriages to show that cannon were mobile. Since the water battery site is gone, we suggest putting the two guns near the west shore, one pointed west and the other south. A third gun in the southeast bastion will also point south, thus putting double emphasis upon the southerly approach. It was the way the Spanish came.

3) The cannon exhibit should explain the rudiments of us-

ing a cannon. For this purpose, the southeast bastion gun mentioned above is suggested. It should be the Frederica 12-pounder. The earth slopes of the bastion will show that a gun and its crew were protected by surrounding walls. The tree canopy in the vicinity should be kept high enough to provide a clear "field of fire," so that any visiting "gunner" can sight on targets approaching via the south channel. No explanation of firing technique is proposed other than a simple diagram on a marker.

NOTES

1. A. D. Candler (ed), Colonial Records of the State of Georgia, III, 386-387. Hereafter this source will be abbreviated as follows: CR 3/386-387.

2. J. T. Lanning, The Diplomatic History of Georgia, 221-222.

3. A Geographical and Historical Description of the Principal Objects of the Present War in the West-Indies, 191-192.

4. Ibid.

5. Collections of the Georgia Historical Society, VII, part 3, p. 33. Hereafter abbreviated as Coll. GHS.

6. M. D. Cate, "Fort Frederica and the Battle of Bloody Marsh," Georgia Historical Quarterly, XXVII, 111-112, 116, 117; /Captain Stollard/"Abstract of the Journal . . . in the Elizabeth Sloop," and Ms. map of Fort King George and the West coast waterway of St. Simons Island, Ga., August 1722.

7. CR 21/75; Coll. GHS 1/109.

8. CR 39/488; Cate, 117, citing CR 21/103, 105.

9. Coll. GHS 1/139-140. Mackintosh was from Darien, a Scottish colony on the Altamaha River. See CR 35/335 ff. Although we lack direct evidence that Augspourguer was at Frederica before June 1736, this engineer officially stated that in 1736 he "built the Fort at Frederica (CR 39/479). In the light of this statement and since the early fort was "in a good condition" by the first part of June, he must have been present during most of the construction period. Further, if Augspourguer was the man who drew the plan entitled "The Fort at Frederica . . . as layd down by a Swiss Engineer"---and what other Swiss engineer was in Oglethorpe's employ?---he was associated with the project very early, because this plan was drawn before construction began. See the later discussion under The Fort Trace.

10. Cate, 113-114; CR 2/280, 5/348 and 437, 6/82, 33/48; Coll. GHS 1/114-115; Phillipps Collection of Manuscripts relating to the Colony of Georgia, 14210/62, 14208/514. The latter source is hereafter cited as Phillipps.

11. Coll. GHS 1/114.

12. Paul Ive, The Practise of Fortification, 33-34.

13. Phillipps 14201/389.

14. Coll. GHS 1/129. Augspourguer's 1739 statement of 15 guns (CR 39/479) is probably more reliable than Dempsey's 1736 report of "20 cannon mounted" (CR 5/144).

15. Coll. GHS 1/129.

16. Coll. GHS 1/116.

17. Coll. GHS 1/129.

18. Phillipps 14201/389. Mrs. Cate suggests that the second palisade (which might have seemed superfluous to the Trustees in faraway London) was erected by Oglethorpe (who had been instructed by the Trustees to spend no money for military purposes) and disguised under such bookkeeping entries as "£10 . . . to Mr. Cartaret for Cedar Posts for fencing in

the Storehouse" (CR 2/310). The November date: Charles Dempsey, who reported construction of the second palisade, left Frederica in November, so the palisade was in place by then. See Cr 5/144, 39/473, 479, 483.

19. Phillipps 14201/392; Coll. GHS 1/144, 129, 134, 140, 146; 4/4 (Edward Kimber, "Itinerant Observations in America" c. 1743); John Whitehead, The Life of the Rev. John Wesley. . . (New Orleans, 1854 reprint of the 1793 London edition), 78; N. Curnock (ed.), The Journal of the Rev. John Wesley, I, 193.

20. Coll. GHS 1/133-134.

21. Coll. GHS 1/134-135.

22. Coll. GHS 1/140; Phillipps 14202/205.

23. Phillipps 14202/213.

24. Cate, 123-124; CR 35/140-141.

25. CR 22 pt. 1/360.

26. CR 2/140; 3/139, 213, 5/95, 96, 190, 348; 30/87; Phillipps Supplement 37r/50. See also Phillipps 14204/51.

27. CR 35/184.

28. See later discussion and illustration under The Palisades. The new construction seems to have been reported casually as mending the palisade and building gates. See Phillipps 14204/43 and Supplement 37 c/43.

29. CR 39/473.

30. Lanning, 149.

31. CR 3/399, 4/392, 35/218.

32. CR 35/218; Cate, 127.

33. CR 35/218; Lanning, 173, 179.

34. CR 35/318.

35. CR 22 pt. 2/288-289.

36. Diary of Viscount Percival, Afterwards First Earl of Egmont, III, 214 (hereafter cited as Egmont Diary); Phillipps 14205/245.

37. Coll. GHS 4/121

38. Egmont Diary 3/214; Phillipps 14205/245.

39. CR 5/436-437.

40. CR 5/558.

41. Coll. GHS 4/121.

42. Ibid.

43. James Pemberton, "Visit to South Carolina, 1745," 15a.

44. CR 35/526. See also Cate, 157. This artillery was probably in the Point Battery, separate from and a short distance south of the fort itself.

45. CR 10/515; 14/413, 476; 28/2B, 517; 35/487; 37/240, 243, 247; British Public Record Office Papers, SP 41/48; Cate, Frederica manuscript, 60 ff. (hereafter cited as Cate MS).

46. CR 13/704, 709; 27/239; Coll. GHS 4/132, 6/13; Cate MS, 67 - 68.

47. Brunswick Advertiser, Jan. 17, 1880; S. P. Gilbert, "The Part Played by the Colonial Dames in Establishing the Fort Frederica National Monument." Georgia Historical Quarterly, XXVII, 177; Albert Manucy, "Fort Frederica Historic Site Report," 114.

48. The following summary is based mainly upon Manucy, op. cit.; C. H. Fairbanks, "Report of Excavations at Fort Frederica National Monument, 1955;" J. L. Shiner, "Excavations at Frederica, Georgia, 1956;" "The Excavation of Fort Frederica." of Shiner's reports, only the last is cited hereafter, since it comprises his final study.

49. A later increase in the thickness of the fort wall may also account for some of the difference. For explanation of the basic method of designing a trace, see Manucy, 118 ff.

50. Coll. GHS 1/116.

51. Tabby is a masonry composed of lime and sand with a shell aggregate. In building construction, it was used much as concrete is used today. Massive monolithic structures could be erected of tabby, by judicious use of wooden forms to support the mortar while it hardened. The technique is described in detail by Thomas Spalding (The Southern Agriculturalist, III, pt. 1, 617 ff.). For a broader exposition see Manucy, "Tapia or Tabby," Journal of the Society of American Historians, XI, No. 4, 32-33.

52. The date of the "mud wall" change is pinned down by Delegal's 1739 description (CR 39/473), but the available records do not mention tabby before 1743. However, actual construction of the tabby features no doubt took place in 1740-1741, during which time Oglethorpe stated that extensive construction was under way. See Phillipps 14205/245 (Jan. 25, 1741).

53. Fairbanks, 28-30.

54. In sandy soil, a 45° slope was about the best that could be readily maintained. The following slopes were obtained from archeological profiles at the fort:

North curtain, east end	50°
North curtain, center	45°
East curtain, south center	45°
Northeast bastion, east face (Fairbanks, 31)	47°
East curtain, center	53°
East curtain, south end	45°
Southeast bastion, north flank (Shiner, 9 and figure II).	50°

See Manucy, 122 ff., for description of 18th century practices in earthwork design and construction.

55. Phillipps 14201/389.

56. Cr 39/473.

57. Fairbanks, 32, 35-36, Fig. 5.

58. Coll. GHS 1/129. A palisade following the trace of the fort would have much the same function (and from the fort interior might look much the same) as fraises. Hence Moore's use of

the words "fraze" and "palisade" as synonyms. Strictly speaking, frases are pointed stakes set horizontally into an earthwork about halfway up its slope. They form a fence to keep enemies out. A palisade is a similar fence but consists of pointed stakes set vertically into the ground (and not into the slope of the earth work).

59. Fairbanks, 32-33. The recommended depth for palisade posts was 3 feet. See Manucy, 136 ff.

60. A 1757 palisade at Fort Loudoun was "lined on the inside with split pieces of timber," according to its builder, Capt. Raymond Demere (see Manucy's "Study of Palisade Data, Fort Loudoun, Tennessee"). Demere knew Fort Frederica well, and use of the liners at Loudoun may have evolved from his knowledge of them at Frederica.

61. An 18-inch trench was wide enough for planting the posts, but the trench in question averaged 2.5 feet in width and in some places was 3.6 or more. At the town gate site (several hundred feet from the fort), the footing ditch for the outer palisade was 1.5 feet wide; for the inner palisade it was 2 feet, but the inner palisade had been salvaged and the ditch no doubt widened in the process. See Fairbanks, 33-34.

The pair of trenches which Fairbanks found at the east face of the northeast fort bastion were not recovered elsewhere along the east front, although a fragmentary feature which Shiner noticed two feet east of the palasade might be the earlier structure (Figure 17). One of the trenches may well be from the repairs of the 1760's.

62. Fairbanks, 37-38.

63. CR 39/473. The space between the center palisade and the outer wall of the moat must be the so-called "covered Way" mentioned in 1739 by Augspourguer (CR 39/479). This is, however, loose use of a term that usually designates the space between the moat and the glacis. Fort Frederica had no glacis.

64. Fairbanks, 31-32.

65. Fairbanks, 34; Phillipps 14204/43 and Supplement 37c/43.

66. Fairbanks 26-28. The sherds were San Marcos complicated stamped.

67. Coll. GHS 1/129.

68. Fairbanks, 41-43.

69. Shiner, 7-8.

70. Coll. GHS, 1/134-135.

71. Shiner, 15-40.

72. Coll. GHS 1/134-135.

73. Shiner, 12-14.

74. See post, The Bastion "Guardroom," for discussion of later construction on this same site.

75. Whitehead, 78.

79. Curnock, I, 193.

77. CR 5/96, 348.

78. Phillipps 14208/481 and Supplement 157h/465; CR 2/422; 3/146, 21/103, 105, 423-425.

79. CR 2/268; Phillipps 14210/3; Egmont Diary 2/473.

80. CR 36/475.

81. Fairbanks (p. 40) estimated the building at 18x70 feet. The excavations are reported in Fairbanks, 38-40; and Shiner, figure 1.

82. CR 22 part 1/360.

83. Coll. GHS 1/144 and 4/121. Frederica bricks measure from 2-3/8 x 3-1/2 x 8-3/8 inches (minimum) to 2-1/2 x 4 x 8- 3/8 inches (maximum).

84. CR 32/506; Egmont Diary 3/139.

85. Fairbanks, "The Excavation of the Hawkins-Davison Houses," 6, 10-11, Figures 1 and 2; Shiner, "The Colonial Houses on Broad Street," 23-24, Fig. 4.

86. Coll. GHS 1/134, 140, 146.

87. Ceilings at the Barracks, a contemporary building a short distance north of the fort, were 8 feet high.

88. Coll. GHS, 4/121.

89. CR 5/190, 34; 22 part 1/360.

90. CR 5/95.

91. CR 22 part 1.360.

92. Phillipps 14204/51 and Supplement 37r/50.

93. CR 30/87.

94. Phillipps 14210/67, 68.

95. Shiner, 11-12.

96. John Muller, A Treatise Containing the Practical Part of Fortification, 102 and plate 23, figures 3, 4. Hereafter cited as Practical Fortification.

97. Shiner, 11-12.

98. Practical Fortification, 240.

99. Oglethorpe doubtless included reference to the King's Magazine in his letter of May 1741: "I go on fortifying Frederica, making magazines . . ." (CR 36/109).

100. CR 33/399; 36/362, 467.

101. CR 5/558; 36/107, 109; Phillipps 14205/245; Coll. GHS 4/121.

102. CR 5/96, 348; Phillipps 14202/213.

103. Colonial Dames of America, Georgia Society, "Minutes of Board Meetings, 1902-1904."

104. Shiner, 5-6, 17ff.

105. Manucy, 147-149; /Samuel Augspourguer/ "The Fort at Frederica" (map).

106. Coll. GHS 4/121.

107. Pemberton, 15a.

108. Muller, A Treatise Containing the Elementary Part of Fortification, 191.

109. Practical Fortification, 181, 192, 195.

110. Practical Fortification, 180.

111. Practical Fortification, 111.

112. Manucy, 142-144, 169.

113. Practical Fortification, 181.

114. CR 35/358, 438; 36/107.

115. Practical Fortification, 165; Muller, A Treatise of Artillery, 160, 182-183.

116. Personal letter to Manucy, May 1, 1958. The 1851 drawing is reproduced in B. J. Lossing, Pictorial Field-Book of the Revolution, II 516.

117. Coll. GHS 1/134, 4/121.

118. Practical Fortification, 239-240.

119. Fairbanks, 27, 41, 43.

120. Because the jar somewhat resembles Spanish earthenware, it was at first thought to be of foreign origin. Dr. John M. Goggin in personal correspondence with the writer (Nov. 11, 1956, et ante) identifies it as a British parallel of the Spanish "olive jar," that all-purpose shipping and storage container. The type of jar in question is found on the British West Indies. It is not found in Spanish sites. It is too bulky and hard to handle to have been a barracks chamber pot.

121. Shiner, 12.

122. CR 39/479.

123. Coll. GHS 1/129.

124. Coll. GHS 1/144.

125. Coll. GHS 1/129.

126. Elementary Fortifications, 228; Treatise of Artillery, 160,

127. CR 5/256.

128. CR 27/148, 239.

129. Coll. GHS 2/121; 6/13; CR 5/558. Captain Gray (1762) wrote there were "at least thirty" cannon. No doubt his count included guns outside the fort. See PRO, WO 34/95.

130. Coll. GHS 6/13.

131. CR 35/526.

132. CR 27/148; Cate MS., 67-68.

133. Edward Kimber, Late Expedition to the Gates of St. Augustine, 8-9. The gun mounts were evidently similar to the type known later as the Gribeauval. Track guides held the gun carriage in place upon a narrow platform, the fore end of which was anchored by a stout pintle. The gun was pointed by revolving the entire platform around the pintle. Fort William also had swivel guns.

134. The files at Frederica contain much information on the development of ruins stabilization techniques and policies. Special attention is directed to Manucy's "Stabilization of the Barracks Tower Ruin;" J. C. Harrington, "Report on Statilization of Burial Vaults;" File 333.2, "Rehabilitation of the Citadel" (King's Magazine); and the following memoranda; June 17, 1952, J. C. Harrington to the Superintendent, Castillo de San Marcos NM; Oct. 28, 1957, Harrington to the Superintendent, Frederica; Oct. 28, 1957, Manucy to the Regional Director, Region One; Apr. 7, 1958, Walter Nitkiewicz to the Superintendent, Frederica; Apr. 8, 1958, Manucy to the Superintendent, Frederica.

135. Omitted.

136. Coll. GHS 3/63; see also Cate, 113-114; CR 2/280, 5/348, 6/82, 33/48; Phillipps 14210/62, 14208, 514.

137. Coll. GHS 3/49.

138. CR 22 pt. 1/91.

139. Coll. GHS 1/140.

140. Id. 3/50.

141. CR 2/278.

142. Cate letter of Sept. 2, 1956, and enclosure; Cate, 123-124. Margaret Cate is writing a definitive history of Oglethorpe's Regiment.

143. PRO, WO 24/222, 236.

144. CR 35/166-167, 498; Cate, 136; PRO, WO 24/236.

145. Worth Bailey, "Fort Frederica," 4-5, 14-15.

146. CR 5/171; see also CR 5/80.

147. Coll. GHS 3/114, 55; Fairbanks, "Excavation of the Hawkins-Davison Houses;" Bailey, 5.

148. CR 5/499; 35/493.

149. Bailey, 4-5; Cr 35/490-491; PRO, WO 24/236.

150. PRO, WO 24/236.

151. Bailey, 5, 6-7, 13.

152. PRO, WO 24/236.

153. C.C.P. Lawson, sketches and notes illustrating British military uniforms circa 1740.

154. PRO, SP 41/35 *ff*.

155. M.E.S. Laws, letter to Cate, n. d.

156. CR 35/452-453.

157. Cate letter of Sept. 30, 1957, citing Heron's accounts for expense of ammunition.

158. Bailey, 9-11.

159. Cate, 147.

160. Kimber, Late Expedition, 6.

161. Bailey, 11-12.

162. CR 33/90-91; see also 119.

163. Coll. GHS 4/126.

164. Id. 4/6.

165. Id. 3/104.

166. Id. 3/144.

167. CR 35/168; see also 35/164.

168. Bailey, 10.

169. CR 1/446.

170. CR 5/169.

171. CR 5/558.

172. Coll. GHS 3/142; see also id. 3/53.

173. See ante, p. 43. Fairbanks, 37-38.

174. Humphrey Bland, Treatise of Military Discipline, 159-160.

175. Id., 162.

176. Cate letter of Aug. 4, 1959, citing testimony in the case of the Crown vs. Thomas Goldsmith, Savannah, Jan. 28, 1754.

177. Coll. GHS 4/5.

178. CR 35/489.

179. Bland, 153-154, 166.

180. Coll. GHS 4/56-57.

181. CR 35/184.

182. Phillipps 14205/245.

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