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APPENDIX No. 1.

Distribution of the parties of the Coast and Geodetic Survey upon the Atlantic, Gulf of Mexico, and Pacific coasts and the interior of the United States during the fiscal year 1883-'84.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION I				
Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island, including coast and seaports, bays and rivers.	No. 1	Triangulation	O. H. Tittmann, assistant.....	Triangulation of the coast of Maine, between West Quoddy Head and Cross Island. (See also Sections V and VIII.)
	2	Triangulation and topography.	C. H. Boyd, assistant; T. P. Borden, aid.	Triangulation and topography of Machias Bay and vicinity.
	3	Hydrography	Lieut. E. M. Hughes, U. S. N., assistant (part of season); Lieut. Commander A. S. Snow, U. S. N., assistant; Ensigns H. M. Witzel, T. M. Brumby, A. L. Hall and J. H. Hetherington, U. S. N.	Hydrographic surveys between Cross Island and Nash Island; in the vicinity of Moose Reach and in Muscongus Bay, coast of Maine. (See also Section XI.)
	4	Topography	Eugene Ellicott, assistant.....	Topographical surveys of Harrington River and of Chandler's River Bay, Maine. (See also Section III.)
	5	Hydrography	Lieut. E. D. F. Heald, U. S. N., assistant; Lieut. David Daniels, U. S. N.; Ensigns O. G. Dodge and Alfred Jeffries, U. S. N.	Completion of the hydrographic surveys of Narragansett Bay and River and of Pigeon Hill Bay, coast of Maine. (See also Section IX.)
	6	Topography	A. W. Longfellow, assistant; W. I. Vinal, assistant.	Topographical surveys between Gouldsborough and Frenchman's Bays, coast of Maine.
	7	Tidal observations	J. G. Spaulding	Series of tidal observations with self-registering tide-gauge continued, and meteorological observations recorded at Pulpit Cove, North Haven Island, Penobscot Bay.
	8	Hydrography	Lieut. J. E. Pillsbury, U. S. N., assistant.	Hydrographic examinations of Pemaquid and Outer Heron Island ledges, coast of Maine. (See also Sections IV and V.)
	9	Geodetic	Prof. E. T. Quimby, acting assistant.	Continuation of the triangulation of the State of New Hampshire.
	10	Geodetic.....	Prof. V. G. Barbour, acting assistant.	Occupation of stations in connection with the triangulation of the State of Vermont.
	11	Hydrography....	Charles Junken, acting assistant; W. I. Vinal, subassistant.	Examination of ledges in Lake Champlain.
	12	Reconnaissance...	Charles O. Boutelle, assistant; J. E. Boutelle, extra observer.	Reconnaissance for the introduction of additional lines in the triangulation between the Fire Island, Massachusetts, and Epping Baselines. (See also Section II.)
	13	Hydrography....	Lieut. Commander W. H. Brownson U. S. N., assistant; Lieut. F. H. Crosby, U. S. N., assistant; Ensigns J. T. Newton, H. S. Knapp, E. Simpson, Jr., and M. C. Gorgas, U. S. N.	Hydrographic examinations in Vineyard Sound, and resurvey of Monomoy Passage, Nantucket Shoals. (See also Section II.)

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION I—Continued.	14	Special survey....	Henry L. Whitting, assistant.....	Survey of Gay Head Cliffs to fix position of wrecked steamer.
	15	Tidal observations.....		Observations continued at Providence, R. I., with a self-registering tide-gauge loaned to the city engineer.
	16	Tidal observations.....	J. M. Conley.....	Continuation of observations with self-registering tide-gauge established on the breakwater, Block Island.
SECTION II.	No. 1	Topography	W. C. Hodgkins, subassistant; J. H. Turner, acting aid.	Topographic resurveys of Stonington, Conn., and vicinity; also of the coast of Connecticut in the vicinity of Saybrook and Lyme. (See also Section VIII.)
Connecticut, New York, New Jersey, Pennsylvania, and Delaware, including coast, bays, and rivers.	2	Hydrography	Lieut. A. V. Wadhams, U. S. N., assistant; Ensigns T. D. Griffin, A. L. Hall, and W. C. Canfield, U. S. N.	Hydrographic resurveys of Fisher's Island Sound and its adjacent waters completed.
	3	Hydrography	Lieut. John T. Sullivan, U. S. N., assistant; Lieut. W. G. Cutler, U. S. N.; Ensigns E. N. Fisher and J. P. Parker, U. S. N.	Hydrographic resurveys of the eastern part of Long Island Sound and a portion of Block Island Sound.
	4	Hydrography	Lieut. Commander W. H. Brownson, U. S. N., assistant; Lieut. F. H. Crosby, U. S. N., assistant; Ensigns J. T. Norton, H. S. Knapp, E. Simpson, Jr., and M. C. Gorgas, U. S. N.	Hydrographic work off Shagwong Point, Montauk; resurvey of Black Rock Harbor, Conn.; examinations for rocks and ledges in East River, N. Y. (See also Section I.)
	5	Topography and hydrography.	Charles Hosmer, assistant; Ensigns, R. P. Schwerin and D. P. Menefee, U. S. N.	Topographic and hydrographic resurveys in the vicinity of Montauk Point, Gardiner's Bay, and Orient Harbor, Long Island; also completion of hydrography between Stepping Stones light-house and College Point, East River. (See also Section VIII.)
	6	Tidal observations.....	E. Koch	Completion of observations with self-registering tide-gauge at Fort Trumbull, New London, Conn.
	7	Topography.....	W. H. Dennis, assistant; E. L. Taney, aid.	Topographic resurveys of the north shore of Long Island Sound between New London and Four-Mile River and between Saybrook and Clinton.
	8	Hydrography	Lieut. John D. Keesler, U. S. N., assistant; Ensigns F. H. Sherman, C. W. Jungen, and T. G. Dewey, U. S. N.	Hydrographic resurvey along the north shore of Long Island Sound between Goshen Point and Hammonassett Point; also determination of dangerous rock in East River, N. Y.
	9	Topography.....	E. Hergesheimer, assistant.....	Topographic resurvey of the north shore of Long Island Sound from Bridgeport to Frost Point. (See also No. 24, Section II, and Section III.)
	10	Triangulation	Spencer C. McCorkle, assistant.....	Re-establishment of points of the old triangulation and determination of additional points on Long Island between Horton's Point and Old Field Point.
	11	Triangulation	Gershom Bradford, assistant.....	Supplementary triangulation between Eaton's Point and Sands Point, north coast of Long Island, and of the opposite shore for resurvey of Long Island Sound.
	12	Triangulation	C. O. Bontelle, assistant.....	Completion of the primary triangulation across the State of New York, for connecting the triangulation of Hudson River and Lake Champlain with that of the Lake Survey. (See also Section I.)
	13	Hydrography	Lieut. H. B. Mansfield, U. S. N., assistant; Ensigns W. B. Capper, J. M. Orchard, C. S. McClain, and Harry Pirola, U. S. N.	Hydrographic resurvey of the approaches to New York. (See also Sections VI and VII.)

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION II—Continued.	No. 14	Hydrography....	Lieut. J. C. Fremont, U. S. N., assistant; Ensigns A. F. Fechtelier, F. W. Kellogg, and F. R. Bradford, U. S. N.	Observations of currents at stations off New York entrance. (See Section VI.)
	15	Tidal observations.....	F. W. Shephard.....	Continuation of series of tidal observations with self-registering tide-gauge at Sandy Hook, N. J.
	16	Geodetic.....	Prof. E. A. Bowser, acting assistant.	Triangulation of the northern part of the State of New Jersey continued, and reconnaissance begun for the extension of the triangulation in the southern part.
	17	Geodetic.....	Mansfield Merriman, acting assistant.	Continuation of the triangulation and reconnaissance of the State of Pennsylvania.
	18	Special survey....	C. H. Sinclair, subassistant; C. H. Van Orden, subassistant.	Survey of the boundary line between the States of Pennsylvania and West Virginia. (See also Section III.)
	19	Topography	C. M. Bache, assistant; W. B. Mapes.	Topographic survey of the New Jersey coast from Cape May Court-House northward.
	20	Physical hydrography.	Henry Mitchell, assistant; Henry L. Marinlin, assistant.	Physical hydrography of Delaware River and Bay and location of Port Warden lines in the harbor of Philadelphia.
	21	Topography	R. M. Bache, assistant.....	Topographic resurvey of the New Jersey shore of Delaware Bay continued.
	22	Topography	C. T. Iardella, assistant	Continuation of the topographic resurvey of the western shore of Delaware Bay.
	23	Hydrography....	Lieut. C. McR. Winslow, U. S. N., assistant; Ensigns William Truxton, John S. Watters, and Louis S. Van Duzer, U. S. N.	Hydrographic resurvey of Delaware Bay from Mahon's River to Misipillion Creek light.
	24	Topography	E. Hergesheimer, assistant	Topographic resurvey in the vicinity of Cape Henlopen. (See also No. 9, Section II, and Section III.)
	25	Hydrography....	Lieut. G. C. Hanus, U. S. N., assistant; Lieut. W. G. Cutler, U. S. N.; Ensigns E. F. Leiper and G. R. French, U. S. N.	Hydrographic resurvey of lower Delaware Bay. (See also Sections III, IV, and IX.)
SECTION III.	No. 1	Determinations of gravity.	C. S. Petre, assistant	Determinations of gravity by pendulum experiments and comparison of standards in Europe and in the United States.
Maryland, Virginia, and West Virginia, including bays, seaports, and rivers.	2	Determinations of gravity.	Edwin Smith, assistant.....	Comparative determinations of gravity with the Kater pendulum at Washington.
	3	Magnetic observations.	C. A. Schott, assistant.....	Annual determination of the magnetic declination, dip, and intensity at the station on Capitol Hill, Washington.
	4	Telegraphic longitudes.	Francis H. Parsons, subassistant; C. H. Sinclair, subassistant.	Longitude of Covington, Va., by telegraphic exchanges of signals with Washington, D. C. Also observation for latitude of Covington. (See also Sections XIII and XIV.)
	5	Triangulation	C. H. Sinclair, subassistant; J. H. Gray, acting aid.	Occupations of stations for connecting with the triangulation, the corner-stones and boundary monuments of the District of Columbia. (See also Section II.)
	6	Topography	John W. Donn, assistant; D. B. Wainwright, assistant.	Continuation of the detailed topographical survey of the District of Columbia.
	7	Topography	E. Hergesheimer, assistant.....	Topographic resurvey of the shores of Cherry Stone Inlet, Va. (See also Section II.)
	8	Topography	Eugenio Ellicott, assistant.....	Topographic surveys in the vicinity of the headwaters of Lynnhaven Bay, Va. (See also Section I.)
	9	Hydrography....	Lieut. G. C. Hanus, U. S. N., assistant; Ensigns E. F. Leiper and G. R. French, U. S. N.	Hydrographic surveys in the south branch of Elizabeth River, and in North Landing River and Back Bay, Va. (See also Sections II, IV, and IX.)

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION III—Continued.	No. 10	Geodesic leveling.	John B. Weir, subassistant; John Nelson, acting aid.	Lines of leveling of precision carried from Hagerstown, Md., towards Fortress Monroe, Va. (See also Section VIII.)
	11	Triangulation and magnetic observations.	C. H. Sinclair, subassistant; Isaac Winston, aid.	Connection of the astronomical station at Strasburg, Va., with the triangulation. Magnetic observations at Strasburg. (See also Section II.)
	12	Telegraphic longitudes.	George W. Dean, assistant; Francis H. Parsons, subassistant; Carlisle Terry, Jr., aid; J. W. G. Atkins, acting aid.	Determination of the longitude of Charleston, W. Va., by exchanges of telegraphic signals with the station at Louisville, Ky. Also observations for the latitude of the Charleston Station. (See also Sections XIII and XIV.)
	13	Triangulation . . .	A. T. Mosman, assistant; J. F. Pratt, subassistant; W. B. Fairfield, extra observer.	Extension westward of the primary triangulation near the thirty-ninth parallel in West Virginia and Ohio.
	14	Special survey . . .	C. H. Sinclair, subassistant; C. H. Van Orden, subassistant.	Determination of the boundary lines between the States of Pennsylvania and West Virginia. (See also Section II.)
	No. 1	Hydrography . . .	Lieut. G. C. Hanus, U. S. N., assistant; Ensigns E. F. Leiper and G. R. French, U. S. N.	Triangulation, topography, and hydrography of North River, N. C. (See also Sections II, III, and IX.)
	2	Hydrography . . .	Lieut. J. E. Pillsbury, U. S. N., assistant; Ensigns E. F. Leiper and G. R. French, U. S. N.	Verification of hydrography for the Atlantic Coast Pilot. (See also Sections I and V.)
	3	Hydrography . . .	Lieut. J. E. Pillsbury, U. S. N., assistant; Ensigns E. F. Leiper and G. R. French, U. S. N.	Verification of hydrography for the Atlantic Coast Pilot. (See also Sections I and V.)
	2	Reconnaissance . . .	O. H. Tittman, assistant; W. B. Fairfield, extra observer; J. H. Turner, acting aid.	Reconnaissance for the extension of the primary triangulation in Northern Georgia and Alabama towards Mobile. (See also Sections I and VIII.)
	No. 1	Topography, hydrography, and magnetic observations.	B. A. Colonna, assistant; Ensign T. G. Dewey, U. S. N.; T. P. Borden and E. L. Taney, aids.	Completion of the survey of the east coast of Florida between Lake Worth and New River. (See also Section XI.)
	2	Current observations.	Lieut. J. C. Fremont, U. S. N., assistant; Ensigns A. F. Fetherer, F. W. Kellogg, and F. R. Brainard, U. S. N.	Observations of currents off the east coast of Florida continued. (See also Section II.)
	3	Triangulation . . .	Joseph Hergesheimer, assistant; J. H. Turner, acting aid.	Triangulation of the west coast of Florida in the vicinity of Punta Rasa.
	4	Hydrography . . .	Lieut. H. B. Mansfield, U. S. N., assistant; Ensigns John M. Orchart, J. P. Parker, John E. Craven, and Harry Phelps, U. S. N.	Hydrographic surveys in the vicinity of the Anclote Keys, in Lemon Bay, and near San Carlos Bay, west coast of Florida. (See also Section II.)
	5	Topography . . .	W. Irving Vinal, subassistant.	Topographic surveys of the Florida coast from the Anclote Keys southward. (See also Section I.)
SECTION VIII.	No. 1	Reconnaissance . . .	O. H. Tittman, assistant; W. B. Fairfield, extra observer; J. H. Turner, acting aid.	Reconnaissance for the extension of the primary triangulation in North Georgia and Alabama towards Mobile. (See also Sections I and V.)
	2	Geodesic leveling.	J. B. Weir, subassistant; John Nelson, aid.	Line of levels of precision carried from the Gulf coast near Mobile towards a point on the transcontinental line of geodesic leveling. (See also Section III.)
	3	Topography and hydrography.	Charles Hosmer, assistant; Ensign Alfred Jeffres, U. S. N.; Carlisle Terry, Jr., aid.	Survey of the Gulf coast to the westward of the delta of the Mississippi. (See also Section II.)

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION VIII—Continued.	No. 4	Triangulation, topography, and hydrography.	F. W. Perkins, assistant; W. C. Hodgkins, subassistant; G. F. Bird and Isaac Winston, aids.	Continuation of the survey of the Gulf coast of Louisiana from Calcasieu Pass eastward. (See also Section XIV.)
SECTION IX.	No. 1	Hydrography . . .	Lieut. E. D. F. Heald, U. S. N., assistant; Lieut. G. C. Hanus, U. S. N., assistant.	Hydrographic survey of the coasts of Texas and Louisiana continued between Galveston Entrance and Calcasieu Pass. (See also Sections I, II, III, and IV.)
	2	Reconnaissance . . .	R. E. Halter, assistant . . .	Reconnaissance for connecting the triangulation in the vicinity of Point Isabel and the mouth of the Rio Grande with Brownsville, Tex.
SECTION X.	No. 1	Triangulation and topography.	A. F. Rodgers, assistant . . .	Survey of the coast of California between San Diego and Newport.
	2	Magnetic observations.	Marcus Baker, acting assistant; Carlisle Terry, Jr., aid; P. A. Welker, aid.	Continuation of the series of observations at the magnetic self-registering record station at Los Angeles, Cal.
	3	Triangulation . . .	James S. Lawson, assistant; P. A. Welker, aid.	Continuation of the primary triangulation of the coast of California north of Point Conception.
	4	Triangulation and topography.	Stehman Forney, assistant . . .	Survey of the coast of California between Moro Bay and San Simeon Bay.
	5	Hydrography . . .	Lieut. E. D. Taussig, U. S. N., assistant; Lieut. F. H. Lefavor, U. S. N.; Ensigns W. L. Burdick and P. B. Bibb, U. S. N.	Hydrographic survey in the vicinity of Point Buchon, Cal., and examination of bar at entrance to San Francisco Bay. (See also No. 9 of this section.)
	6	Triangulation . . .	George Davidson, assistant; James S. Lawson, assistant; E. F. Dickins, assistant; P. A. Welker, aid.	Connection of the main triangulation north of Point Conception with the transcontinental triangulation near the thirty-ninth parallel.
	7	Tidal observations.	E. Gray . . .	Tidal observations with self-registering tide-gauge continued at Sausalito, near San Francisco Bay entrance.
	8	Determinations of gravity.	R. A. Marr, acting assistant; A. D. Schindler, acting aid; C. B. Hill.	Determinations of the force of gravity at San Francisco in connection with similar observations in Alaska.
	9	Hydrography . . .	Lieut. E. D. Taussig, U. S. N., assistant; Lieuts. J. B. Milton and E. P. Elliott, U. S. N.; Ensign P. B. Bibb, U. S. N.	Hydrographic survey of the California coast between Salmon Point and Brushy Point. (See also No. 5 of this section.)
	No. 1	Triangulation, topography, and hydrography.	Louis A. Sengteller, assistant . . .	Survey of Siuslaw River entrance, and continuation of the triangulation and topography of Umpqua River, Oreg.
SECTION XI.	2	Triangulation, topography, and hydrography.	Cleveland Rockwell, assistant . . .	Survey of Nestucca Bay and River, Oreg., and continuation of the triangulation and topography of the Willamette River and of the topography of the Columbia River.
	3	Hydrography . . .	Lieut. T. Dix Bolles, U. S. N., assistant; Ensign J. N. Jordan, U. S. N., assistant; Ensign J. L. Purcell, U. S. N.	Hydrographic surveys of Gray's Harbor and in the vicinity of Seabeck, W. T.
	4	Triangulation and topography.	J. J. Gilbert, assistant . . .	Continuation of the topography of Hood's Canal, W. T.
	5	Triangulation and topography.	J. F. Pratt, subassistant . . .	Continuation of the triangulation and topography of Possession Sound, W. T. (See also Section XIII.)
	6	Triangulation and topography.	B. A. Colonna, assistant; T. P. Borden, aid.	Triangulation and topography of the Strait of Fuca, W. T. (See also Section VI.)
	7	Hydrography . . .	Lieut. Commander A. S. Snow, U. S. N., assistant; Lieut. G. Blocklinger, U. S. N.; Ensigns W. V. Bronnagh, F. M. Bostwick, and W. P. White, U. S. N.	Hydrographic survey of the Strait of Fuca, W. T. (See also Section I.)

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Sections.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SECTION XII.				
Alaska, including the coast and the Aleutian Islands.	No. 1	Hydrographic reconnaissance.	Lieutenant-Commander H. E. Nichols, U. S. N., assistant.	Hydrographic reconnaissance of the bays and harbors of Southeastern Alaska continued.
	2	Tidal observations	W. J. Fisher.....	Tidal observations with self-registering tide-gauge continued at Saint Paul, Kodiak Island, Alaska.
	3	Force of gravity and magnetic observations.	R. A. Marr, acting assistant; A. D. Schindler, acting aid.	Expedition to Point Barrow, Alaska, for the purpose of determining gravity and the magnetic elements. (See also Section X.)
SECTION XIII.				
Kentucky and Tennessee.	No. 1	Telegraphic longitudes.	George W. Dean, assistant; Francis H. Parsons, subassistant; Carl Schenck, acting assistant; Carlisle Terry, Jr., aid; J. W. G. Atkins, acting aid.	Occupation of the longitude station at Louisville, Ky., for the determination of the longitudes of stations in Tennessee, Kentucky, West Virginia, Indiana, and Illinois by exchanges of telegraphic signals. Observations for latitude at stations not before determined. (See also Sections III and XIV.)
	2	Geodetic.....	J. F. Pratt, subassistant.....	Extension of reconnaissance and triangulation in the State of Kentucky. (See also Sections III and XI.)
	3	Geodetic.....	Prof. A. H. Buchanan, acting assistant.	Continuation of the triangulation of the State of Tennessee.
SECTION XIV.				
Ohio, Indiana, Illinois, Michigan, and Wisconsin.	No. 1	Geodetic.....	Prof. R. S. Devol, acting assistant.	Occupation of stations for the extension of the triangulation of the State of Ohio.
	2	Geodetic.....	Prof. J. L. Campbell, acting assistant.	Reconnaissance for the continuation of the triangulation of the State of Indiana.
	3	Triangulation ...	George A. Fairfield, assistant; F. W. Perkins, assistant; Isaac Winston, aid.	Continuation to the eastward of the primary triangulation in Illinois near the thirty-ninth parallel.
	4	Telegraphic longitudes.	George W. Dean, assistant; Francis H. Parsons, subassistant; Carlisle Terry, Jr., aid; J. W. G. Atkins, acting aid.	Determination of the longitudes of Logansport, Ind., and of Chicago, Ill., by exchanges of telegraphic signals with Louisville, Ky. Observations for latitude at Logansport and Chicago. (See also Sections III and XIII.)
	5	Geodetic.....	Prof. J. E. Davies, acting assistant.	Stations occupied in continuation of the triangulation of the State of Wisconsin.
SECTION XV.				
Missouri, Kansas, Iowa, Nebraska, Minnesota, and Dakota.	No. 1	Triangulation....	F. D. Granger, assistant; J. E. McGrath, aid; A. P. Barnard, acting aid.	Occupation of stations for continuing to the westward the primary triangulation in Missouri and Kansas near the thirty ninth parallel.
SECTION XVI.				
Nevada, Utah, Colorado, Arizona, and New Mexico.	No. 1	Triangulation	William Einbeck, assistant; George F. Bird, aid.	Occupation of stations in Nebraska and reconnaissance in Utah for the extension eastward of the primary triangulation near the thirty-ninth parallel.
SPECIAL OPERATIONS.				
Charge of construction of the Coast and Geodetic Survey steamer Carlile P. Patterson.		Charge of construction of the Coast and Geodetic Survey steamer Carlile P. Patterson.	Lieut. Commander C. M. Chester, U. S. N., Hydrographic Inspector; Lieut. Richardson Clover, U. S. N., assistant.	Brooklyn, N. Y.
		Charge of the Coast and Geodetic Survey Exhibit at the Southern Exposition.	H. W. Blair, assistant; John Clark, mechanician.	Louisville Ky.

UNITED STATES COAST AND GEODETIC SURVEY.

APPENDIX No. 1—Continued.

Section.	Parties.	Operations.	Persons conducting operations.	Localities of work.
SPECIAL OPERATIONS—Continued.		Comparisons of standards of weight and measure, and investigations relating to determinations of gravity.	Charles S. Peirce, assistant.....	London, Paris, Brussels, Geneva, and other stations in Europe.
		Attendance of a delegate on the part of the Coast and Geodetic Survey at the International Geodesic Conference.	Ric. chau	Italy.
		Transportation for comparison of important standards of weight and measure.	Prof. Thomas Craig, Johns Hopkins University.	From British Standards Office, London, to International Bureau of Weights and Measures, Paris.
		Tidal observations.	Superintendent of Hawaiian Government Survey.	Honolulu, Sandwich Islands.