A Connecticut Yankee on the Georgia Coast
The Engineering Epic of Fort Pulaski, 1821 - 1861

Living
The story of the trials and triumphs of Lieutenant, later Captain, Joseph L. F. Mansfield, United States Corps of Engineers, in the building of Fort Pulaski, on Cockspur Island, Savannah River, Georgia.

By
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1938
He was the builder of Fort Pulaski. For fourteen years, from 1831 - 1845, as lieutenant, later captain, Corps of Engineers, United States Army, he directed the construction of Fort Pulaski to its virtual completion. Later, during the war between the states, he served with the Union Army and was mortally wounded at Antietam, on September 17, 1862. The portrait is from J. T. Peale and J. R. Morris, The Military and Civil History of Connecticut during the War of 1861 - 65 (New York, 1869).
Preface

An exhaustive, documented study of the building of old Fort Pulaski having never been prepared, this volume is intended to supply that need. Since the main period of construction on this picturesque brick fortification, located at the mouth of the Savannah River, coincides with the fourteen year assignment there of Joseph R. F. Mansfield, United States Corps of Engineers, he is properly regarded as its builder. For this reason, an otherwise rather prosaic subject is here presented as an enduring achievement of this strikingly capable native of the state of Connecticut. The construction of Fort Pulaski has been treated as a glowing epoch in the life of Joseph R. F. Mansfield.

This study has been in preparation at intervals for several years. The bulk of the narrative was written late in 1934, and early the spring and early summer of 1935. During the spring and early summer of 1935, much of the narrative appeared in the Savannah Morning News, as a series of undocumented historical feature articles. Subsequently, this series of feature articles has been thoroughly revised, corrected and documented, mainly in 1937 and early in 1938. However, the writer hereby wishes to give the Savannah Morning News full credit for publishing the bulk of the narrative in its original form, and to express his appreciation to this newspaper for allowing this material to appear in its present form.

Several individuals have been of invaluable assistance to the writer in the preparation of this study. The capable assistance of Miss Loretta Schwartz, of the Maps Files Section, Office, Chief of
Engineers, United States Army, Washington, D. C., is gratefully acknowledged. Most of the original documents upon which this study is based were secured from the Record Section, Office, Chief of Engineers, under the direction of Miss Schwartz, who was also in charge of this material in the summer of 1934. The writer is especially indebted to Mrs. William Hugh Stephens, of the English Department of Armstrong Junior College, Savannah, Georgia, who read the entire manuscript, and suggested many pertinent changes in the construction of the study. Mr. Salston B. Lattimore, Acting Superintendent of Fort Pulaski National Monument, and a colleague of the writer, is worthy of special mention for his gracious suggestions and encouragement.

Rogers A. Young
Fort Pulaski National Monument
Savannah, Georgia

April 30, 1934.
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Prologue

A New Fort is Planned for Cockspur Island

Lying in the edge of the swirling red tides of Tybee Roads at the mouth of the Savannah River, is an alluvial marsh island originally called Caper Island by the Georgia colonists, a name they soon discarded, and known since the second quarter of the eighteenth century as Cockspur. The island, due to its strategic geographical location, has from colonial times occupied a definite role, of varying degrees of significance, in the social, commercial and military history of the Georgia coast. Some of intrigue, adventure and tragedy, by the early years of the nineteenth century Cockspur Island had already been the site of two ill-fated fortifications.

These two fortifications had occupied the island but briefly. Construction of colonial Fort George, a well-headed log blockhouse and earthen fortification, was begun by the Georgia Colony in 1761. Fort George served as a protection for the Savannah Harbor, and intermittently enforced quarantine and customs regulations until 1776, when it was abandoned upon the approach of the British fleet. Upon the conclusion of the Revolution, the necessity for the erection of a new fortification at the mouth of the Savannah River to carry on the functions of Fort George, which had long since been destroyed, was recognized by Georgia. Nothing definite was done toward this end upon Cockspur Island, however, until after President Washington had twice, in 1791 and 1793, recommended and urged the establishment of a national system of fortifications along the Atlantic Coast. Finally heeding his impassioned warnings and prophecies re-
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"Pemp'ry, " later Cockspur Island, in 1735

This interesting colonial map, showing "Pemp'ry, " later known as Cockspur Island, at the upper right, in the mouth of the Savannah River, is from Samuel Kripsperg (Compiler) Ausführliche Nachricht von den Melburnischen Migranten ....
(Melle, 1735), I.
gardening the dangers of a defenseless coast, Congress passed an act, approved March 20, 1794, providing for the early establishment of a system of fortifications, at certain important ports and harbors, from Maine to Georgia. Provision for the fortification of Savannah and the Savannah River, then rapidly becoming one of the most important commercial points of entry along the South Atlantic, was included in this projected coastal defense system. Cockspur Island was again selected as the site of the new Savannah River fortification, and construction began there in the summer of 1794. Completed late in the following year, the fortification, consisting of an earth and timber battery and a blockhouse barracks, was soon thereafter named Fort Greene. Its history was brief and tragic, as nine years later it was totally destroyed and part of the garrison drowned, in the equinoctial gale of September, 1804.

A quarter of a century was then to elapse before Cockspur Island was again selected as the site of a fortification to command the Savannah River. No steps were taken immediately after its destruction to replace Fort Greene, and by 1807, Secretary of War Henry Dearborn reported that no fortification work had been done on the Georgia coast during the five preceding years, since the state had failed to cede permanent fortification sites to the United States, as required by the fortification act of March 20, 1794, and the President had not been able to acquire such sites by purchase "on reasonable terms." Due to these circumstances, and to a change in the War Department's fortification policy on the Georgia coast, the possibility of Cockspur Island being selected again immediately as the site for a permanent fortification at the mouth of the river faded
completely in 1808. By the beginning of that year, the War Department apparently had determined that it would first erect permanent fortifications in the city of Savannah and its immediate vicinity, temporarily transferring its attention from the more distant water approaches until a more opportune period. Therefore, late in the spring of 1808, the Federal Government purchased a fortification site on the Savannah River, three miles below the city, and by the close of that year had practically completed a new masonry battery there. Four years later, at the opening of the war of 1812, when for the first time since the Revolution danger of a foreign invasion actually threatened our Atlantic coast, this new Savannah battery had become "an enclosed work of masonry and mud, mounting six heavy guns," and was known as Fort Jackson. It was then the only important bulwark between Savannah and the sea.

The humiliating lesson of pillage and devastation experienced on our mid-Atlantic coast and at Washington in the war of 1812 as a result of our deficient national coastal defense system, soon aroused the national consciousness to demand an increased number larger and more permanent fortifications. The extensive coastal system subsequently projected was eventually to return Cockspur Island to prominence as a key fortification site on the South Atlantic. A system of fortifications, erected under the provisions of the act of march 20, 1796, and the War Department's coastal defense plan of 1808 had existed along our Atlantic Coast from Maine to Georgia at the opening of the war of 1812. These fortifications, however, with the exception of a few enclosed masonry forts at the most important of our Atlantic ports, were mostly small, impermanent, earth, timber and masonry batteries, at widely sep-
The inadequacy of this system of coastal defense was fully attested by the disastrous domestic events of our second war with England, from June, 1812, to December, 1814. President James Madison, in his second inaugural address, delivered on March 5, 1815, presented the following able summary, in a perspective of the events and the chief military defect upon our country of this abortive struggle. Said he:

The events of that war are too recent and too deeply impressed on the memory of all to require development from me. Our commerce had been in a great measure driven from the sea; our Atlantic and inland frontiers were invaded in almost every part; the waste of life along our coast and on some parts of our inland frontiers ... was immense ....

As soon as the war had terminated, the nation, admonished by its events, resolved to place itself in a situation which should be better calculated to prevent the recurrence of a like evil, and, in case it should recur, to mitigate its calamities. With this view, after reducing our land forces to the basis of a peace establishment ... provision was made for the construction of fortifications at proper points through the whole extent of our coast ....

Though by the events of the war forcibly impressed with the necessity of establishing an adequate fortification system along our coastline, the Federal Government allowed nearly two years to elapse after the signing of the Treaty of Ghent on Christmas eve, 1814, before it was in a position to commence such a vast undertaking. In his annual message to Congress, on December 5, 1815, following the termination of the war, President James Madison formally recommended and urged the early extension of our fortification system, stating that

the character of the times particularly inculcates the lesson that, whether to prevent or remove danger we ought not to be unprepared for it. This consideration will sufficiently recommend to Congress a liberal provision for the immediate extension and gradual completion of the works of defense, both
BRIGADIER - GENERAL SIMON BERNARD

General Bernard, the distinguished French fortification and military engineer, who served as a Field Marshal under Napoleon I, was commissioned a brigadier-general in the Corps of Engineers, United States Army, from 1816 - 1821, and during 1826 - 1827, he designed the original general plans of Fort Pulaski.

Courtesy of Thomas Gamble, Esq., and the Savannah Morning News, Savannah.
fixed and floating on our maritime frontier ....

The task of developing an entirely new and adequate fortification system along our far-flung Atlantic and Gulf coasts of the period was one which required the direction of a military expert with special engineering abilities. The Government's search for a person peculiarly fitted for this position was brief, however, and the country was fortunate in securing the services of the distinguished French fortification and military engineer, General Simon Bernard, who was then seeking employment in the United States. A graduate of the Ecole Polytechnique in Paris, Bernard had served with distinction in many of the campaigns of Napoleon I, where he displayed such outstanding abilities in fortification and engineering tactics that he soon acquired an enviable reputation as a military engineer. Following Waterloo, he came to the United States at the invitation of Joseph Bonaparte, in 1815, bearing high recommendations to government officials from Lafayette and Albert Gallatin. Through a resolution of Congress, approved April 29, 1816, authorizing the employment of a "skillful assistant" to the Corps of Engineers, President Madison commissioned Bernard on November 16, 1816, as "an Assistant in the Corps of Engineers of the United States, with the Rank of Brigadier General by brevet ...." Early in December, 1816, then, by direct order of President Madison, General Bernard, Colonel William McKee and Colonel Joseph J. Totten, formed a new "Board of Engineers," the duties of which were to consist in devising a system of seacoast defense for the entire country.

Congressional fortification appropriations in 1816 and 1817, which in each year were more than double the amount allotted for the same purpose in 1815, coupled with resolutions made early in 1817, calling for immediate
coastal defense surveys, hastened the new national fortification pro-
gram. Though nominally just an assistant engineer on the new fortifica-
tion board, Bernard soon assumed its leadership, and together with his
colleagues plunged immediately into one of the most ambitious and com-
plicated of seacoast defense programs. The Republic of even that era
possessed a long, tortuous, and everchanging coastline, extending from
Canada on the northeast down the Atlantic to the southern extremity of
Georgia, to be resumed along a large portion of the upper Gulf of Mexico.
Every aspect of coastal topography was to be encountered, and its particu-
lar problem solved. This far-flung coastline had to be surveyed, de-
defense sites and strategic areas selected, and defense projects for these
devised and executed, in order to protect our highways and channels of
communication, our centers of industry and our citizenry in general.

Under the active direction of General Bernard, preliminary surveys
of our northeastern coastline were initiated before the end of the year
22
1816. During the greater part of 1817, the Board examined the coastline
of the Gulf of Mexico in the vicinity of New Orleans. The report on the
projected defenses for the Gulf of Mexico was written by Bernard and pre-
25
sented to Congress on December 25, 1817. With the groundwork for the
projected Gulf of Mexico defenses ably finished, the Board transferred its
attention during 1816 to projects for the defense of the national capital.
In a report dated February 24, 1819, the Board recommended naval depots on
Burwell's Bay and the James River, and forts at Baltimore, St. Mary's on the
Potomac, and at Hampton Roads. It is noteworthy that this report, in commen-
ting on the protection of coastal waterways, showed that the Corps of Engi-
neers, for the first time in twelve years, had again recognized and was urging
the necessity for constructing a new fort to command the mouth of the
Savannah River.

During this period, the War Department had finally determined
upon a definite policy to be followed in the location and construction
of future national fortifications. President James Monroe sounded the
keynote of this policy in his first annual message to Congress, delivered
December 2, 1817, when he forcibly observed that

"Fortifications in those quarters... from the Lakes, the Mississippi, and the Mobile... to any extent will
not be necessary, and the expense attending them may be
saved... Great fortifications will therefore be requisite
only in the future along the coast and at some points in the
interior connected with it. On these will the safety of our
towns and the commerce of our great rivers from the Bay of
Fundy to the Mississippi, depend. On these, therefore, should
the utmost attention, skill, and labor be bestowed."

By the fall of 1818, the War Department had formulated its defense policy
along the lines of Monroe's statement, announcing to Congress that

"It has been determined by the War Department that the
fortifications which may be hereafter constructed upon the
Atlantic, and Gulf of Mexico frontier, shall be permanent works,
and of dimensions adequate to the defense of the positions or
passes which they may occupy. This mode of construction is the
best calculated to secure the object for which fortifications
are erected upon the extreme seacoast of the Union, namely, to
protect the important and valuable points. It is also true
economy. The expenses once incurred upon the above principle,
will not require to be repeated..."

It is interesting to find that the impressive masonry fortifications still
existing upon our coasts, were mostly erected as the result of the adoption
of such a fortification policy as outlined. This policy provided for a de-
fense system then considered adequate, a few large permanent, heavily armed
and expensively constructed works along the coast, but it obviously lacked
the foresight to envision or even anticipate the advance in military engineer-
ing and scientific ordnance which would render these very works obsolete.
extremity. On January 30, 1821, the progress of a topographic and
hydrographic survey of the coast from Cape Cod to St. Croix, and of
the coast of North Carolina, was reported as practically complete.
At this time, also, the repair work on the older fortifications at
Boston, New York, Baltimore, Norfolk and Charleston, and the construc-
tion of new fortifications on the Potomac, the Chesapeake, and the
upper Gulf coast, which had commenced in 1818, was in a stage nearing
32 completion. Congress had kept the vast fortification program of
General Bernard and the Board under close scrutiny from the earliest
period of their activities, and on February 9, 1821, the House of
Representatives formally requested the Secretary of War for a report
on the "progress which has been made by the Board of Engineers in
determining the sites, and plans of the fortifications of the coast of
the United States ...." In anticipation of such a request from Congress,
a detailed fortification report by General Bernard, Colonel Totten, and
Captain J. B. Elliott, of the Navy, had been prepared under the date of
February 7, 1821, and by February 16, had been submitted to that body.

This 1821 fortification report was quite lengthy, covering in
detail the operations of the Board of Engineers from 1818 through 1830.
A resume of its contents shows that the fortification surveys of the
South Carolina and Georgia coasts were then, at last, actively contemplated.
Briefly, the report states that

The commission charged with reconnoitering the frontiers of
the United States has completed the three most important sections
of the maritime boundaries, viz: The coast of the Gulf of Mexico,
the coast between Cape Hatteras and Cape Cod, and the coast between
Cape Cod and the river St. Croix. The coast between Cape Hatteras
and Cape Fear has likewise been surveyed; and the only section
which remains to be examined, to complete the reconnoissance of the
coast, is South Carolina and Georgia.

..........................................................
St. Mary's River and Savannah, in Georgia; Beaufort,
Charleston, and Georgetown, in South Carolina, will be examined and surveyed in the course of this year.

The forts which will be projected at St. Mary's River and Savannah, in Georgia, Beaufort, Charleston, and Georgetown, in South Carolina, will have for their object to secure the communication between the sea and the interior; to prevent the blockade of the rivers and harbors of these States; to secure naval stations, necessary in guarding the coasting trade; and to cover the great commercial cities against attack by land or sea.

By this report, however, the new fortification proposed for the defense of the Savannah River, was placed in the secondary class of works, the erection of which was to be deferred for several years.

The first actual step toward the completion of the new fort on Cockspur Island was made soon after the 1821 fortification report was submitted to Congress. As early as February 5, Colonel W. H. Armistead, Chief of Engineers, had ordered the Board of Engineers to

... Proceed to and reconnoitre the coasts of South Carolina and Georgia, and determine on projects for their general and local defense conformably to the system by which it has been governed in the performance of the same duty in relation to the Coasts North and East thereof.

General Bernard, Colonel Totten, and Captain W. T. Boussin, accompanied by Captain Elliott and Midshipman Howell, of the Navy, proceeded immediately to the South from Washington, where they were to have the revenue cutters at Charleston, Savannah and St. Mary's placed at their disposal for the purpose of making the projected surveys. Early in March, the Board of Engineers arrived in Charleston, where they took immediate passage for the Georgia coast on the revenue cutter Gallatin. During the month the defense survey of Cockspur Island was completed. While this survey was made under the personal direction of General Bernard, it was unfortunately cursory in nature, since he subsequently recommended the
erection of a massive brick fortification upon a foundation to rest directly upon the mud of the island, with no provision for piling.

Upon completion of this survey, the Board returned to New York, where it was engaged upon a study of projects for the defense of various harbors, until the autumn of 1821. During this period of deliberations, General Bernard first made an extensive study of the problems pertaining to the erection of the new fortification proposed for construction on Cockspur Island. Five years were to elapse, however, before any further action was to be taken regarding the actual commencement of the new Cockspur Island fort.

The next few years found General Bernard and the Board zealously engaged at official duties throughout the country. During 1822, the Board inspected and reported on the new project at the Migolet, in Louisiana, and on the projects for Mobile Bay and Pensacola harbor. In 1823, the Board was mainly engaged on defense problems and projects for Boston, Marblehead, Portsmouth, New Hampshire, Portland, Cape Fear River and Beaufort, North Carolina. The far northeastern coast of Maine, St. Mary's on the Potomac, and Charleston, South Carolina, claimed the bulk of the Board's attention in 1824. Portland, Salem, Marblehead, Boston, and parts of the North Carolina coast were again studied by the Board during the greater part of 1825.

The long delay in commencing the proposed fort on Cockspur Island had aroused the Georgia citizenry by the beginning of the year 1826. Congressman Edward Tuttall of Georgia personally visited the War Department, early in February of that year, to learn what was impeding the plans for the new Savannah River fortification. In a conference with General Bernard, he was courteously informed that by the fortification report of 1821, Savannah had
temporarily been placed in the category of ports of a secondary com-
mmercial importance, and thus had to await the completion of defenses
then being constructed to protect points of more consequence. A few
days later, adopting an injured and somewhat bitter tone, Congress-
man Tattnall, on February 13, 1828, addressed a lengthy and moving petition
to General Bernand, on behalf of Savannah and its need for an adequate
coastal fortification. Said he, pleadsitively

"It will be my object to show [sic] that it [Savannah] should be placed in the first class of ports, and to add
such other considerations as will probably induce the board
to commence its fortification without delay."

Continuing, he explained in detail the commercial and naval importance
of Savannah. Closing the letter with an urgent appeal for immediate action,
he referred particularly to

The present naked and exposed situation of Savannah.

As to this the reports of the inspecting officers
furnish ample proof - There is but one Fort [Fort Jackson]
in the Harbor of Savannah - and this Fort is so located that
it is never occupied, being in summer, a perfect graveyard
for the men, and at all times, as regards the protection of
the shipping and Harbor, totally useless .... and I am conse-
quentially warranted in saying that Savannah is destitute of any
defense whatever and, on that account is placed in a worse
situation than any other port in the Union .... At this moment
such is the light in which Ft. Jackson is regarded, there is
not a single gun mounted in it, notwithstanding the amount ex-
pended upon its repairs within a short time past .... I

Tattnell's letter elicited an early and adroitly diplomatic reply
from General Bernand. On February 19, he explained by letter to Tattnall,
that the Board did not have, at that time, full information necessary to
prepare a defense project for the Savannah River, but that it would, at an
early date as possible and practicable, consider the problem and draw
up the necessary plans. Concluding the letter, Bernand's careful opinion
with the thanks of Congress and breveted major - general for his

of the course of engineers during the

Major - General Alexander Macomb

Photo by Frank Chalmers

Chief of Engineers, United States Army, 1861 - 1863. Presented

charge for the

new fort on Hooker Island.
emphasized the fact that

Savannah river is of itself alone entitled to a strong and early protection; it is one of the main outlets .... It is therefore much desirable that, as soon as the surveys will be completed, the Board should frame the plans and estimates of the forts destined to the defense of the Coast of Georgia and South Carolina .... No exertion will be spared to furnish as soon as practicable all the necessary documents to commence at the entrance of Savannah River and at Charleston the forts which a final report will recommend as of first importance among those destined to protect the coast in that quarter. 42

Actual preparation of the Savannah River defense project was underway soon thereafter. General Alexander Macomb, Chief of Engineers, on March 22, ordered General Bernard and Colonel Totten to prepare a project for the defense of the Savannah, in such time that it could be approved by the War Department in November, and submitted to Congress at its next session, in December of that year. Prior to Tattnall's urgent conference with General Bernard in February, 1826, the Georgia congressman had introduced a resolution in the House of Representatives, calling for a new "detailed report of the system and plan of fortifications proposed for the national defense," which was approved on January 5. Pursuant to this resolution, General Alexander Macomb, on February 26, requested the Board to prepare a formal revision of the 1821 fortification report. By March 24, the new report was completed, and upon being submitted to Congress on April 12, showed that the Board was then ready to prepare the necessary working plans and estimates for the projected fort on Cockspur Island. Concerning this fort to command the mouth of the Savannah River, the 1826 fortification report observed that

The defense of the Savannah River is by no means difficult. A fort on Cockspur Island lying just within the mouth; and for additional security, perhaps, another on Tybee Island, which
forms the southern cape at the junction of the river with the Ocean — would effectually prevent the passage of vessels up the Channel and cover the Anchorage between Tybee and Cockspur. The present Fort Jackson situated about 6 miles below the City, should be maintained as a secondary barrier, both as respects the main Channel, and the passage which come in from the South; which latter would not be all controlled by the works at Cockspur or Tybee.

The Surveys required, preliminary to forming a system of defense for Savannah, are so far completed as to enable the board to make the projects and estimates for the defense of the main channel whenever they shall be ordered to direct their attention to them.

This report in strongly recommending the re-fortification of the south of the Savannah River, by placing new works on Cockspur Island, also classified the proposed fort there as being of primary importance for immediate erection.

The early fall of 1826 found General Bernard attempting to secure information as to the cost of building materials in the South, the expense of transportation there, and other details necessary to the preparation of a comprehensive estimate for the new fort to be built on Cockspur Island. Late in 1826, the Chief of Engineers reported the "board of engineers for fortification" to be busily engaged in preparing projects for Charleston, Savannah, and Pensacola. Another year was to elapse, however, before the estimate, specifications and plans for the new Cockspur fort were to be completed.

The complete project for the new fortification on Cockspur Island, consisting of a lengthy explanatory "memoir," an estimate of costs, and a set of general construction plans designed by General Bernard, was finally completed by the Board on December 30, 1827. This mass of material was transmitted by General Bernard to General Macomb on January 17, 1828.
However, eight months passed before the Board, consisting of General Bernard, Colonel Totten, and Major Samuel Babcock, the latter officer being charged with the construction of the proposed fort, approved the project for the new Savannah River fortification.

Major Samuel Babcock, a veteran of twenty years service in the Corps of Engineers, was assigned the supervision of the new Cockspur fort project as early as August 1, 1828, but his departure for Savannah was deferred for several months by the various routine delays attendant upon the formal approval and inauguration of a new fortification project.

On August 7, he was officially notified that "The Board of Engineers is to convene at Newport, R. I. for the purpose of making a joint examination and Report on the plans for the defence of Charleston, Savannah and Pensacola, and as you are charged, by the order of the 1st. inst., with the construction of the works at Savannah, you will repair to Newport for the purpose of being associated with the Board in deciding on the plans for those works ...."

By September 8, the Board, in an official communication to Colonel Charles Cretiet, Chief of Engineers, announced its official approval of the project for the new Cockspur fort, the report briefly stating that "The Bd of Engineers for Fortifications having assembled at Newport on the 5 inst. proceeded to examine the project presented for the defense of Savannah Mr. at Cock-Spur Is. which after some explanation was adopted by all the members ...."

During October, and most of November, Major Babcock was occupied in securing the necessary instruments for his impending surveys, in waiting for copies of the construction plans to be prepared, and in preparing estimates for his first quarter year of work on the new fort. Finally, however, he was ready to depart for Savannah, and leaving Newcastle, Delaware, on November 28 or 29, he reached his destination on the steam packet John D. Morgan by December 13, 1828. The new Cockspur fort project was launched.
Upon his arrival in Savannah in mid-December, 1828, Major Babcock found himself in a bustling little city of approximately 8,000 inhabitants. Shipping center of the surrounding agricultural hinterland, Savannah was then the picturesque and tiny metropolis of the southeast. The city was governed by a mayor, then William T. Williams, and a council of aldermen. With Savannah's daily newspaper, The Daily Georgian, as his guide, Major Babcock could then have found many interesting features of the city to attract his attention. For his temporary lodging quarters in the city, he could have found unique accommodation at the then new hostelry, the "City Hotel," which, "having been thoroughly repaired," its agent, Henry Babcock, "respectfully informs his friends and the public, that he will be prepared to receive 57 Boarders." Had not the officer been required to wear his uniform, and had been of a stylish taste in clothes, his desires could easily have been gratified at the shop of "MALLERY and DUFFY, DRAPPERS and TAILORS, on the Bay Street, a few doors east of the City Hotel," where he would have found "a fresh and complete assortment of FINE, SUPERFINE .... Broadcloths and Cashmeres, of the most fashionable colors .... the whole having been selected .... from the N. York market." If Major Babcock should have desired some form of light entertainment or amusement, such as a play in the famous old Savannah Theatre, he would have been temporarily disappointed as the theatre was then closed. He would doubtless have noticed with relief, however, "that the Theatre will be opened in this city on Monday next [then just a week away]." It is expected that Mr. Cooper will arrive with the company from Charleston." Wines, brandies and whiskies, of all types were to be had galore. But on the other hand, that enterprising drug firm, Lay and Hendrickson, at "No. 2 and 15 Gibbons Building," were
offering at a great bargain, "Dr. Chambers' Remedy for Intemperance, in every instance it has had the desired effect of producing an entire disrelish for the use of ardent spirits." Negroes were for sale and for hire on every hand. Had the Major desired to return north, or travel elsewhere, he would have found ships bound from Savannah for Liverpool, New York, Providence, Boston, Baltimore or New Orleans. Had he read his newspaper carefully, he would have noticed that a gentleman named Richard Leake, who was shortly to press upon the officer much unsolicited legal advice concerning the title to Cockspur Island, was announcing his resumption of "the practice of the law in this city." Perhaps the Major would have been forewarned for his impending combats with the mosquitoes and the "sickly seasons" of Cockspur Island, had he heeded the forewarnings of the indefatigable Lay and Hendrickson's patent medicine advertisements. The merits of a "Mixture of the Sulphate of Quinae, For the Cure of Agues, Remittent and Intermittent Fevers," was extolled; while "Maltis Juncosa," and "Potters' Vegetable Catholicon," were advised as prime specifics. A grave warning was issued in regard to the "Catholicon," however, as old "Catholicon" bottles had even been known to be filled with "spurious mixtures, and sold as genuine." But it is doubtful whether Major Babcock noticed these attractions of Savannah, since he was a serious unbending gentleman, and not at all well.

His arrival in Savannah, and the commencement of the new Cockspur fort project did not long pass unnoticed in the city. On December 20, The Daily Georgian remarked that

"Major Babcock of the Engineers, has recently arrived at this place, for the purpose, we understand, of making such arrangements as may be necessary, preparatory to the Construction of a Fortification on Cockspur Island. The work to be erected, is intended,
we believe, for about 130 guns, and the position selected extremely favorable to the defence of our city.59

A few days later, The Daily Georgian again referred to the new Cockspur fort, stating that it understood that copies of "the necessary plans in relation to the contemplated Fort on Cockspur Island" were then being prepared to enable "Maj. Babcock to proceed with the work ...." On December 31, The Daily Georgian contained the following excellent description, apparently furnished by Babcock, of the new fort as then proposed.

We have obtained some additional information from an authentic source, relative to the work of Fortification contemplated for the erected on Cockspur Island. It is to be the kind called in technical language, Casemated: the form of the work pentagonal, and will mount 136 guns, in three tiers; the two lower tiers are to be covered with bomb proof arches; the sally (or gateway) will be covered by a work called a Demi-lune; the whole will be surrounded by a ditch about 40 feet in width - in advance of the main work, is to be constructed an open battery, for mortars and howitzers. The permanent quarters for the troops will form that part of the main work, called the gorge - in the interior of the work will be located the furnace for heating shot - height of walls about 50 feet - a canal will connect the ditch of the work with the river, by which means it may be emptied and replenished at pleasure.61

Meanwhile, Major Babcock had initiated his first surveys and soil examinations on Cockspur Island. His copies of the plans for the new fort had been received on December 24. Soon he discovered a condition on Cockspur Island, which would necessarily call for a revision of that portion of the plans relating to the foundations. This elementary find was that piling would absolutely be required under much of the foundation, since the mud surface of the island did not offer a sufficiently solid base for such an enormous weight. Apparently the Engineer Department was so surprised over this development as to be actually incredulous, and to require
strict proofs and explanations thereof from Major Babcock. By January 14, 1829, he was announcing his intention to "close contracts" for a wharf, frame buildings, and for piling, but the Department was dubious as to his readiness for such actions and withheld its authorization. Excavation of the canals and ditches to the fort site, upon which building materials were to be transported, was authorized by the Department on January 12, however, and the first actual operations on the project were subsequently begun early in February, despite the inclemency of the weather.

On February 9, 1829, Major Babcock transmitted a detailed project for carrying "on the Fortifications at Cockspur ...." He then divided his projected work for the year into four main parts: 1, to build wharves or "landings" on the North Channel of the Savannah River; 2, to erect temporary buildings for the workmen and staff; 3, to excavate the canals and ditches of the work; and 4, to construct the "wood work of the foundation of the fort," whether piling or grillage, or both ...." In a summary of the work accomplished by that date, he explained

"I have been engaged principally since I have been here, in tracing the work, verifying the plan, and piercing the soil, on the site of the work, to ascertain what kind of foundation would be required."

He also then reported that twenty-two experiments "to ascertain nature of soil strata" showed conclusively that piling under much of the fort would be necessary. An analysis of the soil strata was given, as well as a description of the vegetation on the island. In regard to building materials, his report noted that lime and stone would have to be brought from the North, while brick and sand could be obtained locally.
In the meanwhile, he had encountered some difficulty in ascertaining in whom the title to Cockspur Island was vested. Early in January, he had received an unsolicited communication from one Richard Leake, a Savannah attorney, to the effect that previous laws of the State of Georgia, granting to the United States jurisdiction over lands on Cockspur Island for the purpose of erecting fortifications, had then recently been repealed. While the Department advised him to disregard this source of legal guidance, he was ordered, on January 20, to ascertain in whom the title of the property of the fort site was vested. Early in February, he reported that undoubtedly twenty acres on Cockspur Island had been reserved to the United States, the remainder belonging to private individuals, whom he would contact. A subsequent report on March 10, transmitted the information that a Mr. Alexander Telfair, representing himself and other owners, had control over most of the land on the island, except the twenty acres "at the east end reserved for use of the Public," and that an act of the Georgia legislature could insure the title of the United States to this. On March 19, Colonel Gratiet, Chief of Engineers, ordered Major Babcock to inquire of Mr. Telfair the price set on the holdings on Cockspur Island. Babcock had a conference with Telfair on March 27, and next day, the latter, in a letter to the Major, offered the holdings for five thousand dollars. Babcock thereupon informed his superior, advising the acceptance of the price set, stating the "demand not unreasonable."

Continuing his work during the spring months, Major Babcock requested the Department, on May 5, to allow him to suspend the project during the summer months, on the grounds that the "extreme heat" would
prevent efficient work." By June 24, he had arrived at Newcastle, Delaware, having left an overseer and six men at Cockspur Island "to care for public property, to preserve the banks of the ditches and sluices, until the healthy season shall arrive." In a letter written to General Otriot, on this date, Babcock transmitted the information that he had in his possession the articles of an agreement by which Alexander Telfair had bound himself to convey the private holdings on Cockspur Island to the United States as soon as the purchase price was appropriated by Congress.

The first annual report on the progress of the work on Cockspur Island was transmitted to the Engineer Department by Major Babcock, from Newcastle, Delaware, on October 12, 1829. This report showed that he had barely succeeded in getting the work underway during the year 1829. Beginning in December, 1829, he had reconnoitered the island, surveyed the site of the proposed work, and made an estimate as to the probable entire cost of building the fort. Materials and workmen had been located, and the purchase of the private holdings of land on the island negotiated. A project of operations had been made and followed. Three frame buildings had been erected. The excavation of a short canal, upon which building materials were to be transported from the North Channel to the northwestern angle of the fort site, had been completed during the spring. Two temporary wharves at the mouth of this canal had also been built. Some embankments and sluices had been built to prevent an inundation. Work on the project had been suspended in June, and an overseer, William Kearney, with six men, had been left on the island during the summer, to protect the property until the resumption of operations. In concluding his report,
LIEUTENANT ROBERT E. LEE

A handsome young second lieutenant, Corps of Engineers, United States Army, Robert Edward Lee served as assistant engineer at the Fort Pulaski project from November, 1829, to April, 1831. This was his first tour of duty in the army after his graduation from West Point.
Major Babcock announced his intention of returning to the island, with his family, at an early date to reopen operations.

Detained in the North much longer than he had expected, he and his family did not reach Savannah until December 23, 1829. Both bad and good news were awaiting him on his return. William Kearney, his overseer, unfortunately had been drowned about two months previously, leaving the work temporarily without a supervisor. Of much more importance to Babcock, however, was the fact that during his absence, an assistant Engineer officer had arrived, who could now assume the responsibility for much of the harder work on the project. The young Engineer who had been assigned as assistant was Brevet Second Lieutenant Robert E. Lee, later the famous Confederate commander-in-chief. Ordered to join Major Babcock on August 11, 1829, Lieutenant Lee arrived at Savannah early in November, for his first tour of duty in the Army. A stalwart, athletic and handsome young man, Lee soon began to take much of the load off his sick and aging superior, and in addition to his other strenuous duties, was appointed "acting assistant commissary of subsistence," for the project.

Operations on the project were vigorously prosecuted during January and February, 1830. Major Babcock's and Lieutenant Lee's quarters were nearly completed during the period. Barracks for the mechanics and workmen were also nearly finished. A system of drainage and embankments around the entire island was begun. The main wharf on the North Channel, opposite the beacon, was commenced. A carpenter gang of fifteen or twenty white men had been employed and were to be increased as soon as quarters could be provided. In addition to the commanding officer, Major Babcock, the working staff then consisted of Lieutenant Lee, assistant engineer, a
A ROBERT E. LEE SKETCH OF COCKSPUR ISLAND, 1830

This interesting topographic map of Cockspur Island, showing conditions on the Fort Pulaski project in January, 1830, was the first, and best, of several similar rare sketches drawn on the project by Robert E. Lee. Note the peculiar configuration of the Island. The original of this map is in the Construction Section, Office, Chief of Engineers, United States Army, Washington.
Mr. Redden, superintendent of labor, a master carpenter, and a clerk in charge of records.

Much general progress had been made on the project by early April, 1830. All of the temporary buildings, quarters for the officers, barracks for the workmen, and construction shops were practically finished except for a few details. The main permanent wharf on the North Channel was finished, and another commenced to protect the mouth of the canal leading from the north channel to the fort. Work of the laborers had continued for several weeks on the completion of the drainage ditches and embankments, and the excavation of the ditch around the contemplated fort site. Major Babcock proposed at this time to employ for the remainder of the working year about one hundred negro slave laborers and thirty white men, as mechanics. Meanwhile, on February 50, 1830, Congress had appropriated five thousand dollars for the "purchase of a site for a fort at Cockspur Island, Georgia ...." and on March 15, the title to approximately one hundred and thirty acres on Cockspur Island was transferred to the United States by Alexander Telfair, et al.

Major Babcock and his entire force was quartered on Cockspur Island apparently for the first time about May 10, 1830. Their stay on the island, for that working season was soon to terminate, however. In spite of his resolve to remain on the island, and to continue the work throughout the summer, regardless of the "sickly season," on July 2, we find the Major writing his superior officer that while he

had fondly imagined that the situation, from its proximity to the Ocean, would always be healthy; he found by sad experience the contrary; and shall leave it with Lt. Lee forthwith; accordingly to your instructions.
The state of Major Babcock's health apparently had become increasingly precarious, and he informed General Gratiot, in the same letter, that he had only recently "applied to two of the most eminent Physicians in Savannah, who recommended me to remove as soon as possible." In the absence of both officers, a force of laborers, under an overseer, was to be left to protect the property. As a matter of fact, Major Babcock was then quite ill, and apparently left shortly thereafter for Wilmington, Delaware.

When Major Babcock left Cockspur Island in July, 1830, it was his last trip from that spot, although he could not then realize it. After spending most of the summer and early autumn in the North, he wrote General Gratiot, on October 26, that he had been waiting for a season when he could "return to Cockspur with safety." Stating that he planned an early return to the island, he continued, in the same letter, to explain that when he left the island in July he had been too ill to think of office matters, and had left all of his papers there, but that upon his return, would make up all of the required reports. Still delayed, he again reiterated his intention to depart for the South, on November 2. Late in the next month, however, his increasing ill health finally forced Major Babcock to leave the Service, his resignation being tendered in a letter dated December 20, 1830. He was through with Cockspur Island and the Corps of Engineers, and some six months later, on June 26, 1831, he was through with life, his death occurring on that date.

That Major Babcock's administration at Cockspur Island had been inefficient, soon became apparent, following his resignation. His successor was fairly bewildered by fiscal records and affairs left in a turmoil, an
unsystematic set of office records, poor office equipment, contracts
haphazardly made, and the total lack of some of the official construction
plans. Babcock's selection of a site for the fort, which, however, was
partially dictated by the Engineer Department, the site of the temporary
buildings, and even of the wharves, were found to be so unsatisfactory
that the excavations for the fort could not be entirely used, the temporary
buildings were in danger of tidal action, and the wharves already had been
destroyed. In general, Babcock had been able to accomplish little work of
lasting value on the fortification project on Cockspur Island. The only
extenuating circumstances in this situation were, of course, his age, his
poor state of health, and his under-staffed command.
Notes

Prologue

1. The Colonial Records of the state of Georgia (1736), XVIII, 472, hereafter cited as Colonial Records of Georgia.

2. The Revolutionary Records of the state of Georgia (1736), I, 94-95.


4. James B. Richardson (Compiler), Compilation of the losses and impress of the residents (Washington, 1898), I, 107, 140.


9. Under this act, sites for fortifications had to be ceded outright to the Federal Government prior to the erection of permanent fortifications, cf., Laws of the United States of America ... (Philadelphia, 1815), II, 231; cf., A. M. T., II, ff., I, 224.


12. See Edward Manning, History of the United States (New York, 1925), II, 906-911; cf., Madison's Sixth Annual Message to Congress, December 5, 1815, and Monroe's First Inaugural Address, March 4, 1817, and Carre's
second inaugural address, March 4, 1821, respectively in Richardson, op. cit., 1, 566, 11, 7, 86 – 87.

13. See Madison's second and third annual messages to Congress, December 5, 1816, and November 5, 1811, respectfully in Richardson, op. cit., 1, 486, 495; cf., ibid., 11, 308 – 311.


15. Madison's seventh annual message to Congress, December 5, 1815, in Richardson, op. cit., 1, 566.


18. Ibid; cf., Memorandum relating torevet Brigadier-General Isaac Bernard, assistant in the corps of engineers, 1814 – 1831, 3 – 8, by Major Edward Burr, Corps of Engineers, with the assistance of Mr. J. W. Griffin, filed under 50734/77, September 12, 1906, record office, office, chief of engineers, United States, freqently hereafter cited as Burr and Griffin. Record office, office, chief of engineers, hereafter cited as ... .


22.
Colonel J. G. Swift, Chief of Engineers, Washington, to Colonel J. G. Totten, December 4, 1816, MS Letter in R:3; a photocopy of which is in the files of Fort Pulaski National Monument, Savannah, Georgia.

23.
Burr and Scrivener, S; cf., Register of the Debates in Congress ... (Washington, 1826), II, Part I, 1172.

24.
"Commissioners Report upon the Chesapeake and the remaining part of the Coast east and south of Chesapeake Bay, No. 187," in War Department, Corps of Engineers, Reports, July 3, 1816 to October 4, 1819, S48 - S49; cf., Monroe's Second Annual Message to Congress, November 16, 1819, in Richardson, op. cit., II, 45.

25.
Richardson, op. cit., II, 17.

26.

27.

28.
"No. 131 Engineer Department, November 25, 1819, 'Col. W. H. Armistead, Col. of Eng. Reports condition of fortifications,'" in War Department, Corps of Engineers, Reports, July 3, 1816 to October 4, 1819, 412 - 414.

29.

30.
"No. 133. Dated April 13, 1820 /A Report/ By General Bernard and Col. Totten, on Seacoast fortifications ..." in War Department, Corps of Engineers, Reports, July 3, 1816 to October 4, 1819, 428 - 429.

31.
Ibid., 436, ff; cf., Burr and Scrivener, 11.

32.
See Monroe's Second, Third and Fourth Annual Messages to Congress, on November 16, 1819, December 8, 1819, November 14, 1820; and his Second Inaugural Address, March 5, 1821; respectively in Richardson, op. cit., II, 45, 61 - 62, 78 - 79, 86 - 87.

33.

36. War Department, orders book No. 1, Engineer Department, April 4, 1811 to May 27, 1822, sc.

36. Colonel S. L. Amistad, chief of engineers, to General Bernard and Colonel Totten, February 10, 1821, in No. 1, letters to officers of engineers, War Department, 204; cf., The Daily Georgian (Savannah), March 1, 1821.

37. The Daily Georgian (Savannah), March 1, 1821, and March 7, 1821.

36. **Ibid.** of, General Isaac Bernard, to General Alexander Ackerman, chief of engineers, January 17, 1829, ... file No. 19, 411; cf., "Chart of the entrance of the river Savannah exhibiting the site of the fort recommended to defend both channels," 1821 (1827), and "Plan, profile, front elevations and details of a fort projected at Cockspur Island for the defense of the river Savannah," 1827, respectively, plans, drawer 70, sheets 1 and 2, construction section, office, chief of engineers, United States army. This office hereafter cited merely as Construction section, office, chief of engineers.

39. As Mr. Swell [sic], service of General Isaac Berman in the U. S. Army, memorandum, April 24, 1806, commonly known as Swell's cited, No. 10, file No. 50734/75, p. 4.


41. Congressional career Tattall of Georgia, to General Isaac Bernard, February 13, 1826, ... in file: "Old papers, board of engineers, 1820 - 1831," ... of, Em. 6. oils., Mil. Off., 11, 339, 450, 467, 492, 552, 567, 567, 705, 945; ibid., III, (Washington, 1820), 119, 250, 254; which show that from 1825 to 1826, Fort Jackson was partially repaired, was irregularly armed with from eight to seventeen guns, and was occupied by one company of soldiers during most of this period.
42. General Simon Bernard, to Congressman Edward T. Tattanall, February 19, 1826, in Fortifications, Board of Engineers, 1825, Reports Relative to Certain Ports, MS Pamphlet, Case 1, Drawer 4, R.S.


46. Ibid.

47. General Bernard to General Macomb, October 25, 1826, R.S., File No. 184.


49. General Macomb, to Secretary Barbour, November 20, 1827, in Am. St. Pa., Mil. Aff., III, 559; cf., "Descriptive Memoir, analysis of prices and estimate relating to a projected fort destined to defend the entrance of Savannah River, State of Georgia, 1826," enclosure in: General Bernard to General Macomb, January 17, 1828, R.S., File No. 441. See also, "Chart of the entrance to the river Savannah exhibiting the site of the fort recommended to defend both channels," 1821 (December 30, 1827), and "Plan, profile, front elevations and details of a fort projected at Cooper's Island for the defense of the Savannah River," December 30, 1827, respectively, plans, Drawer 70, Sheets 1 and 2, Construction Section, Office, Chief of Engineers.


51. A. Nordecai, Lt. and Asst. Chief Engineer, Washington, to Major Samuel Babcock, New Castle, Delaware, August 7, 1828, in No. 8, Letters to Officers of Engineers, 236-239; cf., R.S., File No. 8, 525, August 7,
1828, and R. 527, August 9, 1828.

32. Board of Engineers, Newport, Rhode Island, to Colonal Charles Gratist, Chief of Engineers, September 5, 1828, R.S., File No. B. 530.


34. Major Samuel Babcock to Colonel Gratist, November 22, 1828, R.S., File No. B. 571; Babcock to Gratist, December 15, 1828, R.S., File No. B. 583; cf., The Daily Georgian (Savannah), December 15, 1828.

35. The Daily Georgian (Savannah), March 12, 1831, gave Savannah a total population of 9,580, including slaves. The 1830 census found some 7,776 inhabitants in Savannah. See E. L. Barrow and L. F. Bell, Anchored Yesterdays .... (Savannah, Georgia, 1923), 123.

36. Thomas Gamble, Jr., A History of the City Government of Savannah, Georgia .... (Savannah, Georgia, 1905), 140.


38. Major Babcock to General Gratist, January 8, 1829, R.S., File No. B. 597.


41. December 31, 1828.

42. R.S., File No. B. 592, December 13, 1828.

43. R.S., File No. B. 597, December 24, 1828.

44. R.S., File Nos. B. 601, January 16, 1829; B. 609, January 23, 1829; B. 626, February 8, 1829.
65. \hspace{2cm} R.S., File Nos. B. 601, January 14, 1829; B. 623, February 7, 1829; B. 624, February 9, 1829.


67. \hspace{2cm} R.S., File No. B. 624, February 8, 1829.

68. \hspace{2cm} R.S., File Nos. B. 597, January 8, 1829; B. 616, January 31, 1829.

69. \hspace{2cm} R.S., File No. B. 624, February 8, 1829.

70. \hspace{2cm} R.S., File No. B. 631, March 10, 1829. In 1759, the whole island of Cockspur, except twenty acres at the southeastern point, was granted by the British Crown to Jonathan Bryan, a member of the King's Council in the Colony of Georgia. He sold the island, except the twenty acres reserved as public domain, to a syndicate composed of Basil Cowper, William Telfair and Edward Telfair, in 1766. Following the Revolution, title to the twenty acres reserved as public domain passed to the State of Georgia. In 1829, Alexander Telfair was representing his own interest, and that of other members of the Telfair family connection, in the private holdings on the island. See R.S., File No. B. 571, March 13, 1829; cf., Colonial Records of Georgia, VIII, 152; cf., County Records, F.P., 183 - 186, Office of the Clerk of the Superior Court, Chatham County Courthouse, Savannah, Georgia.

71. \hspace{2cm} R.S., File No. B. 571, March 23, 1829.

72. \hspace{2cm} R.S., File No. B. 571, May 5, 1829.

73. \hspace{2cm} R.S., File No. B. 709, June 24, 1829. Colonel Gratiet became a brigadier - general in March, 1829, see House Document No. 466, 57 Cong., 2 Sess., I, 470.

74. \hspace{2cm} R.S., File No. B. 652, October 18, 1829; cf., Am. St. Pa., 111. Aff., IV, 164. By a letter dated January 18, 1829, from Colonel Gratiet, (No. 3 Letters to Officers of Engineers, 289 - 291), Babcock had been authorized to build a short canal from the North Channel to the northwestern point of the fort site, upon which to transport material. Two wharves on the North Channel, at the mouth of this proposed canal were to be designed to prevent it from filling with sand. The canal was
deg, but as erosion in it was bad, it was soon abandoned. See R.S.,
File No. B. 624, February 9, 1829; B. 822, October 12, 1839; also
the plan, "Delineation of Cockspur Island and its Environs," drawn by
Major Babcock, showing the projected wharves and canal, which plan
was forwarded with his letter of February 6, 1829, R.S., File No. B.
624; see also, "Sketch exhibiting the actual state of Cockspur Island
and the operations for Jan[uary]/January/1830," drawn by Lieutenant
Robert R. Lee, now inrawer 70, Sheet 3, Construction Section, Office,
Chief of Engineers.

75. R.S., File No. B. 370, December 22, 1839; cf., The Daily Georgian
(Savannah), December 24, 1839.

76. "Engineer Order No. 6, August 11, 1829, U.S. Engineer Depart-ment,"
cited in Douglas Southall Freeman, R. E. Lee, a Biography (New York,

77. Freeman, op. cit., 96 - 97; R.S., File No. B. 901, February 1, 1830.

78. R.S., File No. B. 918, February 10, 1830.

79. R.S., File Nos. B. 967, April 6, 1830; R. 859, October 2, 1831.

80. Statement of Appropriations and Expenditures for Public Buildings,
Naval, and Harbors, Forts, Arsenals, Armories from 1785 - 1839,
Treasury Document No. 373, 545 - 546; hereafter cited as Treasury
Document, No. 373; cf., County Records, Etc., 82 - 83, Office of
the Clerk of the Superior Court, Chatham County Courthouse, Savannah,
Georgia.

81. R.S., File Nos. B. 992, May 10, 1830; R. 1050, July 2, 1830.

82. R.S., File No. B. 1099, October 26, 1830.

83. Ibid.

84. R.S., File No. B. 1104, November 2, 1830.

85. General Charles Gratiot to "Samuel Babcock, late Major of Engineers,"
December 22, 1830, in No. 4 Letters to Officer of Engineers, 67.
House Document No. 446, 57 Cong. 2 sess., I, 178.

R. S., File Nos. P. 741, January 23, 1851; M. 742, January 23, 1851; N. 749, February 3, 1851; M. 758, February 23, 1851; M. 755, March 3, 1851.
Chapter 5
New Blood on Cockspur
Mansfield revises the fort's plans

Christmas Eve, 1830, found a young lieutenant of the United States Corps of Engineers preparing to assume command of the new fortification project on the coast of Georgia. Little did he then realize the problem confronting him, or foresee the many Christmas eves destined to pass before his arduous task was to near completion. The officer was Lieutenant Joseph E. F. Mansfield, then stationed at Fort Monroe, Virginia. The increasing ill health of Major Babcock, and other circumstances, had made it evident to the Engineer Department as early as December 10, 1830, that a new officer had to be assigned to the Georgia fort. Four days later the Department had accepted Major Babcock’s resignation. A young and vigorous officer was needed to carry on the difficult project on Cockspur Island, and the Department, in looking over its scanty list of available officers, had in the meanwhile determined to send young Mansfield, temporarily at least, to Cockspur Island.

You will repair with as little delay as practicable to Cockspur Island, Georgia, and assume the command of the works there in progress under the Engineer Department.
Your being assigned to this work is considered as a temporary arrangement, but you will be required there, at least, until next spring or summer.¹

Shortly afterwards, on the day following his twenty-seventh birthday, Lieutenant Mansfield acknowledged receipt of the order. Writing from Fort Monroe, on December 25, he notified the Department that

I have the honor to acknowledge the receipt of the order from the Department of the 18th inst., directing me to take charge of the construction of the Fort on Cock Spur Island Geo and to state that I have made my arrangements to leave here this evening or tomorrow morning in the St. James/ Cypress now lying in Hampton Roads bound to Charleston whence I shall take Steam Boat of Stage direct to Savannah.²

This young man, who was to spend the Christmas holidays and the early part of January, 1831, journeying southward, was a native of Connecticut. The son of Henry and Mary (Fens) Mansfield, he was born in New Haven on December 22, 1803, but removed with his parents to Middletown while still an infant. In Middletown he received his early education. An uncle, Colonel Jared Mansfield, a professor at West Point, recognizing the growing youth's military tastes, secured his admission to the Academy in 1817. Here he was a serious student,
and during part of his fourth year acted as assistant professor of natural philosophy. On July 1, 1822 he received his commission as a second lieutenant of Engineers, ranking second in a class of forty. For the next three years the young lieutenant acted as assistant to the board of engineers, then assembled at New York. Here he received his first experience with fortification problems, in working at Fort Hamilton, New York Harbor. However, by December, 1830, he had received a rather varied experience on fortification projects not only at New York, but also at Fort Johnson, Charleston, South Carolina Harbor, and Forts Monroe and Calhoun, Virginia.

Nearly four weeks after the receipt of his order to proceed southward, Lieutenant Mansfield reached Savannah on Friday, January 21, 1831, on the Schooner SAVANNAH from Charleston. The same day he notified the Department that

I have this day assumed command of the works here in progress under the Engineer Department, and shall comply with the order of December 18, 1830, from the Department authorizing said act without delay.

The Department order of December 18, 1830, besides placing Lieutenant Mansfield in charge of the construction on the new fort, had ordered him to make an inventory of the materials and public stores at
the post, with the aid of Lieutenant Robert E. Lee, who was then assistant engineer on the project. At the same time, the Department requested an early report on "the actual condition of the works." With these definite instructions in mind, and confronted with the problem of resuming the work where Major Babcock had suspended it, Lieutenant Mansfield lost no time in his efforts to reopen operations.

Perhaps one of the most cheering aspects of the task facing Lieutenant Mansfield was the prospect of his association, temporarily at least, in its solving, with the pleasant young Robert E. Lee. Lieutenant Lee had arrived at the project in November, 1859, to be the assistant to Major Babcock. When Mansfield arrived on the scene late in January, 1860, Lee was the only Engineer Officer on the ground, and a capable one too, despite his youth. His twenty-fourth birthday had just occurred on the nineteenth of that month, just about six weeks previously young Lee had successfully, and alone, piloted the Cockspur fort project through one of its darkest annals, the aftermath of the November, 1859, gale. With the same vigor and ability he had displayed in that incident, he was now ready to assume any responsibilities his new superior might give him.
Lieutenant Mansfield was chagrined to find that his ambition to reopen construction immediately would of necessity have to be held in abeyance. He soon discovered that the problem of determining the exact financial and constructional status of the work was to be no small task in itself. He had been on the ground only two days, when he was besieged by holders of accounts made under Major Babcock and left unpaid by him. Mansfield reported to the Department that he would be forced to withhold payment unless "directed so to do," since Major Babcock had kept such poor office records that none of the accounts could be verified immediately. He also informed the Department that the circumstance of Major Babcock never having kept in the office either a Journal or Abstract Book or any other book that will enable me to correct the monthly and Quarterly Returns will deprive me of the power of forwarding returns until a final settlement of his account....

In concluding this report, in which he so obviously registered his impatience with such negligent business methods, he promised that if the Department will permit me to pass a veil over all proceedings here- to-fore and give new birth to the returns for list of this month, order, system and precision will hence forth ensue.

This typically youthful outburst against Babcock's business inefficiency was merely a prelude to his thorough disgust with the negligent manner in which
the old Major had handled his construction problems and had administered his construction office, supplies and materials.

When the young lieutenant attempted to begin his inventory and survey of the Cockspur works he found that it was going to be rather difficult to ascertain the exact nature and extent of the past construction, as he could find "no plans of what were the ideas of Major Babcock in relation to it [the works] and no plans as yet of what had actually been done". In this second letter written on January 29, to the Engineer Department, he reported that due to such an inefficient performance of duty on the part of Major Babcock "it will be out of my power to furnish for some days yet to come the inventory and statement of the actual condition of the works at this place." However, he continued

I have directed Lt. Lee to make a Survey and Plan of the Island and the additions to it by Major Babcock, which with his zeal and industry will occupy but a few days and then the site and commencement of the body of the work will immediately be examined, fixed and take place.

In concluding this letter, Lieutenant Mansfield made his first reference to the necessity for making certain changes in the fort's plans; changes he believed so vital, and upon which he was so insistent, that the plans eventually were revised later in 1851. He now requested the Department's decision on his plan
To build the work on a strong grillage and to alter the section and profile of the foundation accordingly and ... to execute that part of the body of the work below the parade in brick which is on the plan represented in stone.

He gave as his main reasons for the latter change the cheapness, availability, and the comparative strength, for the purpose, of brick as compared with stone.

Apparently the energetic young officer was not to be deterred from opening operations by these rather chaotic conditions on Cookspear. He lost no time in attempting to recruit a new force of laborers for the project. His first advertisement for laborers, sent in to the Savannah Georgian on January 24, began to run, as follows, on January 26:

Cookspear Island
24th January 1831

WANTED TO HIRE by the month, FIFTY STOUT NEGRO /sic/ LABORERS, to work on the Fortifications of this place.

JOSEPH E. F. KANSFIELD
Lt. Corps Engineers.

Two days later his second advertisement for laborers was sent in, and began to appear, as follows on Tuesday, February 1:

Cookspear Island
26 January 1831

WANTED to hire immediately, one hundred white or black laborers by the year, month or day to work on the Fortifications of this place.

JOSEPH E. F. KANSFIELD
Lt. Corps Engineers.
Meantime the Engineer Department had begun to take cognizance of the energetic activities of young Mansfield on Cockspur Island. In answer to his request of January 25 for its decision on his plans to alter the "profiles" of the proposed foundation of the fort, the Department on February 1, forwarded to him an authorization for a new soil examination of the island, in order that it would have the requisite information to make any necessary changes. Soon after the beginning of February, Lieutenant Mansfield completed the final transaction of the transfer of the Telfair et al. interests on Cockspur Island to the United States, by forwarding the deed to Washington. As early as January 20, he had been directed to secure and transmit to the Engineer Department all papers in regard to the title and deed of the land in question. Although the official transfer had been recorded on March 15 of the previous year, apparently Major Babcock had neglected to forward all of the papers. Accordingly on February 5, he transmitted to his superior, General Charles Gratiot, Chief of Engineers, the "Deed of Purchase," to Cockspur Island, and also the certificate of the County Clerk [Chatham County, Georgia] in relation to "the reservation for the Government."

Hardly had the Department's authorization to proceed with a new soil survey of the island gone forth, when Mansfield was called upon to adjudicate
on the validity of a timber contract alleged to have been made between a Savannah citizen and Major Babcock. Before the end of January, 1851, a certain S. G. Bryan, and C. L. Brown, through their local representatives in Congress, had begun to press the War Department for recognition and continuance of a contract for the delivery of timber to the island, and for certain payments thereunder. Brown claimed to have made an oral contract with Major Babcock, who had

Authorized him to believe that from 25 to 30 hundred pieces of timber would be wanting at Cockspur this season, and requested it should be ready for delivery by the 15th of Novr. [1827] at furthest [1828].

Soon afterwards Brown had disposed of his contract to Samuel Bryan, and now both were attempting to prove the existence of a contract, and the liability of the Government under it. On February 6, Lieutenant Mansfield forwarded to the Engineer Department all of the correspondence of the above mentioned parties, together with their various affidavits, statements and depositions. At the same time, he stated that he had been unable to find a written contract between Major Babcock and the gentlemen in question. In addition, he observed that Lieutenant Lee, who had been on the project during the time the contract was alleged to have been made, stated that it was his understanding that
no real contract had existed. Mansfield also included with his letter of February 8, a copy of a letter he had sent to Bryan, on the previous day, denying the existence of the contract, stating "I have only to observe here that I have the misfortune to differ with you in conclusions from the evidence presented...."

Soon Mansfield's stand was to be upheld, when the Secretary of War, John H. Eaton, ruled that the War Department could not "recognize the existence of any contract in this case," since from the evidence presented its existence was not "sufficiently shown."

This troublesome case is merely typical of the complications confronting Mansfield soon after his arrival, as a result of his predecessor's unbusinesslike methods.

Despite such hindrances, he continued his efforts to begin active construction work on the project. By mid-February his advertisements for labor apparently had been conclusive of results, for on the twelfth, the following advertisement for wood, evidently to be used in warming the quarters on the island, began to appear in the Georgian:

Cockspur Island, Georgia
10th February 1851

WANTED to purchase three sloop or schooner loads of oak and pine wood, to be delivered on the wharf at this place - Application may be made through the postoffice.

JOSEPH K. F. MANSFIELD
Lt. Corps Engineers
He acknowledged the department's authorization of February 1 in regard to the new soil survey, on the fifteenth and on the twenty-sixth transmitted the findings of his examination. He had found in general, that at no place on Cockspur Island did the soil strata alone offer sufficient resistance adequate to the support of the proposed foundations of the fort. This conclusion was based on his soil experiments which had shown:

1st - That the island is generally one complete deposit of mud from up the River. 2nd - That it is spiced throughout with small oyster beds that afford but little or no resistance, in as much as they are not thick and seated on mud. 3rd - That occasionally very fine sand is mixed in with the mud but not uniformly as to quantity in strata but rather in patches and then in a small proportion to the mud. 4th - That a horizontal passed thru' the high water level will cut off all the heterogeneous matter of which the ridge (which runs across the isl....) is composed. 5th - That the mud of the isl when the water is em-pounded is hard, firm and more or less tenacious. 6th - That there is no such a stratum within a reasonable distance of the surface as a firm bed of sand.

It is remarkable how close this interesting analysis of the character and nature of the soil on Cockspur Island parallels the conditions existing there today. It is also notable that Mansfield's experiments tended to confirm Major Babcock's allegation that piling would be necessary under the fort's foundations, a fact which the Department had been reluctant to accept at the hands of the older officer.
The survey and inventory "of the actual condition of the Works on Cockspur Island," as ordered by the Engineer Department on December 18, 1830, was finally completed by March 8, 1831. During the last of January, and in February, 1831, Lieutenant Mansfield and his assistant, Lieutenant Robert N. Lee, had been busily engaged, as much as time would permit, in complying with these instructions from the Department. However, the multifarious interruptions occasioned by the reopening of operations on the island had delayed the final report on this task until early in March.

The complete report, as submitted by Lieutenant Mansfield with his letter to the Department on March 8, proved to be a rather searching and merciless appraisal of Major Babcock's administration on the island.

In reviewing Babcock's work on the project, Mansfield charged the old Major not only with the sins of his acts of omission, but with those of commission as well. Upon his arrival at the project in January, 1831, he had been rather handicapped in determining the exact extent to which Major Babcock had executed the Department's plans, since "apparently Maj. Babcock had not made any" of his own. In overcoming this situation, he had immediately assigned Lieutenant Lee to make a complete "Survey and Plan of the Island and the additions to it by Major Babcock." The result of
Lee's labors was now enclosed in the form of a survey and topographical map of the island drawn by that indefatigable young officer. This survey map, designated as "Map of Cockspur Island, and position of Fort Pulaski," showed the high water line of the island, the fixed terrain, the dikes as actually executed at that date, and the existing drainage ditches. Sketched in on this map were the position of the existing temporary quarters on the island, including Major Babcock's former quarters (now commanding officer's quarters), the office including Lee's quarters, the overseer's quarters, the boatmen's quarters and stone house, two barracks for laborers, a hurricane or storm house, the bakehouse, the master carpenter's quarters, the bathhouse, and the boathouse of the United States revenue department. Also sketched on the plan were the positions of the beacon, the north channel wharf, the head of a wooden sluice near the gorge wall of the fort, and a rectilinear figure showing "the site of the fort as laid down by Major Babcock." The exact position and extent of the excavation on the ditches around the fort site, as executed under Major Babcock to a depth of five feet, was also indicated on the survey map.

The report included a rather critical analysis of each feature of Major Babcock's construction work and various projects on the island. Mansfield found the dikes on the eastern part of the island "sufficient to keep out the ordinary tides," but those constructed on the
the western side to be only so much "lost labour." In general the various quarters and buildings were "good and will answer the purpose intended;" but the sites of the boatmen's quarters and the laborers' barracks he judged to be "injudiciously selected because of their exposure to northeast and southwest storms...." The young lieutenant vigorously condemned the poor judgment Babcock had displayed in selecting a site for the North Wharf. This site he also termed "injudiciously selected," because the wharf was "ill calculated for the position it was to occupy,..." was built at an excessive "cost of construction... and is now a wreck," due to the fact that it had been placed directly on the mud bottom rather than on piling. He further observed that since Babcock's north wharf was too "poor to repair," this "has determined and fixed the landing for materials on the South Channel, on a line perpendicularly opposite the South front along which is a canal for transportation." He stated that this "landing" would "be run out on piles, in a cheap but durable mode." The building of a bathhouse by Major Babcock was considered by Mansfield as "an unauthorised expenditure of the public money."

However, the most drastic and outstanding criticism leveled by Mansfield at his predecessor was the positive condemnation of the feeble judgment the latter had displayed in selecting a site for the fort
structure itself. He found that Babcock had made such a profound error in locating the "position of the work," that if such were followed the fort would fail to accomplish its object of defending both channels. Mansfield included a lengthy explanation in support of a new site for the proposed work, from which if adopted, could be thrown "an equal fire on both channels, and [it] defends better the North channel both as to near and distant defense." Furthermore, he continued, the new "position adopted has the advantage of a better foundation," and "has enabled the constructing officer to commence the excavations properly." Mansfield concluded this sharp censure of Babcock's fort site by observing that he considered even the excavations made by the old Major at the fort site, "more disadvantageous than none at all."

The concluding parts of this extended report contained some rather caustic comments on the manner in which Babcock had conducted the routine affairs of his office on the island. We have already observed some of the difficulties arising in Mansfield's path as a result of Babcock's business negligence. And only three days after sending this report, he was to write to the Department, "I have been at considerable trouble and expense in consequence of Major B's curious method of doing business...."
Now, however, he termed Babcock's "administration of the work" as generally inefficient, only one letter book had been found in the office, and one or two types of incomplete "memorandum books." A few scattered copies of official fiscal forms could be located, but even in these wide discrepancies existed. As a consequence of such haphazard methods, Mansfield and Lee had encountered much difficulty in compiling a financial inventory of the supplies and materials left on the island by Major Babcock. Finally, however, every article was itemized and the total value of the supplies and materials estimated to be $3,500. This estimate concluded Mansfield's report of March 3, 1851. Perhaps if the young lieutenant had taken more into consideration the extenuating circumstances and mitigating aspects of Major Babcock's administration, he would not have waxed so enthusiastic in this sarcastic diatribe directed at the older man. Mansfield was prone to administer sharp reproof though, wherever or whenever he encountered inability or inefficiency.

Lieutenant Mansfield's report on his soil survey of Cockspur Island, transmitted on February 26 to the Engineer Department, had been received at Washington in the meantime. The report had definitely shown the necessity for the use of piling under the
proposed foundations of the fort. Nevertheless, upon consideration of the report, and despite the fact that it corroborated Major Babcock's similar findings, the Department appeared strongly reluctant to accept the fact that it was necessary to make such drastic changes in the foundations. Writing on March 9, General Gratiot, Chief of Engineers, informed Lieutenant Mansfield, that after careful consideration of the soil survey, the Department had decided to send another Engineer officer to Cockspur Island to consult with him in regard to the foundations. A certain Captain Richard F. Field, who had already gained much experience on similar problems in the Louisiana marshes, was the officer designated, and he was scheduled to arrive at Cockspur sometime near the end of the current month. At last the necessity for a serious consideration of possible changes in the foundations of Fort Pulaski had been recognized in Washington. Certainly this was a victory for young Mansfield, and evidence that the Department was beginning to value the young officer's opinion on engineering questions. Later in the month, the Department was to dictate the procedure by which the project for the changes, if found necessary, could be submitted for approval. The Department, on March 26, instructed Lieutenant Mansfield that in regard to possible new foundation materials, he was to
consult with Captain Delafield on his arrival, adopt an opinion, and submit a project and a comparative estimate of costs therefore.

During the month of March, 1831, Lieutenant Mansfield succeeded in beginning active construction operations on the island. Since he considered the wharf built by Babcock on the North channel in too poor a state to repair, he began the construction of a new wharf on the South channel, practically opposite the southeast angle of the fort. During most of the month Lieutenant Lee was engaged "specifically in directing the excavations for the foundations of the fort." In the early part of the month he had completed the survey map transmitted with Mansfield's report of March 6.

The month of April, 1831, brought forth several consequential events at the newly reopened project on Cockspur Island. By April 4, Lieutenant Mansfield had received the Department's official approval for his "alteration in the fort site and plan of operations." Such an approval, involving departmental acceptance of a fundamental revision of the whole fort project, was a distinct recognition of the ability of the young engineer. Mansfield was beginning to make a way of his own, and to acquire a reputation in the Department as the possessor of a discerning engineering mind. Unfortunately, he had also received by April 4, an order
directing him to transfer his assistant, Lieutenant Lee, to Hampton Roads, as early as the latter's services could be dispensed with at Cockspur Island. As the continuance of construction operations on Cockspur Island in the immediate future then appeared uncertain, the Department apparently had decided there was no necessity for two valuable Engineer Officers remaining there. Lieutenant Mansfield could not immediately relinquish Lee's services, however. Lee was then engaged in completing certain drawings, and with the arrival of Captain Delafield for conferences with Mansfield shortly afterwards, the aid of the young assistant engineer was required temporarily.

Despite the uncertain state of operations on the project several significant events occurred during the remainder of April. The new excavations for the foundations of the fort continued during the month. Following Captain Delafield's arrival early in the month, he had a series of conferences with Mansfield in which were discussed the necessity for piling and grillage under the foundation, and the nature of the masonry construction of the foundation. By April 18 and 19, they had reached their conclusions on these matters. Mansfield's report on the results of the conferences, forwarded to the Department on April 18 and 19, showed that the engineers had rec-
ommended the use of brick rather than stone in the foundation, as well as the use of piling and grillage under the foundation. Mansfield's opinions as expressed in various previous reports were thus overwhelmingly sustained. Realizing this, the Department did not long delay in requiring the young officer's appearance in Washington, to give further advice in person. Lieutenant Lee had given much assistance at these conferences, but at their conclusion his services were no longer urgently needed, and on April 21, he was ordered to Hampton Roads.

Meanwhile, by April 15, Lieutenant Mansfield had decided to advertise for certain building materials, even though an immediate continuance of work on the project was then rather indefinite. Actually, at that date, the two officers had not yet finished their consultations on the condition of the project. Neither could the Department's action on their forthcoming report then be conjectured safely. Nevertheless, Mansfield apparently considered the time fitting to make preparations for securing a supply of materials that could be used eventually. On April 15, he sent two advertisements to The Georgian, inviting proposals for brick and sand. Apparently, these were the first of many requests of such nature that were to be made
during his long administration. The first of these advertisements began to appear, three days later, on the 18th, as follows

Cockspur Island, Georgia
April 15th, 1831.

WANTED: Wanted to purchase for the fortifications now erecting at this place, twenty thousand bushels first quality sand for brick mortar. The sand must be clear and free from all saline particles. Samples of the sand must accompany the proposals to furnish same.

JES. E. F. MANSELL
Lt. Corps Engineers.

The other followed on the next day:

Cockspur Island, Georgia, April 15th, 1831

WANTED: Wanted to purchase prior to the 1st July, next, for the fortifications erecting at this place, two millions of first quality hard burnt BRICK. A sample must accompany the proposals to furnish the whole or a part.

JES. E. F. MANSELL
Lt. Corps Engineers.

This seemingly incautious move by the young lieutenant was not as venturesous as might first appear. In fact it was strongly indicative of his initiative in planning and providing for future contingencies.

The emphatic reports from Cockspur Island on the necessity of revising certain portions of the plans for the fort projected there, this time aroused the department to action. Although the grave need for these revisions had been called to the department's
notice previously, it was not until Mansfield hurried on to Washington from his conferences with Mansfield that official steps were taken to remedy the situation. By May 1, 1851, the department had decided to revise the whole project and the plans for the work to be built on Cockspur Island. The suspension of operations on the project, until this revision could be effected, was thereupon ordered. On May 2, 1851, the department’s full decision was telegraphed to Lieutenant Mansfield, when he was notified that

In consequence of Capt. Mansfield’s report respecting the foundations of the fort on Cockspur Island, it is thought best that the project for that work should be revised by the board of engineers.

As the local engineer, you become a member of the board for that object; it will therefore be necessary to make arrangements for suspending the operations as soon as practicable.

You will make any further examinations that you can deem expedient.

Having complied with the above instructions you will repair to Cockspur Island, at which place the board will meet, taking with you besides your own notes and drawings, the plan and memoir of the work and the accompanying copy of Capt. Mansfield’s report.

Immediately on receipt of this order Capt. Mansfield prepared to stop operations. Having received the order by May 11, he informed the department in a letter forwarded the same day of his intention to leave his "post as soon after June 2 as possible," expecting "to be in enroute about June 24." The prospect of a
summer in the North, far from the cares of Cockspur Island, must have been attractive to the young officer as he journeyed northward by sea. Any illusions that Mansfield might have had regarding a restful and comparatively carefree summer were soon to be dissipated. The summer of 1851 proved rather trying for young Lieutenant Mansfield. The Department's attempts to organize a board for the purpose of revising the entire Cockspur Fort project kept him shuttling back and forth between Newport, Rhode Island, and Washington, and it was late in the summer before definite action actually could be taken. As the local engineer of the Cockspur project, Mansfield became a temporary member of the Engineer Board for Fortifications, in order to assist with the proposed revisions. He was supposed to confer with General Simon Bernard and Colonel Joseph A. Totten, the board's permanent members, for that object. Since Bernard had been temporarily absent from the United States when the Department sent Mansfield his orders of May 2, the young lieutenant had been directed to Newport in order to confer with Totten. However, he had barely reached New York, from the South, about the middle of June, when Bernard returned. Thenceupon, the Department ordered the Cockspur Engineer to Washington, to confer with Bernard, since the General had
New reported for duty and being the mem-
ber of the Board of Engineers by whom the
original project was prepared, it is prop-
that the revisions should be made by him.

Gathering up his numerous papers, reports,
and drawings, Mansfield hurried to Washing-
the end of the month, only to find that he would be
compelled by circumstances to retrace his steps.
Although Bernard had been ordered, on June 17, to pre-
pare for conferences with Mansfield, previous plans
of the Frenchman were to preclude their association in
the revisions. Bernard desired to return to his re-

volution-swept homeland, and on July 11, President
Casson accepted his resignation from the United States
Engineer Corps. On July 16, the Department informed
Lieutenant Mansfield that on account of "Depl. Bernard
having closed his connexion [sig] with this Department,"
the revisions of the Cockpur project would have to
be referred to the "remaining member of the Board of
Engineers." Since Colonel Totten was the only remain-
ing member of the Board, Mansfield was instructed to
depart for Newport in order to confer with that officer.

There, during the latter part of a sweltering Rhode
Island summer, the two Engineer Officers labored amid
numerous plans and reports preparing a revised project
for the Cockpur Island fort. By September 28, the work
was completed, and on the 30th, Mansfield forwarded the
new project to the Department for its approval. The
Looking northwestward along the gorge or rear wall at Fort Pulaski, from a point on the countercoppwall of the main boat, showing a section of the main boat, the main drawbridge, the sally port entrance, and the flag pole. The grass covered mound at the lower left of the picture is in the demi-lune, the earthen work designed to protect the rear of the fort.
Engineer Department officially accepted this revised project on October 4, informing Lieutenant Mansfield on the 6th, that

The revised plan for the defence of Cockspur Island, Geo., has been examined at this office and is approved - You will accordingly proceed in its execution as early as practicable.

The new project called for several fundamental structural changes in the original plans of the projected fort. Both timber piling and grillage were now adopted for use under certain portions of the fort's foundations, to support the enormous weight of the work; whereas

The original design for a fort on Cockspur Island was made on the supposition that the substance of the Island was such that neither piles or grillage would be necessary.

Approval was also given to the plan of "constructing the work entirely of brick," including the masonry of the foundation, formerly projected in stone. To lessen the weight of the work upon the grillage several other changes were made. The second of the three gun tiers or stories originally planned was eliminated. In the lower of the two remaining gun tiers, "a timber platform" or floor was substituted for the original "platform of earth." Another outstanding structural change was the enlarging and considerable lengthening of each face of the fort's walls "to obtain after taking off one tier of guns, a command of channel equivalent to that afforded by the first project." Semi-bastions
which would "obtain for us a flanking fire adequate
to control the passage of the bridge [fort drawbridge]."
were provided in the gorge wall by means of "a slight
indentation,"
"small demi-lune of the
first project," it was now proposed to build "a large
one of earth only, surrounded by a wet ditch." The
total of the armament for the fort and its outworks
was also increased, twenty-nine guns being added to
the one hundred and forty-three as proposed by the
original project. A compromise was suggested in re-
gard to the site of the fort. It was recommended that
the Department exercise its discretion in directing
the use of the original site. A new site recommended
by Lieutenant Fansfield was practically superimposed
upon the original. The new site could be adopted and
at the same time follow the old site enough to profit
by much of the original excavation. The new project
also included a detailed estimate on the cost of com-
pleting the entire fort structure. It called for a
total of $374,600, which then was deemed sufficient
 to accomplish this end.

It was by this project, generally so well
planned and drawn, together with a few subsequent
revisions, that Fort Pulaski was eventually erected
as it stands today. Credit for having persuaded the
Department that a new Cockspur Fort project was posi-
tively necessary in 1851, and for having induced the Department to authorize and direct such a momentous step, certainly rests to a large extent with Joseph Mansfield. The 1831 project clearly reflected his ability in handling and treating fortification problems. And while the influence of Mansfield's practical engineering mind was evident in the new project, as work under it advanced his strange lack of foresight in certain engineering and architectural details was to become apparent.

The fiscal year 1850-1851 was one of the most difficult experienced during the sixteen long years of Fort Pulaski's building. In October 2, 1851, Lieutenant Mansfield forwarded to the Engineer Department his annual report on the operations at the island. This succinct communication recounted Mansfield's arrival in January, 1851, the conditions with which he then had been confronted, and the measures taken to meet them. Perhaps the most outstanding constructional condition which had then merited attention was the extent of the excavation made at the fort site by his predecessor, Major Babcock, the ditch around the north, northeast, southeast, and Jorge walls of the proposed work was found to have been excavated in some places to a depth of five feet. Soon after the arrival of Lieutenant Mansfield, his assistant, Lieutenant Robert E. Lee, made a survey of the condition of the island
and its works, plotting his results on a chart. During the spring of 1831 a new wharf on the south channel had been built and a lime house, a blacksmith and a carpenter shop erected. A temporary canal, twenty-five feet wide and three feet deep, upon which building materials were to be transported, also had been dug to connect the new South Channel wharf with the fort site. Before the work had been suspended in the early summer, excavation on the foundation of the fort had commenced. During the summer the entire project had been revised, and the new project accepted by the Department early in October. During the year a systematic set of office records had been installed and followed. Building materials, timber, brick, lime and sand had all been obtained during the year at Savannah or in the vicinity. Laborers had been principally negro slaves hired from their owners, although some white mechanics had been recruited from the North for work prior to the warm season.

Enclosed with the report was a new "plan of the Island and the adjacent channels showing the position given the revised project [Fort site] by Lieutenant Mansfield." This plan showed the new fort site to be so closely superimposed upon the original that much advantage could be taken of excavations heretofore made, and of the firmest and oldest formation of
of the Island ... thus occasioning but little loss by the greater area covered by the revised project."

In summary, it is readily seen that during the fiscal year 1830-1831 relatively little had been accomplished on the construction of the actual fort structure. Mansfield had spent much time in rectifying the errors and mistakes of his predecessor. Excavations hardly were commenced when it was found necessary, from the nature of the soil, to suspend operations in order that the plans of the fort could be revised and adapted to actual conditions on the island. The year was not without its results, however. Two definitely important steps forward were taken during these first months of Mansfield's incumbency. Not only was the complete project placed on an efficient and businesslike basis, but more important, the original project was thoroughly revised and a generally practical and workable set of plans devised.

The year certainly had not been ill-spent for Mansfield. The very crucial condition of the work had forced him to study and partially to master the problem at Cookspur Island in much 

faster a period than it the project had been progressing normally. Opportunities, of which he alertly took advantage, had been afforded him to become more or less acquainted with the several aspects of the existing project and
with its future possibilities. It had been a year of personal growth for Mansfield. Placed on his own initiative for the first time, and in his first sole command, he had proven persevering in face of numerous difficulties, and had been found to be a self-reliant executive, possessing many constructive ideas. However, as subsequent events were to reveal, Mansfield was also to a large extent responsible for the engineering misjudgments made during the year in revising the project. But these may well be charged to his comparative inexperience with such a problem as presented at Cockspur, and to the chaotic conditions existing there which rendered an immediate and thorough understanding doubly difficult. If his nine years of service prior to 1851 had been a long apprenticeship, their worth was attested by the splendid stewardship of the year 1851, the year of his first command. For Mansfield the year 1851 was the crucible of his knowledge and skill.

Lieutenant Mansfield had remained in the North during the early fall of 1851, but by November he had returned to Cockspur Island. After having forwarded the revised project from Newport, Rhode Island, on September 30, he remained there a few days until he had compiled his annual report and sent it to the Department. Then he proceeded leisurely to his old home
at Middletown, Connecticut. Here he attended to a few routine duties, and spent the time intervening before his departure for the South late in October. By November 7, he had again assumed command of the works on Cockspur Island.
1. General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, Fort Monroe, December 16, 1830. No. L. Letters to Officers of Engineers, 67-68. When the Department refers to "the work" or to "the works," it is referring to the fort or fortification in question. This will be found true in the narrative of this study as well.


8. R.S., File Nos. L, 166, November 11, 1830; L, 168, December 1, 1830; cf., Freeman, op. cit., II, 94-95, 100.


11. January 26, 1831. This advertisement also appeared in The Georgian on January 27, 28, 29, 31, February 1, 2, 3, 4, 5, 7, 8, and 9, 1831.

12. The Georgian (Savannah), February 1, 1831. This advertisement also appeared in The Georgian on February 2, 3, 4, 5, 7, 8, 9, 10 and 11, 1831.


17. R.S., File No. M.749, February 8, 1831, with enclosures "A", "B", "C" "D", and "E".

18. February 12, 1831.


21. Had Babcock kept any record of his work as he planned it, this record and the plans should have been at the fort on Mansfield's arrival, since Babcock wrote, after his departure from the island, that he had left all his papers there. See R.S., File No. 8, 1099, October 26, 1830.
22.

See plan, Drawer 70, Sheet 2, "Map of Cockspur Island, and position of Fort Pulaski," 1831,
Construction Section, Office, Chief of Engineers.

23.

Mansfield seems to have overlooked the fact that the Department, in its original plans furnished Babcock, had itself indicated to a certain degree the site on Cockspur Island for the projected fort. See plan, Drawer 70, Sheet 1, "Chart of the entrance of the River Savannah exhibiting the site of the fort recommended to defend both channels," 1827, Construction Section, Office, Chief of Engineers. Thus Babcock cannot be held solely responsible for the poor site selected. He is liable to censure, however, for his failure to discover that the site was poor or if he did realize it was poor, for his negligence in failing to report such a condition to the Department.

24.


25.

General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, March 10, 1831, No. 4, Letters to Officers of Engineers, 97.

26.

Since 1824, Captain Delafield had been in charge of the work on the fortification in progress of erection on the march at Plaquemine Bend on the Mississippi. See Edna Yost, "Delafield, Richard (Sept. 1, 1798 - Nov. 5, 1873)" in Dictionary of American Biography (N.Y., 1930), VI, 210.

27.

General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, March 20, 1831, No. 4, Letters to Officers of Engineers, 110.

28.


29.

R.S., File No. M.779, April 1, 1831.

30.

R.S., File Nos. M.765, March 8, 1831; M.779, April 1, 1831; M.783, April 4, 1831; cf. General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, March 26, 1831, No. 4, Letters to Officers of Engineers, 111-112.
31. E.S., File No. 793, April 1, 1831; cf., E. S. Lee, "Cockspur Island, Wednesday 13th April, 1831," to (Miss) Eliza A. Mackay, Old Fort, near Beaufort, S. C. (This letter is the property of Mrs. Frank Screven, Savannah, Georgia, and used with her gracious permission).

32. E.S., File No. 7779, April 1, 1831.

33. E. S. Lee, "Cockspur Island, Wednesday 13th April, 1831," to (Miss) Eliza A. Mackay, Old Fort, near Beaufort, S. C.

34. E.S., File Nos. M.791, April 16, 1831; M.793, April 19, 1831.

35. E.S., File No. M.795, April 22, 1831.

36. April 16, 1831. This advertisement also appeared on April 19, 20 and 22, 1831.

37. Ibid., April 19, 1831. This advertisement also appeared on April 20 and 22, 1831.

38. General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, May 2, 1831, No. 4. Letters to Officers of Engineers, 129-130. Belknap's report referred to cannot be located today, but apparently it was the deciding factor in the Department's decision to revise the plans of the fort.


40. General Charles Gratiot, Chief of Engineers, to Lieutenant Mansfield, June 17, 1831, No. 4. Letters to Officers of Engineers, 159-160.

41. E.S., File No. M.822, June 25, 1831.


46. See plans, Drawer 70, Sheets 5 and 6, respectively titled: "Chart of the entrance of Savannah River, Ga., exhibiting the site of the fort recommended to defend both channels..." 1831; "Revised project for the defense of Cockspur Island, Savannah River, Ga. Plan Sections, Elevations..." 1831; Construction Section, Office, Chief of Engineers.

47. N.3., File No. M.652, October 2, 1831. The fiscal year then ended on September 30.

48. When Mansfield abandoned Babcock's wharf sites on the North Channel, and built the main wharves on the South Channel, the latter's old transport canal from the North Channel was abandoned and replaced by a temporary canal from the fort site to a point near the shore side of Mansfield's new wharves. See N.3., File No. M.765, March 8, 1831; cf., File No. M.652, October 2, 1831; See also map, Drawer 70, Sheet 4, "Map of Cockspur Island and position of Fort Pulaski," 1831; cf., map, Drawer 70, Sheet 7, "Map of Cockspur Island and the adjacent channels..." 1831; cf., maps, Drawer 70, Sheet 31, Part II, "Survey of the Mouth of the Savannah River, Cockspur Island, showing Fort Pulaski..." 1843; all located in the Construction Section, Office, Chief
of Engineers. After lying abandoned many years,
Babeck's old canal from the north channel was fin-
ally filled in, between the spring of 1852 and the
spring of 1853, see U.S. File No. 0.392, April 22,
1851; cf. U.S. File No. 0.141, April 2, 1852; 0.145
May 5, 1852; 0.147, June 1, 1852; 0.149, January 5,
1853; 0.227, February 3, 1853; 0.229, March 1, 1853;
0.229, July 5, 1853; 0.257, September 5, 1853; 0.284,
March 7, 1854; 0.359, April 7, 1855.

49.
See plan, Drawer 70, Sheet 7, "Map of Cooks
er Island and the adjacent channels, with plans of the fort, the
black lines showing original plan and the red lines
the revised plans." 1831, Construction Section, Office,
Chief of Engineers.

50.
For the Engineer Department's report on the 1830-31
operations at Cooksper Island see the "Report of the
Ann. 18, 729. It is not believed necessary to embody
here these annual printed reports, since they were
compiled from, and restate the facts contained in
the original source materials used in this study.

51.
... File No. 0.651, September 30, 1851; 0.852, Oc-
tober 2, 1851; 0.853, October 7, 1851; 0.859, October
17, 1851; x.671, November 7, 1851.
Chapter II

An epoch is begun:

Fort Pulaski's foundations are laid

Several developments on the Cockspur fort project appeared with the beginning of the new fiscal year, 1831-1832. Soon after his return to the island early in November, 1831, Lieutenant Mansfield began preparations for carrying on extensive operations during the year 1832. By December 1, he had decided to invite proposals for foundation timber to be used in 1832, and on December 5, the following advertisement began to appear in the Savannah Georgian:

Savannah, Dec. 5th, 1831.

1st Rec. 1831.

Sixty proposals will be received till the 25th inst., to furnish at this place, prior to the first of May next, 300,000 feet (b.m.) first quality ranging timber, and 50,000 feet (b.m.) first quality three inch plank. The timber to be from 12 to 15 inches square and common length. The plank square edged and common length and breadth.

E. F. F. MANSFIELD
Lieut. Corps of Engineers.

As December advanced the expanding operations called for additional laborers. Mansfield realized this situation by the thirtieth, and on that date sent to the Savannah Georgian an advertisement for laborers. Next day the following advertisement began to appear:

100 HEADS OF BLACK LABORERS
NEEDED to work on the fortifications at this place.
During December, 1831, and the first quarter of 1832, he was engaged "in laying out" the new site of the proposed work, and in excavating for its foundation. In the course of these excavations he made an interesting discovery which again necessitated certain revisions in the foundation plans. A "large, firm bed of white sand" was found, at an average depth of nine feet, under nearly the whole of the northern section of the proposed fort. It also extended to a certain degree under the southern section, to a point near the southwestern angle, where it terminated. The existence of this firm stratum under part of the proposed foundations raised the problem "of overcoming this inequality of resistance below the grillage," between the northern and southern sections of the fort. On April 10, Mansfield informed the Department that "there is but one way" to solve the problem, and the necessary change consists in suppressing as useless, one foot in depth of excavation and one course of timber for all that part of the work north of the capital, and in adding piles two feet into the sand, for all that part of the work of the capital as far as the sand extends; also adding piles of great length under the S.W. angle which was underlaid with a mud hole.
It is rather surprising that such a prominent soil stratum had not been discovered previously by Mansfield and Walsfield, who were supposed to have made a thorough investigation of the island's soil conditions in the spring of 1831. On February 26, 1831, some thirteen months before making this discovery of the sand stratum, as a result of his independent soil experiments, Mansfield had made the positive statement, "that there is no such a stratum within a reasonable distance of the surface as a firm bed of sand." The young Engineer officer clearly had not been careful or thorough in his examination of the soil strata on the island. However, Mansfield, who had recently been promoted to a first lieutenancy, retained the confidence of the Department, which subsequently approved the new foundation changes.

Following this interruption of the work, which apparently occurred in March, Mansfield prepared and transmitted to the Department a project of operations to be completed during the remainder of the fiscal year 1831-1832. This project, forwarded on April 10, called for the completion of the foundation excavations, excavation of a service canal around the foundation for the purpose of handling building materials, and the completion of the entire grillage. During the remainder of April, and in May and June, he proceeded to carry out this project as far as practicable. However, on
June 2, he requested the Department to authorize a suspension of the work from July 1 to November 1. He proposed this step in order that he might some North to contract for various building materials, and thus usefully occupy the hot months when little effective work could be accomplished on the island. The Department soon gave its approval, and on July 1, 1832, operations at Cockspur Island were suspended for the fiscal year 1831-1832.

During the summer and early fall of 1832, Lieutenant Mansfield was temporarily transferred to another project during the suspension of the work on Cockspur Island. Hardly had he reached the North, when on July 22, the Department placed him in charge of the repairs on the National or Cumberland Road, then in progress in Maryland and Pennsylvania. This action, from one point of view, was further evidence of the regard held by the Department for his intelligence and ability. After some two months' work on that project, on October 5, Mansfield was ordered by the Department "to turn over the property and funds in relation to the Nat'l road to Capt. Belasfield and to proceed back to Savannah." Over two more months were to elapse, however, before Mansfield returned to Cockspur Island.

By the end of the fiscal year 1831-1832 much progress had been made on the work at Cockspur
Island. On October 14, 1852, Lieutenant Mansfield forwarded to the Department his annual report summarizing the year's advances. Work had continued steadily throughout the working year with the exception of the brief interruption caused by the soil discovery and the consequent partial alteration of the foundation plans. The excavation for the foundation of the whole work had been completed. However, to keep water out of this excavation it had been necessary to make constant use of a powerful screw pump, operated by horse power. The earth removed from the excavation had been deposited as a glacie or dike five feet in height, completely encircling the foundation, for the purpose of excluding tidal waters from the construction site. About half of the grillage, that on the northerm section of the fort, had been "laid and weighed with brick." The piling necessary for the foundation of the southeast wall had been driven. In order to expedite the handling of building materials at the fort site, a canal fifteen feet wide and three feet deep had been dug around the foundation excavation. By the use of the branch canal, twenty-five feet wide and three feet deep, connecting the "out" Channel and wharf with the fort, heavy materials had been brought to the fort site by lighter and easily transported where needed.
Mush timber, brick and other building materials had been received during the year. While laborers had been scarce early in the year, an adequate force was eventually secured, and by July 1, when the work was suspended, the project was left in a fine condition for an early resumption.

Operations were not reopened on Cockspur Island until early in January, 1833. The Department had not been able to relieve Mansfield from his National Head duties as early as first expected. He did not leave the North until late in December, 1832, reaching his post on January 5. Then the unfinished work on the foundation, the driving of piles and laying of the grillage, was resumed on the southern part of the fort. Late in January the Department requested Mansfield to submit for approval his plan of construction operations for the ensuing year. Accordingly, on March 20, he forwarded "a project and estimate for continuing the construction of this work during the year 1833." This project called for the realization of two main objectives during the year. It proposed to commence the masonry of the foundation, and to drive the piles for half of the work and to lay the grillage thereon and weigh down the same by deposits of brick to secure it against any accidental overflowing of the sea.

The project also called for the construction of a mill
for mixing mortar, and "arrangement for a supply of fresh water."

Long before preparing this operations project of March 20, however, Mansfield already had determined to begin the permanent masonry of the foundation during the year. With such operations in mind, he apparently soon realized the necessity of securing large quantities of brick to be used in the contemplated work. Accordingly, late in February, he decided to invite proposals for the necessary brick. On February 20, 1833, his request began to appear in the advertising columns of the Savannah Georgian:

SEAL'D and Endorsed Proposals WILL be received till the ninth day of March next, to furnish prior to the thirtieth day of September next, at Cockspur Island, Ga., for the United States fortifications, one million first quality hard burnt BRICK. A sample of the bricks must accompany the proposals and security to half the amount of the contract will be required for the faithful performance of the same.

JOSEPH K. F. MANSFIELD, 14th Lt. Corps of Engineers.

By March 21, he had received four proposals to furnish the brick. One Henry McAlpin of Savannah had made the lowest proposal, offering to furnish the brick at $11.50 per thousand. McAlpin, who operated an extensive brickyard at his plantation, the Hermitage, some two miles and a half west of Savannah on the river, was well equipped to fulfill his proposal. The well known
"Savannah Grey," an oversea sand-clay brick, had been produced at his brickyard for a number of years, and was then commonly used in Savannah for building purposes. On March 21, Wansfield wrote the Department concerning his recent invitation for brick proposals, and enclosed for its approval a "contract with Henry McAlpin to furnish this work 1,000,000 brick." He explained that of the four proposals the McAlpin offer was the most advantageous to the work in its present stage, in as much as the brick were larger and of better quality.

He added, however, that while he was submitting this particular contract for approval, the advertisement in the Savannah Georgian

had been made more to invite competition, to test the market price, than for any other object; in as much as a ready market supply could be obtained without difficulty at $11.50 independent of contract.

This suggestion that the Department authorise him to purchase brick in the open market "independent of contract" was rather unprecedented. The Department had not so soon forgotten the difficulties resulting from Babcock's unauthorised and disastrous excursions in Savannah's open material market, and it refused to subscribe to such a step.

During April, 1833, the fort in process of building on Cockspur Island, was lifted from its former obscure designation as a mere work under construction on
BRIGADIER - GENERAL CASIMIR PULASKI

The fort on Cockspur Island was named in 1853 in honor of the Polish volunteer, Casimir Pulaski, who served as a Patriot brigadier-general during the American Revolution, and was mortally wounded at the siege of Savannah, October 9, 1779.
the Georgia coast, and received an official name.

Though the Office of the Adjutant General, United States Army, was issued, on April 13, the following:

Order 32
The Secretary of War has given the following names to the forts to be constructed and situated on the points and places here below mentioned:

To the work on Cockspur Island, Georgia - Fort Pulaski. 16

The name Pulaski was a happy choice as the designation for the new Savannah River fortification, it was a name which immediately elicited vibrant memories of the sacrificial courage of a brave foreign volunteer and leader who fell in the revolutionary war, not far distant from the site of the new work. It was a name to please both the patriot and the most ardent of militarists. Following Mansfield's receipt of the order, some two weeks later, he apparently gave a copy to William B. Pulloch, editor of the Savannah Georgian. The latter's response was immediate. In the editorial comment in his issue of May 3, he observed approvingly that

We have been furnished by a friend with the names given by the Secretary of War to the forts constructing and to be constructed and situated on the points and places hereinafter mentioned. That of Pulaski is very appropriate for the fort constructing in our harbor, as the soil of our city was crimsoned with the life blood of the gallant Felix, who here sealed by his death that pure and holy devotion for liberty which glowed in his bosom, bleeding
from the wrongs of his oppressed and unhappy country.

On March 29, the Department’s official approval of Mansfield’s operations project for the fiscal year 1832-1833 gave the work on Cockspur Island a decided impetus during the months of April, May, and June. Driving of piles, and the laying and weighing of the grillage on the southern half of the fort progressed rapidly during this period. Permanent masonry work of the foundations was begun for the first time in April. This first brickwork was laid on the north face of the fort, the project calling for a completion of the masonry work of the entire northern half of the fort during the year, if possible. Late in May, the construction work apparently had expanded so rapidly that Lieutenant Mansfield was forced to secure additional laborers. On the 27th he inserted the following advertisement in the Savannah Georgian:

WANTED TO RENT
Thirty prime acres to work on the United States Fortifications at Cockspur Island. Application to be made by letter through the post office.

Joseph E. F. Mansfield
Lieut., Corps of Engineers.

The summer of 1833 was one of those rare periods during the years of the building of the fort when extensive construction operations continued during most of the warm months. Babcock had regarded the
Georgia summer with dismay and had usually fled precipitously to the North until the "sickly season" had abated and cooler weather reappeared. Very few summers were to find Mansfield remaining on the island for the complete season. Inability to retain skilled white northern labor for summer work, the necessity of conducting some project business in the North, departmental instructions, healthful considerations, and private business, were to be the main reasons for the summer suspensions which allowed Mansfield to take temporary refuge in the North. It was the second of these reasons which forced him to request a leave from Cockspur Island for the latter part of the summer of 1833. On June 1, he requested an authorization for a northern trip in July or August, in order to make personal inspection of and contracts for the building stone to be required at the project in 1834. In his request however, he was careful to state that "such an arrangement would not affect the contemplated operations at the fort during the summer." The department apparently had sufficient confidence in the ability of Mansfield's overseer to continue the work in the officer's absence, for by June 28 it had approved the request.

The smooth expansion of the work on the island by the early summer of 1833, attested to lens-
field's skill in handling a difficult construction project. By June 1, the construction had so developed that he saw it would be necessary to secure an additional million of brick before the end of the year. On that day, he inserted the following advertisement in the Savannah Georgian, inviting further proposals for bricks.

SHIPS AND DRAFTS FOR SERVICE IN THE UNITED STATES NAVY.

BELLAND & CARR will purchase a large quantity of first class hard coal from any person, and will pay in good cash for it. They will also purchase a large quantity of first class hard coal at any time during the year.

JOHNSON & CO., 229 W. BROAD ST.

Lieut. Corps of Engineers.

Some ten days later he was again forced to advertise for additional laborers; the following advertisement appearing in the Savannah Georgian of June 12:

BELLAND & CARR.

Lieut. Corps of Engineers.

CANTAD to hire - Thirty prime Negroes to work at this place. Application to be made by letter through the Post Office.

JOHNSON & CO., 229 W. BROAD ST.

Lieut. Corps of Engineers.

With a full quota of negro laborers, who were inured to the heat of a coastal summer, construction on the fort's foundation continued during the remainder of
the fiscal year 1832-1833, which terminated on Sep-
tember 30, 1833.

Prior to his departure for the North early in August, Lieutenant Hansfield took his first step toward rectifying one of the patent constructional deficiencies allowed by the project and plan for the work, as revised in 1831; whether through inadvertence or ignorance or even perhaps a false sense of economy, it is not absolutely clear, but the 1831 plans for the Cockspur Fort had conspicuously failed to project a masonry scarp and countercircle wall for the demi-
lune moat, and had provided no masonry countercircle for the fort moat. Hansfield, who had figured largely in the 1831 revision, certainly should receive the larger share of the blame for such an oversight. He had made a soil survey of the island early in 1831, prior to the revisions, and should have been con-
versant enough with the consistency of its mud strata to realize that a plain mud slope or wall would not prove practicable in a wet ditch. Here again, as in
March, 1832, when he had discovered an hitherto un-
suspected firm bed of sand, he is liable to the charge that his 1831 soil survey had not been thorough or complete. However, by July 5, he had detected the er-
ror, and on that day submitted to the Department an
explanatory "memoir" on "the expediency of increasing
the amount of money to be spent on Fort Pulaski in
the construction of a scarp and counterscarp wall." In this, he urged the necessity of constructing per-
manent masonry walls, and asked for an additional $50,
000 with which to accomplish such an end. The Depart-
ment took the matter under advisement, and notified
Samsfield to resubmit "his project with his annual
25.
report." Shortly afterwards, on August 10, he
sailed in the Schooner Delaware for Baltimore, apparently
leaving the supervision of construction at the Island
in the hands of his overseer.

Eighteen hundred and thirty-three was a
notable year for the Fort Pulaski project. As the fis-

cal year 1832-1833 drew to an end on September 30, 1833,
the year's developments at Cockspur Island were readily
perceivable. During the spring of 1833 the fort had
received its official name, permanent masonry work on
the fort structure had commenced for the first time
during the same season. Also, for the first time, oper-
ations had continued uninterrupted throughout the warm
summer months. The specific accomplishments of the fis-
cal year 1832-1833, however, were enumerated in Lieu-
tenant Joseph E. J. Samsfield's "Report of the Pro-
gress in the construction of Fort Pulaski on Cockspur
Island Savannah River Ca; to the year ending 30th
September 1833 inclusive," which he forwarded to the Department on October 15. He found that during the year the operations had continued mainly on the foundations of the fort. Three pile drivers had been "kept constantly in operation," and 2500 piles driven on the south front of the work. The "grillage of half the southeast front" had been "laid and weighed." Some 2,470 cubic yards of the permanent foundation masonry had been laid on the north and northeast fronts.

The report also spoke of various project matters which had arisen for solution during the working season. It had been found necessary to contract for brick, and while Mansfield had let this contract he had been reluctant to do so, how he reiterated this reluctance, stating there was "nothing to be gained by a contract as the best price is the prevailing market price." Such an opinion apparently little affected the Department's adherence to its established rule of requiring contracts for all fortification building materials. It should have been evident to Mansfield that an exception could not be made solely for his project, in securing the other necessary building materials he had not advocated such novel business tactics and had been very successful. Bargains were made in the New York market for cement and lime, and part of the
necessary building stone was secured at Chatham and Haddon on the Connecticut River.

When the permanent masonry was commenced in the spring of 1835, Mansfield had been forced to provide some type of motive power for his mill for working mortar. This problem had been solved by using at the mortar mill the mules which had formerly provided the power for operating the screw pump at the foundation excavations. A small steam engine had then been purchased, which provided sufficient power not only for the pump, but for a lathe, a small saw, and the grindstone as well. The realization that the preservation of the plain mud slopes of the scarp and counter-scarp walls of the fort and demi-lune moats eventually would prove both expensive and dangerous, had led Mansfield to recommend to the Department in the course of the year that these slopes be revetted with masonry. This suggestion, involving a large and expensive constructional addition, was not to be acted upon by the Department for some years. For Mansfield the year had been one of a widening perspective in regard to the details, scope, and possibilities of his Fort Pulaski project. The year's experiences had given him a firmer understanding of his problem, had shown him some of the project's defects, and suggested remedies therefore.
Construction at Fort Pulaski was resumed with vigor during the first quarter of the fiscal year 1833-1834. While Mansfield did not return from the North to his post until November 14, his aide-de-camp had continued the work during October, and early November. The driving of piles and the laying of grillage on the south front, the laying of the remaining grillage on the southeast front, and the masonry of the counter arches of the northern half of the fort had been resumed, and was to continue during most of the current fiscal year. Two days after his return, he saw the necessity of augmenting his laboring force, and inserted the following advertisement in the Savannah Georgian:

LABORERS WANTED
FORT PULASKI, GA.
16th Nov. 1833
Fifty White or Black Laborers wanted to work on the Fortifications at this place.

JOSEPH MANSFIELD
3rd Corps of Engineers.

By mid-December he was also requesting, through the advertising columns of the Savannah Georgian, "sealed and endorsed proposals ... to furnish in a raft or otherwise, at this island by the 1st March next, for the U. States," an extensive "bill of plank, to be square edged and of the first quality Cypress." 31

Throughout the first two quarters of the year 1834 he steadily continued the timber and masonry work
on the foundations of the new fort. During March and April, 1854, he advertised for additional building materials in large quantities. With the masonry of the fort's walls daily rising higher, he saw that timbers for scaffolding would probably be necessary before the end of the year. Accordingly, on March 21, the following request began to appear in the Savannah Georgian:

SCAFFOLDING POLES WANTED.

JACKSON ISLAND, GA.
20 March, 1854.

Sealed and endorsed proposals will be received till the 20th April next, to furnish at this place, for the United States Fortifications during the month of December next, three hundred and seventy-five Juniper or Pine Scaffolding Poles, of common size and from 35 to 45 feet long.

JOSEPH F. HAUSFIELD 33.
Lieut. Corps Engineers.

Before the end of March, he had begun to advertise for negro brick masons to take the place of his white Northern masons, who he anticipated would leave with the arrival of the summer heat. To this end, on March 21, the following advertisement began to appear in the Savannah Georgian:

WANTED
FORT PULASKI, GA.
27th March, 1854.

WANTED to hire to work on the Fortifications at this place for two years, six good black masons.

JOSEPH F. HAUSFIELD 34.
Lieut. Corps Engineers.

About mid-April, he issued an invitation,
through the advertising columns of the Savannah Georgian, for proposals to supply an unprecedented number of brick, to be used in the building of Fort Pulaski. This was one of the largest requests for the furnishing of materials to be made by Mansfield while the fort was being constructed. On April 19, his request began to appear in the Savannah Georgian:

BRICKS, BRICKS, BRICKS.
FORT PULASKI, GA.
16th April, 1834.

WANTED to purchase for the United States fortifications at this place seven millions good Bricks, to be delivered at this Island prior to the 1st of Dec., 1835, as follows: Three millions this year and four millions next year. Contracts for any number of thousands will be made to suit the convenience of those disposed to enter into the business. But security to half the amount of the contract will be required for the fulfilment of all contracts for more than 500,000. A sample of the bricks must be furnished before any contracts or bargain can be closed.

JOS. L. F. MANSFIELD 35.
Lieut. Corps Engineers.

Late in the spring of 1834, Mansfield again planned a northern purchasing trip, to take place during the late summer and early fall months. On May 19, he requested the department for a leave from the island, between mid-June and early November, observing that remaining at the work after the first date of no material advantage to him or the work, as sickness will result, while in the North bargains for stone, machinery, etc., could be made.
As to the existing condition of the project, he then reported the "foundation of the rampart (the piles and grillage)" to be "complete and perfectly secured." In concluding this request, he assured the Department that operations would continue on the island, despite his absence, as the

Contemplated operations for the summer from the circumstance of the masons generally having left the work, are, to receive brick and lay the massive counter arches of the rampart, which a few apprentice boys and black brick layers . . . will work at to the consumption of all the bricks that can be obtained during the summer. 36.

The Department was unable to approve immediately the whole of Mansfield's plans for the summer. The suggestion that partial operations be continued during his absence then appeared impractical and even impossible. The current appropriation for Fort Pulaski was rapidly nearing exhaustion, and since there was no certainty that the Congress then in session would provide new funds, apparently the Department could see no means for continuing even partial operations throughout the summer. Accordingly, on June 7, the Department authorized him to make his northern trip, provided that the operations on the island had been entirely "suspended for the summer." In acknowledging the authorization on July 10, he stated that the trip would have to be deferred for some time, but "as soon as funds were received to pay off the arrearages on the
on the work; and he had settled accounts for the last quarter, the privilege was to be accepted."

Soon afterwards, however, it developed that it would not be necessary to suspend the work, and the masonry construction outlined in Mansfield's letter of May 19 continued during the remainder of the fiscal year 1833-1834. On June 30, "Congress made a new appropriation for the work at Fort Pulaski." Thereupon, the Department took steps to insure the utilization of this money during the remainder of the year 1834. On July 2, it informed Lieutenant Mansfield of the Congressional action, and ordered him to prepare and submit a project and estimate for the expenditure of the appropriation. About ten days later, he had completed the requested report, and forwarded it to the Department. The foundation of the rampart, below the level of the bottom of the coat (that is, the piling and grillage) was then "all complete." Masonry on the north half of the rampart had been laid to a height of seven feet above the level of the bottom of the coat, while "masses of masonry" also had been laid on the gorge wall and on the southeast front. His recommendations for continuing the work and expending the new appropriation concluded the report, being contained in one succinct paragraph. Briefly, he stated that

"It is proposed to expend the whole appropria-
the permanent mancry construction had also proceeded
the foundation of the foundation south of the appetizer
had been given to the cooperation of the plant at
the same time the foundation level for some $5,920 plus
for the whole part of the end of the working season.
the lot was divided into a process finally completed
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rapidly during the year, some 5,730 cubic yards being laid, since the beginning of the permanent masonry had been laid, no mean feat for a few months' scattered work distributed over two fiscal years, and in the face of many interruptions and difficulties; it was an accomplishment directly resulting from Lieutenant Mansfield's energetic and capable direction of the work. Already his scrupulous devotion to duty, his personal industry, and innate sense of fairness were proving a powerful incentive in accelerating the Fort Pulaski project. In concluding his annual report, he mentioned his success in securing building materials during the year. The materials had come from rather widely scattered markets. Some of the brick had been purchased in Baltimore, Maryland, Alexandria, D.C. (now Virginia), and Charleston, S.C., but the "mass of Bricks" had been "obtained from Savannah." Cement had been purchased in the New York market, while stone had been secured from the Connecticut river, "and sand at low water from the shoals of the Savannah River about 10 miles above the fort." In this connection, it is interesting to note his statement that "contracts for material and labour were unnecessary [during the year] as everything for the work was had without difficulty by bargain and purchase on reasonable terms."
This practice was in sharp contrast with that of the previous year, when the Department had strictly required him to contract for all building materials. Following this singular recession, Mansfield apparently was to be required to contract only for certain types and quantities of materials, being allowed to secure the rest in the open market.

Not long after Lieutenant Mansfield's return to Cockspur Island in the fall of 1834, a rather dismaying period set in. With the closing of such a successful year on September 30, prospects had been unusually bright for an early and rapid continuance of the construction during the new fiscal year, 1834-1835. At that time, funds sufficient to continue the work during the fourth quarter of 1834 were either on hand or in the Treasury, and an adequate supply of materials and labor were available. During the month of October and the first weeks of November, the masonry of the massive column-arches in the foundation had been recommenced. On November 13, the Department had officially approved Mansfield's estimate of the funds necessary to continue the work in November and in the whole last quarter of the year 1834. However, just when everything seemed to point toward the opening of another successful construction year,
actually, adverse conditions were imminent. The mishaps soon began. First his current working funds came perilously near exhaustion. On November 20, Lieutenant Mansfield notified the Department that he was "entirely out of funds," and "apprehensive" that the current estimate of funds had been lost in transmission from the island, since the November credit had not been received. In the same letter he reported another serious situation on Cockspur Island. Cholera, that intermittent scourge of the ante-bellum South, had stricken the slave laborers, and "several cases and deaths" had occurred "among the blacks on the island." As a result, "most of the blacks had been ordered home to their masters," and the laboring force materially crippled. Concluding this appeal for aid, he urged the Department to hasten the funds, stating that "should it be found best for the whites to disperse (which he doubts) he will not have the funds to pay for their services."

Lieutenant Mansfield's worst fears were soon allayed. The situation was not really as bad as it seemed, and dark November soon passed into a more hopeful December. The missing November funds apparently soon came through from the Department. On December 5 the Department approved an additional $15,000 for continued masonry operations during that month. Approval
of a rather unprecedented item in this December estimate gave further evidence that the Department felt there was little real possibility of an immediate suspension of the project. In order to facilitate the handling of the brick, and the subsequent laying of the brick masonry, this estimate had approved, among other items, the sum of $1,500 for the purchase of "10 rail-road cars and iron for ways for transporting bricks from the vessel at the wharf to the flats in the canal." Evidently the Department expected future operations to be accelerated rather than seriously restricted.

General conditions on the island began to improve somewhat as the year drew to an end. December was not without its trials, however. With the dismissal of the larger part of the black laboring force, the cholera epidemic soon began to abate, although sickness continued during the greater part of the month. The disquieting situation on the island had rather seriously interfered with the normal progress of the work and had disrupted Lieutenant Mansfield's regular business routine. The preparation and transmission of his annual fiscal statement, normally forwarded with the annual progress report in October, was delayed this year until mid-December. When the fiscal statement was finally transmitted, on December 9, Mansfield was careful to explain that it had been unavoidably delayed by the
"pressure of business occasioned by high tides and sickness both unprecedented since my first arrival at this post." As the year 1834 closed, unusually cold and stormy weather set in, leaving a rather gloomy prospect for vigorous operations in the first month of the new year.

Events which during the fall of 1834 had pressed reverses in the progress of the Fort Pulaski project reached their culmination soon after the opening of the year 1835. On January 1, 1835, only $3,000 remained in the Treasury to the credit of the Fort Pulaski project. Soon afterwards this sum was released in order to continue the masonry work of the massive piers and counter-arches of the fort walls. Fearful that this sum would prove barely sufficient for ten days' operations, as subsequently proved true, Lieutenant Mansfield realized that immediate action would be necessary to meet the situation. Confronted by a seemingly inevitable suspension of the work, he was in a dilemma. Should he suspend the work, or attempt by some indefinable means to continue it? Work during the first months of the new fiscal year 1834-1835 had already been hampered at every turn. He had already overcome the ill effects of a cholera epidemic, of a temporary shortage of funds, and of unusually cold weather at the island, and despite all of these handi-
caps had assembled a fairly efficient working crew.
With the project finally under way again he was re-
luctant to stop the work. Normally, upon the ex-
haustion of working funds, the only alternative would
have been an immediate suspension. But Mansfield was
unwilling for the project to suffer an entire loss of
the small gain laboriously made by his efforts to
keep it going. Thereupon, he resolved upon a bold
course, one indicative of the man's initiative and
self-reliance, in an attempt to prevent a complete
suspension of the work. In the hope that the Congress
then in session would make a new appropriation
for the work, he decided to assume the risk, and to
invite the project's creditors to continue their serv-
ices after the exhaustion of the existing funds. To
this end, he had the following "circular" printed,
and distributed it widespread on January 21:

CIRCULAR
FORT PULASKI
2nd Jan'y 1855.
You are hereby informed that the appropria-
tion of last session of Congress for the
construction of this Fort, will be exhausted
by the 10th instant - that if you continue
your services, or those of your slaves on
this work, or continue to furnish provisions
or materials for the work after that time,
you must do in anticipation of further ap-
propriation by Congress, and at your own
risk.

It is my opinion that an appropriation
will be made before the adjournment of Con-
gress on the 4th March next, and would ac-
cordingly recommend a continuance as here-
tofores. 54.
Mainly as a consequence of Mansfield's supreme confidence that Congress would make a new appropriation, as shown in his pronouncement, and because of his reputation for square-dealing, the work continued after the exhaustion of the funds on January 10. He apparently felt that the crisis had been passed, and the work would now continue uninterrupted, not only in the interim between the exhaustion of the funds and the making of the new appropriation, but during the remainder of the working season as well. In fact, he was so certain the new appropriation would be made and work would continue, that he took steps to provide a laborers' boarding house on Cockapul Island for the remainder of the working year. In this connection, the following advertisement began to appear in the Savannah Georgian on February 11:

Fort Pulaski, Ga.
10th Feb., 1835.

WANTED — A person to keep the Mechanic's Boarding House at this place, after the 1st. April next.

Jos. F. F. Mansfield
Lt. Corps Engineers.

Further evidence of his optimism over the prospects for continued work is shown by his efforts in mid-February to secure additional wharf building materials. On February 14, the following advertisement began to appear in the Savannah Georgian:

JADMETTO WHARF WARE
Fort Pulaski Ga. 11th Feb. 1835.
WANTED to purchase about three hundred
palmetto wharf logs, of the usual length,
and size, to be delivered in a raft at this
place, or before the 1st June next. The
proposal must state the length and size.

J. S. K. P. BASSFIELD
Lt. Corps Engineers. 56.

That he thought operations would continue through the
summer is evident from the step taken late in February
to secure Negro masons to replace the white mechanics
who usually left the work with the beginning of the
work season. He inserted an advertisement for Negro
masons in the Savannah Georgian on February 23, which
began to appear next day, as follows:

Masons WANTED
Fort Pulaski, Ga., 23rd Feb'y., 1835

WANTED to hire by the day, month, or
year, ten black MASONs to work on the fortifi-
cations at this place.

J. S. K. P. BASSFIELD
Lt. Corps Engineers. 57.

Unfortunately all of Mansfield's careful
plans and enthusiastic hopes were destined for an
early disappointment. By March 14, having received no
official communication from the Department in regard
to a new appropriation, he realized that the Congress
which had adjourned on the third had failed to provide
the needed funds. At that late date, he wrote the De-
partment, informing it of the action taken in January
to keep the project under way, and enclosing his cir-
cular issued to the project's creditors on January 2.
It seems rather irregular that he should have waited so long before advising the Department about the adoption of such an expedient. As early as February 26, 1834, he had informed the Department of his intention to make a possible use sometime of such a circular as he actually issued on January 2, 1835. However, he never received permission to employ such an expedient. Clearly he assumed a grave responsibility in using the circular, and especially so when he failed to send the Department immediate notification of such action. Apparently he had planned to wait until the new funds were provided, and then to inform the Department of the expedient employed to avoid suspension of the project. Now, with no funds provided, he was in a difficult position. He was forced to inform the Department that not only was the project in debt several thousand dollars, but the mass of the working force would have to be discharged immediately. In this same letter, however, he requested the Department's opinion on the advisability of retaining part of the force, which desired "to work at its own risk" in the hope of a new appropriation, "and whether such work creates a just claim against the next appropriation." In answer, the Secretary of War, on March 24, ruled that the work "should not continue," and soon thereafter the Department ordered him to suspend the work.
Though such an order was inevitable under the circumstances, it must have struck Mansfield with dismay. After having surmounted during the year so many hindrances to the progress of the work, to have the necessary operating funds stopped was very disheartening.

Operations on Cockspur Island were totally suspended "as soon as practicable" after the "receipt of the order of the Department," on March 26, Lieutenant Mansfield, through the advertising columns of the Savannah Georgian, offered to sell "one hundred and eighty casks Thomastown Lime at $1.60 the each," stating that this "Lime is offered for sale in consequence of this work ceasing operations for this year." During the last days of March the project was placed in such order that it might easily be cared for during the period of the suspension. All the laborers were discharged "except enough to take care of the public property [i.e., the project]." The pump at the foundation excavation was stopped,

and the excavation, and masonry therein, generally filled and covered with water from the sea, with a view to prevent stagnation and preserve the healthiness of the Island, 61.

By the end of the month the project had been completely closed for the year.

Prior to this suspension, however, a series of events of National importance occurred, which undoubtedly had some bearing on the failure of Congress.
to appropriate new funds for the Fort Pulaski project, and thus on the project's consequent closing. Late in 1834 relations between France and the United States had assumed a menacing aspect when the former country had failed to settle American spoilation claims arising from French aggression on American commerce between 1800 and 1817. President Jackson, in his annual message to Congress on December 2, urged Congress to pass reprisal laws against France, which, if they had been passed and enforced would probably have resulted in hostilities. With hostilities not entirely impossible, our Government began to look to the existing condition of its fortifications. Accordingly the Engineer Department began to take preliminary steps toward this end by ascertaining the actual number of cannon required to defend the various seacoast fortifications, whether finished or unfinished. On February 24, an order was issued to Lieutenant Mansfield requiring an immediate statement on the several classes of guns to be needed at Fort Pulaski.

Meanwhile, Congress had failed to follow the President's recommendation, having refused to adopt reprisal measures against France. However, on March 3, the House of Representatives attempted to amend the annual appropriation bill for fortifications, and pro-

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The text continues on the following page.
vide $5,000,000 to be used by the President, at his discretion, for forts, military service, or any defensive measures he might deem necessary in the immediate future. This move of course was but a thinly disguised step enabling the President to take defensive measures against France. The Senate refused to concur with the amendment and as the House refused to recede the entire fortification bill was lost. On March 19, Lieutenant Mansfield, in compliance with the Department's order of February 26, transmitted a report in which he recommended a drastic reduction in the total of the armament as formerly proposed for Fort Pulaski. In 1831 the total of the proposed armament for Fort Pulaski had been set at one hundred and seventy-two pieces, but Mansfield now proposed to eliminate, as ineffective, all of the guns but some sixty-six. This startling recommendation was never to be adopted by the Department, however.

During the late spring, summer, and early fall of 1835, Lieutenant Mansfield turned his attention to other engineering duties. Following the suspension of the Fort Pulaski project, he remained at his post, and spent most of the time, between April and July, directing the work being done to protect navigation in the Savannah river. He was assisted in this work by Lieutenant John Mackay, of the United States Topographical
Engineers, a native Savannahian, who had been assigned to Mansfield for specific duty on the Savannah River, as early as December, 1832. In compliance with an order from the Department, Mansfield sailed from Savannah on July 81 for North Carolina, to make an inspection of the forts on the Cape Fear River. From this point, he continued his journey to his home in Connecticut, and did not return to Fort Pulaski until October 12.

Soon after his return to Cockspur Island, Mansfield transmitted his annual report on the progress of the construction at Fort Pulaski during the fiscal year 1834-1835, which ended September 30, 1835. The report, which was forwarded to the Department on October 17, summarized briefly the year's hardships and achievements. Despite the numerous interruptions and hindrances to the work, and its final suspension near the end of March, 1835, a mass of masonry, amazing in extent under such circumstances, had been laid during the year. Some 5165 cubic yards of masonry had been laid to the completion generally of all the counter-arches and cross walls of the rampart, to a height of seven feet above the grillage; and to the completion generally of the counter-arches of communication, and the piers, scarp, and rear walls and counter-feets of the north, northeast, and southeast fronts, to a height of twelve feet three inches above the grillage.
By the end of the fiscal year 1834-1835, then, the masonry of the foundation was complete, and the walls were rapidly rising: a distinct accomplishment for the relatively few months' work during the three years since the beginning of the brick work. While the project had been suspended several months prior to the end of the fiscal year, it had been left in such a condition that

At any future day in one week's time the work can be cleared and placed in a state to recommence the masonry.

Progress on the work during the year had advanced under conditions which were far from normal; however, Mansfield's philosophical acceptance of the year's trials was registered in one entire section of the report, which he titled "Disasters." He calmly stated, as if such things were inevitable and ordinary occurrences, that

Notwithstanding the work is now in good condition to be resumed at any moment, it has not been prosecuted this year without many trying difficulties. The isle had been visited by the cholera, an overflowing of the sea, by heavy gales which damaged materially most of the boats, and by extreme cold weather for this climate which damaged the newly laid masonry and retarded the operations.

Building materials had been purchased during the year on "reasonable terms," and again no contracts had been "entered into." The mass of brick had been ob-
tained from Savannah, with some from Alexandria, D. C. (now Virginia), and Baltimore, Maryland. Co-
ment and lime were purchased "through the New York Market," while stone had come from the Connecticut
river, and sand from the Savannah river.

The Fort Pulaski project had suffered many
disheartening interruptions during the year 1834-1835, but during 1835-1836 it experienced a greater blow
when its development was completely arrested. The
continued failure of Congress to appropriate funds
for Fort Pulaski resulted in the complete suspension
of its construction, from late in March, 1835 to the
end of October, 1836. At the end of the fiscal year
1834-1835, the project had been in debt over nineteen
thousand dollars, and Lieutenant Mansfield had urged
the Engineer Department to request an appropriation
from Congress sufficient to pay the debt, prepare the
project for a resumption of operations, and continue
the work during 1835-1836. The Department subse-
quently took several steps which were hopeful omens.
On October 28, 1835, the Department requested from
Mansfield an estimate of the cost necessary "to put
Fort Pulaski in a state to resume operations." He
reported on November 9 that $5,500 would be necessary
for this purpose. Soon afterward he received au-
thority from the Department to purchase brick from a
Mr. Richard Stanton of Alexandria, D. C. (now Virginia). The Department, in giving such authority, probably did so in anticipation of an early resumption of work on Cockspur Island. Mansfield apparently construed the Department's steps in such light. In acknowledging this authorization on November 19, he urged upon the Department the necessity of an immediate installation of "a railway from the end of the wharf to the canal," the purchase of ten railway cars, and the thorough repair of four brick flat, in order to facilitate the future handling of brick. At the same time he asked the Department for authority to hire sufficient carpenters to carry out the above work, who were "willing to work at their own risk in anticipation of an appropriation." He was eager to recommence the work, and already impatient at the continued delay in reopening the project. This, however, was only the beginning of a long, seemingly interminable wait. His plea availed nothing; and over nine months were to elapse before any Congressional action was taken to recommence the construction.

Part of the intervening time, at least, was not to be without its temporary excitement. Mansfield's pent up energy and enthusiasm apparently found a partial outlet in our stirring foreign relations during the early months of 1856. Relations with France
had continued unsatisfactory throughout the year 1835. Congress had failed to adopt President Jackson's recommendation that reprisal laws should be directed at France. Graver counsel had temporarily quieted incendiaries on both sides. As a result France had appropriated sufficient funds to meet the American claims; but had made actual payment conditional on a proper explanation of the meaning of President Jackson's message of December, 1834. Jackson refused to accede to such demands, and explained his stand in his annual message to Congress, early in December, 1835. The affair again assumed menacing proportions. Army officials especially became alarmed. Near the end of the month, Major-General Alexander Macomb, commanding the United States Army, advised General Charles Gratiot, Chief of Engineers, to have the various coastal fortifications "examined . . . with a view . . . to putting [them] in a more powerful state of defence." Early in January, 1836, then, Lieutenant Mansfield was informed that six cannon could be furnished prior to March 31 for the defence of the Savannah River, and that he should make immediate plans to mount them either at Fort Pulaski or Fort Jackson. The prospect of the possibilities of an actual struggle reased Mansfield from his lethargy. Not only were his military engineering instincts whetted but his fighting blood, long dormant under
tedious years of construction detail, was stirred, barely thirty-two, he was excited over this first opportunity to prepare a defence project alone, especially one which might see actual use.

The Engineer Department soon received his defence plans. Hurriedly and eagerly, Mansfield wrote on January 30, that he had decided to place six guns on Cockspur. In case that war actually occurred, he proposed that a temporary fort and block house be built on the parade of the work then being constructed on Cockspur. He also recommended the "fitting up" of the two magazines at Fort Pulaski, and the placing of platforms on the piers at Fort Jackson so that the latter could be used as an ammunition depot. But, he concluded, with dismay, that no notice had yet been received of the shipment of the six promised guns.

This whole episode, like many others during the building of Fort Pulaski, was seen to end in disillusion and disappointment. The proposed battery of six guns was never received, much less erected on Cockspur. Though twice in February Mansfield pled with the Department for the guns, they were not forwarded. Confronted with the guerilla warfare of the discontented Seminole in Florida, the United States was really too busy to press a foreign difficulty. With the adoption of a more amenable position by France all cause for
alarm passed. So ended the first actual move to mount guns at Fort Pulaski. By February 21, the Engineer Department had informed Lieutenant Mansfield that the "causes for erecting a battery at Cockspur Island," having been removed, the work would not be required. In reply, on March 9, he announced that the alarm had cause no real interruption of the quiet on Cockspur, since no expense had been incurred and neither had any guns been received. If this episode had failed to interrupt the quiet of the island, it certainly had disturbed the mental lethargy into which Mansfield must have sunk during the long months of inactivity. Furthermore, the young officer must have been reluctant for such interesting excitement to subside so abruptly. Its sudden end meant only one thing: the Fort Pulaski project and its commanding officer were to relapse into another monotonous period of inactivity. Such was the case. During March, April, May, and June, 1836, the project lay idle, and it was not until July that Congress made a new appropriation, with which the work on Cockspur Island could be reopened.
Notes
Chapter II

1. December 3, 1831, Advertisement repeated on Dec. 5 - 10, and Dec. 12 - 13, 1831.


3. R.S., File No. 1, 098, January 6, 1832.

4. R.S., File No. M.943, April 10, 1832.


6. R.S., File No. 4, 343, April 10, 1832.


8. R.S., File Nos. M.993, July 22, 1832; M.1036, October 10, 1832.


11. R.S., File Nos. M.1080, January 28, 1833; M.1085, February 6, 1833; M.1102, March 14, 1833.

12. Apparently the "weighing down" of the grilling with loose brick, a process executed for the northern
half of the grillage in 1831-32, was merely for the purpose indicated, and to aid in settling the grillage. This use of the brick should be differentiated from their use in the permanent masonry of the foundation, which was commenced later in the fiscal year 1832-33.


17. R.S., File No. M.1135, May 3, 1833. The Savannah Georgian was then owned jointly by Dr. Richard J. Arnold and William H. Bulloch, and edited by the latter.

18. May 6, 1833. Count Casimir Pulaski, Polish volunteer in the Continental Army, was mortally wounded within the present confines of Savannah, during a Patriot assault, when this city was held by the British, October 9, 1779.


20. May 27, 1833.

21. R.S., File Nos. M.1140, June 1, 1833; M.1174, July 8, 1833.

22. June 1, 1833

23. June 12, 1833.
21.
R.S., File Nos. 1169, 1170, July 1, 1833; 1203, July 3, 1833; 1183, August 1, 1833; N.1218, Oct. 15, 1833.

22.
R.S., File Nos. 1173, July 3, 1833; 1216, October 15, 1833. The "scarp" wall is the inner or inside wall or slope of the fort and demilune moat or ditch; while the "counter-scarp" wall is the outer or outside wall or slope of the moat, being opposite or counter to the scarp wall. Since the scarp wall of the fort was the brick foundation wall of the fort itself, Mansfield was only recommending the construction of a masonry counterscarp wall for the fort moat.

23.
R.S., File No. 1190, August 9, 1833.

24.
R.S., File No. 1218, October 15, 1833. This is a typical title for Mansfield's annual reports.

25.
R.S., File No. 1230, November 14, 1833.

26.
R.S., File Nos. 1220, 1221, October 15, 1833; N.1224, November 1, 1833; N.1233, November 14, 1833; N.1238, December 1, 1833.

27.
November 18, 1833.

28.
December 9, 1833.

29.
R.S., File Nos. 1256, January 14, 1834; N.1300, June 23, 1834.

30.
March 21, 1834.

31.
March 22, 1834.

32.
April 19, 1834.

33.
R.S., File No. 1256, May 19, 1834; cf., File No. N.1300, July 1, 1834. The word "rampart," whenever used in this study, refers to the main walls of the fort structure proper.
37. 23 Congress, First Session, December 2, 1833 - June 30, 1834.

38. R.S., File No. N.1591, July 10, 1834.


40. R.S., File No. N.1593, July 11, 1834.

41. R.S., File No. N.1593, July 11, 1834.

42. R.S., File Nos. N.1466, August 1, 1834; N.1429, October 20, 1834.

43. R.S., File Nos. N.1409, August 1, 1834; N.1431, October 27, 1834.

44. R.S., File No. N.1432, October 29, 1834; cf., File No. N.1607, October 17, 1835.


46. R.S., File Nos. N.1429, Oct. 29, 1834; N.1435, November 5, 1834.

47. R.S., File No. N.1435, November 5, 1834.


49. R.S., File No. N.1447, November 20, 1834.

50. R.S., File No. N.1459, December 9, 1834.

51. The Georgian (Savannah), December 30, and December 31, 1834.
52. R.S., File No. M.1475, January 1, 1835; M.1526, March 14, 1835.


54. R.S., File No. 1607, October 17, 1835, Enclosure "A".

55. February 11, 1835.

56. February 14, 1835.

57. February 23, 1835.

58. R.S., File No. M.1295, February 20, 1834.

59. R.S., File No. M.1526, March 14, 1835. See endorsements "1" and "2" on back of this letter, also enclosure; cf., File No. 1527, October 17, 1835.

60. March 26, 1835.

61. R.S., File No. M.1407, October 17, 1835.


67.
R.S., File No. M.1482, June 20, 1835.

68.
R.S., File No. M.1060, December 10, 1832; cf., File No. M.1071, January 4, 1833. Mansfield advertised in the Savannah Georgian between April and July, for various building materials to be used on this project. See Savannah Georgian, April 1, June 9, and June 16, 1833.

69.

70.

71.
R.S., File No. M.1607, October 17, 1835; cf., Army Dept.

72.
R.S., File Nos. M.1526, March 14, 1835; M.1607, October 17, 1835; M.1767, October 25, 1836.

73.

74.
R.S., File No. M.1622, November 9, 1835.

75.
R.S., File No. M.1625, Nov. 19, 1835. Mansfield had previously recommended the building of this railway, in November, 1834, and the Department had approved it on Nov. 25, 1834 (See File No. M.1447, Nov. 25, 1834), but apparently the project had not been carried out.

76.

77.

78.

79.
R.S., File No. M.1648, January 30, 1836. Fort Jackson is located three miles east of Savannah, on the south bank of the Savannah River.
Chapter III
A new fort rises on Cockspur

Fifteen months after work on Fort Pulaski had been totally suspended late in March, 1835, Congress took its first step toward reopening the Cockspur Island project. Two days before the adjournment of Congress on July 4, 1836, the largest single appropriation ever made for construction at Fort Pulaski was approved. Shortly afterward, the Engineer Department notified Lieutenant Mansfield that a new appropriation had been made, and ordered an early “recommencement of operations.” Overjoyed at this unexpected turn of events, Mansfield immediately forwarded an estimate of the funds necessary in July and August “to pay arrearages [on the project] to 30 May 1836,” and “to repair machinery and to make preparations to recommence operations on the masonry.”

While he was eager to begin immediate operations, conditions were such on the project that several months were to elapse before actual construction was again underway.

The task confronting Mansfield was too extensive and arduous for one man alone to direct properly. Through the long months of inactivity on Cockspur Island, the project had fallen into disrepair and decay. At the time of the suspension of operations in the spring of 1835, the foundation excavation had been pur-
poorly flooded with water to prevent stagnation and to protect the masonry already laid. This excavation was now not only flooded but filled with various types of mud and grass "accumulations." The canals to and around the fort were "filled up in a measure with silt." The "flats" or lighters, used for transporting materials in the canals, had been hauled from the water "to preserve them," but nevertheless most all of them had rotted, at least partially. It was thus necessary to repair them before they could again be used. The project machinery was rusty from disuse. Scaffolding and other temporary working structures were decayed and unfit for use. In addition to these perplexing conditions, the project's finances were in a complicated state.

Clearly the attention of more than one officer was necessary to get the project relaunched. Accordingly, on August 4, Lieutenant Mansfield requested the Engineer Department to furnish him an assistant immediately, stating that there were "many important duties to be performed" on the project "before September 1, which cannot be accomplished without efficient aid." The department eventually complied with his request, but not until November, when the pressure caused by the existing crisis had then to a large degree abated.

Meanwhile, he had begun to lay plans for the resumption of actual construction at an early date.
as possible. On July 19, he had begun to advertise in
the *Savannah Georgian* for "50 able white or black
laborers, to work on the U.S. Fortifications." About a week later, through the columns of the same paper, he informed the project's creditors that

Funds to be paid for the due bills against
this Fortification are daily expected . . .
All those who have due bills . . . are here-
by requested to forward to me . . . a state-
ment of the same . . . in order that no time
be unnecessarily lost in making the payments.7

Many of the long standing creditors of the project
were slave owners, and they were rather reluctant to
answer Mansfield's advertisement for laborers, and
perhaps encounter a repetition of their experience
during the fifteen months just passed. However, he was
determined to secure an adequate working force by late-
August, and at the beginning of that month made the
slave owners a very attractive offer for the services
of their slaves. On August 2, he inserted the following
carefully phrased advertisement in the *Savannah Georgian*,
and it began to appear on the 4th, as follows:

*Fort Pulaski*

2nd August, 1856.

The wages to be paid for prime slaves on
the Fort at Cockspur Island from the 15th
instant will be fixed at $14.00 dollars per month
and found - the owner to lose runaway time
only, and the Government to furnish physicians
and medicines. Any slave can be withdrawn from
the works in one day's notice.8

As an addition to his complement of adult laborers, he
began to advertise in the *Savannah Georgian* of August
20, for "ten Negro boys about fifteen years old to work on the Fortifications at this place." He then turned his attention to the task of securing an adequate supply of certain building materials to be used when actual construction work was resumed. On August 30, the Savannah Georgian began to carry the announcement that "Sealed and endorsed proposals will be received until the 30th September next to deliver . . . at the U. States wharf at this place on or before the first day of April next" an extensive bill of joists and plank "of the first quality Yellow Pine and free from sap." With the work on the repair of the project well underway by late September, he realized that not far in the immediate future he would be able to resume masonry operations. Accordingly he took steps to replenish his supply of brick. On September 24, he began to advertise in the Savannah Georgian for "five million of good hard burnt bricks, for the fortifications erecting at this place." Handicapped by a situation replete with perplexing problems, and further hindered by the lack of an assistant, Lieutenant Mansfield had attacked his task with characteristic dispatch. Favorable results were not far in the offering.

Repair of the neglected project, however, had been very slow in the beginning. Relatively little had actually been accomplished on the project itself during
July and August. In fact, it was mid-September before Mansfield prepared and forwarded to the department his definite "Project for recommencing and continuing the construction of Fort Pulaski." This project called for the draining and cleaning of the canals and foundation excavation, the cleaning of the masonry already laid, and the repair of the flats and machinery in order to "place the work in a state to progress rapidly after October 1." Despite the slow developments on the reopened project, he apparently planned for extensive operations after October 1. On September 19, he requested the department to return for revision his project of July 5, 1855, which had called for the reinforcement of the scarp and counterramparts of the fort and demi-lune masts. By October 1, he had planned to resume masonry construction during the month and also to begin the construction of an extensive breakwater and seawall on the northeast shore of Cockspur Island, designed to protect the shoreline and the temporary quarters in that section.

Lieutenant Mansfield's annual report on the progress of the work at Cockspur Island, forwarded to the department on October 15, briefly reviewed the project's year of idleness and stagnation. Construction had not progressed "at all," but had "retrograded from a lack of funds." As a result of such extended inactive-
ity the whole project had fallen into a state of disorder and decay. After Congress had provided new funds in July, steps had been taken to repair the damaged project and reopen the work. By September 30, the Lieutenant had been able to report that

Much has been done however towards putting the work in a condition to resume the operations of masonry, and it is confidently expected that in a few days the masonry will be recommenced.

Again he had saved the project on Cockspur Island. By self-sacrificial labor, and perseverance in the face of seemingly overwhelming difficulties, he had surmounted his many and diverse problems, and had brought the project safely through the crisis.

Mansfield also outlined in his report several new developments in the project, which called for an additional outlay of funds within the immediate future. The damage to the project, as a result of its long suspension, had "added materially to the cost of its construction." A much larger expenditure of funds, however, was involved in his recommendation "to revet with masonry the scarp and counterm私下 walls of the fort and demi-lune mounds, and that part of the slopes of the canal to the mounds, between the "remote and retiring tide leaks." Attached to the report was an estimate on the cost of such extensive revetment, calling for an expenditure of $150,000; also a "memoir" explanatory of
the necessity for such work. The "memoir" explained that while the Board of Engineers, in order to avoid the expense of revetment, had in 1831 designed simple earth slopes for the works and the canal, experience had shown that in the end these earth slopes would prove more expensive. Mansfield, however, had found from experience that earth slopes on Cockspar Island, exposed to tidal action, would become soft "and thereby fill up the ditches and impair the strength of the fort as well as the health of the garrison." He further warned the Department that

It is believed if the revetment of the scarp of the Demi Lune be not constructed that in less than one year after the fort be finished one half the rampart of the Demi Lune will have slid into the ditch.

Such sweeping recommendations were based on fact. They clearly reflected Mansfield's thorough knowledge of conditions on Cockspar Island. The functioning of a discerning engineering mind was evident in this report on the necessity for such revetment.

Confronted by such an admonition, the Department soon adopted his recommendations, and thus authorized the first important constructive addition to the plans of the project, as revised in 1831. General Charles Gravitz, Chief of Engineers, on November 3, approved "the additional estimate submitted for the construction of masonry revetments at Fort Pul-
aski . . . amounting to $150,000 . . . for the reasons stated by Lt. Mansfield,” and “respectfully recommended [it] for adoption, being necessary to the stability of the Fort and health of the Garrison.” Two days later Secretary of War Benjamin F. Butler approved this addition to the Fort Pulaski project “as a necessary and very important addition to the present works, and to be presented, with the proper estimate to Congress.” He was careful to caution the Department however, that “until ratified by Congress no expenditure” could “be commenced” on the revetment. This action was a victory for Mansfield. The unconditional adoption of his long cherished plan for revetment attested to the high regard of the Department for his engineering judgment.

About mid-October, 1836, construction finally was resumed at Fort Pulaski after a lapse of approximately eighteen months. All preparations to resume operations had been completed by October 12. Soon afterwards masonry operations were underway again, and work was begun on a breakwater for the northeast shore of the islands. Mansfield evidently planned for an early increase in his laboring force. He began to advertise in the Savannah Georgian, on October 13, for

a man competent to keep the Mechanics Boarding House on this Island. He will be allowed to charge, and required to board Mechanics according to the custom in Savannah, and will receive his fire wood and house rent free of expense. Application must be made this week. 19.
Two days later he was advertising in the *Georgian* for additional brick masons, who could "find employment and liberal wages on the fortifications erecting at this place." On October 27, he forwarded to the Department a sketch of the plans for the proposed revetment of the scarp and Counterscarp walls. The project, so laboriously and painfully reopened, was to experience a rapid and uninterrupted advance through the fiscal year 1836-1837. Between the latter part of October, 1836, and June 30, 1837, the work continued mainly on the masonry of the fort, and on the building of the breakwater on the north and northeast side of the island.

During the latter part of 1836 the second Engineer Officer to act as an assistant on the Fort Pulaski project was assigned by the Engineer Department to Lieutenant Mansfield. Lieutenant Joseph Reid Anderson, of Virginia, then a recent graduate of West Point, received the following orders from General Gratz, Chief of Engineers, on November 11, 1836:

*Engineer Department  
Wash'n Nov. 11, 1836.*

Lt. J. R. Anderson  
Corps of Engr's  
Washington City  
Sir,

You will, as early as practicable, proceed to Savannah, Georgia, and report to Lt. J. R. Mansfield of the Corps of Engineers, for orders. 25.

Lieutenant Anderson reached Fort Pulaski on December 10,
1836. The young officer soon became dissatisfied with the dry routine of the island and life in the Engineer Corps. About three months after his arrival at the Fort, he decided to resign from the Corps. On March 13, 1837, he left Fort Pulaski for Washington to resign the service, having been granted leave for that purpose by his superior officer, Lieutenant Mansfield. Despite his restless frame of mind and his brief stay on the island, Lieutenant Anderson proved to be of considerable aid to his superior. Anderson's short tour of duty on Cockspur gave Lieutenant Mansfield a sorely needed period of rest and relaxation. For the first time in many months he was relieved partially from the pressure of his arduous duties.

Mid-January, 1837, found Mansfield urging the Department to take some definite action toward the commencement of his pet scheme, the revetment of the scarp and counterscarp walls. Having reopened the project with such difficulty, he was loath to miss any opportunity to enlarge the scope of the work. The adoption of his revetment plan by the War Department in November, 1836, had been enormously pleasing to Mansfield. His enthusiasm had then been only slightly dampened by the War Department's ruling that no actual construction could be undertaken on the revetment without the approval of Congress. Despite the finality of the ruling, he began to look eagerly about for a chance
to begin this work. By January 14, he could restrain himself no longer, and appealed to the Engineer Department for a modification of the ruling. He then reported that if he could be authorized "to excavate for and prepare the foundation" of the revetment for "the scarp and counter scarp of the semi-lune," which, he announced, would "be attended by no great expense," there would be no necessity "of discharging a part of the force now at work." His plea was of no avail, however, since General Gratiot, Chief of Engineers, soon announced that the "scarp work was not to begin until after a new appropriation was made."

Meanwhile, the Congress which adjourned on March 5, 1837, had failed to pass the general appropriation bill, providing funds during 1837 for all fortifications. Representative Bell of Tennessee had attached to the fortification bill, in the form of a "rider", an amendment providing that all surplus money in the United States Treasury, above governmental needs on January 1, 1836, should be distributed or deposited with the states. The House adopted Bell's amendment, thinking that by such a device, attached to the important fortification bill, the much controverted measure to distribute the surplus Federal revenue would be re-enacted into law for the year 1836. The Senate immediately detected the design of Bell's amendment and rejected it. The two Houses then became deadlocked over the gen-
measure, each refusing to recede from its position, and thus the 1837 fortification bill was lost with the adjournment of Congress on March 3.

This time however, Mansfield was prepared for the remainder of the year. In addition to a large sum remaining from the appropriation made in 1836, he was to secure during the year an additional $90,000 in a transfer of funds from Fort Monroe. The Department, on March 6, notified him of the failure of Congress to provide an appropriation with sufficient operating funds in view, however, he did not think it necessary to notify the Department of his plan for continuing the work during the year, until April 3. On that date he outlined for the Department's approval a complete plan by which he proposed to continue the work "for 12 months" from May 1, 1837, "or until the unexpended balance of the present appropriation is spent." By this plan, work after May 1 was to be mainly on the masonry of the walls, and the working force was to be reduced to

1 inspector, 1 clerk, 1 overseer, 2 white masons, 4 slave masons, 2 apprentice masons (slaves), and a sufficient number of slave laborers to receive brick and sand and attend the masons.

Mansfield urged the approval of his plan for several reasons. Besides having sufficient funds to continue such reduced operations, he shrewdly observed that from the mere fact that the work and machinery would be maintained by the above plan, and the work will pre-
gress slowly throughout the year, appears to be a better plan than if it [the project] was entirely suspended." Also, he concluded, that if his plan was followed, "at the time of the next appropriation the work can be resumed with more facility."

A few days later the Department apparently approved his scheme to continue the work, and by mid-April the young officer was making plans accordingly. On April 8, he notified the Department that he was then "arranging to purchase materials to carry on the work at Fort Pulaski," during the early fall of 1837, and, according to the plan agreed on, would "reduce the regular [working] force in a few days but add slave laborers for summer work." In the same letter he advised the Department that he had a capable superintendent of labor, whom he could leave in charge of the summer work on the island; and requested "authority to proceed North in May to purchase stone [for the project]."

Shortly afterward apparently, the Department approved his projected trip, and late in May he embarked on his first buying expedition in two years. En route North he made a brief inspection of the fortifications in Charleston Harbor, which had been under his general supervision since 1836.

Hensfield's Northern trip in the summer of 1837 was spent traveling in the states of New York,
Connecticut, and Rhode Island, during June, July, August and part of September. He reached New York City on June 16, and on the same day transmitted to the Department his estimate and plan for continuing construction at Fort Pulaski during July, August and September. During this quarter the only construction planned was a continuance of the masonry of the fort walls; while materials to be purchased included brick and lumber to be used later in flooring the gun casemates and the quarters. While he was in the North, the Department decided to give him a new assistant Engineer, and on July 31 informed him that it had ordered "Brevet 2nd Lieut. Henry W. Benham, of the Corps of Engineers, to report to you at Savannah for duty."

Lieutenant Benham, who was a native of Connecticut, Mansfield's home state, joined his superior in the North, Benham was the third Engineer officer to act as Assistant Engineer on the Fort Pulaski project. After a congenial journey south together, the two officers reached their post on September 29, 1857.

The fiscal year 1856-1857, ending on September 30, 1857, was the first successful working season on the Fort Pulaski project in two years. With the vexations trials and interruptions of the two previous years safely behind, the project had assumed a renewed and vigorously expanding life. The annual construction report, forwarded by Lieutenant Mansfield to
the Engineer Department on October 14, 1837, showed that appreciable progress had been made during the year. The advancement made on four main projects at the island, between October 12, 1836, and September 30, 1837, was outlined in this report. By far the most important project of the year had been the continuance of the masonry of the fort walls. Some 1,000 cubic yards of masonry had been laid during the working season.

in completing all the embrasures and piers generally of the north and northeast fronts, in completing seven embrasures, and their corresponding piers of casemates on the southeast fronts; completion, generally, of piers, and such progress in all the embrasures of the south front; and to the completion, generally, of the piers, walls, etc., of the gorge, to the level of the bottom of casemate floors.

During the period a stone breakwater had been partially constructed to protect the north and northeast shores of the island. The short narrow gage railway for hauling brick from the South Channel wharf to the flats in the canal apparently was built during 1836-1837. Its cars were pulled by mules. Considerable progress had been made in the embanking of earth to form the parade ground of the fort. Finally, a permanent lime system had been started on the island during the year. While money, materials, and men had been adequate for such uninterrupted development, this again was due to the vigilance, foresight and energetic supervision of Lieutenant Mansfield. And it not been for his restrained allotment
of the appropriation made in July, 1836, and his wise planning of his annual projects for 1836-1837, the work undoubtedly would have been suspended again in the spring of 1837, when Congress again failed to provide additional funds for Fort Pulaski.

So careful had Mansfield been with the stewardship of his operating funds in 1836-1837, that on September 30, 1837, over $90,000 was available to carry on the work during the new fiscal year 1837-1838. This sum proved sufficient to continue the brick work of the fort walls for the next six months. However, when he transmitted to the Department, on March 1, 1838, the estimate of funds required for the current month, he carefully called attention to the fact that "this estimate covers the whole amount in Treasury United States] undrawn on account." Therefore, by April 1, all available funds for the Fort Pulaski project were exhausted, and during the three and a half months following, work was again suspended on the island. Early in May Mansfield apparently became desperate over the situation. On July 6, three days before the Congress then in session adjourned, he notified the Department that in case no appropriation was made, which appeared doubtful, he planned, unless otherwise ordered, to sell public property enough to pay off the small debts of the work and for funds enough to pay for the services of individuals
to take care of the public property on the Island until the next session of Congress, so that it [the project] will receive as little damage as possible. 47.

Fortunately, he was not forced to take such extreme measures. Next day, July 7, Congress approved a new appropriation of $100,000 for Fort Pulaski, and an indefinite suspension was prevented. Good fortune came the second time for Lieutenant Mansfield on July 7, 1836. Also, on that day, he was promoted to a captaincy in the Corps of Engineers. This was a prized rank in the quiet military era of the Thirties, when promotion, especially in his branch of the service, came slowly and rarely.

Steps were immediately taken to reopen the project. On July 16, the Department notified Mansfield that the appropriation had been made, and ordered him to prepare and transmit immediately for approval a "project and estimate" for continuing the construction of Fort Pulaski during the third and fourth quarters of 1836, and the first and second quarters of 1839. In compliance with this order, Captain Mansfield, on July 24, submitted to the Department a comprehensive "Project for continuing the construction of Fort Pulaski, to the exhaustion of the appropriation of 1836 . . . ." This project first reviewed briefly the existing condition of the work. At that time the masonry of the casemate arches on the north and northeast fronts had been "turned" and all of the embrasures
Looking northwestern from the parade ground toward the parapet along the inner face of the gorge walls. The quarters to the right of the sally port entrance were for the soldiers, and those to the left were for the officers. The solid brick wall at the extreme right is the "screen" wall protecting the powder magazine which was endangered during the Federal siege of the fort on April 29 and 30, 1862, ultimately causing the Confederate garrison to surrender.
in the fort completed. The piers and scarp wall of
the south and southeast fronts had been completed to
such a height that the casemate arches could be com-
mented. To expend the new appropriation, he proposed
To continue the masonry of the main work to
the completion of all arches of the casae-
mates of all the fronts and the gorges to
roof the same. Raise the scarp wall above
the level of the "Terre plein" and to lead
the arches with earth and continue the ma-
sory of the parapet wall.

This ambitious program was underway before the end of
July, and during August and September, the last months
of the fiscal year 1837-1838, much progress was made
on the masonry of the fort walls.

The summer of 1838 proved far more pleasant
for Mansfield than he had contemplated early in the
season. Happy surprises came one after the other. En-
asperation over another suspension, and fear that it
would continue through the indifference of Congress,
had vanished with the provision of new funds early in
July. An unsolicited, but nevertheless desired and
welcomed promotion to a captaincy had also come to
the deserving officer in July. Then, with the work at
Fort Pulaski unexpectedly and safely relaunched, the
young officer turned his attention to a project even
more dear to his heart than the absorbing task on
Savannah Island. Treasury him at Middletown, his Con-
nnecticut home, was his fiancée, Louise Sarahrather, to
when he was to be married in September.
the work apparently in the hands of his assistant, 
lieutenant Henry W. Benham, Captain Mansfield em- 
arked for the North on August 21. With his 
routine duties in the North attended to, he and 
Louisa were quietly married on September 25, 1836. 
Some weeks later, the Savannah Georgian carried this 
announcement about the wedding of Fort Pulaski's 
Chief Engineer:

Married

At Middletown, Conn. on Thursday, 25th 
Sept., by the Rev. John Crane, Joseph 
E. Mansfield, Captain U.S. Corps of 
Engineers, to Louisa S., daughter of 
Samuel Walker, Esq. of that place. 56.

Mansfield was thirty-five, a mature and conscien-
tious officer, and one of the most capable and 
promising engineers in the Service. His courtship 
and marriage with Miss Walker was the first of the 
very few romantic episodes in his orderly life de-
voted to duty. By November 12, he had returned to 
his post, bringing with him his young bride.

A week later he was again absorbed in the 
routine of duties on Cockspur. On the 19th he for- 
warded to the Department his annual progress report. 
During the fiscal year 1837-1838, which ended Sep-
tember 30, 1838, work on the island had been "con-
finned to the masonry of the rampart of the en-suite 
Fort" and to the building of a necessary "break-
water and catch-sand for the preservation of the
The north and northeast sides of the island. Another great mass of brickwork, some 5550 cubic yards, had been laid. The scarp wall on the north and northeast fronts was completed to a height "of one foot above the extrados of the arches over the casemates." The scarp wall of the south and southeast fronts was completed to a height "of 2 feet below the intrados of the arches over the casemates." On the north, northeast, and southeast fronts "the turning of the groined arches over the casemates and communication ways," was completed. On the gorge face, the piers, abutments, and scarp wall were raised about three feet above the level of the casemate floors. By the end of this year, then, the walls of the fort varied in the different faces from one-third to over one-half of being completed. During the working season a "permanent head of cut granite was constructed to the wharf on the North Channel of the Savannah river," and the remainder of the "rough stone on hand placed on the breakwater and catchhead." notwithstanding the short suspension of operations during the spring and early summer of 1856, the fiscal year 1857-1858 was one of the best years experienced during the construc-tion of the fort, not only for the work, but for the supervising officer as well.

Construction of the masonry walls of Fort Pulaski proceeded uninterrupted during the fall and
winter of 1838. Early in the fiscal year 1837-1838, a much better means of communication with Savannah had been established when a steamboat, apparently chartered, was placed in service between the island and Savannah. To secure fuel for this boat, we find Captain Mansfield beginning to advertise in the Savannah Georgian, on November 17, that

Proposals will be received till the 30th inst. to furnish delivered on the wharf at this Island, from the 19th Dec. to the 1st May next, 200 cords, first quality pine wood, such as is in general use for steamboats on the Savannah River.

Soon after the opening of the year 1839, just as the work of the new fiscal year 1838-1839 was fairly underway, Captain Mansfield was deprived of the aid of his Assistant Engineer. On December 18, Lieutenant Benham was assigned to Fort Marion, in St. Augustine, Florida. Soon after the end of the month apparently, he left Cockspur Island permanently, reaching St. Augustine on January 12, 1839.

The masonry work on the fort's walls continued as usual during the first quarter of 1839. Early in February, however, Mansfield realized that the appropriation made for Fort Pulaski in 1838 would last but a few months longer. Unless the Congress then in session provided new funds before its adjournment, another suspension of the work was certain, about
the end of April. He was also greatly concerned over
the report made on January 24 by the House Ways and
Means Committee, which had recommended a greatly re-
duced general appropriation for fortifications in 1839,
on the ground that a large, surplus fortification fund
already existed in the Treasury and in the hands of the
various fortification agents. Excitedly, he wrote the
Department on February 8, that no surplus would ex-
ist in the amount of Fort Pulaski, "as on April 1
only $96,900 will remain undrawn in the Treasury and
none in the hands of the agent on that day." He warned
the Department that

There must be an appropriation or it will
be necessary to suspend this work again and
for the third time since I have had charge
of it for want of the usual Annual Appropria-
tion by Congress.

To prevent another ruinous and dispiriting suspension,
he pled with the Department for a "small appropriation"
which "would enable the work to progress properly till
the next session of Congress." This, he stated,
could be applied to [the work of] day laborers
in excavating and driving piles for the founda-
tion of the counterspy walls, which [work]
will necessarily be a slow operation and will
not require a large expenditure."

Meanwhile, the Senate had refused to concur with the
House measures providing for such extreme refurnish-
ment in the general appropriations, and had amended the
fortification bill to provide at least an adequate ap-
appropriation. Subsequently, the House recorded from its original stand, and on March 3, the 1839 fortification bill was safely passed. Apparently the Department had taken literally Mansfield's plea for a small appropriation, and had recommended such to Congress, since the 1839 appropriation for Fort Pulaski was the comparatively small sum of $15,000. On March 7, the Department informed Mansfield that $15,000 had been appropriated for Fort Pulaski, and ordered him "to prepare a project to expend the same." A week later he advised the Department that immediate steps would be taken to comply with this order.

Early in the spring of 1839, the construction of the fort's walls had advanced sufficiently so that, if it became necessary, guns could be mounted temporarily in the battery casemates. On March 6, Captain Mansfield urged his superior, Colonel Joseph C. Totten, Chief of Engineers, to ship "without delay", thirty-six casemate seacoast guns and carriages complete, with four carrouselads and carriages, "to be immediately placed in battery for the defence of this position." Captain Mansfield also observed that in a short time the work might be put in a condition to make a "handsome defence," if necessary. At that time, he reported, the scarp wall of the work was raised throughout to the top of the casemate arches. The arches of all the casemates and magazines were then
laid with the exception of one in the gorge face.
The "Postern and Gateway" was then ready for the
installation of the drawbridge and gates, materials
with which to floor all of the casemates were then
on hand. Finally, he suggested in the same letter, that
a number of the guns at Fort Moultrie, Charleston (S.C.)
Harbor, be transferred in charge of an ordnance officer,
should need for their use actually arise. In recom-
manding such warlike preparations, Captain Mansfield
evidently was aroused by the ominous attractions of
hostilities then threatening.

His urgent solicitude was engendered ap-
parently by the disturbed state of relations between
the United States and England. As early as 1834, the
British Government had reopened negotiations with
the United States to settle our northeast boundary be-
tween Maine and the English New Brunswick. Rather
futile negotiations during 1835 and 1836 had been
harshly interrupted in December, 1837, by the Caroline
episode. Despite the agitated state of American
feeling, the British initiated a new movement to fix
the boundary, early in 1838. Late in that year, and
in January, 1839, the renewed negotiations were further
aggravated when border warfare broke out between
citizens of New Brunswick and the Maine militia. On
February 26, President Van Buren sent a message to
Congress requesting extraordinary powers to deal with 76.

the situation. Though a temporary truce was drawn up between the two governments next day, Congress, on March 2 and 3, authorized the President to call out fifteen thousand volunteers and voted several millions of dollars to protect American interests in case of invasion. With the national feelings of England and the United States so mutually antagonistic, the actual outbreak of hostilities was not impossible, and Captain Mansfield apparently desired to be prepared for such an exigency.

In the meantime, he had completed his plan for continuing operations on Cockspur during the remainder of the working season. On April 9, he submitted to the Department his estimate of the funds necessary to continue the work during the second quarter of 1839. The expenditures proposed called mainly for a continuance of the masonry of the walls, and for carpentry work on the North Channel wharf. About a week later he had completed a "Project for continuing the construction of Fort Pulaski to the exhaustion of the appropriation of 1839." This project, which he forwarded to the Department on April 15, reviewed briefly the condition of the work on March 1, before outlining a plan for continuing the construction on the island. On March 1 all of the arches of the bat-
tery casemates had been "turned complete." The scarp wall of the four battery fronts had been raised to the "bed of cordon." The scarp of the gorge wall had been raised nine inches above the intrados of the arch, "and the granodiles filled in preparatory to the commencement of the roofs of the casemate arches," in this front or face, Mansfield observed that such a condition "leaves no doubt as to the plan of operations to be followed to the exhaustion of the means at command."

He proposed the following six point plan for continuing the project during the remainder of 1839, and the first quarter of 1840: (1), to roof all the casemate arches; (2), to construct the walls sustaining "the earth of the terre plein;" (3), to place a lead covering on these roofs; (4), "to lead the arches impart with the earth of the terre plein;" (5), to construct the facing walls of the "rampart on the parade sides;" and (6), to "prepare the machinery for planing the plank" of the casemate floors. However, in closing this report, he informed the department that the work outlined was planned on a small scale, in order to extend the operations until such time Congress would make a new appropriation. To supplement his laboring force for the restricted summer operations, Captain Mansfield began to advertise in the Savannah Georgia, on May 7, that he
Wanted to hire to work on the fortification at this place during the summer, six half grown Negro Boys, $60.

During the second and third quarters of 1839, masonry work on the casemate roofs continued uninterrupted. Captain Mansfield however, personally directed the operations during very little of this period from April through September, 1839. In the latter part of May he made a brief trip to St. Augustine, Florida, to investigate the expenditures on the seawall in that city, made under F. L. Laney, superintendent of the work. From the middle of June to the middle of October, 1839, he was in the North purchasing stone and other building materials, having sailed from Savannah on June 19 in the Brig Clinton bound for New York. Returning, he reached Cockspur Island on October 16, having spent a profitable summer mainly in the states of New York and Connecticut.

The greatest mass of masonry to be laid in a single year, up to that time, was completed at Fort Pulaski during the fiscal year 1838-1839, which ended on September 30, 1839. Captain Mansfield's annual progress report, forwarded to the Department on October 22, showed that by far the most important of the year's projects had been the masonry operations on the walls, and on the casemate arches and roofs. The scarp wall of the whole work had been raised "to a height of 3 inches below the cordon." The groined arches of the
casemates and the arches of the magazines had been completed. The brick "roofing of the arches of the four battery fronts had been completed preparatory to receiving two finishing courses of brick over its surface." The wall "sustaining" the terreplein had been completed to a height of three inches below the cordon, on the battery fronts, and on two-thirds of the gorge face, "except at the three tower staircases." The spandrels of the gorge face had been "filled in" to a height of one and one-half feet "below the key of the intrados of the arches." Eight brick cisterns in the four battery fronts, and the "sewer under the parapet" had also been completed. In all, some 6,500 cubic yards of brick work had been laid. Twenty-five stone steps in each of the two gorge stairways also had been set. Other work had included the laying of one-half of the sleepers to the floors of the battery fronts, and the floor itself in two of these casemates. Further progress had been made during the year on the breakwater, and the north wharf had been considerably enlarged.

The fiscal year 1838-1839, then, was a significant and pivotal year in the construction of Fort Pulaski. Up through that busy year all efforts on the project had been directed toward the building of the massive foundations, and the erection of the outside
walls, the interior halls, the casemate arches, and certain interior walls. By September 30, 1839, the form of the whole work was practically completed. The arched brick casemates were then completed and roofed except for a few final courses of brick. Certain exterior constructional details of the terreplein and gorge face were yet incomplete; however, and the interior finishing work of the four battery fronts and the gorge face was scarcely begun. In the six years since Captain "ansfield had laid the first brick, the work had made amazingly rapid progress under the arduous, perplexing, and oftentimes disheartening circumstances which had been encountered. Such progress had come mainly as the result of the proficiency, ingenuity, and resourcefulness of the project's supervising officer.

The completion of Fort Pulaski did not seem far distant on September 30, 1839, with the exterior walls and the casemates practically complete, and with the work of finishing the interior already begun. In reality, enough work to occupy five or six more intensive working seasons still remained unfinished. Restricted operations during the two fiscal years following 1838-1839 were to postpone the fort's completion by at least two additional years, however. Working funds had begun to run low as early as September 30, when only a little over nine thousand dollars
remained to the credit of Fort Pulaski. This was a rather small sum with which to continue operations on the island during 1839-1840. Nevertheless, during the last quarter of 1839, Captain Mansfield made a beginning on the operations of the new year by pushing vigorously the final masonry work of the casemate roofs, and continuing the laying of the casemate floors on the north and southeast fronts. He was assisted in this work, after November 7, by Lieutenant James Hayward Trapier, Corps of Engineers, who reported for duty on that date. Lieutenant Trapier, a native of South Carolina, was the fourth Engineer officer to act as Assistant Engineer at Fort Pulaski.

Late in 1839 and early in 1840, in addition to work on his construction problems, Captain Mansfield became immersed in a study of plans for mounting various types of guns at Fort Pulaski. While actually the construction of the fort was not then sufficiently advanced to mount permanently any type of gun, he was already making preparations to mount both casemate and barbette guns. During the fall and early winter he received from the Engineer Department information and plans for preparing the mountings of the casemate and barbette guns. On December 18, he forwarded to the Department 'a plan herewith of entrenchures and battery flanks,' in order that the gun mounting problem to be faced in the case-
mates might be more readily understood in Washington.

His difficulties in planning the gun mountings con-
tinued in 1840. On January 21, the Department was
requested to furnish the technical information neces-
sary to the building of the barbette gun mounts be-

hind the parapet walls. At this time, Captain Mans-

field announced to the Department that

The casemates of the Battery Fronts of this
work will be in a few days in a condition
to receive the guns should occasion require
them to be mounted before this work will be
finished, with this exception however; the
iron segments have not been procured and
cannot be out of the present available funds,
and two casemates in the center of each
Battery front having been arched over the
sisters, will require stone segments which
cannot be executed out of the present a-
vailable funds.

In the meantime, the Department apparently had re-
quested information on the size of the floor space
available in the casemates for the mounting of guns
there, and on February 5, Captain Mansfield, in reply,
forwarded a plan of the casemates, remarking "I have
made a plan which you will find herewith enclosed
marked A adapted to the casemates of this fort."

The spring of 1840 was a busy period on
Cockspur Island. During the first quarter of the year,
and until the middle of April, work progressed rapid-
ly on the roofs of the casemate arches. The final
masonry courses of the roofs were laid early in the
year, and most of the spring was consumed in plastering
the finished roofs with a thin layer of cement. The
other main construction project of this period was the laying of the casemat floors in the battery fronts; all of which were completed by the time operations were entirely suspended early in May. Early in March, Captain Mansfield realized that the scanty available funds could not be stretched very much further. In transmitting to the Department on March 2 his estimate of funds necessary during the current month, he observed that at the end of March only a very small balance would remain in the Fort Pulaski account. As a result of such a condition, he warned the Department "that all operations with a trifling exception will be discharged at the close of this month." On March 5, the Department authorized him to continue restricted operations during April, May and June. However, by April 16 all masonry work was suspended, and early in May the remaining workers, carpenters, blacksmiths, and laborers, were all discharged, with the exception of two white caretakers and two negro boatmen.

Meanwhile on April 7, Captain Mansfield requested authority "to proceed north to make sundry contracts for the construction and completion of this work during the next season in the event of an appropriation." At the same time, he informed the Department that "in a few days" all of his "funds will have been
expended." Confronted by an imminent suspension of the project, Mansfield apparently had no intention of remaining idle all summer on the humid island. Several days later the Department gave him permission to go north, as soon as the mounting of some twenty guns in the casemates of Fort Pulaski could be completed.

The Department in the meantime, realizing that a suspension of the Fort Pulaski project was inevitable in a few weeks, on April 8 ordered Lieutenant Trapier, Mansfield's Assistant Engineer to repair to Charleston \( \frac{3}{5} \), Ga as soon as relieved by Capt. Mansfield from duty at Cockspur Island and report yourself to Capt. Bowman for duty, as an assistant to him, pending the suspension of operations at Fort Pulaski. 100.

The Corps of Engineers was then much too small for young officers to remain idle. On the same day therefore, the Department also notified Mansfield that Lieutenant Trapier was to be ordered to Charleston as soon as he could be spared. On April 18, then, Lieutenant Trapier left Cockspur Island for Charleston, South Carolina.

Exciting foreign relations early in 1840 still further complicated the situation on Cockspur Island, and prevented Mansfield's departure for the North until late in May. During the spring of 1840 relations with England over the northeastern boundary question had continued unsettled. The trial by New
York counts of one of the Canadian insurgents in connection with the Caroline episode, and the alleged violation by New Brunswick citizens of the truce between England and the United States over the disputed area, soon precipitated another convulsion of jingoistic feeling in both countries. It is not unusual, then, to find Captain Mansfield warning the Department that "if there be a possibility of a rupture with England in 1810, it would be well to book to the armament of Pulaski..." Writing on March 2, he urged that arrangements be made for such a possibility of England with the aid of two ships and 500 men may save the Government that trouble as that power undoubtedly are [sic] as well informed of the condition and progress of this work as the Department can be. This position is the key to the Inland Navigation between Charleston and St. John's River, and the defense of Savannah and once in possession of the enemy will be held in spite of all the efforts of a power dependent on militia for defense, 103.

Concluding this admonition, he announced that the magazines of the work could be "fitted up" and the main gate made and hung on short notice, and the iron tracks for the casematte guns laid, if the necessary funds could be provided. Finally, he stated that he had sent the communication in order that "timely preparation" could be authorized if thought necessary. On March 20, he transmitted to the Department for its inspection, an illustrative diagram which he termed,
"Plan of the crenellade embrasures in the face and flank of Section, Fort Pulaski." During the remainder of the month he made active preparations to receive and mount guns should the Department decide to forward any. Masons were busy during this time laying some of the foundation stones for the gun traverse tracks over the sistrum in the battery front.

Meanwhile the Department apparently had decided to heed Captain Mansfield's warning of March 2, and had informed him of the intention to forward some twenty guns to Fort Pulaski. On April 6, he asked the Department to notify him when he might expect the twenty guns; stating at the same time, that his inquiries of the ordnance office at Augusta, Georgia, concerning them had elicited no reply. He also observed that there then existed "no obstacle to their being rec'd and mounted as soon as rec'd." His anxieties were relieved about a week later. On April 14, he informed the Department, in a postscript to a routine letter, that

The 20 guns are now landing but ordnance officers omitted to ship their lower carriages giving no reason therefor on invoice. 108.

The first shipment of ordnance intended for Fort Pulaski had finally arrived, but under circumstances very exterminating to Captain Mansfield.
Construction work at the fort had practically closed for the year, and the Department had authorized Captain Mansfield to come North as soon as the guns could be mounted. Nager to leave the island, his departure was to be prevented for several weeks by the Ordnance Department's negligence in failing to send the proper carriages, and tackle with which to handle the guns. He reported, on April 21, that while the guns had been received at the fort wharf on the South Channel, their lower carriages had not yet arrived, nor had any notice been received of their shipment. The guns could not be handled and mounted with his present machinery, he further reported, as hitherto there had been no occasion for the use of a sling cart, which was now necessary. He urged the Department to have the Ordnance Department ship the carriages and necessary tackle at once, stating that the fort's business in the North would be "injured" if he had to remain on the island too long. Further complications arose from the fact that most of the laborers had been discharged for the year, and there was no adequate force on the island to handle the guns. The Ordnance Department had sent no laborers to handle the guns, and had provided no money for their handling. Captain Mansfield notified the Department, on April 25, that he had been forced to advance funds to the Ordnance Department for laborers, in order that the guns
could be unloaded at the fort wharf from the steamboat on which they were shipped from Augusta, Georgia.

He also observed rather impatiently that information concerning the shipment of the lower carriages for the guns still had not been received.

Still further complications in getting the guns mounted developed about a week later. In reporting to the department on the progress of the mounting of the guns, Captain Mansfield, on May 2, stated that Captain Harding, of the Augusta Arsenal, was in charge of the mounting of the guns. He also reported that while the chassis of the guns had been received, and all the guns placed in the casemates, they could not be mounted as the wheels for the chassis would not fit. The iron carriages for the guns also had arrived but were still at the wharf at this time. As long as these delays continued, his stay on the island had to be prolonged, since the presence of an Engineer Officer was required at a work in which an Ordnance Officer was mounting guns. Several weeks later however, the remaining obstacles were overcome. By May 30, 1860, the first twenty guns of the Fort Pulaski armament were finally mounted, and on that day Captain Mansfield took his long-delayed departure for the North. During the afternoon of May 30, he sailed from Savannah in the Steamer Southernner.
A seventeen months' suspension of actual construction operations was in store for the Fort Pulaski project, when it was stopped from a lack of funds early in May, 1840. Undoubtedly Captain Mansfield would have been extremely dismayed in May, 1840, could he have foreseen that the depressed economic and financial condition of the country and the national treasury at that time would completely arrest construction work on Fort Pulaski for the next year and a half. In the summer of 1840 trade and business in the United States had not completely recovered, nor had the monetary system regained its stability, following the ill effects of Jackson's destruction of the credit of the United States Bank, the depositing of federal revenue in weak state banks, and the resulting disastrous panic of 1837.

The Act of June 23, 1836, regulating the handling and depositing of federal revenues, had directed the Secretary of the Treasury to select in each state certain banks which in his opinion were in a satisfactory condition to receive deposits of federal revenues, subject to treasury drafts. This law also provided that the surplus in the Treasury, over $5,000,000, was to be deposited with the states, proportionally to their congressional representation, in four installment payments beginning January 1, 1837. Though these funds were supposed to be on "deposit," the general opinion...
then prevailing was that they were given to the states. Such proved to be the case, since even today the funds are still on "deposit." Following the depositing of federal revenues in the several state banks, and the distribution of the first instalments of the Treasury surplus, "an era of unbounded speculation set in." On July 11, 1836, the Treasury Department issued its famous specie circular, which soon caused most of the weak state banks to suspend specie payments. The overextended financial condition of the banks, coupled with the generally depressed economic conditions resulted in an inevitable financial panic. Soon funds began to run low in the Treasury as bank after bank became insolvent and was unable to meet the Treasury obligations. Though by 1838 the banks generally had resumed specie payments, these financial and commercial misfortunes appreciably blighted the revenues of the government. By January 1, 1840, the state banks were behind over $800,000 in their payments due the Treasury. The distribution of the federal surplus was so ruinous to the Treasury that the fourth installment was postponed and, in the end, never made. During the period of distress federal expenditures had materially increased, due to the expansion of public works and the heavy expense of the Seminole War in Florida. All of these circumstances resulted in a total of annual deficits, between 1837 and 1843, of over $42,000,000. Such were the causes of the restricted
appropriations and operations at Fort Pulaski between 1837 and 1842. It was not the first, nor the last time, however, that the work on Cockspur Island keenly felt reverberations from events of National importance.

Cockspur Island lay quiet and peaceful under the coastal heat during June, August and September, 1840. In addition to a caretaker of the property, one clerk was engaged during the month of June, working on the office records preparatory to closing the fort's books for the year. A small force of laborers also was employed for a few days during this month repairing a small break in one of the dikes. The caretaker alone remained on the island in July, August and September. Captain Fansfield occupied this period with his purchasing duties in the North, where he waited and hoped for a new appropriation with which to reopen construction work at Fort Pulaski.

The eagerly anticipated appropriation was finally made on July 21, 1840, but with very disappointing stipulations as to its eventual use. The National Treasury was still in a stringent condition as a result of the prevailing depressed economic and financial conditions throughout the United States. During the first six months of 1840, federal revenues had fallen several million dollars below expectations.
The Congress then in session realized that some effective expedient must be adopted, along with the general appropriation bills, in order to remedy the situation and to strengthen the weakening Treasury. Early in July the Senate first offered an amendment to the general appropriation bills to meet the situation. This amendment empowered the President to suspend or postpone until March 4, 1841 (the close of the next session of Congress), at his discretion, the payment of certain items of appropriation "in case of a deficiency of receipts...or a failure on the part of the United States Bank and the late depositary banks to pay the debts due from them." Included among the items liable to suspension was the appropriation for fortifications. The House undertook consideration of the Senate amendment on July 16. After much discussion by supporters of the United States Bank, who claimed the amendment was a partisan political attack on the bank, and a powerful rebuttal by supporters of the amendment, who saw it only as a reasonable precautionary measure, the House concurred with the amendment on July 20. Next day, along with the appropriations for other fortifications throughout the country, $14,000 was approved for Fort Pulaski, under the restriction of this amendment. Several weeks later, on August 11, the Department notified
National Park Service

THE NORTHWESTERN PASSENGR OR SHAN AT FORT MASON, 1894

Looking southeastward from the parade ground toward the northeastern passageway or Shan in the east wall near Fort Mason, are the beautiful brick arches of the entrances or beaten path zones in the walls. Originally, all of these great arches had wooden railings or walls facing the parade ground. A small door at the angle leads to the circular stairway which spans on the reservoir or upper platform of the fort. 
Captain Mansfield that while a new appropriation had been made for Fort Pulaski, "no calculations could be made for any part of the unexpended funds set off to this work before the 4th March 1841." At the same time, the Department authorized and proposed a continuance "of the work on credit to the amount of one quarter of the last appropriation ($11,000) to be paid for between the 1 January and April 1841." Finally, in the same notification, he was ordered to prepare, and submit to the Department at an early date, a plan of operations for such work. Another crisis had arisen in the project requiring a judicious decision and wise planning for the future, but he was not to be hurried into a decision at such a crucial moment. Eight long weeks were to elapse before he rendered his second report in compliance with Department's orders.

Meanwhile, he maintained his temporary headquarters in Middletown, Connecticut, and from there, on October 17, he forwarded to the Department his annual report on the progress of the work to September 12th, 1840. This report summarized in concise fashion the year's progress on the island. Operations had been fairly extensive during the fiscal year 1839-1840, prior to the suspension of the work in April and May, 1840, despite the limited funds available. The year's two main projects had consisted of work on the final masonry details of the roofs of the casemate arches,
and the laying of the wooden floors of the battery casemates. At the time of the suspension of the work, the sustaining wall of the gorge terreplein had been completed to the "height of the scarp wall," while on the battery fronts the sustaining walls of the terreplein had been finished to a height of "3 inches below the cordon." The masonry of all the casemate roofs had been "raised to the required height, the enamel courses completed, and the whole plastered with cement," preparatory to the laying of the sheet lead roofing. The "top surface of the scarp and the sustaining walls to the terreplein, as well as the vertical surface of the same walls that are to be lined with sheet lead" also had been "plastered with cement." The pointing of the piers and walls of the casemates in the south front had nearly been completed. The arches under the "entrances into the Sections" had been finished. Other masonry work completed included: the laying of the stone segment foundations for the gun carriage tracks over the eight cisterns in the battery fronts; the "filling in" of the spandrels of the arches over the cisterns of the battery fronts; and the finishing of the drains to the cisterns. Carpenter work finished included: the laying of the wooden floors in all of the battery casemates and the construction and hanging of the main gate at the entrance to the fort. A special progress drawing or plan, showing the extent of the construction completed at the
end of the fiscal year 1839-1840, had been deposited
with the Department on June 5, by Captain Mansfield.

The fiscal year 1839-1840 saw accomplished on
the project several important advances, all of which,
however, were due in the main to the initiative, resource-
fulness, and vision of its supervising officer, Captain
Mansfield. Early in the year, Mansfield had foreseen that
the chance of actual hostilities resulting from the dis-
turbed relations between the United States and England
was not entirely removed from the range of possibility.
Consequently he undertook the first serious study on
the problem of mounting guns at Fort Pulaski. He had
seen the real significance of Fort Pulaski as the key
fort in the line of southern coastal defenses. His
success in convincing the Department of Fort Pulaski's
intrinsic importance resulted in the mounting at the
fort, during the late spring of 1840, of the twenty, and
only cannon to be placed there prior to the Civil War.
These cannon could not have been mounted, however, had
it not been for Captain Mansfield's skillful planning
of his year's work, in order that the casemates would
be ready for use under any exigency. Handicapped by ex-
tremely limited funds from the very first day of the
new fiscal year 1839-1840, he adroitly organized the
year's operations in such a manner as to get the most
work from his force and to complete the most construc-
tion using the most material during the longest period
possible. This plan, though not accomplished by task-master methods, proved a success. The casemates were roofed with bricks, the interior walls all but finished, and the floors of the battery casemates completed, by the early summer of 1840, Fort Pulaski was already a rough, but substantial fortification. That it was then in such an advanced state of construction, was in the largest measure due to Captain Mansfield's entire devotion to duty, his inspiring supervisory ability, and the depth of his technical engineering skill.
Notes

Chapter III

1. This appropriation, made on July 2, 1836, was for the sum of $170,000. See Treasury Document No. 374, 545-546.


5. R.S., File No. M.1728, August 4, 1836.


7. July 26, 1836.

8. August 4, 1836. The Georgian considered this offer so flattering that special mention was made of it in an editorial in the same issue.

9. August 20, 1836.

10. August 26, 1836.

11. September 24, 1836.


16. The "remote" tide lock was the sluice or tide gate located at the southern end of the canal from the South Channel of the River; while the "retired" tide lock was the tide gate located at the point where the canal entered the semi-lune moat.

17. For respective approvals of Gratiot and Butler see endorsements at the end of enclosure "B" in R.S., File No. M.1767, October 25, 1836.


19. October 13, 1836.

20. October 15, 1836.

21. See plan, Drawer 70, Sheet 6, "Plan and profiles for scarp and counter-scarp walls, Port Pulaski." Construction Section, Office, Chief of Engineers.


24. Robert S. Lee had been the first Engineer Assistant, from 1829 to 1831.


30. 24 Congress, Second Session, December 5, 1836 - March 5, 1837.

31. A complete and interesting record of this controversy may be found in The Congressional Globe, 24 Cong., 2 Sess., 1836-1837. (Washington, 1837), IV, 504-505, 506, 212, 217, 219-221. The first law to distribute the surplus revenue had been signed on June 23, 1856, and had provided for the distribution of the surplus, after January 1, 1857, in four instalments. See Ibid., 24 Cong., 1 Sess., 1835-1836. (Washington, 1836), III, 451-457, 460.


33. R.S., File No. E.1861, April 3, 1837.

34. R.S., File No. E.1861, April 8, 1837.

35. Ibid. The capable superintendent of labor to whom Lieutenant Mansfield referred was an interesting character. One William Wadley, a native of Frontwood Township, New Hampshire. Wadley had gone south to Savannah in 1834, when he was twenty-one, and after a week had met a labor recruiting agent from the Fort Pulaski project, who employed him to work there as a blacksmith laborer. Much of the wrought iron work in the fort was done by him, especially that on the main doors. Some time after his arrival, when most of the white laborers went on strike for higher wages, and threatened to kill those who did not join them, Wadley alone remained on
the job. Soon afterward, without any intermediate steps, he was promoted to the position of "Superintendent of Public Works on Cockspur Island," a position which he held until he left the island in 1840. He was particularly intimate with Mansfield, and taught himself civil engineering during his six years on the island. On leaving the island he advanced rapidly in the profession he had acquired, and in 1866 became the president of the Central of Georgia Railroad. See A Brief Record of the Life of William E. Nadley (N. Y., 1906), 1, 12-13, 14, 17, 56, 109. This valuable volume was made available for this study through the courtesy of Colonel John Millis, Cleveland, Ohio, and Captain Ralph Willis, formerly of Savannah, Georgia.


37. E.S., File No. M.1904, June 16, 1837; K.1912, July 1, 1837; K.1921, August 1, 1837; M.1922, August 5, 1837; M.1952, September 1, 1837.


39. General Charles Gratiot, Chief of Engineers, to Lieutenant J. K. F. Mansfield, July 31, 1837, No. 6 Letters to Officers of Engineers, p.311; also House Document No. 616, 57 Cong., 1 Sess., 1, 210; see also E.S., File No. E.1922, August 5, 1837; E.1940, September 30, 1837. Joseph Field Anderson had been the second Engineer Assistant, from 1836 to 1837.


41. E.S., File No. M.1909, October 14, 1837.


43. E.S., File No. M.46, Mar. 1, 1838
44. F.S., File Nos. M.105, July 6, 1838; M.200, Nov. 19, 1838.


46. By "public property", in this instance, Mansfield meant building materials previously purchased for the fort.

47. F.S., File No. M.105, July 6, 1838.


51. Ibid.

52. F.S., File Nos. M.123, July 24, 1838; M.150, August 30, 1838.


55. The Georgian (Savannah), Oct. 6, 1838; cf., Dictionary of American Biography (N. Y., 1933), XII, 257.

56. October 6, 1838.

57. The Georgian (Savannah), Nov. 12, 1838. It cannot be determined from available materials whether Mrs. Mansfield lived in the quarters on the island or on Savannah. However, it seems probable that she established their home in Captain Mansfield's quarters on Cockspur.
58. R.S., File No. X.200, November 19, 1838.

59. R.S., File No. X.122, July 24, 1838; X.226, Dec. 6, 1838.

60. R.S., File No. M.200, November 19, 1838.

61. November 17, 1838; advertisement repeated November 19-21, 26-29, and December 1, 1838.


64. E.S., File No. X.231, Dec. 8, 1838; X.252, Jan. 1, 1839; X.268, Jan. 24, 1839; X.302, March 2, 1839.


67. Ibid.

68. The Congressional Globe, 25 Cong., 3 sess., 1838-1839, (Washington, 1839), VII, 147, 157, 166, 172, 175, 189, 191, 200, 234, 238, 244, 250, contains a complete record of this retrenchment movement.

69. Treasury Document No. 373, 545-546.

70. E.S., File No. X.308, March 14, 1839.

71. E.S., File No. X.200, Nov. 19, 1838; X.304, March 6, 1839.
72. R.S., File No. 361, March 6, 1839.


78. R.S., File No. 314, April 9, 1839.

79. R.S., File No. 323, April 15, 1839.

80. May 7, 1839; advertisement repeated May 8-11, 1839.

81. Ibid., op. cit., File Nos. 336, May 1, 1839; 353, June 1, 1839; 362, June 15, 1839; 391, August 28, 1839.

82. The work was in charge of his superintendent of labor.


84. R.S., File No. 366, June 10, 1839.

85. R.S., File Nos. 391, August 22, 1839; 394, September 11, 1839; 401, Oct. 16, 1839.
66. R.S., File No. E.409, October 22, 1839.

67. R.S., File No. E.409, October 22, 1839.

68. R.S., File Nos. E.411, October 22, 1839; M.424, Nov. 22, 1839; M.432, December 2, 1839.

69. Savannah Georgian, November 7, 1839; cf., House Document No. 446, 57 Cong., 2 sess., 1, 969. Henry W. Scopes had been the third Engineer Assistant from 1837 to 1838.

90. R.S., File Nos. M.394, September 11, 1839; M.418, November 2, 1839; M.436, December 6, 1839; M.441, December 18, 1839.

91. R.S., File No. M.441, Dec. 10, 1839, see plan, Drawer 70, Sheet 9, "Plan of the casemate embrasures of Fort Pulaski," Construction Section, Office, Chief of Engineers, United States Army.

92. R.S., File No. E.455, January 21, 1840.

93. R.S., File No. E.469, Feb. 5, 1840, see plan, Drawer 70, Sheet 10, "Sketch of Casemates of Fort Pulaski," Construction Section, Office, Chief of Engineers.

94. R.S., File Nos. E.440, Dec. 16, 1839; M.447, Jan. 1, 1840; M.465, Feb. 1, 1840; M.480, March 2, 1840; M.485, March 5, 1840; M.490, March 8, 1840; M.494, March 11, 1840; M.498, March 18, 1840; M.503, May 6, 1840; M.590, Oct. 17, 1840.

95. R.S., File No. E.450, March 2, 1840.

96. R.S., File No. E.485, March 9, 1840.

97. R.S., File No. E.493, May 6, 1840.

98. R.S., File No. E.498, April 7, 1840.
100.
Colonel J. G. Totten, Chief of Engineers, to Lieutenant J. G. Trapier, April 9, 1840, No. 7 Letters to Officers of Engineers, p. 437.

101.
Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, April 9, 1840, No. 7 Letters to Officers of Engineers, p. 437.

102.
R.S., File No. M.592, May 6, 1840.

103.

104.
R.S., File No. M.440, March 2, 1840.

105.
See plan, Drawer 70, Sheet 11, Construction Section, Office, Chief of Engineers, U. S. Army; ef., Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, March 26, 1840, No. 7 Letters to Officers of Engineers, p. 420; ef., R.S., File No. M.494, April 2, 1840.

106.
R.S., File No. M.497, April 6, 1840.

107.

108.
R.S., File No. M.506, April 14, 1840.

109.

110.
R.S., File Nos. M.486, March 2, 1840; M.496, April 2, 1840; M.498, April 7, 1840; M.501, April 21, 1840.

111.
112. File No. E.523, May 6, 1840.


114. R.S., File No. E.518, May 2, 1840.

115. R.S., File No. E.523, May 6, 1840.


121. Ibid., 517 ffs., 542, 544-545 gives a complete record of this affair. The Congress was the 26 Congress, First Session, Dec. 2, 1839 - July 21, 1840.

122. Treasury Document No. 572. 545-546.

123. R.S., File No. E.577, October 6, 1840; of., File No. E.733, October 17, 1841.

124. R.S., File No. E.590, October 17, 1840.
125.

See plan, Drawer 70, Sheet 12, "Plan of Fort Pulaski, with Sections, profiles, and elevations showing progress in the construction to the 30th Sept. 1840."

Construction Section, Office, Chief of Engineers.
Chapter IV
Disaster and triumph at Fort Pulaski

Early in the fall of 1840, Captain Mansfield made a very prudent decision regarding the work for the immediate future on the Cockspur Island project. The new fiscal year 1840-1841 was barely underway before he realized that an immediate decision was necessary. The problem he faced, at his temporary headquarters in Middletown, Connecticut, was a difficult one. Some eight weeks previously the Engineer Department had notified him that due to the stringent condition of the National Treasury, the bulk of the Fort Pulaski appropriation for 1840-1841 would not be available until after March 4, 1841. At that time, however, the Department had authorized him to reopen operations "on credit" during the last quarter of the year 1840, on the condition that a debt not exceeding $11,000 was assumed for such work.

After "mature deliberation", Captain Mansfield, on October 6, notified the Department that he did not believe it wise to reopen actual construction operations on Cockspur Island at all during the year 1840-1841. Both general national conditions, and conditions on the island, apparently had much influence on this decision. While the full appropriation had been promised for unrestricted use after March 4,
1841, there was no absolute certainty that the money would actually be available then. Congress had given the President authority to suspend or postpone the fortification appropriation so long as the condition of the Treasury continued stringent. As a result of the long suspension of the work on the island, all of the boats, flaps, machinery, and the wharves would have to "be extensively repaired before operations could again be renewed." A temporary resumption of operations would not have been practical, however. The short working period authorized would have been occupied with the necessary repairs to the project, which would have been barely completed, before the project would have probably again been suspended. For the best interests of the project therefore, Mansfield submitted with his letter of October 6, a "plan of operations" for 1840-1841, by which he proposed "to remain in the North during the year and enter contracts for stone for the doors, windows, fireplace jamb, and gun carriage segments." He also requested the Department to make Middletown, Connecticut, his headquarters of "operations center", if his plan "to remain North" all year, making purchases of material, was acceptable. The Department did not approve this plan immediately, but "after vain efforts . . . to get unrestricted funds, the plan was adopted allowing the Engineer to
remain in the North."

Maintenance work only was carried on at Fort Pulaski during the fourth quarter of 1840 and the first quarter of 1841. While Captain Mansfield was occupied with his purchasing duties in the North during this period, two caretakers remained on Cockspur in charge of the suspended project. Their duties consisted mainly of acting as night watchmen, of making minor repairs to the dikes and ditches, and of "cleaning up" the premises. By mid-February, 1841, Captain Mansfield had located most of the materials which he considered necessary to have on hand in the event that operations should be re-opened in October. On February 12, he requested the Department to authorize the expenditure of $3,200 during April, for the purchase of the following types of building materials: stone sills and lintels, marble fireplace jamb and mantels, window frames and sashes, front doors and frames, partition doors, loophole sashon, stone gun carriage segments, iron gun carriage tracks, and cast iron boxes and sheaves for the main drawbridge.

Early in the spring of 1841 the island began to awake from its long period of inactivity. On March 3, Congress had appropriated $15,000 for the Fort Pulaski project, which, together with the $44,000 appropriated under restriction in 1840, made a
fairly large sum available for the purpose of reopening operations. Nine days later, the Department notified Mansfield that the additional appropriation had been made, and ordered him to prepare and submit for approval an "operations project and estimate" for the remainder of the year 1841. On March 16, in compliance with this order, he submitted a project and estimate calling for an outlay of $26,200 between April 1, 1841 and January 1, 1842. In submitting this comprehensive estimate, however, he was careful to emphasize, for the Department's notice, that "this estimate is made on the supposition that the operations will progress to advantage and not be forced by a threatened immediate war." Apparently he was still somewhat apprehensive over the status of relations between the United States and England, on the question of the Maine-New Brunswick boundary. His fears were not without ground, since in March, 1841, the two powers were still suspiciously watching the other's moves in the situation. In fact, the boundary question was then far from a settlement, which actually was not to be reached until October, 1842.

This new working project was divided into two parts: repair work to be undertaken immediately in preparation for the resumption of operations in October, 1841; and actual construction work to be
done after operations were reopened. The first part of the project called mainly for repair work, including the practical rebuilding of the north and south wharves on the island, the repair of the cranes on these wharves, reconstruction of the flats used in transporting materials, and finally, the purchase of a pilot boat to be used as a tender at the island. The second part of the project outlined in detail the extensive finishing work which was to be commenced after October 1, 1841, in the body of the fort. This included in the main, such items as: the laying of the lead roofs of the casemates, the laying of the iron tracks for the gun carriages of the battery faces, the building of the wooden fronts or "bulk heads" to the battery casemates, the laying of the casemate floors in the gorge face, the setting of the cordon to the scarp walls and the coping of the sustaining walls of the terreplein, construction of the parapet wall on the terreplein, and the building of the drawbridges and portcullis. This last section of the project soon proved far too ambitious for accomplishment in the remaining months of 1841. The repair work outlined in the first part of the project was to have priority, and was planned to begin early in April. However, Captain Mansfield was to "remain in the North until advised otherwise," and this preliminary repair work at Cockspur Island was
commenced under the supervision of his overseer.

All the spring and summer of 1841, repairs on the neglected project proceeded slowly in the coastal heat. After a year's suspension conditions were even worse than Mansfield had thought. Decay was widespread, and where rot had not invaded the wharves and boats, dilapidation was so general as to impair their usefulness. Much of the machinery was corroded and broken. Beginning in April, and extending through the month of September, 1841, a clerk was employed in the office on Cockspur Island, taking care of the project's records, and in maintaining a regular correspondence with Captain Mansfield, who remained in the North during the summer. A small force of carpenters and laborers were constantly at work throughout the period making the necessary repairs on the wharves, the boats, the machinery, the dikes, and the ditches. Captain Mansfield had secured during April, 1841, only a very small part of the extensive list of building materials which he had planned to purchase during that month. However, during the summer, he succeeded in purchasing not only these materials, but also such other materials as lead pipe for the casemate conduits; timber, plank, spikes and iron work for wharf repairs, and iron hardware for the wooden fronts of the battery casemates. A small steamboat, to be used as a pilot boat or tender, also was purchased.
during the summer, for the sum of $3,000.

The comparatively unproductive year, 1840-1841, came to a close on September 30, 1841. About mid-September, Captain Fansfield, who was still at his temporary headquarters in Middletown, Connecticut, had notified the Department of his intention to leave for Cockspur Island between the first and the tenth of October. However, his departure was delayed until October 14. On the same day that he left Middletown for the South, he forwarded to the Department his annual report on the Fort Pulaski project. Work on the whole project had been entirely suspended for six months of the year 1840-1841. So actual construction work was done on the fort structure itself during the entire year. Beginning in April, however, steps had been taken to begin repairs on the neglected project, in order that actual construction operations could be resumed later in the year. During the six months period between April and September this repair work had been practically completed. The south wharf had been thoroughly repaired and enlarged, and a new crane erected on it. Certain repairs also had been made on the north wharf. During the period three states had been rebuilt, and a pilot boat purchased.

While during 1840-1841 very little work had been done on Cockspur to advance the actual fort struc-
A view of the buttress masonry which forms the base of the northeastern face of wall of Fort Pulaski. These masonry were intended for the mounting of cannon; the carriages of which moved on iron curved tracks laid in the semi-circular grooves in the heavy concrete base, a feature noticeable in the photographs. The interaction, entwined arps of the stones has been produced through successive whitewashings and the accumulation of the little “dirt layer” maps, which build these numerous red houses on the walls.
ture, many indirect moves had been made elsewhere to further the interest of the whole project. Adequate building materials had been purchased, plans of future work made, and additional working funds secured. Various materials which had been purchased in the North included:

doors and windows, with frames for the quarter, hinges for the doors and windows of the bulk heads of the battery fronts; iron gun carriage tracks for the casemate battery and 145 guns of the barbette battery; stone segments for 8 casemate guns over the sibterns cut complete; iron work of a crane for the north wharf and double acting 8" cylinder pump for draining foundations; and the sheaves for the "Main" drawbridge. Two boom type derricks for setting stone procured, and stone segments for 145 barbette guns constructed.

Through Captain Mansfield's wise decision in regard to the project work for 1840-1841, much futile labor and lost time had been avoided, by remaining in the North where he could better serve the future interests of the project, and by commencing repairs on the island only when adequate funds were available, he succeeded in placing the project in a favorable position for rapid progress in 1841-1842.

Adequate and available working funds had finally been amassed by September 30, 1841. In addition to the $41,000 appropriated under restriction in 1840, which still remained untouched in the Treasury, the $15,000 appropriation made on March 3, 1841, and the $35,000 appropriation made on September 9, 1841, were available, providing a total sum of $99,000 for work
in the year 1841-1842. Commenting on the repairs
completed at Cockspur by September 30, 1841, and on
the working funds available at that time, Captain
Mansfield hopefully observed, on October 14, 1841,
that

These preparations with the aid of the
additional appropriation of $35,000 in
1841 leaves every prospect of a great
progress towards the completion of the
body of the work and the Semi-Lune by the
list of May 27th, 18.

His hopes were to be only partially fulfilled.

With Mansfield's return to the island late
in October, 1841, activity at Fort Pulaski greatly
increased. During the early part of October, the final
repairs on the project were completed, and the first
work of the new fiscal year initiated under the direc-
tion of his overseer. The carpenters completed the re-
pairs to the flat, and to the crane on the south
wharf, and the rebuilding of the carpenter's shop and
lime house. The masons repaired the bake house, and
continued the pointing of the piers and walls of the
casemates on the north front. The masonry work con-
tinued throughout the month. Upon his return to
the island on October 15, he set plans in motion to
reopen the operations on an extensive scale, that
he contemplated active work on the island throughout
the winter is shown by his efforts to secure an ade-
quate supply of fuel and certain building materials.
Beginning in The Daily Georgian of October 27, proposals to furnish wood for heating the quarters on the island were requested as follows:

**Fort Pulaski, Ga.**

23 October, 1841

Written Proposals will be received thro' the Post Office until the 5th November, to furnish this yard two hundred cords sound oak wood during the winter.

JOE. E. F. MANFIELD
Capt. Corps Engineers, 21.

On the same day another invitation began to appear in The Daily Georgian, announcing that

Written Proposals will be received thro' the Post Office until the 10th November, to supply this work in the course of the winter with eight thousand bushels river sand. 22.

The most important invitation for proposals to furnish material made at this time, however, began to appear as follows in The Daily Georgian, on October 30:

Written Proposals will be received thro' the Post Office until the 10th November next, to furnish for this Fort, delivered at the U. E. Wharf, Four Hundred Thousand first quality hard burnt bricks (of the size of those made by Henry McAlpin) by the first March next, and at such periods as to insure a delivery of about sixty thousand per month. A sample of the bricks must be furnished.

JOE. E. F. MANFIELD
Capt. Corps Engineers, 23.

He was determined to neglect no measure which might by any means insure an uninterrupted progress on the reopened project. He realized, of course,
that the best work could be produced only by a well
and strong force of laborers, and on October 25, took
a step to secure their physical welfare. On that day
he requested authority from the Department to employ
an attending physician for the project, and to purchase
medicines when needed, observing that this practice
had been allowed previously, and was again necessary.
Apparently the Department was not at all convinced that
such a move was absolutely necessary. Several weeks
later, he was requested by the Department, to explain
the need for a doctor's services at Fort Pulaski, the
necessity for purchasing medicines, and the method by
which sick men were handled on the project.

His reply, which was delayed until December
1864, was quite lengthy, and gave an interesting side-
light on the health and working conditions at Cock-
spur Island. He reported that the precedent for the
services of a doctor on the project had been set in
the years prior to 1863, when much slave labor had
been employed, "and always the work had furnished the
necessary medical attendance for that class." An at-
tending physician had been employed by the month at
a salary ranging from $45 to $50, and during the
working months of the eleven year period since 1850 the
cost of such services amounted to $3,623.50. During
the same period $672.17 had been expended for medicines.
He observed, however, that he had used no slaves during the "present season", and as a result, had found much "less trouble in administering affairs." Continuing, he stated that the services of a physician would not be required regularly, then, except by visit, but medicines would be needed, especially quinine. Quinine, the common remedy used in treating the prevalent malaria fever, was too expensive to be purchased by laborers, and he urged that it "be furnished by the Government as in past years". Further, he reported that quinine had always been necessary on the island, and had often been administered to the laborers by the clerk and himself. As to the handling of sick men on the project, he stated that while he did not employ or retain habitually sick men, he could not discharge a laborer just because the man became ill temporarily. He observed that it would not be humane to discharge a sick workman, because the laborer would have "no place to go", and even if the laborer were discharged, there was "no one . . . to be hired in his place." In closing, Captain Mansfield asked Colonel Totten, Chief Engineer, for "authority to keep a stock of common remedies on hand", warning his superior that "otherwise it [the stock] might have to come from his [Mansfield's] own funds." The whole report was but indicative of the humane and just nature of the man.
On October 20, Captain Mansfield forwarded to the Department an interesting report on the supervising personnel then at Fort Pulaski. At that time the supervising "force on the work" consisted of one clerk, one master mason, and one pilot boat captain. To this group however, he observed that he planned to add shortly "a master carpenter and an overseer of laborers." Salaries of this force supply an interesting commentary on employment practices of that time. The clerk received $70 per month, a free room "attached to the office," and his firewood. The master mason was paid $4 per day "every day he works." The boat captain received $50 per month, "and finds himself," that is, he had to pay for both his meals and lodging. The master carpenter was to receive $3. for every working day, and the overseer was to be paid $75 per month. The wages were quite good, and Captain Mansfield was careful to observe that the wages paid are reasonable and just for this locality."

Diversified construction work continued rapidly during the month of November, 1842. The masons continued the pointing of the piers and walls of the casemates of the E.S. and S.E. fronts; setting door sills and water table of the facing walls of the gorge and screen on E.S. front and stone traverses segments over sifterns of battery fronts and the foundation stones of the hearths of the fireplaces on gorge; erecting facing wall
of E. front and constructing Eynamising yet on one of the reversed arches
of the casemates on Gorge to Eynamise the flooring timbers and plank of quarters
and magazines.

The carpenters were engaged in setting the iron gun carriage tracks in the battery casemates, and pre-
paring the furring for the magazine ceiling. They were also occupied during part of the month repairing
some of the flats, and a portion of the North wharf.

Near the end of November, 1841, Captain Mans-
field reopened discussion with the Department on his
pet scheme to revet with masonry the scarp wall of the
demi-lune, and the countercarpa walls of the fort and
demi-lune. This vital constructional addition to the
project originally had been recommended to the Depart-
ment by Captain Mansfield in July, 1833. By October,
1836, the Department had taken no action on the matter,
and Captain Mansfield again had strongly urged the
acceptance of his plan. This time the Department had
adopted the scheme, but had deferred its execution
until such time as sufficient funds would be available.

However, this revetment project had been allowed to
lapse for approximately five years; undoubtedly due to
the stringent financial and economic conditions of the
time, and the necessity of finishing the main body of
the fort first. By the fall of 1841, however, the main
body of the work was rapidly nearing completion, and on
November 25, he transmitted to the Department an "Esti-
mate for the revetment \[810\] in Masonry of the Scarp of the Semi-lune, and Counterscarp of the Main Work and Semi-lune of Fort Pulaski; and memoir explanatory of the same."

In this "memoir" he remarked that the Board of Engineers in 1831 had designed the scarp of the demi-lune and the counterscarp of the main work and demi-lune "to be simply slopes of earth, and at the same time \[had designed\] a wet ditch." Experience had shown that a wet ditch and earth slopes were "incompatible;" therefore an estimate for the necessary revetment was submitted, calling for an expenditure of \$70,885.65. This sum was considerably less than the \$150,000 revetment estimate made in 1836, due to the fact that the 1841 estimate proposed to revet only the scarp of the demi-lune and counterscarp of fort and demi-lune, while the 1836 estimate also had included revetment of the slopes to the feeding canal. The plan to revet the slopes of the feeding canal, or canal to the main, apparently had been abandoned by 1841, because of the additional expense involved. Accompanying the memoir and estimate was his new "plan and profiles" of the proposed revetment. Although he then requested the Department for an "early decision" on his scheme, remarking that he wished "to begin excavations for the same," several weeks were to pass
before a decision was reached, and many months were to elapse before the revetment project actually was commenced.

Interior construction work on the fort continued during December, 1841. The masons were employed during the month

Erecting facing walls to four battery fronts; setting the cordon and coping of ramparts; pointing piers and walls of the casemates; setting the stone carriage segments over the cisterns in the battery fronts; setting the iron tracks for gun carriage of the same; constructing a permanent sluice through the South-West dike to drain the Island; laying counter damps arches under the magazine floors.

Carpenters were engaged in constructing the "bulk head frames for the casemates of the battery fronts," and aided in the setting of the iron carriage tracks of these fronts.

Early in the month Captain Lansfield requested the Department to send him complete "instructions on the mode of finishing the inside of the magazine," stating that he had never received such information, but "as the carpenters are now preparing stuff for the magazine ceilings, would like to have instructions thereto."

Accordingly, on December 16, the Department sent him the "plans and details for finishing the inside of the magazines," which he received on December 23. During this period the force of laborers worked on the breakwater at the eastern end of the island, and on the per-
manent dike system, and began the construction of the advance battery. The laborers also commenced the excavation for the foundation of the hot shot furnace in the northeast corner of the parade ground.

Near the end of December, he transmitted another report on working conditions at Fort Pulaski. The report summarized in statistical fashion the number of workmen annually employed, and the monthly wages paid between 1835 and 1841, inclusive. The average number of workmen annually employed per month for eight months at Fort Pulaski, from 1835-1841 were: 1835, 25 5/8; 1836, 169 3/8; 1837, 128 3/4; 1838, 118 3/4; 1839, 99; 1840, 5 5/8; 1841, 6 2/3. The lack of operating funds in 1835, and in the years following 1837, is clearly reflected in these figures. The average amount of wages paid per month during this period was: white laborers, $26; blacksmiths, $64; carpenters, $48; and stone cutters and masons, $55. Although the project had been forced to suspend several times during this period, when it was underway, the wages paid were quite good for the services rendered, considering the era and the locality.

The special problem of making preparations to mount additional cannon at Fort Pulaski occupied much of Captain Mansfield's attention during the latter part of the year 1841. On October 27, he requested
the Engineer Department to send him complete information on the mounting of the barbette guns, stating that he was then ready to begin the construction of the foundations of these guns. Practically a month later the requested information had not been transmitted, and he again asked for the Department's decision on the position and mounting of the barbette guns. Two days later, November 27, the Department forwarded to him a "Plan showing the positions of the barbet guns of Fort Pulaski, with details of the platforms," accompanied by a letter of explanation. Approximately a week later, he had received this plan, and had requested the Department to make an immediate shipment of the plates, pintles, and bolts for the chassis of the forty-five barbette guns. In summarising the work accomplished during November, Captain Mansfield stated, on December 6, that the masons had been occupied in setting stone traverse segments over the sills of the battery fronts, and the carpenters in setting iron tracks for the carriages of the guns in the battery casemates. This work on the stone gun segments and carriage tracks of the casemate batteries continued during the remainder of December, 1841.

The laying of the lead roof of Fort Pulaski, one of the largest constructional tasks on the project, was begun in January, 1842. The brickwork of the case-
mate roofs had been completed and thinly plastered with cement approximately a year and a half previously. In the interim, the roof had been allowed to set, while other construction details were carried out. As early as November 27, 1841, however, the Engineer Department had forwarded to Captain Mansfield complete instructions on the method of laying the lead roof, and full details of the earthen construction of the terreplein. By these instructions, lead in sheets about one-eighth of an inch thick was to be laid over the entire plastered area of the roof. At the junction of these sheets was to be placed a raised soldered joint, and over each joint was to be laid a narrow course of brick for added protection. The lead was to be carried up against the back of the scarp walls and sustaining walls of the terreplein, and inserted "in a joint of brickwork just below the level of the terreplein", in order to prevent any seepage through these walls. After the lead roofing was completed, the leading of the terreplein with earth was to be commenced. This very interesting constructional process was designed for the purpose of filtering and purifying the rain water which would seep through the earth of the terreplein and pass through lead pipes to the cisterns in the foundations of the fort. In the depressions between the casemate arches was to be built a fairly large lead gutter, covered by a low arch of brick laid without mortar. Over this gutter
was first to be laid a layer of oyster shells or coarse gravel a foot or so in depth, then a layer of well packed sand several feet in depth, and finally, a layer of heavier earth was to be added until the level of the terreplein was reached. Mansfield had received these extensive instructions by December 6, and by January 27, the plumbers had begun the leading of the roofs of the north casemates.

Meanwhile, he had been vainly attempting to get an official decision on his new revetment plan forwarded to the Department on November 25, 1841, in order that work on it might be commenced. In December 20, 1841, he urged an early decision on the matter. Reiterating his request on December 23, and on January 7, he warned the Department that an immediate decision was absolutely essential in order to take advantage of the large working force then on hand, "which will leave of its own accord by the last of March or early April."

Finally, on January 18, the Department sent Captain Mansfield its new plan for the proposed scarp wall of the demi-lune. However, this new plan, as prepared by the Department, gave approval only to the proposed scarp wall of the demi-lune, while Mansfield's project of November 25, 1841, had included the counterscarp walls of the fort and demi-lune as well. The Department's letter of the same date, which accompanied the plan
authorized him "to undertake immediately the masonry of the scarp of the demi-lune," and also stated that while the department was "not prepared to say positively that a counterscarp wall will not be erected, but if at all, it will be one of the last things done on the project." However, no work was to be done under this department plan of the demi-lune scarp during the year 1842, and it was not until 1843 that this demi-lune revetment project was even undertaken again.

Near the end of January, he reported that the "main work was being rushed." At that time the cordon and coping of the parade wall to the northwest bastion, and the north and northeast fronts was then nearly completed. The cordon on the southwest bastion and the southeast angle was also practically completed. On the 26th, he notified the department that he would commence next day the laying of the lead roofing on the north casemates, after first spreading a pitch and tar composition over the cement plaster in this area. Work was then also rapidly progressing on the advanced battery in front of the east angle of the fort. The south face of the battery was about completed and much of the north face.

Near the end of December, 1841, the work on Fort Pulaski had assumed such proportions that it had become difficult for one man to supervise efficiently
all of the details of the expanding project. Realizing
this, Mansfield, on December 23, had requested the
Department to furnish him with "an assistant for the
year 1812." The personnel of the Engineer Corps
was then quite small, and young officers to act as
assistant engineers were scarce. Neither could the De-
partment then foresee apparently, that any officer
would be available in the immediate future for duty
on Cockspur Island. However, by January 10, the De-
partment had offered to employ a civilian to act as
assistant engineer at Port Julaski. About a week later,
in acknowledging this offer Mansfield accepted it, and
requested the Department to employ either a Mr. Bender
or a Mr. Anderson. At the same time, Captain Mans-
field observed that it was quite "important that the
man [to be] employed have a knowledge of surveying, be
free of laziness and of addiction to ardent spirits." He
was not a man to tolerate inefficiency within the
service, and he apparently did not want a civilian
employee who could not meet in fair measure the standards
of the Corps.

January, 1872, was an eventful month on Cock-
spur Island. Disaster visited the project on the After-
noon of January 7, when fire of undetermined origin
destroyed one of the largest of the temporary quarters,
to the west of the fort, which had housed seventy-five
laborers. Fortunately, no one was in the building at
the time, and Captain Mansfield reported, on the same day, that "it will not be necessary to rebuild as the laborers can be housed in the remaining quarters."

Two important constructional decisions also were made during the month. The department gave its first positive authorization to a portion of Mansfield's revetment scheme, and the leading operations on the casemate roofs were commenced. Thorough repairs to Captain Mansfield's temporary quarters were begun during the period.

Early in January, Captain Mansfield had requested the Department to give a decision upon his project to begin the drilling of the piston blocks for the barbette battery. In an informal report made near the end of the month on the status of the work, he outlined the existing ordinance situation at Fort Pulaski. Most of the iron tracks for the casemate guns were then laid, including those under nineteen of the twenty guns then at Fort Pulaski. The twenty guns were mounted in the following positions: three along the south front, two on the southeast front, seven on the east front, seven on the north front, and one in the northeast angle. From the positions of these guns it is evident that the north and northeast walls of the fort, facing the main channel of the Savannah River, were then considered more exposed than the south and southeast walls, against which the main attack during the Civil War was actually directed. This, however, was a natural suppo-
sition, as the south and southeast walls were opposite
the shallow South Channel, and the mile-distant Cybe
c Island, and consequently then considered safer from
assault. Continuing his report, he observed that the
nineteen guns under which the tracks had been laid
were at last completely in readiness for actual use.
He then had on hand granite segments for forty-five
barbette guns, and stated that the remaining eleven
would be included in the next estimate.

The first six months of the year 1842 was
one of the busiest periods during the entire time the
fort was under construction. Much of the finishing work
and final details of the terreplein walls and coping,
and the casemate roofing were completed during the
spring and early summer. The casemates were occupied
during the time pointing the piers, walls and embrasures
throughout the fort; constructing the parade walls at
the angles, and the counter d Canary arches in the magazines
and casemates of the gorge; setting the remaining cordon
and coping of the fort walls, and the curving to the
embasures of the circlip; setting the remaining steps
to the circular stairways; constructing a hot shot
furnace at the northeast angle, and commencing one at
the southeast angle; constructing the dry arches over
the gutters of the casemate roofs; building some of the
fire places in the soldiers' quarters; cutting the
curbstones for the shaft hole of the flagstaff; erecting the parade wall of the gorge face; building the parapet walls of the battery fronts; setting the flooring joists of the soldiers' quarters; cutting dowel holes for the magazine doors and the concrete bulkheads; and constructing permanent sluices through the northeast and southeast dikes.

During the same period the carpenters were preparing and erecting the furnishings for the gorge quarters and the linings for the magazines; erecting the bulkheads of the battery casemates; setting the door and window frames to the gorge quarters; preparing and laying the flooring of the officers' quarters and magazines; making doors and shutters to the embrasures; completing the laying of the iron tracks for the gun carriages in the battery front casemates; erecting "two partitions in the communication ways in the south front thereby converting three casemates into store rooms;" constructing "blinds to the two bull's eyes in the battery fronts;" placing wooden grates over the manholes in the floors of the battery casemates; constructing boxes for the concrete foundations of the barbette gun segments; and repairing Captain Mansfield's temporary quarters on the island.

The plumbers were engaged during this time on one of the most extensive tasks of the whole project.
After the laborers had carefully spread the pitch composition over the entire cemented area of the casemate roofs, the plumbers had worked steadily laying the extensive lead roof, and by the end of June the task was completed. The laborers, during this time, had done all of the heavy work attached to the detailed operations of the skilled workers, including the receiving and transporting of materials; the excavating of the shot furnace and sluice foundations; the building of these foundations; the pitching of the casemate roofs; the painting of the battery casemate bulkheads and embrasure shutters; the laying of the concrete foundations of the barbette gun segments on the northeast and southeast fronts; and excavating the foundation of the guard wall to the north magazine. Perhaps the largest task completed by the laborers during the period was the loading of the battery casemate roofs with shell, sand and earth, to the level of the terreplein or upper platform of the fort. As early as February 19, Captain Mansfield had begun to advertise in the <i>Daily Georgian</i> for proposals "to furnish this work the whole or any part of twenty-five thousand bushels clean shells in the months of March and April next," which were to be used in this loading process.

In the midst of these extensive operations, the Department met Mansfield's plea for a sorely needed
engineer assistant, by employing a civilian, one
Edward Watts, for this purpose. Beginning on March 11, 
Mr Watts, a civil engineer, assisted Captain Mansfield 
with the supervision of the strenuous work of this 
period. Soon after his arrival, Mr. Watts commenced 
a series of measured drawings of the temporary living 
quarters and work buildings then existing on the island. 
By May 28, the drawings, eight sheets in all, were 
completed, and were on that day forwarded by Captain 
Mansfield to the Engineer Department.

During the period from January to July, 1842, 
Captain Mansfield also continued his work in preparation 
for the mounting of additional guns at the fort. On 
March 15, his request made in December, 1841, for bolts, 
plates, and pintles for the barbette guns, not having 
been complied with, he reiterated it, and asked for 
the thirty-nine sets, eleven to complete the barbette gun 
complement, and twenty-eight for the demi-lunes. In 
May further iron gun tracks were laid in the battery 
casemates, and the pintles for the casemate embrasures 
were cut and fitted. During June the laying of the 
case-mate gun tracks was completed, and forms for the 
concrete foundations of the barbette guns on the north-
east and southeast fronts were completed and six pintle 
blocks set.

The spring of 1842 saw apparently the first
official inspection of Fort Pulaski. The advanced state of its construction had finally merited attention in Washington. Early in May, Colonel Joseph O. Totten, Chief of Engineers, arrived for a brief inspection of the work and a consultation with Captain Mansfield. He was much impressed with the existing condition of the fort. However, upon his return to Washington, he urged on May 15, that the progress of the construction be further accelerated. At this time he especially recommended that the coping of the parapet wall be set as early as possible. In reply, on May 26, Mansfield reported that due to the existing state of the construction, the coping could "not be put on before fall;" however, he observed that "much progress has been made on the parapet wall and the loading of the arches since you were here...."

Operations on the island gradually diminished during the third quarter of 1842. Work was especially restricted after the middle of July, due to the heat and departmental orders. A large force of skilled workmen and laborers were employed until after the receipt of the Department's order of July 14 "to lessen expenditures" on the project. The comparatively large operating fund accumulated from appropriations made during the suspension of the project in 1840 and 1841, evidently was nearing an exhaustion. In fact, so low were the Fort Pulaski funds, that on July 29, about
two weeks after the original order had been forwarded, the Department transmitted to Mansfield a new order "requiring the suspension of the work except as to comply with existing contracts." By August 5, he had received the latter order, and on the same day forwarded to the Department an eloquent plea for the continuance, at least for a time, of the operations at Fort Pulaski. He urged strongly that

... as the working force is small, and it is not improbable this work will be suspended entirely for at least 12 months from the close of next September, and as the parapet wall of the 4 battery fronts is nearly complete, except for the brick coping, which has been commenced, and is indispensable to protect the wall, and as all of the granite segments of the barbette can be set this month, and all of the counterarches may be filled in too, therefore he asks the Department to sanction the expenditure of $2500 for the present month, as the work would be in a good condition at the end of the fiscal year. 62.

On the whole, affairs were very unsettled at Cockspur Island during July, August, and September, 1862. The period was a time of uncertainty and worry for Captain Mansfield. His duties had appreciably increased by mid-summer. On June 12, the master mason had been forced to leave the island because of his severe illness, and since that time Captain Mansfield had been forced to supervise the masonry work. After the rapid progress of the work had been halted late in July by the Department's restrictive orders, the laboring force and supervisory personnel were reduced, and by August 12, he was forced to discharge Mr. Watts, his assistant
engineer. On the next day, August 19, disaster visited the project for the second time in 1842. At the height of a coastal thunderstorm, lightning struck the "west end of the last limehouse at the south wharf," and

... one of the laborers was killed who was sitting under the shed over the mortar mill, with 3 others at a distance of about 30 feet from the limehouse building. 63.

The limehouse was also damaged slightly, a door and some of the weather boarding being shattered by the bolt.

Perhaps Captain Mansfield's chief concern during these trying months was for the future of the project after September 30, 1842, the end of the current fiscal year. By mid-summer he was regarding with dismay the possibility of another suspension of the project. It was ever difficult for him to accept as inevitable an impending suspension of active operations. Usually he tried all of the legitimate means at his command to circumvent such a happening. However, when there was a grave prospect that Congress would withhold working funds, he was helpless, as little actually could then be done to prolong operations. Such was the case early in August. Nevertheless he warned the Department on August 5, that "it is not improbable this work will be suspended entirely for at least 12 months from the close of next September."
His fears were not unjustified. On August 11, Congressman Black of Georgia offered an amendment to the 1842 appropriation bill for fortifications, providing the sum of $60,000 for Fort Pulaski. Despite the fact that he emphasized the fort's importance as a key defense of the southern coast and as a protection to the contiguous inland states, and strongly contended that the money was necessary and sufficient to complete the fort, the amendment was defeated. He was joined in his plea by Congressman Waterman, also of Georgia. Nevertheless, no appropriation was made for Fort Pulaski in 1842, mainly on the ground that a certain amount of funds were still available in the Treasury for that work. Consequently, by August 22, Mansfield had received instructions from the Department that a "suspension of the work entirely will take place . . . at the close of September, 1842."

Notwithstanding the uncertainties of the third quarter of 1842, a comparatively large amount of work was accomplished at Fort Pulaski during the period. The masons were employed during the time constructing the parapet wall on the terreplein; completing the setting of the pintle blocks and segments of the barbette battery; setting the coping of the four battery front walls; affixing hinges and staples to the doors of the store rooms; pointing the casemate
arches of the north front; and "worked at the hearth foundations of the officer's quarters." The carpenters were engaged in "constructing bulkhead partitions for the store rooms" in the north and south fronts; furring the walls of the officers' and soldiers' quarters; "casing" the doors and windows, and laying the floors of the soldiers' quarters; preparing the piles and grillage for the foundation of the guard wall of the south magazine door; completing the bulkheads of the casemates; and constructing and hanging the "wicket gate of the postern." During this time the blacksmith made the "crane eyes and bars" for the fireplaces of the soldiers' quarters, and the hinges and hooks for the doors of the storerooms and the "bulls eye" windows. The laborers performed the heavy work of the period, including: the receiving and transporting of building materials; the excavating for the foundations of the guard walls of the north and south magazines; the driving of the piles and the laying of the grillage of the foundations of both walls; pumping the water from the counterarches of the battery front casemate; and making and laying the concrete of the parapet walls.

Work in preparation for the mounting of additional guns had proceeded during the summer, and deserves special attention. In July the pintle blocks and segments for the barbette battery were transported
to the terreplein of the fort. All but two of the
blocks were then secured in place. Six of the se-
gments were also set. During the month all of the
cement foundations for the segments of the barbette
guns were completed. By the end of August all of
the pinte blocks and segments of the barbette battery
had been set complete. On August 25, however, Cap-
tain Mansfield had reported that he had not yet re-
ceived any barbette guns for his work.

About three weeks prior to Mr. Watts' dis-
charge on August 11, he had completed a drawing showing
how the grillage of the fort had actually been ex-
cuted, practically ten years previously. On July 28,
Captain Mansfield forwarded this drawing to Washing-
on, in compliance with a request for such a plan made by
the Department on November 27, 1841. The uncertain
work of the third quarter of 1842 finally came to an
end on September 30, when the remaining force of skilled
workmen and laborers were discharged. Another long
and dispiriting suspension of the Fort Pulaski project
had set in.

A severe equinoctial gale struck Cockspur
Island on Wednesday, October 5, 1842, and continued to
blow from the northeast for the next two days. Cap-
tain Mansfield was practically alone on the island at
the time, except for his overseer, and one or two
laborers. The main force of workmen and laborers had been discharged, and had left the island on September 30, about a week previously. The weather along the coast had been unsettled for several days after the first of October, but by the morning of the 5th a severe northeaster had set in. A letter written by Captain Mansfield to his superior, Colonel Joseph G. Totten, Chief of Engineers, on October 6, when the storm had abated, vividly describes the damage which took place on Cockspur Island. The gale was at its height on the 6th, and Mansfield wrote that

...the Tides were at the highest spring at the same time the seas...swept over all our dikes but one and breached them in several places and damaged them otherwise materially so as to require much repair. The boat house is probably damaged so as to be unfit for repair and an old boat stove to pieces. The salient angle of the advanced battery has several feet washed away from its parapet and other damage of little importance done to temporary buildings. The fort has sustained no damage as far as I can at present discover and there is a prospect of a speedy repair of all the dikes.

Concluding his letter, he observed that

I have never in the whole course of my experience for the past 11 years I have been on this station known so severe a storm. The breakwater performed its duty well and remains not materially affected. I shall pass thro' Washington in a few days and shall then make application for the funds necessary to cover this extraordinary and unexpected expense.
Such was the third visit of disaster to Cockspur Island during the year 1842.

Lieutenant Barton Stone Alexander, the fifth Engineer Officer to act as Assistant Engineer at Fort Pulaski reported for duty on October 6. Mansfield had requested the assistance of a young officer from the Corps of Engineers as early as December, 1841. The Department however, had then been unable to release a regular Officer of Engineers, but had supplied him with a civilian engineer, who had served from March to August, 1842. By July, a new group of young engineers had been graduated from West Point, among whom was Barton Stone Alexander of Kentucky.

On July 26, Colonel Totten had notified Captain Mansfield that "an Officer of Engineers Brevet 2nd Lieut. Barton S. Alexander is ordered to report to you, on the 1st of October next..." The young officer’s arrival at Cockspur Island had been delayed several days, and when he finally appeared on the scene, at the height of the storm, on October 6, his introduction to his new post was certainly most inauspicious. With a chill northeaster blowing, the whole island flooded with water, and even his temporary quarters somewhat damaged, his first impression must have been that he had indeed arrived at the end of the world.

Mansfield’s 1841-1842 progress report, which he had completed on October 5, outlined in a brief
but graphic manner the intensive work of that fiscal year. Despite disasters visited upon the project by fire and the elements, an amazing amount of detail construction work had been completed in the main body of the fort during the year. Several outstanding general construction tasks finally had been completed during the period. The cordon of the fort walls had "been principally cut and all set." The parade "facing wall of the whole rampart" had been constructed and its coping cut and laid. The three tower stairways in the angles of the fort had been completed, as had the two gorge stairways, "excepting the guard-fronts" of the latter. Except in two small places, the parapet wall of the terreplein had been "raised to the height of the coping." The coping of this wall had been laid on the north, northeast, and southeast fronts, and on part of the south front. The lead roofing had been laid on the roofs and walls over the casemate arches, and earth "deposited thereon to the level of the terreplein." The piers, walls, and embrasures of the casemates, and the whole scarp wall, from the cordon to the water level in the meats, had been pointed. Two hot shot furnaces had been erected in the parade. Forty-two bulkheads or wooden fronts had been installed in the battery casemates. The details of the interior construction of the two magazines had been completed, so that they were
"ready for ammunition." Lightning rods for these magazines had been completed, and were "ready to put up."
The shutters to all embrasures, and blinds to the "bulls eyes" had been made and erected. Most of the counter-arches of the casemates in the battery fronts had been "filled in with sand to the level of the water in the ditch;" and finally, the foundations of the guard walls to the magazine doors had been laid.

Work also had been rushed during the year on the interior construction of the living quarters in the gorge face. Counter-damp arches had been built below the floor level of the two magazines and the gorge casemates. The fireplaces of all the quarters in the gorge face had been constructed. Flooring in the officers' quarters, and in three casemates of the soldiers' quarters had been laid. The furring had been completed in the officers' quarters, and in three casemates of the soldiers' quarters. In the latter three casemates the door and window frames and the baseboards had been installed.

Work accomplished during the year in preparation for the armament of the fort included: installation of the pintle blocks and stone segments for fifty-six barbette guns, all laid in readiness for the iron traverse tracks; laying of the stone traverse segments over the eight cisterns in the battery casemates; and the completion of the laying of the iron traverse tracks.
in the battery casemates. Twenty-eight granite pinto
blocks and segment for the demi-lune guns had been
procured, but not installed.

Extensive operations had been carried on in
the outworks of the fort during 1841-1842. The permanent
dikes on the western, northeastern, eastern, and southern
sides of the island had been nearly completed, but un-
fortunately much of this work was destroyed in the
October, 1842, gale. The year had also seen permanent
brick sluices constructed through the northwestern
and southeastern dikes; while the first "permanent
advanced sluice for changing the water of the ditch
of the fort" had been built at the southern terminus
of the proposed feeding canal. The great breakwater
on the northern and northeastern sides of the island
had finally been completed during the year, when some
1,545 tons of rough stone had been laid along these
shores.

Despite the disasters, and the restrictions
placed upon his operating funds during part of the
year 1841-1842, Captain Mansfield had safely piloted
the Fort Pulaski project through one of its most in-
tensive working years. His influence and skill as an
executive had been clearly evident in the year's suc-
cesses. In several respects the year had been rather
momentous for the Fort Pulaski project. The leading
of the roof, and the leading of the terreplein with
earth, two of the largest constructional jobs of the whole project had been completed. At the insistence of Captain Mansfield, the Department had finally authorized and directed the beginning of the most revetment scheme; a project which undoubtedly would have been commenced during the year had sufficient funds been available. Then, for the first time in the history of the project, the Chief of Engineers had made an official inspection, and had been impressed favorably with the progress of the work, and the significance of the position. Finally, the greatest amount of detailed construction work ever completed at the fort in any one year, up to that time, had been finished by September 30, 1842, the end of the fiscal year 1841-1842.

Captain Mansfield departed for the North about mid-October, 1842, leaving the project on Cockspur Island in charge of his new assistant, Lieutenant B. S. Alexander. Immediately following the disastrous gale of October 5, 6, 7, Mansfield had sent to Savannah for fifteen negro laborers to make the necessary repairs on the partially ruined dikes. Placing these laborers in charge of an overseer, he left the task of rebuilding the dike and ditch system under the general supervision of Lieutenant Alexander, and departed for his home in Middletown, Connecticut. He had barely
arrived at Middle town before he wrote the Department, requesting "a leave of absence for a few months, while the work [on Cockspur Island] is suspended." The Department, however, could not then relinquish, even temporarily, the services of such a valuable officer. On November 5, the Secretary of War appointed him a "member of the Board of Engineers," which was a distinct honor, and an evident recognition of the abilities of the thirty-nine year old Captain of Engineers.

From about mid-November, then, until he returned to his post in March, 1843, Captain Mansfield was engaged with his new duties on the Board.

The problem of rebuilding the dike and ditch system on Cockspur Island was rather difficult initiation for the young Engineer Assistant. No work could be carried on at the fort, during the period, however, and by the end of December, 1842, the dikes and the drainage systems had again been placed in a satisfactory condition. The young officer's time was wholly occupied, during this last quarter of 1842, in directing and supervising the task being carried out under his overseer, who worked sixteen laborers in October, fifteen in November, and fourteen in December.

The second problem attacked by Lieutenant Alexander was the making of an accurate topographic survey of Cockspur Island and vicinity, which he commenced in January, 1843. As early as August, 1842,
Captain Mansfield had suggested to the Department that Lieutenant Alexander be "given the duty of making a complete and minute survey of the topography of this Island and the channels within a circle with the fort as the center and a 2 mile circumference." Accordingly, prior to his departure for the North in October, 1842, Captain Mansfield apparently had given his new assistant instructions to commence this survey at an early date. It was not until the beginning of the year 1843, however, that Lieutenant Alexander had completed his work on the dikes and the ditches, and was free to begin the survey. During the first three months of 1843, with the aid of his overseer, and two laborers, Lieutenant Alexander succeeded in getting his survey of the island underway. The only other work in progress on the island during this time was a few minor repairs to the breakwater and the dikes; except in the latter part of March, when a crew of carpenters began "making repairs preparatory to resuming work" on the fort project.
Notes
Chapter IV


2. R.S., File No. M.577, October 6, 1840.


4. R.S., File No. M.735, October 14, 1841.

5. R.S., File Nos. M.607, December 12, 1840; M.627, January 25, 1841; M.634, February 12, 1841; M.647, March 17, 1841; M.643, April 14, 1841. One of these caretakers, during a part of the period, was apparently William Wadley, superintendent of public works. However, on November 12, 1840, he married Rebecca Barnard Everingham, who was living on Cockspur with her mother, Mrs. Holten. The wedding took place on the island, the ceremony being performed by Rev. William Preston of the Independent Presbyterian Church of Savannah. After the ceremony, the bride and groom left immediately for Savannah in a row boat, which was rowed by Negroes. After a short stay in Savannah, the couple proceeded to the Ogeechee River, where Wadley had contracted to build a bridge for the Central of Georgia Railroad. See A Brief Record of the Life of William H. Wadley... (N.Y., 1906), 16-17.


11. R.S., File No. M.672, May 19, 1841; M.672, June 25, 1841; M.672, July 6, 1841; M.672, August 10, 1841; M.703, August 6, 1841; M.703, Aug. 14, 1841; M.716, Sept. 7, 1841; M.746, Oct. 23, 1841; M.759, Nov. 5, 1841.


15. R.S., File No. M.733, October 14, 1841.


18. R.S., File No. M.733, October 14, 1841.


22. October 27, 1841; this advertisement repeated October 28-30, November 1-6, 8, 10, 1841.

23. October 30, 1841; this advertisement repeated on November 1-6, 8, 10, 1841.


27. R.S., File Nos. M.748, October 25, 1841; M.790, December 6, 1841.

28. R.S., File Nos. M.1175, July 5, 1833; M.1218, October 15, 1833; M.1767, October 25, 1836; M.1448, January 14, 1837.

29. See plans, Drawer 70, Sheet 13, "Fort Pulaski, plans and profiles for earth and counterearth walls." Construction Section, Office, Chief of Engineers.


31. R.S., File No. M.781, December 6, 1841; cf., File No. M.790, December 25, 1841. These plans, like other detail plans, such as the interiors of the quarters, or of the piazzas, cannot be located today.


34. R.S., File No. M.750, October 27, 1841.


36. See plans, Drawer 70, Sheet 24, Construction Section, Office, Chief of Engineers; cf., R.S., File No. M.781, Dec. 6, 1841.


40. Colonel J. G. Totton, Chief of Engineers, to Captain Mansfield, November 27, 1841. No. 9 Letters to Officers of Engineers, pp. 170-175.

41. File Nos. 8,781, December 6, 1841; 8,816, January 26, 1842.

42. File Nos. 8,786, Dec. 20, 1841; 790, Dec. 13, 1841; 799, Jan. 7, 1842. Laborers from the North usually left the island before the hour of the summer set in.

43. See plan, Drawer 70, Sheet 15, "Profiles of Scarp Wall of demi-lune of Fort Pulaski," Construction Section, Office, Chief of Engineers.

44. Colonel J. G. Totton, Chief of Engineers, to Captain Mansfield, Jan. 19, 1842. No. 9 Letters to Officers of Engineers, pp. 269-274. See also File No. 8, 975, October 5, 1842; 9,1056, April 3, 1843. This project was not undertaken during 1842 apparently for two reasons: Mansfield was preoccupied with other tasks, and working funds were not adequate.

45. Totton had first suggested the use of clay under the lead to prevent certain chemical reactions of the cement plaster from destroying the lead. Mansfield, however, adopted the pitch composition as more effective. See Col. J. G. Totton, Chief of Engineers, to Capt. Mansfield, Jan. 19, 1842, No. 9 Letters to Officers of Engineers, 269-274.

46. File No. 8,789, December 25, 1841.

47. File No. 8,816, Jan. 26, 1842. A thorough investigation has failed to disclose whether or not these civilians were Savannahians, or lived elsewhere. Both names belong to old Savannah families, but since Captain Mansfield failed to indicate the initials of either gentleman, it can not be determined which members of these families, if they did belong to these Savannah families, he is referring to.
48.
K.S., File No. 1,799, January 7, 1842.

49.

50.
K.S., File No. 1,799, January 7, 1842.

51.
K.S., File No. 1,616, January 26, 1842.

52.
K.S., File No. 1,6214, Feb. 5, 1842; K.033, March 1, 1842; K.058, March 5, 1842; K.054, April 6, 1842; K.064, April 15, 1842; K.070, May 4, 1842; K.071, May 5, 1842; K.087, June 4, 1842; K.088, June 6, 1842; K.908, June 14, 1842.

53.
February 19, 1842; this advertisement repeated February 21-25, 28, March 1-4, 1842.

54.
K.S., File No. 1,654, April 6, 1842. While Watts is an old family name in Savannah, no evidence has been located to show that one Edward Watts, civil engineer, belonged to this family or lived in Savannah. It is entirely possible, however, that he resided in Savannah for a short period and worked at Fort Pulaski for the few months in 1842, as shown, on the other hand, Mansfield does not indicate where Watts came from, and as the Department appointed him, it is possible that he came from some northern or eastern state.

55.
K.S., File No. 1,655, May 28, 1842. See plans, Drawor 79, Sheets 16-23, Construction Section, Office, Chief of Engineers, United States Army.

56.

57.
K.S., File No. 1,687, June 4, 1842.

58.
K.S., File No. 1,908, July 5, 1842.

60. R.S., File No. E.376, Oct. 5, 1842. This order must have been received about July 20.

61. R.S., File No. E.393, August 5, 1842.

62. R.S., File No. E.393, August 5, 1842.

63. R.S., File No. E.391, August 22, 1842.

64. Apparently this was the only accidental death during the construction period.

65. R.S., File No. E.391, August 22, 1842.

66. R.S., File No. E.393, August 5, 1842.


68. R.S., File No. E.391, August 22, 1842.

69. R.S., File Nos. E.932, August 4, 1842; E.950, September 5, 1842; E.972, October 1, 1842.

70. R.S., File No. E.932, August 4, 1842.


73. See plan, Drawer 70, Sheet 25, "Fort Pulaski, Plan of the Orillage as executed, with sections illustrative of the same and indicating the parts on piles and on sand. Also plan of the masonry on orillage to the commencement of the vertical walls, as executed, with
Sections illustrative, etc.," Construction Section,
Office, Chief of Engineers; cf., E.S., File No. M.923,
July 25, 1842.

76.
Lieutenant B. S. Alexander arrived at Cockspur Island
on Thursday, October 6, during the height of the gale,
however. See E.S., File No. M.980, October 8, 1842.

77.
E.S., File No. M.972, October 1, 1842.

78.
The Daily Georgian (Savannah), October 7, 1842.

79.
Captain J. R. Mansfield, Fort Pulaski, to Colonel Joseph
J. Totten, Washington, October 8, 1842, E.S., File No.
M.980.

79.
The Daily Georgian, of nearby Savannah, on Oct. 7, 8, 10.
It carried brief accounts of the effect of the storm on
the rice plantations along the Savannah river, but no
reference was made to the damage at Cockspur Island.

80.
E.S., File No. M.980, October 9, 1842. The Fourth Engineer
officer to act as Engineer Assistant had been Lieutenant
J. H. Trapler, who served at Fort Pulaski from 1839 to
1840.

81.

82.
House Document No. 146, 57 Cong. 2 sess., 1, 156.

83.
Colonel J. O. Totten, Chief of Engineers, to Captain
J. R. Mansfield, July 26, 1842, No. 9, Letters to
Officers of Engineers, 571.

84.
E.S., File No. M.976, October 5, 1842.
This first sluice at the mouth end of the feeding
canal was later found to be too small and was removed
and replaced with a larger one in 1857-1858. See R.S.,
File Nos. 9,1029, July 23, 1857; 9,1255, September 30,
1858. The main canal or "feeder ditch" to the sluice
was to be excavated in April and May, 1853. See R.S.,
File Nos. 1081, May 6, 1853; 1087, June 6, 1853; 1090,
June 8, 1853.

66. File Nos. 9,920, October 8, 1842; 9,925, October
22, 1842.

67. File No. 9,920, October 9, 1842.

68. File No. 9,920, October 22, 1842.

69. File No. 9,920.

90. File No. 9,944, November 9, 1842.

91. File Nos. 9,996, November 16, 1842; 1096,
December 21, 1842; 1018, January 11, 1843.

92. File No. 9,941, August 22, 1842.

93. File Nos. 9,1020, January 12, 1843; 1032,
February 17, 1843; 1042, March 11, 1843; 1061,
April 5, 1843.
Chapter V
Uncertain progress on Cockspur

Operations were resumed on a small scale at Fort Pulaski during the second quarter of 1843. On March 3, Congress appropriated two separate items of $30,000 each, or a total of $60,000, for Fort Pulaski, thus providing adequate funds with which to reopen construction work on the project. Four days later, the department ordered Captain Mansfield to return "to Fort Pulaski to resume operations." Mansfield, who was then at his home in Middletown, Connecticut, did not receive this order until March 10, and it was not until March 22 that he was able to leave for Fort Pulaski. Exactly one week later, on March 29, he reached his post, and immediately notified the department of his intention "to make arrangements to commence operations on April 1 with a suitable force." He was eager to begin work after the six months' suspension, and on the first day of April reopened the construction work with an adequate force of skilled workmen and laborers.

Two days later, on April 3, he forwarded to the department a "Project of operations at Fort Pulaski for expending the appropriation of 60,000 dollars made in 1843." In this report he outlined an ambitious
program of work to be undertaken with these new funds. He proposed first to excavate the main "feeder ditch" or canal, which was to carry the tidal water from the South Channel to the woods, "with a view to draw off the water around the work and admit of the excavation for the scarp wall of the demi-lune to be commenced immediately after." The earth thus excavated was to be dumped parallel to this canal, about one hundred and eighty feet to the westward,

to form a roadway leading from the demi-lune to a suitable position on the south channel for a small wharf for garrison purposes, making an angle with the coverline of the demi-lune to the westward of about 97°.

It is interesting to note that in January, 1934, when the restoration project at Fort Pulaski was commenced by the National Park Service, the remains of the bed of an old roadway, with an average elevation of 11.0 feet was found paralleling the canal on the western side, approximately 18 feet from its center line. This bed formed a 97° angle with the demi-lune, and was apparently the base of the roadway built in 1842. Undoubtedly Mansfield meant that the earth excavated from the main canal in 1842 was to be placed 18 feet to the west of the canal, rather than 180 feet; since today no signs remain of a roadway having been built 180 feet to the west of the canal.

This excavation work, however, was to be
merely preparatory to one of the year's main projects. As soon as the meats were drained sufficiently, work was to be commenced on the long agitated meat revetment scheme, which was "not to be suspended until completed." Under this revetment scheme, the scarp wall of the demi-lune was to be constructed first, work upon which was to begin as early in April as possible. Within the body of the fort general construction operations were also to be reopened, including masonry work to complete the parapet walls, and the guard walls of the magazines, and the carpentry work in the gorge quarters. Mansfield also proposed "to construct the portico" along the gorge, during the year. Finally, the "rotten timbers of the sides of the wharf on the north channel, connecting the granite pier head with the Island," were to be removed and replaced with large stone blocks; and the dikes on the island were to be strengthened. In closing his report, Captain Mansfield was careful to warn the Department, that while "to accomplish these objects it will probably take till the close of the fiscal year 1849," it was not improbable to finish the scarp wall of the demi-lune before the close of the summer.

The work as outlined in his project was soon underway. During the second quarter of 1845 construction operations of various types were rapidly reopened. In
April the masons began to lay brick on the coping of the south front; while carpenters prepared the flooring material for the soldiers' quarters, constructed a pile driver, and made the wooden gate to the advanced sluice. The laborers were occupied excavating the canal to the moats, repairing the north wharf and breakwater, and "driving piles for the foundation of columns of portico of permanent quarters." On April 4, Captain Mansfield had begun to advertise in The Daily Georgian for

Proposals...to furnish, delivered at this work in the usual way, eight thousand bushels clean river or bluff sand, before the 30th day of May next, 11.

In May, the operations were rapidly expanded. During this month the masons continued the brick work of the south front coping, covered part of the conduit drains to the battery front cisterns with brick, and were engaged in constructing the guard walls to the magazine doors, and the cellar to drain the parade. The carpenters were occupied in laying the floors and installing the window frames of the loopholes in the soldiers' quarters. The laborers completed the excavation of the canal to the moats, placing the excavated earth along the western side of the canal, and commenced the excavation for the semilunar scarp wall. They also continued repairs on the breakwater and the dikes, and made and placed "concrete in the guard walls of the
A VIEW OF THE TERREPLEIN AT FORT PULASKI, 1933.

Looking eastward along the northern terreplein or upper platform of Fort Pulaski into Tybee Roads at the mouth of the Savannah River. At the right of the photograph may be seen a section of the northeastern terreplein, beyond which, across Tybee Roads, may be seen the point of Tybee Island where Fort Screven is located. Along the northern terreplein may be noted one type of gun mount or platform, while one of the larger type platforms may be seen in the extreme right of the photograph, on the northeastern terreplein.
magazines, and foundations to columns of Portico to 12.

Quarters." Late in May, Mansfield reopened discus-
sion with the Department on the building of a counter-
scarp wall for the masts; a project which had been
temporarily pigeonholed by the Department in January,
1842, when the construction of a semilune scarp wall
had been authorized. On May 22 he requested the De-
partment "to decide on the construction of a counter-
scarp for this work," at the same time reminding it
that an "estimate for the same (the counterscarp)"
had been forwarded on November 25, 1841." Concluding
this letter, he cautioned the Department that he could

...only say that if the counterscarp is not
constructed the ditch will eventually fill
up and perhaps at the precise time needed.
The counterscarp can be constructed while
the work is now in progress at much less ex-
pense. 16.

In the face of such vigorous advice, the Department
was soon to take action in regard to the counterscarp
walls.

During June, the last month of the second
quarter, rather extensive operations proceeded on Cock-
spur Island. The masons continued the masonry of the
guard wall to the door of the north magazine and the
brickwork of the drains from the terreplein to the
sisterns and of the coping on the south front and
southwest bastion. They also plastered the two gorge
sisterns with cement, and laid the brick paving over
the two cisterns of the northeast front. The carpenters were occupied in laying the floor of three casemates in the soldiers' quarters. The laborers continued the excavation for the semilune scarp, and began to drive the piling for the foundations of this wall. They also began to lay the "stone wall on the east side of the north wharf."

On June 3, Mansfield acknowledged the Department's criticisms of May 30 on his operations project which had been forwarded on April 3. In his letter of June 3, he attempted to give adequate explanations regarding each of the questions raised in the Department's communication of May 30. He first explained that while he did not plan immediately "to construct the wharf at the termination of the roadway to the South Channel," the old temporary wharves on the South Channel, approximately six hundred feet to the east of the southern terminus of the new roadway, "must now be abandoned as they were out of the water and rotten, and erosion in 5 yrs. will destroy them entirely." He further stated that the "wharf site on the North Channel is now believed to be permanent as there is little change in the shore line there." The earth being excavated from the main canal, which incidentally was "to be a simple ditch with no embankments," was "to form the roadway" to the
South Channel, along the western bank of the canal. In regard to the portico along the gorge quarters, he reported that

Nothing more has been done towards the portico than to prepare the foundations of the columns which, consisted of a single pile driven under each column and cut off at the standing water level and a column (in a box) of concrete deposited thereon to a height of the level of parade.

With this letter, he returned the Department's plan of the demi-lune scarp wall, which had been forwarded to him on January 19, 1842. In rejecting this plan, he explained that it did not suit local conditions, and stated that "it is probable I may increase the dimensions of this wall before my plans are matured for execution. I return herewith the profiles above referred to."

About the middle of June, he forwarded further information to the Department explanatory of the cost and necessity of constructing a counterscarp wall for the fort and demi-lune. Following his urgent letter of May 22, on the necessity of building a counterscarp for the work, the Department, on May 31, had ordered him to forward immediately "an estimate of the cost of constructing a counterscarp in masonry to the main work and demi-lune." By June 12, he had prepared the estimate, and on that day forwarded it to the Department, together with his plan or "profiles for the counterscarp." Requesting an "early decision on the same," he submitted a new counterscarp project, calling for an outlay of
$25,000, and "in revision of the plan and estimate for the same object dated the 25 November 1841." He then remarked that the "great difference in the present estimate and the estimate of November 25, 1841 was owing to a difference in profile and to the entirely different nature of masonry and difference in workmanship and materials."

Meanwhile, all during the spring, Lieutenant Alexander had continued his topographic survey of Cockspur Island and vicinity. On June 15, Captain Mansfield advised the Department that the "survey of this Isl. is nearly completed, and my assistant Lieutenant Alexander is about to prepare a map of it for the Department." He further reported that Lieutenant Alexander had "already plotted this survey for the use of this office on a scale of 3 miles the foot," and requested the Department's opinion on the use of such a scale for the finished chart of the survey. When Mansfield's letter was received in Washington, the Chief of Engineers was temporarily absent from the city, and it was not until July 7 that he answered Mansfield's request, then informing him that "in relation to the scale for the Map of Cockspur Island I will observe that I have no objection to the scale you propose, namely 3 feet to one mile (not 3 miles to one foot as you have written it.)"

Operations on the Fort Pulaski project con-
continued briskly during the third quarter of 1843. The
masons were occupied during this period laying the
 coping of the gorge and the southwest bastion; lathing
the soldiers' quarters during rainy weather; laying
the hearths, and putting on the scratch coat of plaster
in three casemates of the soldiers' quarters; continuing
the paving of the casemate floors over the battery front
cisterns; paving, and setting the stone door sills of
the entries to the bastions; setting the curbstones
of the ventilators to the casemate floors; pointing
the arches and the coping of the walls; and, beginning
in August, constructing the masonry work of the scarp
wall on the north face and gorge of the demi-lune. The
carpenters prepared and "capped" the piles for the demi-
lune scarp wall; and continued the installation of door
and window frames in the officers' and soldiers' quarters.
The excavation for the demi-lune scarp wall was completed
by the laborers during July and August. Other work carried
on by the laborers during the third quarter included;
the driving of piles, and the laying of piles, and the
laying of grillage in the foundation of the demi-lune
scarp wall; and, beginning in August, the placing of the
concrete of the demi-lune scarp wall, and the repairing
of the north and southeast dikes.

During the summer of 1843, Captain Mansfield
corresponded extensively with the Engineer Department
regarding the execution of the next revetment project at Fort Pulaski. On July 22, he transmitted detailed information to the Department concerning the results of his technical experiments on the soil strata underlying the foundation sites of the proposed scarp and counterscarp walls. Accompanying this letter was a diagram showing the position of the counterscarp as dictated by his soil experiments. Following his rejection, on June 28, of the Department's original demilune scarp plan, Captain Mansfield, with the Department's permission, had proceeded to prepare and put in execution his own scarp plan. In the meantime, however, the Department had prepared a new scarp plan, and forwarded it to him on July 28. This plan arrived much too late for adoption, and Mansfield, who received it on August 19, returned it the same day, observing that the "plans arrived too late to use as work on the foundations has progressed so far that the drastic changes called for can not be made." In fact, a portion of the wall had already been laid when the Department's new scarp plan was received; and as he later informed the Department, had the new plan been followed, its execution would have called for a greatly increased outlay of money. Attached to his letter of August 19, returning the Department's second scarp plan, was his drawing of the scarp wall as it had actually been commenced.
About a week later, on August 23, the Department had received Mansfield's drawing of August 19. On the same day, a letter went forth from the Department, accepting the profile of his scarp plan, but suggesting certain alterations to the "back" or outside section of the scarp wall, stating that

Since it is no longer practicable to change the grillage it is desired that you will add to the back of the wall the concrete shown in pencil on the drawing this day received from you, and this day returned.

Following these suggestions, Mansfield directed his assistant, Lieutenant J. S. Alexander, to draw up a revised scarp plan, embodying the additions penciled on the scarp plan of August 19. By mid-September, Alexander had completed the new scarp drawing, and on September 19, Captain Mansfield forwarded to the Department the "profiles of the scarp wall of the hemi-lune of this fort altered and drawn agreeably to the instructions on the plan of said profiles returned by the Department." This revised scarp plan showed both the work completed and the work remaining to be done; and in this form was executed between October, 1843, and May, 1844.

Meanwhile, attention had again been transferred to the project of constructing a countercarp wall at the fort. After considering the countercarp plans submitted by Mansfield on June 12, the Department
prepared a new countercorps plan, and forwarded it to
Hansfield on August 22. He received this plan on
August 31, and having carefully copied it, returned it
to the department on September 4. After studying
the department's new countercorps plan for several
weeks, Captain Hansfield arrived at the conclusion
that the countercorps could be built much cheaper than
provided for by the department's plan of August 25.
Accordingly, he prepared still another countercorps
plan, embodying his suggested revisions to the depart-
ment's new plan. On September 30, he forwarded his
new countercorps plan to the department, with an ex-
planatory letter offering his opinion that the wall
would be constructed cheaper than shown on the de-
partment's new plan, and requesting a decision as to
"which profile shall be used," his new plan or the de-
partment's. Several weeks were to elapse, however,
before the department reached a decision on this matter.

Early in September, 1843, Captain Hansfield
forwarded to the department a report giving an inter-
esting sidelight on employment practices at Mackspr
Island. On September 9, he transmitted a report giving
a "List of persons permanently employed at Ft. calakhi," in various capacities, showing their name, job, pay and
birthplace. It is interesting to find that only one
native of Georgia was then employed on the project in
a permanent capacity. This was one F. W. Stock, whose
job was that of "Vicualler" or board house keeper, and who received, for his culinary labors, the sum of twenty dollars per month, plus his "quarters and found." Seven other regular employees were also listed. Ralph Dunning, a native of Connecticut, acted as clerk, and received seventy dollars per month, plus his "fuel and no. quarters." Another important employee from Connecticut was Thomas S. Minor, who, as chief overseer, was paid sixty dollars per month. Still another native of Connecticut was Levi Mitchell, "master carpenter," who received three dollars per day. Three of the employees were not native born. William Finkler, "master mason," was a native of England, and was paid three dollars per day for his labors. E. Harrington, "suboverseer," a native of Ireland, received "$0.85 per day" and found." Christopher Wagner, the baker, from Germany, was paid a regular salary of thirty-two dollars per month.

One of the most picturesque of these employees was old Francis J. Cercepoly, from Florida, who was captain of the project's steamboat or "tender," at a monthly salary of forty-eight dollars. He had begun his intermittent connection with the work in Major Babcock's administration. During the two years of Robert S. Leffis tour of duty on Cockspur Island, 1829-1831, the young Engineer was pleasantly associated with this colorful boatman, who had drifted up the coast from Florida, where his ancestors had settled. Colonel Olmstead, who
was Confederate commander of Fort Pulaski in 1861-1862, relates a remarkable incident of Lee's ability to remember names and faces, in connection with his immediate recognition of Cercoopoly after a lapse of thirty years.

In 1861 General Lee visited Fort Pulaski briefly to direct its preparation for a siege. On the day of his arrival, Cercoopoly stationed himself at a point Lee must pass, hoping to be recognized. To the old fellow's delight, Lee's party had hardly come abreast of the spot, before Lee paused, glanced searchingly at the old boat captain, and then rushed forward to greet him warmly, calling him by name, although thirty years had elapsed since he had left the island.

By September 30, 1863, Captain Mansfield was able to look back upon a year of more than fair accomplishment on Cockspur Island, while the beginning and first few months of the year had been unfavorable, in the early spring of 1863 operations had been reopened on a moderate scale, and had progressed steadily throughout the remainder of the year. Captain Mansfield's new assistant, Lieutenant B. B. Alexander had arrived in the fall of 1862, and had immediately proven his worth with his capable supervision of the dike and ditch rebuilding project, necessitated by the disastrous October, 1862, storm, and in the making of the long needed topographic survey, during the first half of 1863.
Early in April, 1845, when operations were
reopened at Fort Pulaski, Captain Ansfield had de-
termined that the year’s work would be mainly on four
projects: construction within the fort; excavation of
the main canal to the moats; the commencement of the
next reversion project, and the strengthening of the
island’s dikes, ditches, and breakwater and the re-
pair of the permanent wharf on the North Channel. This
plan for the year’s work had been adhered to as faith-
fully as possible. Construction within the fort during
the year had consisted of both masonry and carpentry
work. The masonry work had included mainly the com-
pletion of the coping to the parapet walls of the
south and southeast fronts, and the gorge; further
work on the magazine guard walls; the plastering of
the battery front and gorge cisterns; and the laying
of the drains under the parade. The carpentry work
had consisted in the main, of the laying of the floors
in three of the casemates of the soldiers’ quarters,
also the furring, lathing, and plastering, and framing
the doors and windows of these casemates; and framing
the doors and windows of the officers’ quarters. The
main canal or “feeder ditch” from the South Channel to
the moats had been excavated, and a roadway built along
its western slope. During the spring of 1845, the excava-
tion for foundation of the demi-lune scarp wall had
been made, piling driven, the foundation laid, and the
masonry of the wall practically completed on the north front of the demi-lune. During the summer, plans for the counterscarp walls of the work had been prepared and were awaiting the department's final decision for their execution. Finally, during the early spring months of 1843, the dikes, ditches, and the breakwater had been materially strengthened, and the stone work of the permanent north wharf practically completed by the laborers on the project. Mansfield's sensible but ingenious planning of his year's task, and his deft handling of his limited force of workmen and laborers, had enabled him to complete, within the short period of six months, an amount of work which ordinarily would have required a much longer period of time to accomplish. The new fiscal year 1843–1844 had barely commenced before Captain Mansfield decided to request leave in order to make a trip North. On October 13, he wrote for the department's consent, stating that as he had "closed the annual papers, and has the utmost confidence in his assistant Lt. B. A. Alexander," he desired "to come North on business, to visit his family, etc." He also stated, that should the trip be authorized, he desired "to pass through Washington and deposit with the department the survey of Coitkapur Island." Ten days later, on October 25, the department approved his request, and two days afterwards notified him of its
Early in the first week of December, Mansfield left the island for the North. By November 3, he had arrived in Washington, where he personally delivered to the Department the finished charts of the 1843 topographic survey of Cohoay Island.

Prior to his departure from the island, however, he had finished the last of his routine reports, and secured the Department's final decision on the plans for the counterscarp walls. On October 12, he forwarded a rather interesting reply to a form circular issued by the Department on October 12, which requested information on the duties of project clerks. He reported that the Fort Sullivan project had only one clerk, whose "compensation is $75 per month and board, fuel and quarters;" while the duties of this clerk consist in keeping the Journal of daily operations written up from the reports of the Master Workmen. In keeping the books and accounts of expenditures and making out all payrolls, returns and copying all letters and in short doing all the writing necessary to a clear and systematic record of all operations.... 45.

This thorough character of the clerk's duties is but a direct reflection of the orderly and businesslike nature of his employer.

Much more significant, however, was a letter written by Captain Mansfield to the Department on this same day, October 12, regarding the profiles of the proposed counterscarp walls, in reply to Mansfield's
letter of September 30, taking issue with the Department's counterscarp plan of August 22, and transmitting a substitute counterscarp plan, the Department, on October 8, had forwarded a report supporting its August plan. Mansfield did not receive this letter until October 18. On that day he immediately replied reiterating his stand that his counterscarp of September 30 was more practical and less expensive than the Department's plan of August 22. The Department, however, was not to be shaken from its adherence to the counterscarp plan of August 22, and on October 25, gave its final approval to this plan, and ordered it to be executed, with slight modifications. In a sense this decision reflected credit on Captain Mansfield, since the modifications to the Department's counterscarp plan were adopted at his suggestion.

Lieutenant B. J. Alexander was in charge of the Fort Rulaski project during most of the fourth quarter of 1843. In October the driving of the piles and the laying of the grilling in the foundation of the demi-lune scarp wall was completed. The masonry work of this wall was continued throughout the three months period. Other work carried on during this period by the masons included: the painting of the coping of the southeast front, and the casemate arches of the northeast front; the plastering of the soldiers' quarters; and the setting of curbstones to the ventilators of the casemate floors.
besides their work on the foundation timbers of the
demilune scarp, the carpenters were engaged mainly in
"casing the doors and windows of the officers' quarters."
The laborers added in the completion of the foundation
of the demilune scarp, and helped to place the concrete
work of this wall. During November and December the
laborers commenced the excavation of the demilune
ditches, or moat, and began "embanking the demilune
rampart." They also made some repairs to the southeast
dike during December. With a fair working crew,
Lieutenant Alexander had succeeded in getting the new
year's work well underway by the time of Captain Mans-
field's return to the Island on December 19.

At the time of Captain Mansfield's visit to
Washington, early in November, 1843, he had left a
memorandum with the Department requesting its decision
on several constructive problems in both the demilune
and fort. In reply to the queries in his memorandum,
he received, several weeks after his return to the island,
a communication dated December 28, from Colonel Totten,
Chief of Engineers. This communication was quite
lengthy, treating in detail each of the points raised
in Mansfield's memorandum. In the demilune, he was ad-
vised to construct "a breast high wall to the parapet;"
and to build a shot furnace, as "has already been directed."
He was also directed to submit a "sketch of the demilune
constructed from actual dimensions," so that there
would be marked "thereon the position for the guns."
The height he had proposed for the "level" of the demil-
lune parade was approved, as was his location for the
demilune "gateway." He was also advised that the plans
for the demilune drawbridge, and the main sluiceway
into the moats would be forwarded as soon as they could
"be prepared."

The Chief Engineer's communication also took
up four main constructional problems within the body of
the fort. "Anesfield was directed to pave the "walk way
along the gorge...with the very best and hardest bricks
laid flatwise;" while the "ponstern" was to be paved
"with the hardest brick on edge or with granite flagging,
as concrete will not withstand the violence it will be
exposed to." In regard to the portico along the gorge,
Colonel Fotten wrote that the "portico which you pro-
posed I do not regard as an indispensable structure —
at any rate, it must be very light and cheap — I should
like to see your preliminary sketches of such a one —"
Neither was Colonel Fotten convinced that the toilets,
which Anesfield proposed to erect within the fort, should
be installed there. In this point he observed that "the
privies should be outside of the Fort — where, is not
yet determined; but I certainly would make no provision
for them within the walls," with such able suggestions
in hand, Mansfield was prepared to face several of the problems which were to arise in the new year.

The month of January, 1864, saw the operations on the project rapidly expanding. Three days after the opening of the new year, Captain Mansfield began to advertise in The Daily Georgian for "20,000 bushels clean shelling corn, for the use of the fortifications at this place."

Near the end of the month, work on the demi-lune had progressed to the extent that the consideration of plans for the mounting of guns thereon was necessitated. On January 23, he requested of the Department that the "plan for securing the pindle blocks as now set in the main work, be furnished soon; as the present is the most favorable time that probably will ever occur here to do the work." Apparently he had misplaced the original plans which he had followed in creating and securing the pindle blocks of the fort's barbette battery during 1863. Before the end of the month, however, the Department had forwarded to him a new "plan for securing the pindle blocks of the Barbette Battery," intended for his use when the demi-lune gun masts were installed.

Early in February, in compliance with the Department's request of December 26, 1863, he forwarded a drawing of the demi-lune as it had been executed at that date. His letter of February 3, which accompanied the drawing, explained that the "Plan shows the con-
struction of the demi-lune with the new position of the draw bridge, the parade raised one foot and the ditch as I have established it." In this letter he explained that while the width of the demi-lune ditches or moat had been set at a fifteen and a half yards, the
ditch at the salient angles was but 13 1/3 yards which could be increased by making the prolongation of the gorge a secant instead of a tangent to the curve of these points.

Continuing, he observed that

I have marked down a position for the draw/ fry furnace which can be changed as well as the draw/ bridge if they do not meet the views of the Department - likewise it will not be too late to alter the breadth of the ditch of the Demilune.

He concluded the letter with the urgent statement that he "would thank the Department for a reply on this point as our excavations for the countercaspar have been commenced."

Ten days later, on February 19, Colonel J. G. Totten, Chief of Engineers, replied at length to Mansfield's letter of February 9. The letter discussed in the main the position of the countercaspar wall, and the width of the fort and demi-lune ditches. Mansfield was again "instructed to place the countercaspar so that there should be at least a horizontal distance of 17'6" from the crest of the glacia unbanked to face of this wall." Opposing "any excess of breadth [in the ditches],
as involving "a useless expense," the Chief Engineer observed that "a ditch 40 feet wide would be as complete a protection as one 100 as a siege is out of the question, and as regards an assault, both, and each are impassable obstacles." Clearly the day of rifled cannon had not then been visualized by Colonel Totten. In concluding his letter, the Colonel approved the "Ditch of the Gorge as submitted," and instructed Captain Mansfield that the "Ditch of the demi-lune should not exceed 30 feet in width, with a minimum of 20 feet. The maximum width for the main ditch should be \( \frac{5}{2} \) feet and the minimum 40 feet."

Before the end of February, Captain Mansfield had written two more letters to the Department, in an effort to secure a final decision on the width of the ditches. On February 19, he acknowledged receipt of Colonel Totten's letter of February 15, and in reply, informed the Department as to the steps he would take to comply with its orders of that date. He explained that

No misunderstanding has been made of the Department's instructions in regard to the embankment of the glasis of the main work, nor is any part of the embankment to be removed in excavating for the counterenemy of the work.

He further assured the Department that the "change in the breadth of the ditches, in compliance with the Department's order, shall not be expensive as the work had not progressed far enough to cause great loss."
While freely accepting the "department's view" on the width of the main "ditch on the 4 battery fronts," and setting it at sixteen yards, he reluctantly set the width of the demi-lune ditches at thirty feet, stating, however, that at least "it should be 40 feet at the gorge." In fact, he was so strongly of the opinion that a wider demi-lune ditch was necessary, that he reopened the question nine days later. On February 28, he informed the department that he had reflected on the subject of the breadth of the demi-lune ditch and believed 30 feet far too little for a ditch to a permanent work. If a counterscarp is to be built it appears that the only objection to a broad efficient ditch is the removal of a few yards more of mud.

He urged the department to "reconsider the ditch breadth" immediately, as "in about 10 days will be prepared to excavate further for this counterscarp with a view to lay all that part on sand this season." Colonel Totten, however, was adamant, and on March 4 notified Captain Mansfield that he considered the "maximum width of 30 feet for the demi-lune ditch ample."

Construction work proceeded busily on Cookspur Island during the first three months of 1844. By the end of this period the most revetment project was well on its way to completion. In January the main section of the demi-lune scarp wall was completed, and in February the coping was laid. Early in February excavations for the foundation of the counterscarp walls
THE BREACHED AND SHATTERED WALL AT FORT PULASKI, 1936

Looking northeastward along the breached and shattered southeastern wall of Fort Pulaski. The solidly bricked area of the wall, at the left, is at the southeastern angle or pancoape, which was breached by the fire of the Federal cannon on Tybee Island, April 10 and 11, 1862. This disastrous bombardment also produced the interesting shattered effect of the southeastern wall. A large section of the main moat is to be seen in the foreground.
of the fort moat were commenced. Despite the fact that
the working force was restricted, much detailed con-
struction was continued during the quarter. In addition
to their work on the scarp wall in January and February,
the masons completed the guard wall of the south magazine;
plastered the two gorge cisterns; fitted iron carriage
tracks to the stone segments of the fort’s barbette
battery; pointed the fort’s parapet wall on the north,
 northeast and southeast fronts; and the intrados of
the casemate arches of the northeast front; and lathed
and plastered certain of the officers’ quarters. The
carpenters worked steadily during the three months
“casing” the doors and windows of the officers’ quarters;
“fitting in doors and windows and mountings of 3 case-
mates of the soldiers’ quarters”; and constructing the
“luffer blind ventilators” of the quarters. After com-
pleting the laying of the concrete of the demi-lune scarp
wall in January, the laborers commenced in February, to
excavate for the foundation of the counterscarp wall
of the fort moat, “on the E. [East] and 3.C. [Center]
fronts.” In February the laborers also began to excavate
the gorge moat, and by March 1 had begun to excavate for
the foundation of the northern section of demi-lune moat
counterscarp. During the period the laborers embanked
the “rampart of the north face of the demi-lunes,” and
the “glaesis on the E. [East] and 3.C. [Center] fronts”
of the fort moat.

A lengthy discussion of several important constructional problems was carried on by correspondence between Captain Mansfield and the Engineer Department during March and April. Having carefully studied the details of his demilune plan, which he had submitted by request on February 3, the department was ready to reply by mid-March. On March 10, it forwarded to him, with an explanatory letter, a new demilune plan, embodying its suggestions of the final details of this outwork. Colonel Totten, Chief of Engineers, in this letter, advised Mansfield that

This sketch shows certain things which have been determined - the profile of the glacis of the demilune and of the covert way, as well as the traces of these... The profile of the ditch, rampart and parapet, are shown. The reference of the parapet is taken at the height supposed to be recommended by you - 9".

In regard to the drawbridge gateway into the demilune, Colonel Totten observed that the "position of the gateway is the same as recommended by you," but warned him to "delay the construction of masonry for bridge gateway until I send a detail drawing which I hope to send you in a few days." He was also ordered to build the foundation of the "breast high wall...of concrete," and the "superstructure of concrete faced with bricks as drawn [on the sketch]." Concluding this letter of advice and directions, Colonel Totten requested that "drawings
of all the sketches, on sheets by themselves" be forwarded
at Captain Mansfield's earliest convenience.

A little over a week later, on March 25, Cap-
tain Mansfield had received the Department's new demil-
lune sketch, and on that day, forwarded a reply contain-
ing his comments on the new plan. He reported that
the demilune as constructed had followed closely the
Department's ideas in practically every particular, ex-
cept that the "breath of the rampart terreplein" had
been built at a "bare 10 feet instead of eleven as drawn
on the said sketch." He requested "authority to adhere
to the original plan as executed in order to avoid the
expense of alterations" and urged the Department to for-
ward "an immediate reply" on this point. He further re-
ported that he was then
occupied with the counterearp of the
capital and anxious to complete the arrange-
ments on the sloop for the drawbridge of the
demilune and prepare the foundation of the
shot schild furnace in order that the next sea-
son the counterearp may be completed entire....

Accordingly, in closing this letter, he requested the
Department to forward the plan of the demilune drawbridge
"as soon as possible."

Meanwhile, the Department, as it had promised
in its letter of March 16, had forwarded on March 22, the
eagerly anticipated demilune drawbridge plans. A lengthy
explanatory letter of the same date accompanied the plans.
This letter explained in the minutest detail the operation of the demi-lune drawbridge. In closing, it instructed Captain Fansfield that after he had constructed this drawbridge, he was to "send to this office a set of drawings similar to those exhibiting the work as executed."

Four days, then, after Fansfield had made his exigent plans of March 25, he received the Department's demi-lune drawbridge plans, and the accompanying letter. In commenting on these plans, on March 29, Fansfield's good engineering sense came to the fore as usual. He notified the Department that there would be much expense incurred, at a time when it could not be borne, should these plans be followed exactly, and the foundations be constructed for the walls "sustaining the rampart on either side of this passage from the parade to the piers of the drawbridge in which the crank for lowering the bridge is established." To avoid this expense, he suggested that "these walls toward the interior of the Demi-lune unconnected with the draw [bridge] and its machinery be suppressed and their place be supplied by slopes of earth."

He substantiated this stand by explaining that these masonry walls would call for expensive piling and grillage timber work, while the earth slopes could rest safely upon the mud. Again he requested an "immediate answer as to whether the present plans are to be followed or not," on this point. Five days later, on the basis of Fansfield's
letter concerning these walls, the department authorized him to "omit" a large section of them.

Several constructional plans prepared at the Fort Pulaski office, under Captain Mansfield's super-
vision were forwarded to the Department during May. On May 1, in compliance with the Department's request of
March 16, for drawings of the sluices already built on the island, he transmitted a roll of drawings containing
the "Plans of the sluices that have been constructed at this work." Accompanying these drawings was a letter,
which modestly explained that "these sluices have not failed in any particular nor has it been necessary to
strengthen them at all since they were built." In this same roll of drawings he returned the Department's demi-
lune drawbridge plans of March 22, both sets of plans having been carefully copied in his office on Cockspur
Island. Nine days later, on May 10, he sent his measured plan of the demilune as actually constructed, to
the Department, by Captain Jack Mackay, of the Topographical Engineers, who was enroute to Washington,

Special exertions were made during two and a half months of the second quarter of 1864 to complete
a great mass of detailed construction work on Cockspur Island. Such was accomplished despite the rapidly de-
pleting working funds, the exhaustion of which finally caused the suspension, by mid-June of the work for the
fiscal year 1863-1864. The working crew was also grade-
nally but sharply reduced during the period, from a
total of eighty, on April 1, to seventeen on June 11.
The small crew of masons, five in April, and four in
May and June, completed a surprising amount of work.
During the three months they were busily occupied con-
structing the fort countergoursearcgL on the north and north-
east fronts, and the north face demi-lune countercarcn;
building the masonry pit for the demi-lune drawbridges;
fitting iron carriage tracks to the stone segments of
the fort's parapet wall and its coping; laying hearths
in the officers' and soldiers' quarters; setting marble
mantels in the officers' quarters; and plastering two
casemates of the officers' quarters.

The most laborious tasks of the period were
performed by the laboring crew, which contained by far
the largest number of workers. They plodded along in
the spring heat, laying the foundation of the demi-lune
shot furnace and drawbridge; building the "dry stone
wall on the east face of the north wharf"; excavating
the moat on the north and south fronts of the demi-lune,
and north, northeast, and gorge fronts of the fort;
embanking the parapet and "filling in" the parade of
the demi-lune; and making and placing the concrete of the
countergourd walls on the north and northeast fronts
of the main work. The small carpenter crew continued their
work on the "louver blind ventilators" of the quarters.
and the "casing" of the doors and windows of the officers' and soldiers' quarters. On June 11, the working funds having been exhausted, the whole working force was "discharged for the season," and the operations on Cockspar Island were again suspended.
Notes

Chapter V


2. R.R., File No. 9, 1041, March 10, 1843.

3. ibid; of., R.R., File No. 9, 1047, March 22, 1843.

4. R.R., File No. 9, 1052, March 29, 1843.

5. R.R., File No. 9, 1051, May 8, 1843.

6. R.R., File No. 9, 1053, April 3, 1843.

7. Preparations for the digging of this canal, which was to form a 97° angle with the demilune, had begun in 1842. Its southern terminus was to be located approximately six hundred feet to the west of the South Channel end of Mansfield's old transport canal. The completed main "feeder" or canal was "to be a simple ditch with no embankments."

See R.R., File No. 9, 1076, Oct. 5, 1842; of., File No. 9, 1090, June 5, 1843. See also map, drawer 70, sheet 53, pt. ii. "Survey of the mouth of the Savannah River, Cockspur Island, showing Fort Pulaski . . . .", 1843, Construction Section, Office, Chief of Engineers.

8. Mansfield refers to the need for "a small wharf" on the South Channel, due to the fact that the old temporary construction wharves on the South Channel located approximately six hundred feet to the east of the mouth of the new canal, and at the southern terminus of Mansfield's old transport canal dug in 1831, were then rotten and were soon to be abandoned.

See R.R., File No. 9, 852, Oct. 2, 1831; of., File No. 9, 1090, June 5, 1843. See also map, drawer 70, sheet 53, pt. ii. "Survey of the mouth of the Savannah River, Cockspur Island, showing Fort Pulaski . . . .", 1843, Construction Section, Office, Chief of Engineers.
9. Another interesting point concerning this roadway to the South Channel is the fact that during the late summer of 1845, in order to provide sufficient earth to grade the parade of the fort, Lt. Alexander supplied the necessary material "by cutting away part of the broad roadway to the south side of the Island..." See R.S., File No. 4,606, September 12, 1845.

10. R.S., File No. 4,807, April 1, 1845; of., File No. 4,1081, May 6, 1843, and 4,1093, June 8, 1843.

11. April 4, 1843; this advertisement repeated on April 5 and 6, 1843.

12. R.S., File No. 4,1076, April 27, 1843; of., File No. 4,1087, June 6, 1843.

13. Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, January 18, 1842. No. 9 Letters to Officers of Engineers, 269-274.


15. R.S., File Nos. 4,1085, June 1, 1843; 4,1103, June 6, 1843.

16. R.S., File No. 4,1090, June 6, 1843.

17. These old wharves had been built by Mansfield in the spring of 1851, when he abandoned Babcock's sharp sites on the North Channel. See R.S., File No. 4,1765, March 8, 1851; of., File No. 4,852, October 2, 1851. See also map, Drawer 70, "sheet 3, "Sketch exhibiting the actual state of Cockspur Island..." 1831; of., map, Drawer 70, Sheet 7, "Map of Cockspur Island and the adjacent channels..." 1831; of., map, Drawer 70, Sheet 53, Pt. II, "Survey of the mouth of the Savannah River, Cockspur Island, showing Fort Pulaski..." 1843; all located in the Construction Section, Office, Chief of Engineers.

18. See plan, Drawer 70, Sheet 15, "Profiles of Scarp
19.

Soon afterwards, apparently, the Department authorized him to prepare and follow the type of demilune scarp plan which he considered best. See K. 1131, August 19, 1843.

20.

R. S., File No. B. 1092, June 12, 1843.

21.

Ibid. See plan, drawer 70, sheet 27, "Fort Pulaski, Plan for countercarp on sand and mud," 1843, Construction Section, Office, Chief of Engineers.

22.

It should also be remembered that the 1841 project had called for both a scarp and a countercarp wall, which project the Department had divided into two separate projects in January, 1842, temporarily eliminating the countercarp plan. See R. S., File No. B. 774, November 29, 1841, of Colonel J. C. Totten to Captain Mansfield, January 13, 1842, No. 9, Letters to Officers of Engineers, 269-274.

23.

R. S., File No. B. 1094, June 15, 1843. This "survey for the use of the office" apparently is the topographic map, drawer 70, sheet 26, "Coosapur Island, Savannah River, Ga. Surveyed and drawn by Barton B. Alexander, Lt. Engrs.," 1843, Construction Section, Office, Chief of Engineers; as there is no evidence showing that it was ever transmitted to or received by the Department, and as it is drawn to the scale referred to. See No. 10, Letters to Officers of Engineers, 1-156.

24.

R. S., File No. M. 1109, July 15, 1843; M. 1129, August 12, 1843, of Colonel J. C. Totten, Chief of Engineers, to Captain Mansfield, June 20, 1843, Lt. Engrs., and to Captain Mansfield, July 7, 1843, in No. 10, Letters to Officers of Engineers, p. 141, and pp. 468-471, respectively. Totten evidently realized that Mansfield had merely made an error in writing the scale of three feet to one mile as three miles to one foot.
8. 1843; K.1130, August 12, 1843; M.1147, September 8, 1843; K.1169, October 7, 1843.


27. The Department's original scarp plan, Drawer 70, Sheet 15, Construction Section, Office, Chief of Engineers, had been sent to Mansfield on Jan. 18, 1842. See No. 2, Letters to Officers of Engineers, 260-274. See also K.S., File Nos. K.1090, June 6, 1843; M.1129, August 6, 1843; K.1131, August 19, 1843; M.1147, September 8, 1843.

28. Plan, Drawer 70, Sheet 29, "Profile of Scarp wall of Demilune." 1843, Construction Section, Office, Chief of Engineers. See also D.P. Woodbury, Lieutenant and Assistant to the Chief Engineer, to Captain Mansfield, July 20, 1843. No. 11, Letters to Officers of Engineers, 1.


30. K.S., File Nos. K.1140, August 30, 1843; M.1147, September 8, 1843.

31. K.S., File No. K.1131, Aug. 29, 1843. This drawing, Mansfield's own demilune plan, under date of Aug. 19, 1843, is not in the Construction Section, Office, Chief of Engineers, due to the fact that it was returned to Mansfield on August 25, by the Department, with its comments and instructions for certain alterations. See Col. Totten, Chief of Engineers, to Capt. Mansfield, Aug. 25, 1843, No. 11, Letters to Officers of Engineers, 58-59.


33. Ibid.
34. R.S., File No. M.1156, September 19, 1843.

35. See plan, Drawer 70, Sheet 31, "Plans and profiles, illustrative of the piles, grillage, and masonry of the scarped wall of the demi-lune of Fort Pulaski," 1843, Construction Section, Office, Chief of Engineers.

36. R.S., File No. M.1092, June 12, 1843; cf., Colonel Totten, Chief of Engineers, to Captain Mansfield, August 22, 1843, No. 11, Letters to Officers of Engineers, 37-38. See plan, Drawer 70, Sheet 30, "Fort Pulaski, plan for counter scarped on sand and mud," 1843, Construction Section, Office, Chief of Engineers.


38. R.S., File No. M.1160, September 30, 1843. See plan, Drawer 70, Sheet 32, "Diagram relative to counter scarpe of Fort Pulaski," 1843, Construction Section, Office, Chief of Engineers.


40. Dunning also received his meals, as a part of his compensation. See R.S., File No. M.1161, October 18, 1843.

41. See Major (later Colonel) Charles N. Olmstead, Fort Pulaski, to Florence Olmstead (his wife), Savannah, Ga., November 21, 1861, MS letter in possession of Miss Florence Olmstead (a daughter), Savannah, Georgia, and used with her gracious permission.

42. R.S., File No. M.1177, October 13, 1843.


44. R.S., File No. M.1191, October 31, 1843. See plan, Drawer 70, Sheet 33, 2 Pts, "Survey of the mouth of the Savannah River, Cockspur Island, showing Fort Pulaski.
with the advanced battery, the dikes, temporary buildings, etc., etc. ..."

1843, Construction Section, Office, Chief of Engineers.

45. E.S., File No. M.1161, October 18, 1843.

46. See plan, Drawer 70, Sheet 30, Construction Section, Office, Chief of Engineers; cf., Colonel Totten, Chief of Engineers, to Captain Mansfield, August 22, 1843, No. 11, Letters to Officers of Engineers, 37-38.

See also plan, Drawer 70, Sheet 32, Construction Section, Office, Chief of Engineers; cf., E.S., File No. M.1160, Sept. 30, 1843.

47. E.S., File No. M.1162, October 18, 1843.

48. Colonel Totten, Chief of Engineers, to Captain Mansfield, October 25, 1843, No. 11, Letters to Officers of Engineers, 167-169.

49. E.S., File Nos. M.1163, October 9, 1843; E.1187,

November 4, 1843; E.1194, November 6, 1843; E.1199,

November 24, 1843; E.1204, December 6, 1843; E.1224,

January 7, 1844.

50. E.S., File Nos. M.1203, December 8, 1843; M.1214,

December 20, 1843; cf., The daily Georgian (Savannah),

December 20, 1843.

51. Colonel Totten, Chief of Engineers, to Captain Mansfield, December 28, 1843, No. 11, Letters to Officers of Engineers, 310-312.

52. Ibid.

53. January 3, 1844; this advertisement repeated on January 4-7, and 9, 1844.


56.
See plan, Drawer 70, Sheet 34, "Demilune of Fort Pulaski," 1844, Construction Section, Office, Chief of Engineers.

57.

58.

59.
R.S., File No. M.1246, February 17, 1844. In referring to the "glass," Mansfield was speaking of the earthen embankment around the outer wall of the fort.

60.

61.
Col. J. J. Totten, Chief of Engineers, to Capt. Mansfield, March 4, 1844, No. 11 Letters to Officers of Engineers, 415. It is interesting to note that the word, or earth around the front battery fronts, was actually excavated to a width of 40 feet, and the demilune ditch to a width of 30 feet.

62.
See File Nos. M.1219, January 4, 1844; M.1233, January 23, 1844; M.1240, February 3, 1844; M.1241, February 9, 1844; M.1254, March 3, 1844; M.1261, March 11, 1844; M.1270, April 5, 1844.

63.
Col. J. J. Totten, Chief of Engineers, to Capt. Mansfield, December 20, 1843, No. 11 Letters to Officers of Engineers, 310-312. See plan, Drawer 70, Sheet 36, Construction Section, Office, Chief of Engineers.

64.
Col. J. J. Totten, Chief of Engineers, to Capt. Mansfield, March 16, 1844, No. 11 Letters to Officers of Engineers, 437-438. See plan, Drawer 70, Sheet 39, "Sketch of the demilune of Fort Pulaski," 1844, Construction Section, Office, Chief of Engineers. This plan, while displacing plan, Drawer 70, Sheet 34, is very similar to the latter.

65.
66. Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, March 22, 1844. No. 11 Letters to Officers of Engineers, No. 443. See plan, Drawer 70, Sheet 36, "Plan, Sections, and Elevations of [Semilune] Drawbridge of Fort Pulaski," 1844; and plan, Drawer 70, Sheet 37, "Details of [Semilune] Drawbridge, Fort Pulaski," 1844; both in Construction Section, Office, Chief of Engineers.

67. R.S., File No. 3, 1271, March 29, 1844.

68. The $60,000 appropriation for Fort Pulaski made on March 3, 1843 was rapidly being exhausted.

69. Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, April 3, 1844. No. 11 Letters to Officers of Engineers, No. 444.

70. These plans were of the following sluices: sluice at south end of main canal to meets - plan, Drawer 70, Sheet 38, "Plan and sections of the advanced sluice of feeder to ditch as actually executed through south dike," 1844; and sluices through northwest and southwest dike - plan, Drawer 70, Sheet 39, "Plan and sections of the sluice thro' the N.W. dike as actually executed, and plan and section of the sluices thro' the S.E. dike as actually executed," 1844; both sheets in the Construction Section, Office, Chief of Engineers. These three sluices were constructed in 1844. See R.S., File No. 3, 976, October 5, 1842.

71. R.S., File No. 3, 1290, May 1, 1844. See plans, Drawer 70, Sheets 35, 36, and 37, Construction Section, Office, Chief of Engineers.

72. See plan, Drawer 70, Sheet 40, "Plan as has actually been executed of the piles, grillage, and masonry of the scarp wall and gorge of the Semilune of Fort Pulaski," 1844, Construction Section, Office, Chief of Engineers; cf., R.S., File No. 3, 1301, May 23, 1844.

73. R.S., File Nos. 3, 1275, April 2, 1844; 3, 1289, April 29, 1844; 3, 1296, May 3, 1844; 3, 1300, May 17, 1844; 3, 1311, June 6, 1844; 3, 1512, June 11, 1844; 3, 1528, July 10, 1844.
Chapter VI

An epoch ends:
A fort is built and a duty completed

Meanwhile, on June 14, Captain Mansfield had left the island for the North. As early as April 10, he had notified the Department of his intention, on the approach of the "hot season", to "close operations between 1-15, June, until November 1." He further stated that he would "soon ask the Department for leave to come North, so as to make contracts for the manufacture of the iron work of the drawbridge for Fort 1.

Fulaski." In May the coastal heat further aggravated his poor state of health, and on May 25, he requested Colonel Totten, Chief of Engineers, to grant him a leave in the cooler climate of the North, until October 20. By June 11, he was rather irritated with the Department's seeming lack of interest in his project, and at its failure to take any action regarding his personal circumstances. On that day he wrote a rather sharp and querulous letter to the Department concerning the whole situation. With no little asperity, he reported that

Today the last man was discharged and the work at the fort is actually suspended. The main reasons for the suspension are: 1, good men will not work in the sickly seasons, and 2, all funds are expended.

In concluding this succinct letter, he reminded the Department of his request of May 25, reiterated it, and
reported that his health had now reached the state where actually it was quite "bad."

This peevish outburst was rather premature, however. The slow-moving Washington bureau had not overlooked his welfare after all. In June 7, the Department had forwarded him authority to leave immediately for the North, in order to take up "specific duties with the Board of Engineers," of which he was a member. Mansfield received this letter, belatedly for him, on June 12. He lost no time in making his departure, however. Placing "Lt. B. S. Alexander and 8 men in charge of the work and Fort Pulaski," he sailed for New York two days later. Ten days of steady traveling brought him safely to his home and family at Middletown, Connecticut, on June 24. Cockspur Island, with its attendant troubles and problems, which of late years had become an ever increasing source of responsibility and worry to Mansfield, at least could be partially forgotten for a time.

Awaiting him at Middletown was an official notice from the Department that the sum of $13,000 had been appropriated by Congress on May 31, for work at Fort Pulaski during the year 1844-1845. This notice also ordered him to submit at an early date an estimate to expend this sum. Accordingly, on July 19, he forwarded "a project of operations to expend the appropriation of $13,000...." Briefly reviewing the "Present
condition of the work," the report noted that the
counterescarp north of the capital
sally-port, is generally completed to
the level of the underside of the coping,
and the ditches, along the same
generally excavated.

Therefore, with the sum appropriated, it was proposed

to complete the entire counterescarp wall;
excavate the ditches; construct the
two draw and fixed bridges; embank the glacis
and the rampart and parapet of the demi-lune
generally; finish the plastering of the casemate
quarters; and erect the furnace in the
demi-lune.

S ocaspur Island, in the meantime, was the scene
of very limited operations, under the direction of Lieutenant B. J. Alexander. During most of July, the working
force, eight laborers, were "employed in embanking in
the rear of the counterescarp wall." Early in the month,
however, Lieutenant Alexander realised that even this
work must soon end. Not wishing the prospects of an
idle summer on the hot, lonely island, he requested Cap-
tain Mansfield to secure him a leave during the hot
months. On July 11, Captain Mansfield forwarded his
assistant's request to the Department, stating that he
approved the application. Four days later, on July 15,
the Department ordered Lieutenant Alexander to temporary
duty with Major Smith in New York Harbor. On July 27,
then, not at all reluctantly, Alexander left S ocaspur for
the North.

S ocaspur Island was practically deserted
during the remainder of the summer of 1843. Prior to his departure for New York, Lieutenant Alexander had engaged "3 persons, 2 laborers and 1 mechanic...at an aggregate cost of $25 per month" to remain "on the Island, with their families, in charge of the property."

During August and September, this force alone remained on Cockspur, performing maintenance duties, but no other work was carried on at this period.

Captain Mansfield, from his temporary headquarters at Middletown, on October 18, forwarded to the Department his annual construction report for the year ending September 30, 1844. This report briefly outlined the work of the productive, though often interrupted year 1843-1844. While some detailed construction work had continued in the quarters within the fort, the year's working funds had been

...applied principally to the construction of the escarp and counterscarp walls of the demi-lune, and the counterscarp of the main work; to the excavation of the ditches, and the embankment of the rampart and parapet of the demi-lune.

Construction in the main work had included both carpentry and masonry work. In the gorge face two casemates of the officers' quarters and five of the soldiers' quarters had been practically completed, "being lathed and plastered and doors hung and casings fitted." Most of the remaining casemates in the gorge had been furled, lathed, and "cased." Miscellaneous masonry work within
the fort had included: setting of all but two of the
surbing stones for the floor ventilators; pointing the
interior and exterior of the parapet wall; completing
the setting of the iron carriage tracks of the barbette
battery; the completion of the guard wall of the south
magazine to the coping; the pointing of the intrados of
the seven of the battery casemates on the northeast
front; and the practical completion of the cisterns.
The parade ground had been "generally filled in." The
counter-arches of eleven of the battery casemates had
also been "filled in to the water level with sand."
Much work had also been accomplished on the building of
the fort's counterscarp, and the excavation of its moat.
The counterscarp wall had been completed to the coping
on the gorge, and the north and northeast fronts. The
moat had also been excavated along these fronts.

Part of the heavy construction work in the
demilune had been finished during the year, and rapid
progress had been made toward the final completion of
this whole outwork. The scarp wall and a part of the
north front counterscarp had been completed. The north
moat of the demilune had been completely excavated, and
the south moat partially so. The rampart and parapet
of the north face, and a portion of the south rampart
had been embanked during the working season. The foun-
dations of the shot furnace and the demilune drawbridge
also had been constructed.
A few other miscellaneous tasks were completed on the island prior to the suspension of the work in June. The decayed timbers of the north wharf were removed and replaced with a "dry stone wall." The southeast dike had been strengthened. A new boathouse, to replace the one destroyed by the 1842 storm, had been built at the north wharf during the year.

The year, in many respects, had been rather trying for Captain Mansfield. The working force had hardly been adequate, and funds had rapidly depleted. Although assisted by Lieutenant Alexander, responsibilities and worries, which had gradually increased year by year, seemed to press especially hard upon Captain Mansfield during 1843-1844. Correspondence with the Department over constructional problems, much of it of no great significance, had measurably increased. The condition of his health had been none too good throughout the whole year. Though only forty-one, he had been laboriously engaged at Fort Pulaski, and at other projects along the malarial southern coast since 1828, and his constitution was beginning to give way. He had not allowed such circumstances to affect the work of the year 1843-1844, however, but had directed the work vigorously until exhausted funds again caused a suspension.

The work of the new year 1844-1845 was rather slow in getting underway. During October the only work
done on the island was the repair of the oven at the

bakehouse. During most of the month, Mansfield was de-
tained in New York and Washington by his duties with the
Board of Engineers, and he did not leave for the island
until October 22. In September, however, he had begun
to plan for the earliest possible opening of the new
year's work. On September 19, he requested the Depart-
ment to furnish him the plan for the main sluiceway at
Fort Pulaski, stating that he wished to buy stone for
this sluice while he was still in the North. About a
month later, the Department not having complied with
this request, he reiterated it on October 16, stating
that he would like to have the plan by November 1, since
he "proposed to begin the counterearp [at the site of
this sluice] immediately on the resumption of operations."
In this same letter he requested that "Lt. Alexander be
ordered to Pulaski by November 1." By November 2, Captain
Mansfield had returned to his post and operations were
immediately reopened.

The month of November, 1864, proved a disap-
pointing one at Cockspur Island. The project made but
little advance during the month. Lieutenant Alexander
had failed to return promptly to his duties. Captain
Mansfield did not succeed in commencing the main sluice-
way due to the fact that its plans still were withheld by
the Department. Twice in November, on the fourth, and on
the twenty-sixth, he requested the Department "to for-
ward the plan of the sluice of this work," but by the
end of the month the department still had failed to re-
lease the plans. Certain work was accomplished during
the month, however. The one mason on the project was em-
ployed constructing the demilune shot furnace. The three
carpenters were occupied "making doors to the cupboards
in the casemate quarters." The main tasks of the period,
though, were carried out by the sixty-eight laborers
then employed. They were engaged embanking and grading
the "covert way and glacis" of the north and northeast
fronts of the fort, and the north front of the demilune;
embanking the rampart on the south face of the demilune;
grading the terreplein of the fort's barbette battery;
making and placing concrete to strengthen the pinte
blocks of the fort's barbette battery, along the south
and southeast fronts; and excavating the ditch and count-
eresery foundation along the south front of the fort.

The long and painfully awaited plans of the
main sluiceway were finally forwarded by the Department
25. to Captain Mansfield on December 6. A letter explain-
ing these plans in detail was forwarded on the same day.
He received the plans on the tenth, and explanatory let-
ter two days later. Upon his reception of the plans
and their explanations, he immediately began to suggest
certain changes and revisions, discussion of which with
the Department, was to occupy much of his time during the
next month. On December 12 he wrote the Department, sug-
gestting an immediate revision of a certain part of the
sluiceway, stating that

...a change in the section of the sluice re-
ducing it to 9 feet greatest breadth and
greatest height the level of the water in the
ditch would add much to the favourable ap-
pearance of the work when finished; would
lessen the expense of the same; and in some
degrees lessen the damage caused by a large
amount of water being let in at one time....

With his letter he transmitted a "rough draft" of his
proposed change in the sluiceway. The Department was
not measurably impressed with his suggested revision.
On December 20, Colonel Totten returned Mansfield's
sketch of December 12, advising him that while it varied
but little from the Department's plans of December 6,
"a slight alteration" had been indicated in red ink,
"which you may adopt, but I do not recommend the change;
which proposes to lower the key of the arch one foot."

Captain Mansfield was not at all satisfied with
the stand taken by the Department regarding his suggested
change in the section of the sluiceway. By December 28,
he had prepared further information to substantiate his
position, and on that day forwarded it to the Departmen,
accompanied by his drawing of the twelfth, which he re-
turned for further consideration. Totten, however,
was far from convinced that Mansfield's suggested change
was either practical or necessary. On January 7, he
tersely replied that he would

... not enter a discussion on points where there is a mere difference of opinion, but will say that I think a large sluice the most proper — you think otherwise. If any change is to be made in the project sent from this office, as to lateral dimensions, it should be to increase not to diminish them. You are still authorized to lower the arch, but I cannot recommend that change. 33.

Realizing the temper of Totten's stand, nothing remained for Mansfield but to acquiesce; so on January 17, 1845, he notified the Department that since it appeared to prefer its original sluice plan, he planned, "unless otherwise instructed, to execute the same according (as to dimensions in the clear) to the plan furnished me by the Department."

Operations at the island were slightly accelerated during the last month of the year 1844. Lieutenant Alexander returned to his duties on December 3, and was thus available to assist Captain Mansfield during most of the month. The slightly augmented working force was engaged with rather miscellaneous work during the period. The two masons continued the construction of the demilune shot furnace; closed the "two gaps in the parapet wall of the main work;" commenced the building of the piers for the main drawbridge; and bathed some of the mason's quarters. The three carpenters were engaged "sharpening" the piles for the foundation of the countoursarp wall; making the closet doors of the officers' and soldiers' quarters; and erecting the wooden
"mantle pieces of the fire places" in the soldiers' quarters. The laborers, sixty-seven in number, were occupied excavating the ditch on the south front of the fort; embanking the rampart and parapet of the south face of the semilune; driving piles for the counterscarp and sluiceway south of the capital, and excavating to establish the same; driving piles for the foundation of the piers of the bridge of the semilune; laying the grillage and concrete for the foundation of the piers of the main bridge; and placing concrete around the pintle blocks of the fort's barbette battery.

Operations at Cockspur Island during the first quarter of the year 1865 were confined mainly to projects outside the fort structure proper. A crew averaging sixty workers was busily engaged continuing the building of the foundations for the main and semilune drawbridges, and constructing the counterscarp wall. The masons were employed in completing the pointing of the fort's parapet wall; pointing the scarp wall of the fort at the water level, and the arch over the poestern; completing the masonry foundations of the main and semilune drawbridges; completing the semilune shot furnace; and continuing the construction of the counterscarp wall along the south face of the fort and semilune. The carpenters prepared the piles and grillage for the counterscarp wall and the main sluiceway; completed the "mantle pieces of the soldiers' quarters," and began the construction of "sinks for the
and constructed closet doors and "sashes for the partition lights" of the officers' quarters. The laborers were occupied during the three months completing the excavations for, and driving the piles and laying the grillage of the counterscarp wall and main sluiceway; continuing the excavation of the demi-lune ditch; embanking the parapet wall of the south face of the demi-lune; placing the "stair pavements at the angles of the north and S. Front fronts of the fort"; and "making and placing concrete in the counterscarp." By the end of the period the working funds were rapidly nearing an exhaustion, and while Congress appropriated $17,000 for Fort Pulaski on March 3, this sum would not become available until July 1.

An unusual constructional mishap had occurred on the project in January. After the counterscarp wall of the south face of the demi-lune had been "laid from the [draw] bridge to the salient angle," apparently the extreme cold weather had caused it to buckle, "and it was discovered to have sprung out." The damage was so extensive that it was "found necessary to rebuild part of this wall."

General construction work on the project continued fairly vigorously during the late spring of 1845. After the latter part of April, however, all available working funds were exhausted and the work proceeded on credit extended by the Planters Bank of Savannah.
April the masons worked on the counterscarp facing wall at the northwest section of the demi-lune salient, at the northeast point of the east angle of the fort, and along the south and southeast front of the fort, commenced the masonry of the counter-arch of the main sluice; began the "plastering of the west ends of 5 casemates of the soldiers' quarters;" and continued the pointing of the arch over the postern. The carpenters were occupied laying the grillage of the main sluice, and making "sills" for the soldiers' quarters.

The laborers were engaged with a number of miscellaneous tasks during the month. They completed the excavation of the moat along the south faces of the fort and demi-lunes; paved the bottom of the moat "at the angles exposed to currents of water;" made and placed concrete in the counterscarp wall on the south front of the fort, and in the main sluice; laid "wood sills south of the capital on the gorge, S. East and S. South East fronts and on the south face of the demi-lunes;" placed an "earth backing" behind the counterscarp wall along the south front of the fort; embanked the glacies along the south faces of the fort and demi-lunes; and commenced the grading of the fort's parade ground.

The prospect was not the most cheerful on May 1. All available working funds had been exhausted and the project was in debt over eight hundred dollars. Operations were in a crucial state, with the construction
on the counterscarp and main sluiceway at a stage where it would have been unfortunate to suspend it. With the approach of the spring heat, Captain Mansfield's health, which for several years had been rather poor, was noticeably affected. On May 9 he prudently, but gloomily reported that "operations will close for the season at the close of May for two reasons, lack of funds and the hot weather." At this time he informed the Department that the counterscarp wall was completed except at the sluiceway, and that the excavation of the rest had practically been finished. He also reported that he "expected" the main sluice to "be completed to the level of the coping" by the end of May. Concluding these "remarks," he warned the Department that he considered it "inad-
visable to make the sluice gates and hang them and make the permanent bridges and draw this season." While this was a practical report from an officer inherently devoted to duty, to some extent there may be seen re-
lected in it his existing physical feelings and condi-
tion.

Mansfield's active supervision of the work at Fort Pulaski was rapidly nearing an end as the month of May, 1845, opened. The construction operations during May were the last full month's work he was to direct on Cockspur Island. During the period he rushed the final construction work of the counterscarp wall and the main sluiceway. By the end of the month the working force
had been reduced from fifty to thirty-six in number, and the project was in debt over $5,000. The masons had continued the pointing of the postern and the arches of the casemates; completed the "plastering of the 5 casemates" unfinished in the soldiers' quarters; continued the construction of the main sluice, and the counter-scarp wall along the south face of the demi-lune; built a "small drainage sluice across the drain in advance of the glacis on the N.[north] E.[east] fronts, and laid "the pavement across the ditch at the main sluice." The carpenter completed "the sinks of the 5 casemates of the soldiers' quarters;" and erected "two pumps to the two cisterns on the gorge;" attached the "fastenings back [sic] to the doors and windows of the bulkheads" of the battery casemates; and erected the "centering of the main sluice arch."

The laborers were busy embanking the glacis on the south and southeast fronts of the fort, and on the south face of the demi-lune; embanking earth behind the walls of the main sluice; excavating and leveling the ditches along the south front of the fort, the south face of the demi-lune, the gorge, and at the northwest bastion; "excavating for and laying grillage for the pavement across the ditch at the main sluice;" laying mud sills on the south face of the demi-lune; "making and placing concrete in the main sluice;" and "excavat-
ing for and laying the grillage and concrete of the small advanced sluice at the foot of the glacia on the E.B. front."

By early June the work was practically at a standstill. On June 4, Captain Mansfield reported briefly to the Department on the status of the project. Two casemates of the officers' quarters and five of the soldiers' were then complete, except for "painting, locks to doors, and glazing to the lights over the doors."

At this time he informed the Department that

This work will be entirely suspended about the 15 June with the exception of 3 to 4 laborers to keep charge and embank the glacia. Carpentery [work] was suspended today.

In closing this short report, he significantly remarked that

A summer operations here would be superfluous as the work [fort] can now be occupied by troops should the state of the country require.... 47.

The first fifteen or twenty days of June, then, were occupied with miscellaneous operations in bringing the work to a close. The one mason continued construction work on the main sluice, and further strengthened the pindle blocks of the fort's barbette battery with cement. The two carpenters, who worked only until June 4, placed the locks on the closets of two of the officers' casemates and five of the soldiers'. Ten laborers were busy during the time placing concrete in the main sluices; ex-
A view of the shattered northwestern angle of pentagon of Fort peaschki, showing the walls reflected in the main pool. This is one of the most unusual and beautiful scenes at Fort Peaschki.
saxating and levelling the ditches, and the feeder to the ditches; laying red sillis along the south face of the semilune; and embanking the glacis along the south face of the semilune. By July 1, Captain Mansfield was able to report that the "main sluice has been completed to the coping and water from the sea let into the ditches."

Mansfield's work was completed; he had directed the building of the foundation of the fort, the erection of its walls, the building of its outworks, the excavation of its moat, and the construction of the retaining walls to the moat - a duty and a task faithfully, unflinchingly and efficiently performed.

The near completion of Fort Pulaski, as far as practical and military objects were concerned, by the early summer of 1845, confirmed Captain Mansfield in his determination to ask the Department for a release or a transfer from Cockspur Island. For several years, the long tour of duty on the isolated island, general unsatisfactory working conditions, the lack of opportunity for advancement in the service, coupled with increasing ill health, had gradually formed in the officer a resolve to request a change of station. To this end, from Fort Pulaski on May 31, he addressed a long and masterly letter of plaintive understatement to his superior, Colonel Joseph G. Totten, Chief of Engineers:

If there be a station at the North to
which I can be ordered without injustice to another I shall be pleased to change. I will merely remark that I have been at the south for 17 years, and 16 years of that time at this post where my duties comparatively have been laborious in the extreme. My constitution is now broken and my health to say the best of it poor. I have for several years been dissatisfied with this locality, but have supposed it a duty from which I could not be relieved without injury to the service till I had completed and secured the foundation of this fort which I had commenced. I believe this is now accomplished, and I must acknowledge my reluctance to continue on this station.

I will observe here that the ditches of this fort are all excavated and the counter-scarp completed to the coping and the sluice it is expected will be completed to its coping in a few days. The work hereafter to be done, will of course be above high water level. It will however require the Superintendence of an engineer officer for two years to come to complete it although on emergency it might receive a garrison at once.

Colonel Otten was absent from Washington, when this rather pathetic appeal arrived, but on June 5, the Department notified Captain Mansfield that his letter would be laid before the Chief Engineer on the latter's return to his office.

Realizing that immediate action would not be taken in regard to his request, Captain Mansfield took an alternative step to insure his early departure from the hot island. On June 10 he requested the Department to grant him "leave from July 1 to November 1," in order that he might proceed to Middletown, Connecticut, visit his family and friends, "recruit his health and attend to private business." He informed the Department that
"operations for the fiscal year" would be closed "before leaving," and that "Lt. Alexander will remain to receive field orders." With an excited eye doubtful upon the possibility of immediate trouble with Mexico in the Mexican annexation affair, and upon the English and French supposed commercial and imperialistic designs in that region, he fervently concluded that

If the country is thrown unexpectedly into war will hold self in readiness to return. Am happy to say it [The work] is so far advanced as to be capable of defense in case of emergency. 51

Six days later, on June 16, the Department approved his request for leave, and he immediately commenced preparations to depart at the end of the month. 52

Correspondence with the Department over the existing status of the project, and the work thus entailed, consumed much of Captain Mansfield's time in the interim before July 1, "work had advanced so rapidly on the main sluice that by June 13, he was able to return "to the Department the rough drawing of a sluice for this work in four sheets agreeably to the wishes of the Department as I have done with them." 53

As early as June 11, the Department had requested Captain Mansfield to forward a complete inventory of the existing ordnance at Fort Pulaski. This order was complied with on June 20. The armament of Fort Pulaski then consisted of twenty, long thirty-two
pounder casemate guns, "mounted complete," with one thousand suitable shot, but no powder. The magazines, two in number, on either end of the dome face, were then "in a suitable and good condition to receive powder at any time." He stated that the ordnance then required to complete the armament of the fort's casemate battery consisted of: thirty-one, long thirty-two pounders and four carronades, or howitzers for the flanking defence, with suitable carriages and implements, and an adequate supply of balls and shot. The remainder of the ordnance required for the fort and outworks included: barbette of main work, forty, seacoast twenty-four pounders, twelve, seacoast eight inch howitzers, two eight inch siege howitzers; and four, eighteen pounders; demi-lune, fourteen seacoast thirty-two pounders, fourteen, seacoast twenty-four pounders, and two coehorns; advanced battery, one, thirteen inch, and seven, ten inch heavy seacoast mortars. He requested the immediate shipment of the guns for the casemate battery, and asked that the other guns be shipped as soon as desirable "if there be a distant prospect of war." The Mexican-Yemen situation had gradually assumed an alarmingly hostile aspect, and apparently he was already entertaining some vague fears over the comparatively unarmed condition of Fort Pulaski, in the face of a possible outbreak of war. In concluding this inventory,
he announced that the armament schedule, as given in
the Department's letter of March 21, 1842, for Fort
Pulaski, had been followed in outlining necessary
requirements, with the exception that one gun had been
added to the demi-lune complement, and two additional
for the barbette.

Several days later, on June 24, the Depart-
ment informed Captain Mansfield that a requisition had
been made for all the guns he had requested on the twen-
tieth, for the main work, but not for those of the demi-
lune, since it was believed that the latter guns could
not be mounted at an early date. In acknowledging
this communication, Mansfield, on June 28, remarked that
he feared the Department's decision on the demi-lune guns
to be based on the supposition that the breast-high
wall on the demi-lune had to be constructed before the
guns could be mounted. However, he continued, that if
the Department would allow him to substitute an earth
slope temporarily for the breast-high wall, the parapet
could be placed immediately, as could the remaining
pintle blocks and segments for the guns. This re-
quision for the additional guns of the fort was never
to be filled.

The last constructional plan pertaining to
the Fort Pulaski project, to be prepared under the
direction of Captain Mansfield, was forwarded to the
Department on June 24, 1845. This was a drawing showing the small sluice at the foot of the glacis on the north-east front of the fort, as actually constructed during the month of May. Accompanying the plan was an explanatory letter, in which Captain Mansfield informed the department that the enclosed drawing was that of a small sluice recently constructed at the foot of the glacis of the N. 3/4 E. 3/4 S. front of this fort for the purpose of drainage through a dike designed to keep out extraordinary high tides. It is not indicated in position on plan of island forwarded some time since but should be placed therein according to the diagram.

Mansfield's long term of duty on Cockspur Island was now almost at an end. On June 27, he submitted the regular monthly estimate for the funds necessary in the month of July, including a report on the fiscal status of the project. Four days later, on July 1, he had completed his two final reports and placed them in the mail. In the first of the two, he made his regular monthly report on operations during the preceding month of June. The concluding part of this report showed that he still did not know what action would be taken on his plan for a change of station, as he then notified the department that the "superintending engineer will be absent from July 1 till November on leave," with "Lt. Alexander to be in charge in his absence."

On the same day, he wrote his final letter from Cockspur Island, enclosing his quarterly fiscal re-
port, and notifying the Department of his departure for
the North:

I this day forward my accounts on account
of this work for the quarter ending 30th June
1845.

I will thank the Department for a Treasury
brought on Savannah for the balance due to me
of 4031 56/100 dollis in order that I may for-
ward the same to make good an accommodation at
the Planters Bank.

Please to cause it to be sent to Middle-
town Conn., for which place I take my
departure today. S3.

Although he did not then know it, he had left Cockspur
Island, the scene of his many trials, hardships and tri-
umphs, never to return. His duties on the difficult Fort
Pulaski project were over, and well done.

So slackening of the work had occurred at Fort
Pulaski during the year 1844-1845 on Captain Mansfield's
account, despite his increasing dissatisfaction with his
post, and the gradual aggravation of his physical condi-
tion. Until funds were exhausted, and even afterward, on
borrowed funds, operations were rushed and concentrated
on the completion of the counterscarp wall, the main
sluiceway, and the excavation of the fort and semilune
moats. Prior to his departure, on July 1, Mansfield was
able to report the completion of the counterscarp and
main sluice, with the exception of their coping. The
excavation of the moats had also been completed so that
they could be filled with water "at pleasure." While some
work had been carried on within the fort's quarters, and
on its walls, "most of the labor of the year" had been
spent on the counterscarp, the sluice, and the meats. The "main idea" of such procedure being, "to place the work [Fort] in a condition to be defended and to complete the work below the water level...."

That this object had been fulfilled, is shown not only by Mansfield's reports, but by his letter of May 31, in which he stated that

I have for several years been dissatisfied with this locality, but have supposed it a duty from which I could not be relieved without injury to the service till I had completed and secured the foundation of this fort which I had commenced. I believe this is now accomplished....

I will observe here that the ditches of this fort are all excavated and the counterscarp completed to the coping and the sluice it is expected will be completed in a few days. The work hereafter to be done, will of course be above high water level. 65.

Never a man to assume more credit than his duty, he had shown the main bulk of the task actually to have been completed under his supervision. However, he candidly admitted, in this same letter, that many comparatively small constructional details yet remained unfinished.

It will however require the superintendence of an engineer officer for two years to come to complete it [the fort], although its emergency it might receive a garrison at once. 66.

Fort Pulaski and its outworks were very near a final completion, from a purely constructional point of view, on July 1, 1825. The foundations of the fort and demi-lune had long been completed, the massive walls of both works erected, much of the interior arrangements
and finish and trim of both works installed, the moats excavated and their sides revetted with masonry, necessary wharves built, and a drainage, dike and embankment system practically laid out on the island. Only such features as the construction and installation of the drawbridges and portcullis, the erection of a piaza or portico along the gorge quarters, the completion of part of the constructional details and trim of certain of the gorge quarters, and the completion of the grading and embanking for the barbette platform and parade of the fort and the parade of the demi-lune remained to be finished during the period which was to intervene before April 3, 1847, when the completion of the fort was officially announced. The fact that the Fort Alaska project was so remarkably advanced on July 1, 1845 was due in the largest measure to the faithful and indefatigable devotion to duty, to the directing genius, and to the sound and practical engineering wisdom of Captain Mansfield.

In the meantime, following his departure from the island, Captain Mansfield had arrived at his home in Middletown, Connecticut. In poor health himself, he found his wife quite ill. Other personal troubles soon beset him. He had been so long on duty in the South that many of his private affairs had lapsed into woeful neglect. Private business had to be attended to immediately.
Even his uniform was out-of-date, shabby, and required alterations. In the midst of his troubles, however, came the longed-for release from Cockspur Island, but with it orders transferring him to even a more obscure and isolated post far to the southwest: Brigadier General Zachary Taylor's camp on the Texas border, near Corpus Christi. Unknown, of course, and perhaps even unvisualized by Mansfield, but here lay the glorious opportunity for the active military service he had obviously and eagerly anticipated so often during his long isolation on Cockspur Island. As chief engineer of the army under General Taylor, he was to serve with distinction and to gain his colonelcy during the ensuing Mexican War.

The Engineer Department on August 11, transmitted to Captain Mansfield official orders relieving him of the supervision of the construction of Fort Pulaski and detailing him "for duty in Texas." Three days later, on August 14, he had received the department's orders, and that day, in official notification, replied:

I have received the letters of the department of the 11th with extracts of special orders 66 and 68 and orders for me to proceed to Aransas Bay, Texas, and report to Brig. Gen. Taylor for duty. I shall comply with the order as soon as practicable. My uniform must be altered and my wife is sick but I expect to leave here on Sunday or Tuesday next and shall write the department when I start. It is probable I shall take the route of the Ohio and Mississippi rivers to New Orleans, and unless otherwise instructed probably shall not stop in Washington.

In this manner ended the connection of the
Kargl Aerial Surveys, Ltd., San Antonio, Texas

LOOKING WESTWARD OVER FORT FULASCI NATIONAL MONUMENT, 1937
builder of Fort Pulaski with his greatest and most
enduring technical triumph: an architectural monument
which silently but eloquently reflects the engineering
ingenuity, the practical skill, and the inherent in-
tegrity of Joseph King Fennemanfield.
1. R.S., File No. R.1286, April 18, 1864.


4. R.S., File No. R.1513, June 12, 1864.

5. Ibid.


11. R.S., File Nos. R.1350, July 11, 1864; R.1351, August 10, 1864.


13. Ibid.


20. Ibid.


23. R.S., File No. W.1396, November 4, 1844; cf., The Daily Georgian (Savannah), November 4, 1844.


27. See plans, Travers 70, Sheets 41, 42, 43, "Sections of Sluiceway in to ditch, Fort Pulaski," 1844; cf., plan, Travers 70, Sheet 41, "Plan and Sections of sluiceway into ditch of Fort Pulaski," 1844; all in the Construction Section, Office, Chief of Engineers.

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30. R.S., File No. M.1413, December 12, 1844; see plan, Drawer 70, Sheet 45, "Cross section of sluiceway into ditch of Fort Pulaski," 1844. Construction Section, Office, Chief of Engineers.

31. Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, December 20, 1844; No. 12 Letters to Officers of Engineers, 480-481.


33. Colonel J. G. Totten, Chief of Engineers, to Captain Mansfield, January 7, 1845; No. 12 Letters to Officers of Engineers, 510-512.

34. R.S., File No. M.1431, January 17, 1845; cf., Captain R. E. Lee, Asst. to the Chief Engineer, to Captain Mansfield, January 26, 1845; No. 12 Letters to Officers of Engineers, 550.


37. It is possible that Mansfield meant a simple type of lavatory or wash basin by "sinks." It seems more logical, however, that he applied this term to crude toilets or urinals, since the toilets later erected in the officers' quarters were designated as "sinks." See plan, Drawer 70, Sheet 45, "Proposed plan of sinks for officers quarters at Fort Pulaski, Ga." Construction Section, Office, Chief of Engineers. No conclusive physical evidence exists today in the fort, however, that either toilets or any other kind of "sinks" were built in the soldiers' quarters.

38. R.S., File Nos. M.1432, January 30, 1845; M.1440, February 10, 1845; M.1445, March 6, 1845; M.1447, March 10, 1845; M.1461, April 10, 1845.
These "mud sills" were placed along the bottom of the
moats between the scarp and counterscarp wall to aid
in retaining the latter. In 1935 these mud sills were
still in a good state of preservation.

See Departmental endorsement on back of R.S., File No.
M.1475, May 31, 1845.

The exact settlement and outcome of the Texas situation
was at the height of its uncertainty in the early
summer of 1845. Clear accounts of the diplomacy of the
American Secretaries of State Webster and Calhoun, and
of the Foreign Offices of England, France and Mexico
may be had in Delitt, op.cit., V, 66-116, 113-119, 140-
155, 161-171, 177-190; John Bellamy Latane, A History
of American Foreign Policy (N.Y., 1907), 224-258; A.W.
Ward and J.P. Cooke, The Cambridge History of British
Foreign Policy 1863-1812 (B.D. 1925), II, 253-256.

52. R.S., File No. 1.1482, June 10, 1845.

53. See departmental endorsement on bottom of R.S., File No. 5.1482, June 10, 1845; cf., R.S., June 20, 1845.

54. R.S., File No. 5.1481, June 13, 1845; cf., plans, drawer 70, sheets 61-64, "Construction Section, Office, Chief of Engineers.

55. R.S., File No. 5.1482, June 20, 1845.

56. See Index, esp. cit., V. 143-145; 148-150; 166-171; 177-179; cf., same, esp. cit., 253-256.

57. The department's requisition, though never filled, included:

- 31, 32-pdr. guns - casemate
- 4, 24" carronades - casemate
- 4, 24" guns - barbette
- 4, 13" - -
- 12, 3 in. seacoast howitzers - barbette
- 2, 7" siege - -
- Carriages, implements, etc."

See Geo. L. Welcker, Lieutenant of Engineers, in charge of department, Washington, to Captain Mansfield, June 24, 1845, No. 13 Letters to Officers of Engineers, 206. cf., letter, Captain Mansfield, to Colonel Long, Chief of Artillery, June 20, 1845, Supplement to R.S., File No. 5.1482, June 20, 1845.

58. Ibid.

59. See plan, drawer 70, sheet 46, "Fort Pulaski. Plan and sections of works at the foot of garrison B.S. front, as has actually been executed," Construction Section, Office, Chief of Engineers.

60. R.S., File No. 5.1485, June 24, 1845.
61. R.S., File No. 1492, June 27, 1845.

62. R.S., File No. 1490, July 1, 1845.

63. R.S., File No. 1492, July 1, 1845.

64. R.S., File No. 1490, July 1, 1845; cf., File No. 1474, October 6, 1845.

65. R.S., File No. 1475, May 31, 1845.

66. Ibid.

67. R.S., File No. 1453, April 3, 1847.

68. R.S., File No. 1505, August 19, 1845; cf., File No. 1523, September 31, 1845.

69. Following Mansfield's noteworthy services in the Mexican War, he became a significant figure in the Army. After 1851, as colonel and inspector-general of the Army, he traveled extensively inspecting posts in Texas, New Mexico, California, and Oregon. Upon the outbreak of the War Between the States, he was commissioned brigadier-general in the Army and assigned to the command and supervision of the defenses of Washington. Later in 1861 he served under General Meade at Fort Monroe, and early in 1862 took part in the occupation of Norfolk and Suffolk, Virginia. Commissioned major-general of volunteers, in July, 1862, Mansfield was assigned to the III Corps. Two days before the Battle of Antietam, he joined the federal forces in that sector, and was mortally wounded in that battle, September 17, 1862, while fearlessly reconnoitering the position of the Southern troops, as his own corps was coming into action. See House Document No. 114, 37 Cong. 2 Sess., p. 680; cf., Gustave C. Fiebeger, "Mansfield, Joseph King Feno. (December 22, 1803 - September 19, 1862)" in Dictionary of American Biography (C.F., 1933), XII, 257.

70. Geo. L. Pelzer, Lieutenant of Engineers, in charge of the Department, Washington, to Captain Mansfield,
August 11, 1845. No. 15, Letters to Officers of Engineers. 269.

71.

R. S., File No. N. 1509, August 11, 1845.
Fort Pulaski, a finished structure, but incompletely post, 1845 - 1861

Departing from Cockspur Island on July 1, 1845, Captain Mansfield had notified the Department that his assistant on the Fort Pulaski project, Lieutenant Fenton Stone Alexander, was to "be in charge in his absence." Following Mansfield's transfer from the supervision of the construction work at Fort Pulaski, on August 11, 1845, Lieutenant Alexander continued temporarily in charge of operations for several weeks until early in September when he assumed the regular supervision of the work.

A few weeks later, in summing up the work accomplished at the fort during the fiscal year 1844 - 1845, ending September 30, 1845, and commenting on the project's status, Lieutenant Alexander observed, on October 6, that the work is now susceptible of a strong defense. Within the main gate the fort is ready for all its guns, and the demi-lune and advanced battery could be prepared for their guns on short notice. Labor during the year 1845 had been concentrated on the completion of the counterscarp wall of the moat of the main work, on the building of the main sluiceway into the moat, and on the completion of the excavation of the fort and demi-lune moats. Masonry of the whole counterscarp wall and the main sluice was completed to the coping. Fiers for the drawbridges over the moats, and for a shot furnace in the demi-lune were also completed by the beams. The excavation of the fort and demi-lune moats was completed so that they could be filled with water "at pleasure." Miscellaneous masonry and carpentry
work carried on during 1845 included the completion and coping of the gaps in the parapet walls of the terreplein, strengthening the fifty-six pintle blocks of the barbette battery gun platforms with masonry, plastering much of the soldiers' casemate quarters, attaching locks to the closets and erecting "sinks" or urinals in the soldiers' casemates and completing the installation of the wrought iron fastenings on the doors and windows of the wooden bulkheads or fronts of the battery casemates. The grading of the terreplein and parade ground was also finished prior to the end of the fiscal year.

About the middle of December, 1845, work was suspended at Fort Pulaski and Lieutenant Alexander was transferred some ten miles up the Savannah River to Fort Jackson, the repairs of which he was to supervise during the ensuing seven months. During the interim Fort Pulaski was left in charge of the ordnance sergeant then stationed there. By June 20, 1846, Alexander had returned to Fort Pulaski, and immediately reopened operations on the nearly completed fort structure.

During July, August and September, 1846, Lieutenant Alexander rushed the construction work of the fort and demi-lune, and by September 30, 1846, the end of the fiscal year 1845 - 1846, the main structure of the fort was within six months of its final completion. The main masonry work within the fort during the summer had consisted of the pointing of the brickwork of the casemate arches in the battery fronts. Carpentry work within the fort included laying the floors, erecting the furring of the ceilings, and hanging doors in the guard rooms and prison; erecting mantels in the officers' kitchen...
quarters; installing water toilets in the officers' quarters; and hanging
doors at the entrances of the tower stairways. A notable carpentry
project of the year had been the partial erection of a portico or
piazza along the face of the gorge quarters of the fort. This piazza
was completed in November, 1846.

Much had also been accomplished outside the fort structure
during the summer of 1846. In the demi-lune, the breast-high wall
of brickwork had been completed and the earth embankment of the demi-
lune parapet finished. The pindle centers and the traverse stones of
the demi-lune gun emplacements were set by the marines. The draw-
bridge across the demi-lune moat was also completed. Miscellaneous
work finished on the island included completion of the coping of the
counter-scarp walls, the construction and installation of the main
alvise gates, and continued work on the permanent wharf and on the
dike system.

Between October, 1846, and April, 1847, the final constructional
details of the interior of the fort structure proper were rushed to
such an extent that its completion was finally officially announced
early in the latter month. The finer carpentry work in the gorge
quarters was finished, including completion of the plastering, installa-
tion of the doors and window blinds, the attaching of locks, and painting.
The massive doors in the sally-port, the main drawbridge, and the wooden
portcullis gate were all constructed and installed. The guard wall or
masonry "screen" of the "south" powder magazine was finished, and the
painting of the brickwork of the casemate arches and the facing wall of
the gorge quarters completed. The wrought iron railings of the three
circular tower stairways were erected, and sodded banquets were constructed on the terre-plein. The grading and embankment of the glacis slope of the demi-lune and fort was finished. With the main construction at an end, the temporary work shops and some of the laborers’ quarters immediately northwest of the fort were taken down, and the construction debris on the area removed. After eighteen years of intermittent construction operations on the Fort Pulaski project the great undertaking was finished, and Lieutenant Alexander announced to the Engineer Department on April 3, 1847 that during March

The machinery of the main drawbridge and portcullis was put up—the partitions enclosing it put up, and painted; the additional plastering completed—so that at this date everything in, about, or pertaining to the main work and its out works is complete, and they are now ready for their entire armament.

during the fourteen year period which was to elapse between 1847 and 1861, the latter date, technically speaking, marking the end of the main constructional period at Fort Pulaski, only slight constructional activity was carried on in the fort, or on the project. Aside from routine repairs and maintenance on the fort and area, and the building of an earthen dike system to protect the island from tidal action, the chief constructional project of the period was concerned with a revision of the structure of the gun platforms on the terreplein of the fort.

While there was actually no urgent military necessity for the occupation of Fort Pulaski by a garrison during this period, the fact that the construction of the barbette gun platforms was incompletely, thus precluding the mounting of the fort’s complement of ordnance, apparently was an important factor preventing the establishment of a regular military post here prior to the outbreak of the war between the States.
Lieutenant, later Captain, Jeremy Francis Gilmer, Corps of Engineers, was in command of Fort Pulaski and work on the island during much of the fourteen year period assigned to Fort Pulaski in the fall of 1848. Gilmer served the second longest tour of duty on the island station, being relieved by Lieutenant William Henry Chase hitting, on July 15, 1858.

Under the direction of Gilmer, plans were submitted in 1849, and modified in 1851, for the repair and renovation of the temporary quarters outside the fort structure. This work was approved and completed between January and October, 1851. Between the latter part of the years 1849 and 1851, Gilmer completed the execution of the modifications to the dike system encircling the fortification on the island, according to the dike plan prepared by Lieutenant Alexander, in 1848. The last main construction project undertaken outside the fort structure proper was the building of a new brick sluiceway at the south end of the main ditch to the moat, between July, 1857 and September, 1858. Maintenance work on the fort and area during the period consisted mainly of sodding the barren slopes around the fort structure and the surface of the terreplein and par de ground; cutting weeds and grass; grading the embankments of the fort, demi-lune, and dike system; removing the accumulated mud from the ditches; pointing the brickwork of the fort; pointing the quarters and wooden casemate fronts in the fort; and making general repairs necessitated by such storms as the great hurricane of 1854.

Soon after the opening of the year 1855 the War Department
Major - General J. F. Gilmer, C. S. A.

As a lieutenant, later captain, Corps of Engineers, United States Army, Jeremy Francis Gilmer served the second longest tour of duty at Fort Pulaski, prior to the War Between the States, from 1848 - 1858. Resigning from the United States Army on June 29, 1861, he became the Chief Engineer of the Confederate Army.
Chief of Engineers, United States Army, 1839 - 1864. Fort Pulaski was generally completed while he was in charge of the Corps of Engineers, and many of the finer features of its construction were executed from his technical suggestions.
had adopted a completely new schedule of ordnance for Fort Pulaski.  
This schedule provided for a rather drastic revision of the proposed 
armament for Fort Pulaski, calling for a total complement of one 
hundred and thirty-six pieces, including the installation of twenty-
six eight inch columbiads in the barbette battery, a more effective 
type of gun than previously proposed for use on the terreplein. The 
proposed installation of the twenty-six columbiads on the barbette 
dictated the immediate remodeling of twenty-six gun platforms on the 
terreplein. Further constructional revisions on the terreplein was 
necessitated by the fact that under the 1855 schedule new platforms 
had to be provided for thirteen seacoast howitzers on barbette.

Remodeling of the gun platforms on the terreplein was delayed 
until after the arrival of Lieutenant J. E. G. Shiting, on July 15, 
1859, to relieve Captain Gilmer of the command of Fort Pulaski. On 
August 17, Lieutenant Shiting significantly notified the Department 
that

"With the exception of the barbette platforms of the 
N. C. and S. Fronts, which require a change to suit the 8" 
columbiad to be mounted, Fort Pulaski is ready to receive 
its garrison, armament and stores."

Between January, 1859, and May 31, 1859, thirteen of the proposed 
twenty-six columbiad platforms were completed on the terreplein. 
six on the northeast front, six on the southeast front, and one on 
the east salient.

Shiting proposed to the Department, on July 26, 1859, that 
the remaining thirteen columbiad platforms and the thirteen howitzer 
platforms on barbette be built during the fiscal year 1859 - 1860. 
No funds were allotted for this work during the year, and in his
Arriving on duty at Fort Pulaski on July 15, 1863, Lieutenant, later Captain, H. H. C. Westinghouse, Corps of Engineers, United States Army, was placed in command of the garrison by General Joseph E. Johnston, and eventually became a General - Engineer.

Photo by Samuel Contee, U. S. A.
annual report of August 10, 1860, stating observed that his several
plans during the year for funds to complete the platforms had pro-
duced no result, and nothing further had been accomplished on the
terreplein. The most significant statement in this report was to
the effect that the completion of the fort and its occupation by a
garrison was still mainly contingent on the construction of the re-
mainin twenty-six barbette gun platforms. Now he reiterated his
unheded though often repeated statement that

With the exception of the barbette platforms, mentioned,
this fort is ready to receive its guns, munitions and

garrison. 26

This opportunity to complete the preparations to arm the fort
fully, and to provide for its early occupation by a garrison of United
States troops, was neglected during the subsequent months until it was
too late and the chance had passed. During the remaining months of
1860 nothing further was accomplished on the proposed barbette gun
21
platforms. And then, about noon on January 3, 1861, Fort Pulaski was
seized by several detachments of the Georgia state troops, under the
general command of Colonel R. H. Lentz of Savannah, and the fortification
passed from the control of the Federal Government until recaptured during
the siege of April 10 and 11, 1862.

Although all constructional details of Fort Pulaski were never
completed, or the structure occupied as a regular military post prior to
the war between the states, it is interesting to know that the Federal
Government expended approximately one million dollars, in the thirty-
three year period from 1828 to 1861, on the construction, repair and
maintenance of this massive coastal fortification.
National Park Service

COCKSPUR ISLAND AND THE MOUTH OF THE SAVANNAH, 1862

This "Map of the Mouth of Savannah River and Adjacent Islands," is from Brigadier-General Q. A. Gillmore, Official Report to the United States Engineer Department of the Siege and Reduction of Fort Pulaski ... 1862 (New York, 1862). Note how the configuration of the island had changed from the time Lee drew his map in 1850. The exact position of the Federal batteries, which bombarded Fort Pulaski from Tybee Island, can be seen at the upper right of the map.
Notes

pilogue

1. File No. N. 1490, July 1, 1845.

2. George T. Velcker, lieutenant of engineers, in charge of Engineer Department, Washington, to Captain Mansfield, August 11, 1845, No. 15 letters to officers of engineers, 209; cf., File No. 6. File Nos. 1509, August 14, 1845, and 666, August 4, 1845; 667, September 4, 1845; 494, October 6, 1845.

3. File No. A. 494, October 6, 1845.

4. Ibid.

5. File Nos. 486, November 14, 1845; 562, July 1, 1846. The exact identity of this officer is not known, but he was probably Sergeant James L. Miller, who was at the fort two years later. See R.G. File No. 563, May 2, 1847.

During this period, when constructional operations had temporarily ceased on the fort, the state of Georgia, by legislative act on December 27, 1845, ceded to the United States the 20 acre public reserve on Cockspur Island (supra, prologue, 20, n. 70), with the proviso that, if at any time the Federal Government should cease to occupy Cockspur Island for purposes of fortification, said reserve would be re-invested in the state of Georgia for the use of the public. See Acts of the State of Georgia, 1845. (Columbus, Georgia, 1845), 97. Abandoned as an active military post in 1884 (see Special Orders No. 128, June 27, 1884), in Special Orders, Department of the East, 1884, Adjutant General's Department, United States Army, and proclaimed a national monument in 1924 (see National Military Park, National Park, Battlefield Site and National Monument Regulations, War Department .... [Washington, 1931/32]), Fort Pulaski and adjacent area on Cockspur Island, could no longer be regarded as an actual fortification site, and technically the area was again vested in the state of Georgia. Thus, in the winter of 1934-1935, while developing the area as a national monument, the National Park Service, United States Department of the Interior, found it necessary to request the state of Georgia to cede the reserve to the United States again, in order to clear its title. By March 28, 1935, through legislative enactment, the state had complied, and title to the whole area upon Cockspur Island was vested in the United States. See Acts and Resolutions of the General Assembly of the State of Georgia, 1835 (Atlanta, Georgia, 1835), 405-406.

9. A " sodded banquette" was a grass covered earthen mound, erected between the gun platforms on the terreplein of the fort, to protect the guns and soldiers from enfilading cannon fire.

10. Mansfield served the longest term of duty on Cockspur Island, the fourteen years from 1831 to 1845.


13. Mr. A. F. W. 48, 14, December 8, 1848; 15, December 15, 1848; 16, December 31, 1848; 17, January 10, 1849.
17. R.S. File No. 2, 2174, August 17, 1858.


23. Treasury Document No. 373, 545-546. Strictly speaking, from a technical point of view, all construction at Fort Pulaski was not completed, with the barbette gun platforms still unfinished.
BIBLIOGRAPHY
I. SOURCE MATERIAL

MISCELLANEOUS LETTERS

A. R. E. Lee, "Cockspur Island, Wednesday 15th April, 1861," to (Miss) Eliza A. Back, Old Fort, near Beaufort, South Carolina.

This letter is in the possession of Mrs. Frank S. McFadden, Savannah, Georgia, and is used with her gracious permission.

B. Major (later Colonel) Charles H. Olmstead, Fort Pulaski, to (Mrs.) Florence Olmstead (his wife), Savannah, Georgia, November 21, 1861.

This letter is in the possession of Miss Florence Olmstead, a daughter of Colonel Olmstead, in Savannah, Georgia, and is used with her gracious permission.

C. Colonel J. C. Swift, Chief of Engineers, United States Army, to Colonel J. C. Totten, Corps of Engineers, December 4, 1861.

This letter is filed among the miscellaneous manuscripts of the Engineer Department, Record Section, Office, Chief of Engineers, United States Army, Washington; and a photostatic copy is in the historical files of Fort Pulaski National Monument, Savannah, Georgia.


This letter is in the file: "Old Papers, Board of Engineers, 1823 - 1881," Record Section, Office, Chief of Engineers.

E. General Simon Bernard, to Congressman Edward Tutwail, February 19, 1864.

This letter is in Fortifications, Board of Engineers, 1823, Reports Relative to Certain Forts, MS prepared, Case 1, Drawer 4, Record Section, Office, Chief of Engineers.

BOUND MANUSCRIPTS

A. Old Records Division, Office of the Adjutant General, United States
Army, Washington.

1. General Order Book, Adjutant General's Department, Volume 6, 1838 to 1834.

2. Special Orders, Department of the East, 1891, Governor's Island, New York City, Headquarters, Department of the East, 1891.

3. Record Section, Office, Chief of Engineers, United States Army, Washington.

   1. Fortifications, Board of Engineers, 1880. Reports relative to certain forts, pamphlet, Case 1, Drawer 4.


   3. - 17. Letters to Officers of Engineers, numbers (volumes), 1 - 4, 8 - 7, 9 - 24, 10, 12, 23.

10. War Department, Corps of Engineers, Reports, July 3, 1912 to October 3, 1913.

19. War Department, Ordnance Book No. 1, Engineer Department, April 1, 1911 to May 27, 1912.

6. Record Room, Office of the Clerk of the Superior Court, Chatham County Courthouse, Savannah, Georgia.


   2. County Records, Book 5 A., Pages 52 - 55.

LOOSE MANUSCRIPTS

As Record Section, Office, Chief of Engineers, United States Army, Washington.

   1. Fifteen hundred items, including letters, reports, and statements, transmitted to the United States Army Engineer Department, Washington, by the Engineer Officers who supervised the construction and maintenance of Fort Pulaski, 1826 - 1891. This material, consisting entirely of original handwritten manuscripts, is the largest and chief collection of sources material relating to this period of the fort's history. Typewritten abstracts, indexes, and copies of this material are filed in the historical office, Fort Pulaski National Monument, Savannah, Georgia. The original material is filed in the Record Section, Office, Chief of Engineers, by letter and number in the following drawers:
MAPS AND CONSTRUCTION PLANS OF PORT PULASKI

A. Construction Section, Office, Chief of Engineers, United States
   Army, Washington.

1. Forty-eight construction plans and topographic maps of the
   Port Pulaski construction project, and of Cockspur Island
   and vicinity, were consulted, and cited in this study. The
   originals are beautifully designed and hand-colored; of which
   photostatic copies are available in the historical files of
   Port Pulaski National Monument, Savannah, Georgia. Since the
   title of each plan is given in the notes to this study, only
   the number of the plan is listed here:

   DRAWER 70, SHEETS 1 - 10
   "  29, Ports I and II
   "  34 - 44
   "  50

1. The letters "A", "B", "C", "D", "E" and "F" represent the first letter
   of the surname of the various engineers officers: B-Bernard or Babcock,


1. In the event of a fire I order:

2. Instructions, precautions and procedures to take and report

3. Action to be taken in the event of a fire at the

4. Instructions for the fire alarm system and procedures to take

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D. Consequence:

- In the event of a fire, evacuate the building immediately.
- Call the fire department immediately.
- Do not use elevators.

Volume 1:

1. House
document.

2. Engage

3. Report

4. Secure

5. Prepare

6. Evacuate
5. The Congressional Globe .... Washington, Blair and Rives:

22 Cong. 2 Sess., 1854 - 1855, II, 1855
24 Cong. 1 Sess., 1856 - 1857, III, 1856
24 Cong. 2 Sess., 1856 - 1857, IV, 1857
24 Cong. 2 Sess., 1857 - 1858, VI, 1858
26 Cong. 3 Sess., 1858 - 1859, VII, 1859
26 Cong. 1 Sess., 1860 - 1861, VIII, 1860
27 Cong. 2 Sess., 1861 - 1862, XI, 1862

4. Laws of the United States of America, from the 4th of March, 1789, to the 4th of March, 1815 ... Arranged and Published under the Authority of an Act of Congress, Philadelphia, John Bieren and E. John Duane; Washington City, R. C. Weightman, 5 volumes, Volume II, 1815.

7. Colvin, John B. (Editor) Laws of the United States of America, from the 4th of March, 1819, to the 4th of March, 1831 ... Corresponding with, and intended as a continuation of, the Edition of Bieren and Co. [See item 6 above] as published by Authority of an Act of Congress, Washington City, Printed and Published by Davis and Force, 1832, Volume VI.


D. Treasury Department


E. War Department


2. National Military Park, National Park, Battlefield Site and National Monument Regulations, War Department, Approved and Published by Authority of the Secretary of War, Office of the Quartermaster General, October 6, 1931, Washington, Government Printing Office, 1931.
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A. Legislative

1. Acts of the State of Georgia, 1845, Published by authority, Columbus, Georgia, W. A. Flournoy, State Printer, 1845.


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1. The Daily Georgian (Savannah), 1821, 1828, 1841 - 1844.

2. The Georgian (Savannah), 1829, 1831, 1834, 1838.


PERIODICALS

Library of the St. Augustine (Florida) Historical Society and Institute of Science.

1. Army and Navy Chronicle (Washington, D.C.), VIII, No. 5, January 31, 1839; No. 23, June 8, 1839.

This periodical was published weekly in Washington, volumes 1 to 13 appearing between January 3, 1835 - May 21, 1842; apparently a semi-official military and naval gazette.

BOOKS CONTAINING SOURCE MATERIAL
BIOGRAPHY


Undoubtedly the most exhaustive and definitive study of the great Southern Commander which has yet appeared. Volume I contains an interesting account of young Lee's life on Cockspur Island, 1829 - 1831, and includes a facsimile copy of the official order of August 11, 1833, assigning him to the Fort Pulaski project. There are citations to other official orders in this volume.


This rare little family account of the life of William M. Edley, apparently based on family papers, by his daughter, gives original sidelights upon the life on Cockspur Island, and the work of Edley there, chiefly as designer and maker of the fine unearthed iron hardware of the fort structure.

CIRCUMSTANTIAL HISTORIES

1. Gamble, Thomas, Jr., A History of the City Government of Savannah, Ga., from 1790 to 1900, compiled from official records by Thomas Gamble, Jr., Secretary to the Mayor, under direction of the City Council, 1900.

This valuable work is not merely a compilation of copies of official city records, rather it is Gamble's interpretative account of the development of city government in Savannah, as based upon those records. The work places in convenient, summarized form a number of years of records, but in some instances it would bear checking before final use.


An accurate account of this famed local
(Savannah, Georgia) military company's participation in the War Between the States. The work contains a copy of the letter of the Georgia War Governor, Joseph Brown, to Colonel Lawton of Savannah, January 2, 1861, instructing him to seize Fort Pulaski; also eye-witness accounts of the seizure and the condition of the fort on January 3, 1861.

II. SECONDARY MATERIAL

BOUND MANUSCRIPTS

A. Record Section, Office, Chief of Engineers, United States Army, Washington.

1. Service of General Simon Bernard in the U. S. Army, Memorandum, April 21, 1906, By Mr. Buell *sig*, Commonly known as Buell's Notes, File Number 50734/72.


The above are brief typed office memorandums, based directly upon the official records of this office relating to Bernard, but are sketchily written and undocumented. Of value, however, as official office summaries of Bernard's service in the Corps of Engineers.

B. Historical Library, Fort Pulaski National Monument, Savannah, Georgia.

1. Lattimore, Relton B., Biography of a Blockhouse, Being the story of Fort Greene, Cockspur Island, Georgia, 1794 - 1804, a fortification which once occupied a site within the area now known as Fort Pulaski National Monument, Savannah, Georgia, April 1, 1935, 94 typed pages.

This well written pioneer account of the fort which immediately antedated Fort Pulaski on Cockspur Island is thoroughly documented and reliable.
BIOGRAPHY

A. Compilations:


Interesting accounts, which, however must be used with caution as concerns dates, are given of "Bernard, Simon", in Volume I; and of "Mansfield, Joseph King Fenno", in Volume IV.


Accurate and valuable accounts are given in Volume IV of the American - Canadian Boundary controversy, 1854 - 1842; and in Volume V of the American view of English and French diplomacy and interests in the prelude to our Mexican War. It is interesting to find these international problems reflected in the work and views of Mansfield at Fort Pulaski.


An interesting anecdotal account of the life of Mansfield is found on pages 283 - 284 of this work.


This carefully prepared series of brief biographies are of unequal value, but are prepared in a scholarly manner and are generally accurate. This study has referred to the following biographical accounts in the series: Thomas Marshall Spaulding, "Bernard, Simon (Apr. 22, 1799 - Nov. 5, 1839)", II, 1929; Edna Yoest, "Deaffield, Richard (Sept. 1, 1799 - Nov. 5, 1873)", V, 1930; Gustav J. Niehberger, "Mansfield, Joseph King Fenno (Dec. 22, 1803 - Sept. 18, 1862)", XII, 1935.
1. Barrow, Alfrida De Hanne and Bell, Laura Palmer, Anchored Yesterdays, The Log Book of Savannah's Voyage Across a Georgia Century, From the Press of the Review Printing Company in the City of Savannah, Georgia, 1925.

An informal, chatty chronology of Savannah's history, which contains many references to economic and social life of the city.


This work is a generally accurate standard history of the United States, and used merely for reference purposes in this study.


Fair general accounts of the causes and results of the panic of 1837, which indirectly affected the appropriation of money for fortifications, are given in the works above of Dewey and Hepburn.


Valuable and accurate accounts of American and British diplomatic views of the Korean situation in the summer of 1865, are given in Latane's work and The Cambridge History of British Foreign Policy listed above. The effect of this international situation upon Fort Pulaski is discussed in this study.
APPENDIX

Service of United States Officers, Corps of Engineers, on the Fort Pulaski project, Cockspur Island, Savannah River, Georgia, 1828 - 1861.

1

BABCOCK, SAMUEL, Major, 1828 - 1830:

1. Ordered to fort project on Cockspur Island, August 1, 1828.
2. Arrived at Savannah, December 13, 1828.
3. Left Savannah permanently, July 2, 1830.
4. Resigned the Service, December, 22, 1830.

Lee, Robert Edward, Second Lieutenant, 1829 - 1831:

1. Ordered to fort project on Cockspur Island, August 11, 1829.
2. Arrived at Savannah, November 1829.
3. Left from Cockspur Island, April 21, 1831.

MURFIELD, JOSEPH KING FIELD, Second and First Lieutenant and Captain, 1831 - 1845:

1. Ordered to fort project on Cockspur Island, December 18, 1830.
3. Left Fort Pulaski, August 11, 1845.
4. Left Fort Pulaski permanently, July 1, 1845.

Anderson, Joseph Reid, Brevet Second Lieutenant, 1836 - 1837:

1. Ordered to Fort Pulaski, November 11, 1836.
2. Arrived at Fort Pulaski, December 10, 1836.
3. Left Fort Pulaski permanently, March 13, 1837.
4. Resigned the Service, September 30, 1837.

Benham, Henry Washington, Brevet Second Lieutenant and First Lieutenant, 1837 - 1838:

1. Ordered to Fort Pulaski, July 31, 1837.
2. Arrived at Fort Pulaski, September 29, 1837.
3. Left Fort Pulaski, December 18, 1838.

Trapier, James Heyward, First Lieutenant, 1839 - 1840:

1. Arrived at Savannah, November 7, 1839.
2. Ordered from Fort Pulaski, April 3, 1840.
3. Left Fort Pulaski permanently, April 18, 1840.

ALEXANDER, BARTON STONE, Brevet Second Lieutenant and Second Lieutenant, 1842 - 1848;
1. Ordered to Fort Pulaski, July 28, 1842.
2. Arrived at Fort Pulaski, October 6, 1842.
3. Assumed command of Fort Pulaski, September 1, 1845.
4. Ordered from Fort Pulaski:
   a. Temporarily, April 19, 1847; leaving May 8, 1847.
   b. Permanently, March 11, 1848; leaving March 29, 1848.

STEVENS, ISAAC INGALLS, First Lieutenant and Major, 1848:
1. Ordered to Fort Pulaski, March 11, 1848.
2. Arrived at Fort Pulaski, March 22, 1848.
3. Assumed command of Fort Pulaski, March 27, 1848.
4. Left Savannah permanently, March 30, 1848.
5. Transferred from command of Fort Pulaski, September 13, 1848.

GILMER, JEREMY FRANCIS, First Lieutenant and Captain, 1848 - 1858:
1. Ordered to Fort Pulaski, September 13, 1848.
2. Arrived at Fort Pulaski, March 22, 1848.
3. Ordered from Fort Pulaski, March 27, 1848.
4. Left Savannah permanently, March 30, 1848.
5. Transferred from command of Fort Pulaski, September 13, 1848.

Lee, George Washington Custis, Brevet Second Lieutenant and Second Lieutenant, 1855 - 1856:
1. Arrived at Savannah, March 10, 1855.
2. Ordered from Fort Pulaski to Fort Clinch, Fernandina, Florida, January 30, 1856.
3. Relieved Captain Gilmer at Fort Pulaski, June to November, 1856.

Whiting, William Henry Chase, First Lieutenant and Captain, 1859 - 1861:
1. Ordered to Fort Pulaski, June 14, 1859.
2. Arrived at Fort Pulaski, July 15, 1859.
3. Fort Pulaski seized by Georgia State Troops, January 3, 1861.
4. Whiting resigned the Service, to join the Confederate Army, February 20, 1861.

Notes
Appendix

1. All officers whose names are completely capitalized were in command of the project; others were assistants. Alexander was first an assistant and then commandant.
2. The exact date of Lee's arrival is not known, but it was early in the month.
3. Fort Pulaski had been named in 1833.