

5232

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

....., Director

State: Georgia

DESCRIPTIVE REPORT

Topographic }  
~~Hydrographic~~ } Sheet No. 5232

LOCALITY

St. Marys Entrance

Coast of Georgia

Sound  
South End of Cumberland Island

1931

CHIEF OF PARTY

S. B. Grenell

applied to chart 1242, Mar. 16, 1939 g.K.S.

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. ....

REGISTER NO. 5232

5232

State..... Georgia .....

General locality..... ~~Coast of Georgia~~ St. Marys Entrance  
Sound

Locality..... ~~South End of Cumberland Island~~

Scale..... 1:10,000 Date of Photographs: 11-21-33; 11-26-33  
Date of survey Comp: 8/25/34-9/18, 1937

Vessel..... Aerial Photo. Compilation Party 18

Reviewed and recommended for approval:

Chief of party..... Lieut. (j.g.) S. B. Grenell

Photographs plotted by: F. B. Hickman

Surveyed by .....

Inked by..... J. B. Williams, Jr. ....

Heights in feet above..... to ground to tops of trees

Contour, Approximate contour, Form line interval..... feet

Instructions dated..... November 10, 1933 ....., 19.....

Remarks: Compilation of aerial photos Nos.: (790) M-76 to 88;

(790) M-13 to 22.

# --NOTES OF COMPILATION--

One copy of this form must accompany each chart from beginning to completion. The last draftsman, whose name appears on this form, is responsible for it and all personnell will endeavor to keep these forms up to date and correctly posted. This form is very important inasmuch as the final Descriptive Report of the chart compiled is based upon the information contained herein.

SHEET No. 5232

PHOTO NO. 790 M-76 to PHOTO NO. 790 M-88  
790 M-13 790 M22

BY	START	FINISH
ROUGH RADIAL PLOT		
SCALE FACTOR ( )		
SCALE FACTOR CHECKED <u>S. B. Grenell</u>		
PROJECTION <u>A. M. Gruber</u>		
PROJECTION CHECKED <u>Warren Fitch</u>	<u>8-18-34</u>	<u>8-18-34</u>
CONTROL PLOTTED <u>A. M. Gruber</u>	<u>8-19-34</u>	<u>8-19-34</u>
CONTROL CHECKED <u>A. A. Futral</u>	<u>8-20-34</u>	<u>8-20-34</u>
TOPOGRAPHY TRANSFERRED		
TOPOGRAPHY CHECKED		
SMOOTH RADIAL LINE PLOT <u>F. B. Hickman</u>	<u>8-22-34</u>	<u>8-23-34</u>
RADIAL LINE PLOT CHECKED <u>S. B. Grenell</u>	<u>8-23-34</u>	<u>8-23-34</u>
DETAIL INKED <u>J. B. Williams, Jr.</u>	<u>8-25-34</u>	<u>9-18-34</u>
AREA DETAIL INKED <u>13.9</u>	Square Statute Miles	
LENGTH OF SHORE LINE OVER 200m. <u>14.5</u>	Statute Miles	
LENGTH OF SHORE LINE UNDER 200m. <u>19.9</u>	Statute Miles	
GENERAL LOCATION <u>Coast of Georgia</u>		
LOCATION <u>South End of Cumberland Island</u>		
DATUM STATION <u>Dungeness W.T.</u>	LATITUDE <u>30 - 14 - 50.352 -1550.6M</u>	
DATUM <u>N. A. 1927</u>	LONGITUDE <u>81 - 28 - 10.336 -274.9M</u> Adjusted.	

# INSPECTION REPORT

Sheet #5232

## REFERENCE:

In reviewing this sheet in the Washington office, special reference should be made to the General Report for Single Lens Sheets filed with sheet # 5206.

## GENERAL INFORMATION:

This sheet covers the general area along the Inside Route through Cumberland Sound. The marsh area is similar to all of that formation along this section of the coast and offers no features worthy of special note. The stream lines are clear cut and definite and check with the plane table <sup>and</sup> hydrographic surveys.

The southern end of Cumberland Island is a private estate belonging to the Carnegie family. The wooded portions are covered with a mixed growth of oak and pine with a few scattering palm and scrub palmetto along the borders.

The high and low water line in the vicinity of the breakwater on the south tip of Cumberland Island do not check exactly with the plane table survey. This matter was discussed with Lieut. H. A. Paton and he advised that he had made local enquiries and found that the formation of this point shifts with the seasons and with every heavy storm. The shoreline as shown on this compilation is taken from the photographs as of November 24, 1933. The position of the breakwater shown checks perfectly with the field plane table position.

## CONTROL:

This sheet was controlled entirely by triangulation. No topographic control was used except that short sections of shoreline were checked from the plane table survey by H. A. Paton, 1934.

The triangulation came from the revision survey of C. M. Durgin, 1932-33 and intersection stations from the first order arc of C. D. Meaney, 1932.

## LANDMARKS FOR CHARTS:

Landmarks have been submitted on form 567 by Lieut. H. A. Paton, 1934.

## COAST PILOT NOTES:

Notes have been or will be submitted by Lieut. H. A. Paton, 1934.

## NAMES:

All names on this sheet were taken from current issues of charts.

Respectfully submitted,

*S. B. Grenell*  
S. B. Grenell

## REPORT OF COMPILATION:

## COMPILATION METHOD:

This sheet was compiled by the standard radial plot method. No difficulty was experienced in carrying the plot through with the available control.

## ADJUSTMENT OF PHOTOGRAPHS:

The pictures on this sheet have about the average amount of tilt and no difficulty was experienced in adjusting the pictures to the plot. With the exception of picture #80 which was so badly blurred and had so much tilt distortion that it was omitted from the plot.

## INTERPRETATION:

The photographs were clear, causing no trouble with the interpretation of the detail. The single lines of sand dots on the southern tip of Cumberland Island have been put there to show where the current is gradually building up sand bars which may in time connect themselves with the mainland.

The stereoscope was used to pick up the roads which in most cases ran through heavily wooded areas and were not visible with the naked eye. The ruled shoreline by the Dungeness dock is used to show the presence of a stone wall along the shoreline.

## INFORMATION FROM OTHER SOURCES:

The photographs and the field sketches were the only sources of information used on this sheet. With the exception of various small sections of shoreline which were checked in the compilation of this sheet from an overlay sheet gotten from H. A. Paton. The docks shown on H. A. Paton's aluminum sheet were checked and found true on this sheet.

## COMPARISON WITH OTHER SURVEYS:

Junctions with other sheets compiled in this office are complete and satisfactory. There are no details appearing on the charts that should be removed.

## ACCURACY AND COMPLETENESS:

The area covered on this sheet is complete in every detail, as nearly as can be determined from the photographs. All well defined detail is located with a probable error of not more than 4 meters; less well defined detail with an error of not more than 10 meters.

## PHOTOGRAPHS:

No.	to	No.	Date	Time	Stage of Time
(790)	M-76	M-88	11-26-33	11:30 AM	1/5
(790)	M-13	M-22	11-24-33	12:12PM	4/6

Approved:

*S. B. Grenell*  
S. B. Grenell,  
Chief of Party

*J. B. Williams, Jr.*  
J. B. Williams, Jr.,  
Draftsman

REVIEW OF AIR PHOTO COMPILATION NO. 5232

Chief of Party: S.B. GRENELL

Compiled by: J.B. Williams, Jr.

Project: F.P. 4, Ga. Party #18

Instructions dated: Nov. 10, 1933

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64) ✓
2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n) ✓
3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e) ✓  
*None used*
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28) ✓  
*None*
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report. ✓
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i) ✓
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44) ✓

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41) ✓
9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57) ✓  
*Form 524 submitted by H.A. Paton, 1934*
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60) ✓  
*Form 567 Submitted by H.A. Paton, 1934*
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c) ✓  
*No bridges*
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k) ✓
13. The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted. ✓
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
15. The drafting is satisfactory and particular attention has been given the following:
  1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report. ✓
  2. The degrees and minutes of Latitude and Longitude are correctly marked. ✓



3. All station points are exactly marked by fine black dots. ✓
4. Closely spaced lines are drawn sharp and clear for printing. ✓
5. Topographic symbols for similar features are of uniform weight. ✓
6. All drawing has been retouched where partially rubbed off. ✓
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground. ✓

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time. ✓

17. Remarks:

18. Examined and approved;

*Dec. 12, 1934*

*J. B. Howell*  
Chief of Party

19. Remarks after review in office:

*See following pages.*

Reviewed in office by: *D. H. Benson* *B. G. Jones*

Examined and approved:

*K. T. Adams*  
Asst Chief, Section of Field Records  
*Division of Charts*  
*L. O. Albert*  
Chief, Division of Charts

*F. B. Borden*  
Chief, Section of Field Work  
*G. H. Gunde*  
Chief, Division of Hydrography  
and Topography.

REVIEW OF AIR PHOTO COMPILATION T-5232  
(1:10 000)

Comparison with Contemporary Surveys:

Contemporary plane table surveys were made covering the area of the compilation for the purpose of establishing temporary topographic stations for the control of hydrography and the air photo compilation. The compilation party did not use the plane table work for control, but did compare the plane table sheet with the compilation.

(1) The following list of recoverable described stations were added to the compilation from the plane table sheets indicated. They were plotted in this office by D. H. Benson and checked by L. A. McGann.

PIN (d)	T -6198 (b)	
ATE (d)	"	<i>Descriptions on Form 524 are filed under Nos. T6198(b) and T6190(a)</i>
ZOD (d)	"	
RYE (d)	"	
TRI (d)	T-6190 (a)	

(2) Comparison with T-6191 (b). <sup>(1434) (Scale 1:10000)</sup> Several triangulation stations were plotted incorrectly on the compilation as follows:

△ Beach (2) 1933. 9 meters N.W. of correct position. Could not be located correctly on photographs so was not used in radial plot.

△ Tiger Island Range Front Beacon 1933. 2 meters west of correct position; clear on photographs.

△ Tiger Island Range Rear Beacon 1933. 9 meters N.W. of correct position. Clear on photographs.

△ Hammock (1905-1932). 2 meters west of correct position. Spotted correctly on photographs.

Because of the incorrect plotting of the above stations, the south end of Cumberland Island was rechecked by a radial plot using the above stations (except Beach 2) and station, St. Mary's River Light 2 (1933) for control. Station Jolly (1933) was not used as the spotting was doubtful. The compilation was correct, except for the North Jetty, which was replotted and changed about 8 meters south at long. 91°27.3' and now checks with the plane table. All of the Jetty is not shown either on the plane table or the compilation, there not being room on the sheets. The triangulation stations listed above were plotted in this office from the NA 1927 adjusted positions. The report for plane table control survey 6090a states that the plane table could not use the first field position furnished for triangulation Tiger Island Range Rear Light 1933, but later the adjusted position was received and checked the plane table location. The compilation was apparently not held on the erroneous positions of triangulation Tiger Island Range Rear Light and triangulation Beach 2 1933

The plane table survey T-6191(b) is subsequent to the compilation but this shoreline is shifting rapidly and for that reason the compilation has not been revised the section of H.W. line on T6191b was not carried to a junction with the compilation (B.S.J.)

The junction referred to has been accomplished on T. 6190a.

E. V. Allen

as very little change was made after replotting on the correct triangulation positions in this office.

There is a difference of from 30 to 90 meters in the location of the high water lines as shown on the plane table and the compilation around the end of Cumberland Island. This difference is discussed in the reports for the two sheets. The photographs confirmed the compilation which was not changed. This area is subject to rapid changes in shape and location of water line, and is building up steadily. A sand island was added to the compilation from the plane table just south of the North Jetty. The island was not radial plotted from the photographs because it appears on only one picture and the plane table survey is of later date than the photographs.

All detail shown on the plane table within the area of the compilation is shown on the compilation with the exception of the magnetic meridian and the azimuth of the Tiger Island Range which is lettered on the plane table sheet as  $260^{\circ}37'$  from north. This azimuth was checked by protractor in the office.

Comparison with T-6189 (b). (1934) (1-10000)

Lat 30-45.8  
Long 81-28.2

(1) The short stretches of rodded shore line near  $\Delta$  Nightingale and  $\odot$  Pole differed slightly from the compilation. Examination of the photographs showed that a more careful tracing of the shore line at these points confirmed the plane table and changes in the compilation were made accordingly. The plane table shore line of Drum Point Island could not be checked by the photographs for the reason given in the plane table report, that the plane table located the outer edge of the mud bank which is covered at H.W. No change was made in the compilation.

Several temporary topographic signals fell outside the highwater line of the compilation. The photographs taken at  $1/5$  tide showed that these were all located in the mud base at low water. The low water line was added to the compilation by a dotted line where not already shown.

Eighteen buildings at Dungeness were added to the compilation in this office from the photographs.

A rock just south of  $\Delta$  Beach 2 (1933) about 95 meters outside the H.W. line was added to the compilation from the plane table.

by 4 meters. A note has been

The plane table projection is incorrect at  $30^{\circ}41'$ , ~~being 4 meters out as marked in pencil on the plane table sheet.~~ This error does not affect this compilation.

All detail shown on the plane table sheet within the area of the compilation is shown on the compilation except the magnetic meridian and the Tiger Island Range azimuth, also shown on the plane table sheet T-6189 (b) and given above.

Comparison with T-6190 (a): (1934) (1:10000)

(1) The rodded shore line shown on this sheet checks the compilation shore line very closely. A building near the Dock on St. Mary's River was added to the compilation from the plane table sheet. This building is partly obscured by trees on the photos. All detail shown on the plane table sheet within the area of the compilation is shown on the compilation except for the magnetic meridian.

Comparison with old Surveys:

T-1152 (1870) covers the northern part of the area of the compilation down to about  $30^{\circ}45.5'$ . No changes in topography of any importance have taken place.

T-613 (1857) on a scale of 1:10,000 laid directly under the celluloid and containing two triangulation stations recovered in 1932 shows that some changes have taken place. The most important change has been the building <sup>out</sup> of the southeastern part of Cumberland Island along the line of the North Jetty. The jetty has been built since the 1857 survey and the point has built outwards along the jetty between 800 and 900 meters. The eastern shore line of Cumberland Island north of  $30^{\circ}44.5'$  has receded about 100 meters. The eastern part of Tiger Island has receded about 300 meters. The marsh shores of Cumberland Sound have changed up to 100 meters in places both ways. The island south of Drum Point Island has decreased in size about 75 per cent, the northern part having been washed away. The marsh island at lat.  $30^{\circ}44.3'$ , long.  $81^{\circ}29.5'$  has also decreased in size about 50 per cent, the northern half having disappeared. There are also differences in the locations of the creeks flowing through the marshes, although the general locations and shapes are the same.

T-4095 (1914) shows no important changes. The part of the North Jetty extending northward on the shore is not shown on the compilation, being covered with sand and not visible from the photographs. *reactions of T-4095*  
*The compilation is complete and adequate to supersede the shore primary surveys.*  
Comparison with the present charts: *T-1152 and T-613 which it covers, except for the North Jetty on T-4095.*

Chart 1242 shows only one important change and that is the building out along the jetty of the southern part of Cumberland Island. Chart 453 shows the same difference as above. The island south of the North Jetty has changed in shape and location also, and shifts comparatively rapidly. Chart 3257 shows the same conditions as the above two charts.

Landmarks:

Greyfield Tank is not shown as a landmark on the charts, but is submitted in the report on T-6189 (b), along with Dungeness House Cupola, likewise not shown on the present charts. There are no contemporary Hydrographic surveys yet available.

*Comparison with recent Hydrographic surveys*  
General:

An island bare at low water and a shoal area, both to the east of

Drum Point Island, were added to the compilation from the photographs, which were taken at one fifth tide.

Respectfully Submitted,

D. H. Benson.

*D. H. Benson*

*V.B.G. Jones*

*Approved*  
*K.T. Adams*



Survey No. T-5232

Chart No. 1242

Diagram No..

Not Approved by the Division of Geographic Names, Department of Interior.

R. Referred to the Division of Geographic Names, Department of Interior.

(100)

Work list for the compilation

To use  
 7-5129 (11-1-50) if started is brought up to a proper  
 function line

1. Sheet indexed.
2. Latitude and longitude corrected or unadjusted; degree and minutes corrected or projection.
3. Note 1 review as to whether projection was checked and results.
4. Check geographic names against standard and place name list.
5. Heights and bearings checked against local light lists and connections and omissions noted in review. (Check with the standard or U.S. L.S. Bureau in case of doubt as to when the data was reliable).
6. Descriptions on Part 524 checked against compilation and corrected where necessary. Corrections noted in the review and cross references made where filling was changed. This list by sheet numbers made in the review.
7. Comparison with other surveys:

Chart - for omissions and changes in landmarks and other important detail.

a. Old surveys.

c. New hydrographic surveys. *Not available*

d. Plane-table control surveys - all detail on the plane-table control surveys is shown on the compilation except as noted in the review. Differences are discussed.

Plane-table control surveys reviewed in connection with the compilation review and reference made at back of the plane-table report. Some of the compilation review attached at back of the plane-table report as necessary. Notes on discrepancies on the plane-table sheet where needed.

a. Projection.

b. Quality of the plane-table work.

c. Differences.

d. U.S. sections and grids.



8. Station 524 is marked on map.
9. Put date and initials on notes and plane-table sketches.
10. Differences or new data on spot heights to attention in Section 1, page 1, Section 2, page 2, Section 3, page 3.
11. Overlay complete:
  - a. Section 1, sheet with enlargement of record.
  - b. Section 2, sheet with enlargement of record.
  - c. Section 3, sheet with enlargement of record.
12. Review complete:
  - a. Accuracy of location.
  - b. Bridges.
  - c. Section 1, sheet with enlargement of record.
  - d. Section 2, sheet with enlargement of record.
  - e. Section 3, sheet with enlargement of record.
  - f. Section 4, sheet with enlargement of record.
  - g. Section 5, sheet with enlargement of record.
  - h. Section 6, sheet with enlargement of record.
  - i. Section 7, sheet with enlargement of record.
  - j. Section 8, sheet with enlargement of record.
  - k. Section 9, sheet with enlargement of record.
  - l. Section 10, sheet with enlargement of record.
  - m. Section 11, sheet with enlargement of record.
  - n. Section 12, sheet with enlargement of record.
  - o. Section 13, sheet with enlargement of record.
  - p. Section 14, sheet with enlargement of record.
  - q. Section 15, sheet with enlargement of record.
  - r. Section 16, sheet with enlargement of record.
  - s. Section 17, sheet with enlargement of record.
  - t. Section 18, sheet with enlargement of record.
  - u. Section 19, sheet with enlargement of record.
  - v. Section 20, sheet with enlargement of record.
  - w. Section 21, sheet with enlargement of record.
  - x. Section 22, sheet with enlargement of record.
  - y. Section 23, sheet with enlargement of record.
  - z. Section 24, sheet with enlargement of record.
13. Any additional data to make the descriptive report complete for future reference.

*File subject card for beach  
erow as of 1. and color combination*

Applied to Chart 841 March 19, 1936 Wallace A. Bruden

" " reconstruction of chart 453, April 10, 1937 John S. Loe