

5229

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Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic Sheet No. 5229
~~Hydrographic~~

State Georgia

LOCALITY

Georgia East Coast

Little Cumberland Island

1935

CHIEF OF PARTY

S. B. Grenell

U. S. GOVERNMENT PRINTING OFFICE: 1934

5229

applied to new chart 448 (thru chart 841) July 1937 J.S.L.

applied to chart 1242, Mar. 16, 1939 J.H.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.

1242-2

REGISTER NO. 5229

State..... Georgia

General locality..... ~~Georgia East Coast~~

OK

Locality..... ~~Little~~ Cumberland Island

Scale 1:10,000 Date of photographs 11-24-33; 12-16-33
survey comp., 19.....

Vessel..... Aerial Photo Compilation Party No. 18

Reviewed and recommended for approval:
Chief of party..... Lieut. (j.g.) S. B. Grenall

Photographs plotted by:
~~Surveyed by~~..... F. B. Hickman

Inked by..... C. E. Helfrich

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. M1-790I-8 to M9-790I-8

M266-790 I-8 to M274 - 790 I-8

--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. 5229

	M1-7901-8	to PHOTO NO.	M9-7901-8
	PHOTO NO. <u>M266-7901-8</u>		<u>M274-7901-8</u>
BY	<u>F. B. Hickman</u>	START	FINISH
ROUGH RADIAL PLOT	<u>F. B. Hickman</u>		
SCALE FACTOR ()	<u>F. B. Hickman</u>		
SCALE FACTOR CHECKED	<u>S. B. Grenell</u>		
PROJECTION	<u>A. M. Gruber</u>	<u>11-12-34</u>	<u>11-12-34</u>
PROJECTION CHECKED	<u>A. A. Futral</u>	<u>11-14-34</u>	<u>11-14-34</u>
CONTROL PLOTTED	<u>A. A. Futral</u>	<u>11-15-34</u>	<u>11-15-34</u>
CONTROL CHECKED	<u>Warren Fitch</u>	<u>11-16-34</u>	<u>11-16-34</u>
TOPOGRAPHY TRANSFERRED	<u>C. E. Helfrich</u>	<u>Various</u>	<u>Times</u>
TOPOGRAPHY CHECKED	<u>S. B. Grenell</u>	<u>"</u>	<u>"</u>
SMOOTH RADIAL LINE PLOT	<u>F. B. Hickman</u>	<u>6-134</u>	<u>1-16-35</u>
RADIAL LINE PLOT CHECKED	<u>S. B. Grenell</u>		<u>1-16-35</u>
	Junction made with 5230		
DETAIL INKED	<u>C. E. Helfrich</u>	<u>2-9-35</u>	<u>3-30-35</u>
AREA DETAIL INKED	<u>25.8</u>	Square Statute Miles	
LENGTH OF SHORE LINE OVER 200m.	<u>25.4</u>	Statute Miles	
LENGTH OF SHORE LINE UNDER 200m.	<u>46.7</u>	Statute Miles	
GENERAL LOCATION	<u>Georgia East Coast</u>		
LOCATION	<u>Cumberland Island</u>		
DATUM STATION	<u>Terrapin, 1933</u>	LATITUDE	<u>30°-55'-28.879" (889.3M)</u>
DATUM	<u>N. A. 1927</u>	LONGITUDE	<u>81°-27'-13.288" (348.8M)</u>

N.A. 1927 DATUM { 30° - 55' 28.937" (891.1) (ADJUSTED)
 { 81° - 27' 13.394" (355.6)

INSPECTION REPORT
for
COMPILATION No. 5229
Scale: 1:10,000

REFERENCE:

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

GENERAL INFORMATION:

Compilation 5230 which makes a junction on the west was completed several months ago. A flight along the junction was compiled and the west border of this compilation completed at that time. The flight covering the outer coast of the island was held up until a traverse could be run along the beach. There was no control for this outer flight except the traverse. The traverse was run in late in December by this compilation party and closed between triangulation stations OLD TOWER at the north end of the island and CUMBERLAND ISLAND WINDMILL.

The western flight strip was flown at about $2/3$ tide while the eastern or outer strip was flown at near low water. These two flights overlapped at the shoreline in Lat. $30^{\circ}-56.0'$, Long. $81^{\circ}-26.0'$ and a difference in the low water line may be noted at this point. The east flight shows a wide sand bank which is not indicated on the west flight.

TOPOGRAPHIC DETAIL:

There are several low eroded bluffs on the compilation which were carefully studied under the stereoscope and have been actually shown with the conventional symbol. The stereoscope was also used extensively in tracing out the roads which pass through very heavy timber and which show indistinctly on the photographs. Cumberland Island is privately owned, principally by the Carnegie and Stafford families and all roads are private roads but are kept in good condition. Most of them are surfaced with shell.

The bar formations along the outer beach show very clearly on the photographs and have been carefully indicated. The formation at the mouth of Christmas Creek is of special interest as it indicates the range of shift of this stream mouth.

In several places the vegetation has been carefully put in to show lines of the old beach formations as they appear on the photographs. This feature will be of use in the study of erosion along this section of coast.

CONTROL:

The radial plot was controlled entirely by triangulation and traverse. The triangulation is from the coordinating scheme of C. M. Durgin, 1933. The traverse was run in by a unit of the compilation party and closed within third order triangulation accuracy.

The flight overlaps were very small and in one case - indicated on overlay - there was a small area not covered on any print.

COMPARISON WITH CONTEMPORARY SURVEYS:

A careful check has been made with the shoreline shown on the smooth hydrographic sheets of H. A. Paton, 1934. The hydrography checked the shoreline excellently except in one place in the vicinity of High Bluff. A careful check of the compilation was made and a report forwarded to Lieut. Paton suggesting that he check the accuracy of the field topographic sheet. No report was received from Lieut. Paton so it is assumed that the field sheet was found to be in error.


LANDMARKS AND COAST PILOT NOTES:

The above have been submitted by H. A. Paton, 1934.

NAMES ON OVERLAY SHEET:

All names appearing on the overlay sheet were taken from current issues of charts.

Respectfully submitted,


S. B. Grenell,
Chief of Party

REPORT OF COMPILATION:RADIAL LINE PLOT:

The standard radial line plot method was used to establish radial points. Lack of control presented the majority of difficulty encountered. All the available control and common points between two flights held. The adjoining sheets were single lens of the same scale, 1:10,000.

ADJUSTMENT OF PHOTOGRAPHS:

An unusual amount of tilt was encountered which necessitated constant adjusting and interlacing between points. Radial points were well selected.

INTERPRETATION:

The photographs were clear, but due to the tall trees, roads and a part of high water line were obscured. This difficulty was overcome by use of the stereoscope. An unusual pseudo-stereoscopic effect was noticed on the east flight. Between Lats. 30°-52', 30°-53' and Long. 81°-27' the flights failed to join. The blank area is clear of the inland water route and with the exception of a few small creeks, is the usual type of salt marsh.

COMPARISON WITH CONTEMPORARY SURVEYS:

All junctions with adjoining sheets have been made. The shoreline checked the smooth sheets of Lieut. Paton, but shoreline rodged in on topo sheets failed to hold in some places. These discrepancies were taken up with Lieut. Paton and adjusted by him on the field sheets.

COMPARISON WITH OTHER SURVEYS:

This compilation agrees with previous charts.

ACCURACY AND COMPLETENESS:

Probable error in well defined detail 4 meters.
 " " " Less well defined detail 10 meters.

PHOTOGRAPHS:

No.	to	No.	Time	Date	Stage of Tide
M-1 - 790 I-8		M-9-790 I-8	12:05PM	11-24-33	4/6
M-266-790 I-8		M-274 - 790 I-8	12:40PM	12-16-33	1/7

C. E. Helfrich
 C. E. Helfrich,
 Draftsman

Approved:

S. B. Grenell
 S. B. Grenell

REVIEW OF AIR PHOTO COMPILATION NO. 5229

Chief of Party: S.B. GRENNELL

Compiled by: C.E. Helfrich

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)
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 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 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) None
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;

April 9, 1935

S. B. Schell
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:

C. K. Green
Chief, Section of Field Records
L. O. Lobnitz
Chief, Division of Charts

T. B. Borden
Chief, Section of Field Work
G. Wade
Chief, Division of Hydrography
and Topography.

Review of Air Photo Compilation T 5229

Scale 1:10,000

The western half of this sheet, particularly the northwestern section, is inadequately controlled. The eastern half of the compilation is controlled by traverse along the coastline.

Of the four triangulation stations plotted on the western half of the sheet, three were incorrectly plotted by the field party:

Triangulation station Shoal 2 (1933), 9 meters east of correct position.

Triangulation station Terrapin (1933), 5 meters east of correct position.

Triangulation station Bat (1860), 5 meters east of correct position.

The errors in plotting control stations were apparently due to confusion in datums.

The plotting of triangulation has been corrected and the radial plot checked as nearly as possible in this office. The plot has been carried through with templates to a junction with the adjoining compilations, T 5228 and T 5230. The checked plot made in this office indicates no error larger than 1 mm. on the compilation except in the northwest section where errors ~~made~~^{may} amount to as much as 1.5 mm. The compilation has not been changed as available control is inadequate for precise plotting. The compilation as submitted from the field is coordinated with the hydrography and graphic control surveys. Soundings in most of the secondary streams have been plotted by shoreline references and any change in the compilation at this time would necessitate considerable replotting of the hydrographic survey which has been inked. Since the control is not adequate for precise radial plotting ~~and~~^{and} because of the press of work at this time and the relative unimportance of the area, it is not considered advisable to make any change in the compilation shoreline. The differences will not be ~~appreciable~~^{considerable} when reduced to the 1:40,000 scale chart. The western half of the compilation is inadequate for use for resurveys and should be replotted with additional control or with the nine-lens photographs, when practicable to do so.

Comparison with Graphic Control Surveys

(a) T 6187b - April 1934 - 1:10,000

Differences between the sections of high water line shown on T 6187b and this compilation are largely due to interpretation of indefinite shoreline. The photographs have been examined and the compilation has not been changed except along the sand beach, lat. 30° 57.8', long. 81° 25.4'. The shoreline on this sand beach has been revised to agree with T 6187b.

Three small ^{grass patches} ~~marsh islands~~, lat. $30^{\circ} 55.6'$, long. $81^{\circ} 27.2'$ were added to the compilation from the photographs.

(b) T 6188a - June 1934 - 1:10,000

Differences between this compilation and the short sections of shoreline on T 6188a are largely due to interpretation and the compilation has not been changed.

(c) All details shown on graphic control surveys T 6187 b and T 6188 a within the area of the compilation are now shown on the compilation except temporary plane table stations and the magnetic meridian.

(d) Recoverable topographic stations were transferred to this compilation by D. H. Benson and checked by H. R. Sabersalski. Descriptions on Form 524 are filed under T 6188a and T 6187b.

Comparison with Recent Hydrographic Survey H 5698 (1934)

No discrepancies exist between soundings and shoreline. Several sections of high water line on H 5698 were taken from the graphic control surveys discussed above and differ from this compilation. This has been called to the attention of the verifier.

Comparison with Previous Topographic Surveys

(a) T 4106 (1924), 1:20,000

The principal change in topography which has taken place since 1924 is at the entrance to Christmas Creek. The high water line of the south point of the entrance has moved northward about 190 meters, and the channel through the sand beach has moved north about 1350 meters. This area is subject to frequent and rapid change as reported on page 3 of descriptive report, T 6187 b. The shoreline along the Atlantic side of Cumberland Island as shown on the compilation has built out to a maximum of 90 meters at lat. $30^{\circ} 56'$.

The compilation is complete and adequate to supersede T 4106.

the section of T 4106 which it covers

(b) T 1152 (1870), 1:20,000

The Atlantic shoreline of Cumberland Island has built out considerably north of lat. $30^{\circ} 52'$. At lat. $30^{\circ} 52'$ the shoreline is the same as it was in 1870.

There have been minor changes in the small streams. through the marshes in the interior.

The main roads on Cumberland Island are substantially the same now as in 1870, although there have been a few changes,

The compilation is complete and adequate to supersede T 1152 except for the continuation of bluff line on the west side of Cumberland Island.

the section of which it covers

(c) T 1145 (1870), 1:20,000

The most important change that has taken place is at the entrance of Christmas Creek. The entrance has moved north and east about 1600 meters since 1870. The whole Atlantic shoreline of Cumberland Island has built out to a maximum of 360 meters at lat. $30^{\circ} 56.3'$.

Otherwise not much change has taken place since 1870.

The compilation is complete and adequate to supersede T-1145.

*the section of T-1145
which it covers*

Comparison with charts Nos. 1242, 448, 3257.

Chart No. 448 shows a railroad running from the pier in Cumberland River to the Atlantic shore at lat. $30^{\circ} 54.6'$. Apparently the tracks have been removed and the roadbed is now used as a roadway, being shown thus on the compilation. The railroad is shown as a road on charts Nos. 1242 and 3257.

There are many roads shown on the charts which are not shown on the compilation. The main roads can be easily traced from the photographs and are shown completely on the compilation but the trails and secondary roads are not discernable through the trees except at intervals.

Douglas H. Benson
V B G Jones

Date Aug. 20, 1935

GEOGRAPHIC NAMES

Survey No. T-5229Chart No. 1242

Diagram No. _____

Approved by the Division of Geographic Names, Department of Interior. *

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

Under investigation. Q

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Cumberland River</u> ✓	✓ " 1242 ✓		✓	
	<u>Cumberland Island</u> ✓	✓ " "		✓	
	<u>Little Cumberland Island</u> ✓	✓ " ✓		✓	
	High Bluff (make this a descriptive term)			✓	
*	<u>Cumberland Wharf</u> ✓	✓ 448		✓	
	<u>Terrapin Point</u> ✓	✓ 1242 ✓		✓	
	<u>Abraham Point</u> ✓	✓ " ✓		✓	
	<u>Long Point</u> ✓	✓ " ✓		✓	
	<u>Christmas Creek</u> ✓	✓ " ✓		✓	
*	<u>Shell Creek</u> X			✓	
*	Hatmoon Bluff	✓ E		✓	
	Stockwell Bluff	✓ 1242		✓	
	<u>High Point</u> ✓	✓ " ✓		✓	
	<u>Brickhill River</u> ✓	✓ " "		✓	
	Brickhill Bluff	✓ " "		✓	
	<u>Malkintook Creek</u> ✓ X	✓ " ✓			
	<u>Whitney Lake</u> ✓	✓ " ✓		✓	
	<u>Table Point</u> ✓	✓ " "			
	<u>Atlantic Ocean</u>	✓ " "		✓	
	Hawkins Cr ✓			✓	
	Long Point (Ch 448)				
	<u>Brockington Cr</u> X (Cumberland I. Quad)				
* Not shown pending approval B.G.N. 9/5/35.			Names underlined in red approved by K.T.A. on 1/24/36		

Applied to chart 841 Mar. 19, 1936 W.A. Bruder