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MEMOIRS

OF THE

MUSEUM OF COMPARATIVE ZOÖLOGY

AT

HARVARD COLLEGE.

VOL. XXVIII.

PLATES.

III.

CAMBRIDGE, U.S.A.
PRINTED FOR THE MUSEUM.
1903.

Reefs. — Agassiz. III. Plates 200-236.

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OF THE

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REPORTS ON THE SCIENTIFIC RESULTS OF THE EXPEDITION TO THE TROPICAL PACIFIC, in charge of ALEXANDER AGASSIZ, by the U. S. Fish Commission Steamer "Albatross," from August, 1899, to March, 1900, Commander JEFFERSON F. MOSER, U. S. N., Commanding. IV. THE CORAL REEFS OF THE TROPICAL PACIFIC. By ALEXANDER AGASSIZ. pp. xxxiii., 410. 238 Plates. February, 1903.

ONE VOLUME TEXT. THREE VOLUMES PLATES.

Memoirs of the Museum of Comparative Zoölogy
AT HARVARD COLLEGE.
Vol. XXVIII.

REPORTS ON THE SCIENTIFIC RESULTS OF THE EXPEDITION TO THE TROPICAL PACIFIC, IN CHARGE OF ALEXANDER AGASSIZ, BY THE U. S. FISH COMMISSION STEAMER "ALBATROSS," FROM AUGUST, 1899, TO MARCH, 1900, COMMANDER JEFFERSON F. MOSER, U. S. N., COMMANDING.

IV.

THE CORAL REEFS
OF THE
TROPICAL PACIFIC.

By ALEXANDER AGASSIZ.

III. — PLATES 200 TO 236.

CHARTS AND TWO COLORED PLATES.

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CAMBRIDGE, U. S. A.:
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February, 1903.

PLATE 200.

PLATE **200**.

Track of the "Albatross" through the Marquesas, reduced from Admiralty Chart 1640.

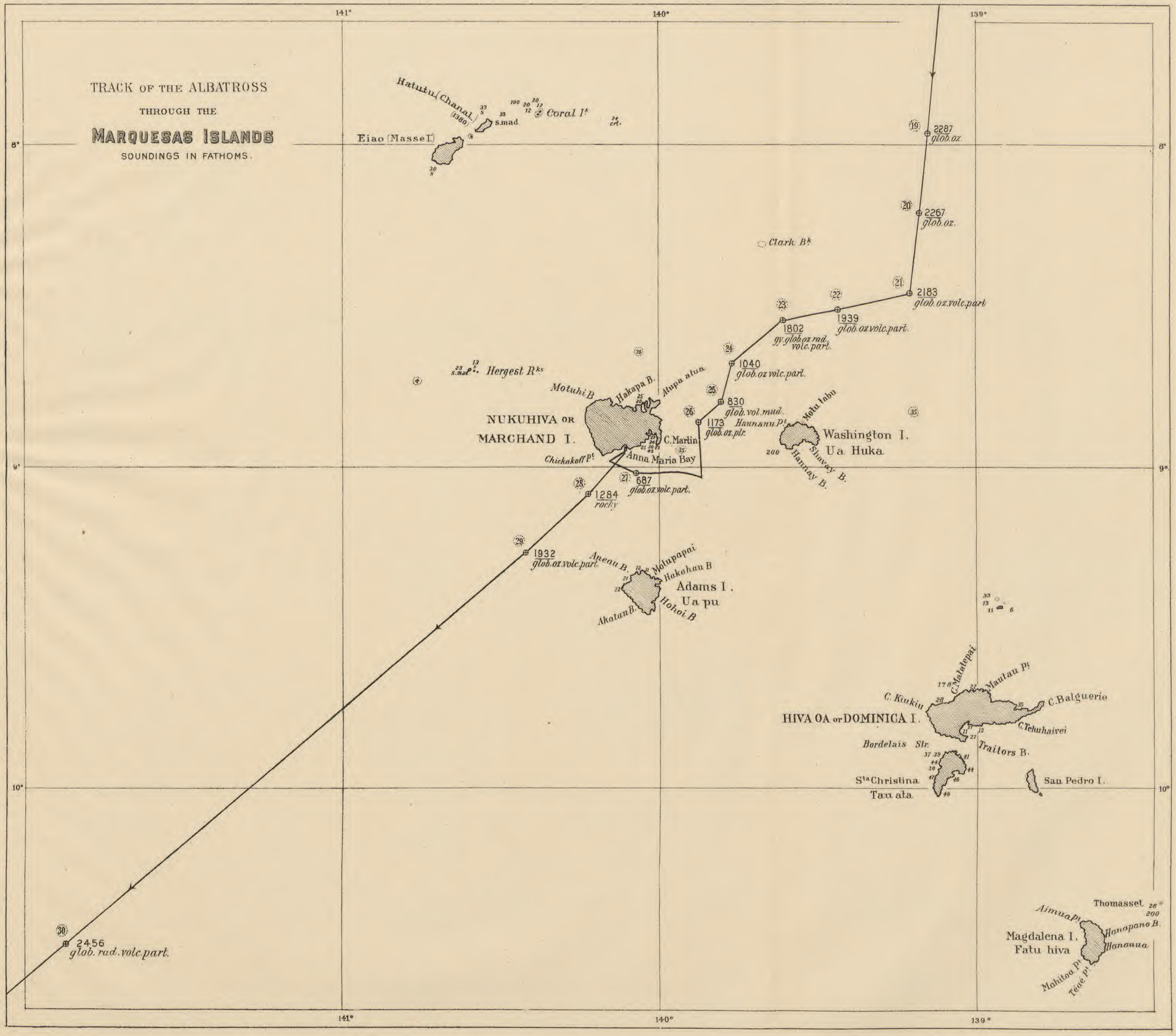

TRACK OF THE ALBATROSS
THROUGH THE
MARQUESAS ISLANDS
SOUNDINGS IN FATHOMS.
141°
140°
139°
8°
9°
10°
Hatutu (Chanal)
(1380)
Coral Is
s.mad
Eiao (Massel)
Clark Bk
2287
glob.oz.
2267
glob.oz.
2183
glob.oz.volc.part.
1939
glob.oz.volc.part.
1802
gy.glob.oz.rad.
volc.part.
1040
glob.oz volc.part.
830
glob.vol.mud.
1173
glob.oz.plr.
Hergest Rks
Motuhi B
Hakapa B.
Atupa atua
NUKUHIVA OR
MARCHAND I.
C. Marlin
Anna Maria Bay
Chickakoff Pt
Haunanu Pt
Motu tabu
Washington I.
Ua Huka
Shavey B.
Hannay B.
687
glob.oz.volc.part.
1284
rocky
1932
glob.oz.volc.part.
Aneau B.
Matupapai
Hakahau B
Adams I.
Ua pu
Akotau B.
Hohoi B
C. Matatepai
Mautau Pt
C. Kukiu
C. Balguerie
HIVA OA OR DOMINICA I.
C. Tchuhaivei
Bordelais Str.
Traitors B.
Ste Christina
Tau ata
San Pedro I.
Thomasset
Aimua Pt
Hanapano B.
Magdalena I.
Fatu hiva
Hanauua
Mahitoa Pt
Teiaé Pt
2456
glob.rad.volc.part.

PLATE 201.

PLATE **201**.

Track of the "Albatross" through the Paumotus and Society Islands.

TRACK OF ALBATROSS
IN THE
PAUMOTU ARCHIPELAGO
AND
SOCIETY ISLANDS
SOUNDINGS IN FATHOMS.
(LEEWARD GROUP)
SOCIETY ISLANDS
PAUMOTU ARCHIPELAGO
TAHITI
Tahaa
Borabora
Huaheine
Raiatea
Moorea
Mopelia
Maupiti
Motu-Iti
Tetiaroa
Mehetia
Hereheretue (St Paul)
Anu-Anuraro (Mangareva)
Nukutipipi
Manihi
Ahe (Waterland)
Takaroa
Takapoto
Tikei
Rangiroa
Arutua (Barrick)
Apataki
Kaukura
Toau (Elizabeth)
Makatea
Aratika (Deveraux)
Kauehi
Raraka
Fakarava (Wilkes Island)
Tahanea
Tuanake
Tepolo
Motutunga
Katiu (Sacken)
Takume (Wolkonsky)
Rareia (Barclay de Tolly)
Takaroa
Napuka
Puka-Puka
Angalau
Fakaina
Rekareka
Tauere
Tatakoto
Haraiki
Reitoru
Amanu
Hao
Nengonengo
Manuhang
Paraoa
Vairaatea
Ahunui (Bream Martin)
Puka-ruha (Sertes)
Reao (Clermont-Tonnerre)
Vahitahi
Nukutavake
Pinaki (Whitsunday)
Aki Aki
Ravahere
Marokau
Tekokota
Hikueru
Marutea
Anaa
Fasite (Monsieur)
Nov. 18
Nov. 10 A.M.
Sept. 27
Oct. 6
Nov. 1
Nov. 4
Sept. 20
Oct. 7
Oct. 8
Oct. 9
Oct. 10
Oct. 14
Oct. 16
Oct. 17
Oct. 18
Oct. 27
Oct. 30
Oct. 31
Nov. 1

PLATE 202.

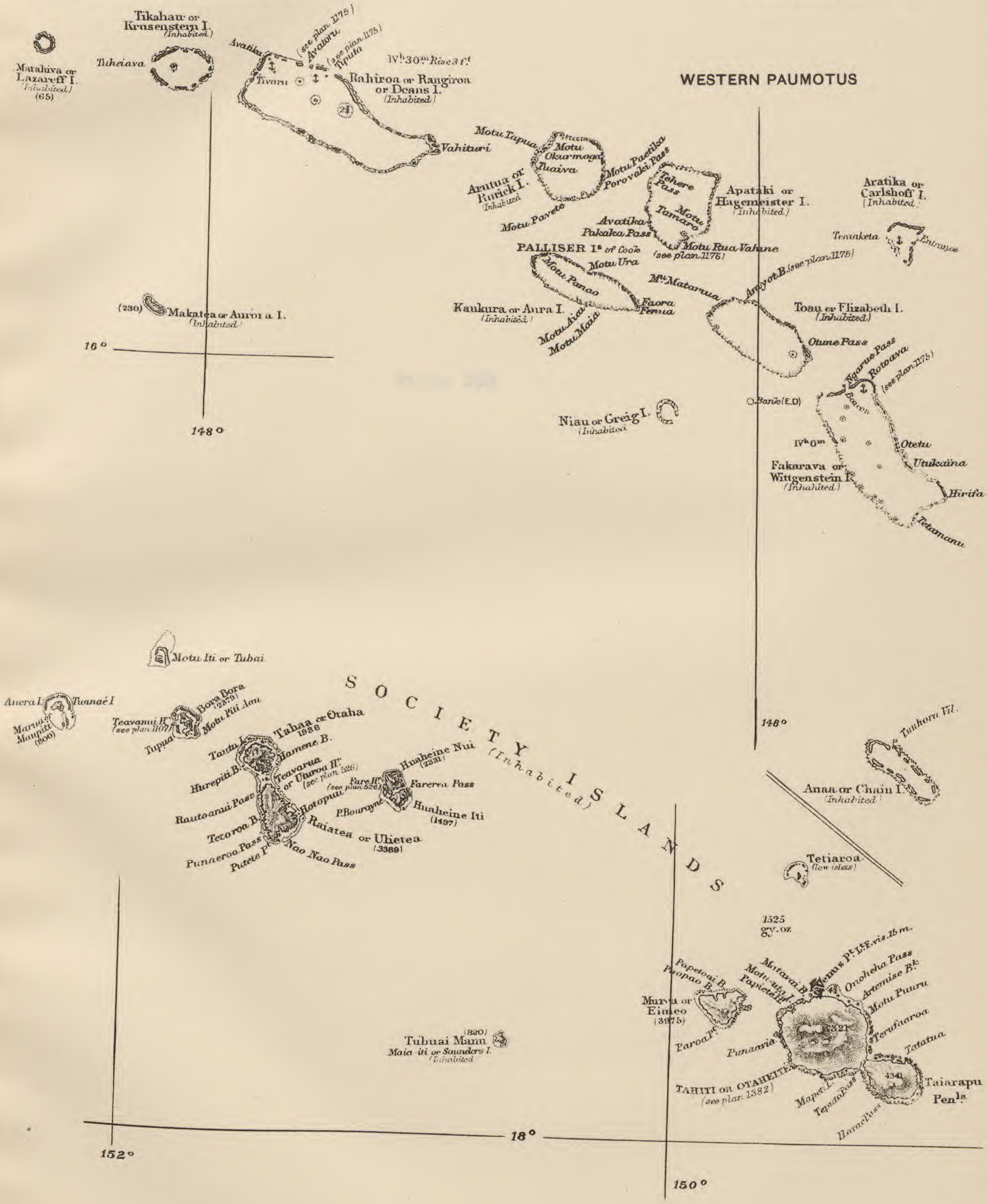

WESTERN PAUMOTUS
SOCIETY ISLANDS (Inhabited)
Tikahau or Krusenstern I. (Inhabited)
Matahiva or Lazareff I. (Inhabited) (65)
Tikehiava
Avatiku
Tivaru
Avatoru (see plan 1175)
Tipuka (see plan 1175)
Rahiroa or Rangiroa or Deans I. (Inhabited)
Vahituri
Motu Tapua
Motu Okurmaga
Tuaiva
Motu Paetika
Porovaki Pass
Anutua or Purick I. (Inhabited)
Motu Povete
Tehere Pass
Motu Tamaro
Apataki or Hagemeister I. (Inhabited)
Aratika or Carlshoff I. (Inhabited)
Temakeia
Entrance
Avatika
Pakaka Pass
Motu Rua Vahane (see plan 1175)
PALLISER Is of Cook
Motu Ura
Motu Panao
Mt. Matamua
Anyot B. (see plan 1175)
(230) Makatea or Aurora I. (Inhabited)
Kaukura or Aura I. (Inhabited)
Motu Aiau
Motu Maio
Faora
Fenua
Toau or Elizabeth I. (Inhabited)
Otune Pass
Ngarue Pass
Rotoava (see plan 1175)
Banio (E.D)
Beacon
Niau or Greig I. (Inhabited)
Otetu
Utulcaina
Fakarava or Wittgenstein I. (Inhabited)
Hirifa
Tetamanu
16°
148°
Motu Iti or Tubai
Anera I.
Tuanaé I
Mariu Maupiti (200)
Bora Bora (2379)
Teavanui H. (see plan 1107)
Tupua
Motu Piti Aru
Tahaa or Otaha 1936
Tautu I.
Hamene B.
Hurepiti B.
Teavarua or Uturoa H. (see plan 526)
Huaheine Nui (2331)
Fare H. (see plan 526)
Farerea Pass
Rautoanui Pass
Hotopuu
P. Bourayne
Huaheine Iti (1497)
Teroroa B.
Raiatea or Uhietea (3389)
Punaeroa Pass
Puteie Pt.
Nao Nao Pass
Tubuai Manu (820)
Maia-iti or Saunders I. (Inhabited)
152°
18°
148°
Tuahora Vil.
Anaa or Chain I. (Inhabited)
Tetiaroa (low islets)
1525 gy. oz.
Papetoai B.
Paopao B.
Murua or Eimeo (3975)
Paroa Pt.
Mutaiva B.
Motu-uta I.
Papieteiti
Venus Pt. E. vis. 15 m.
Onoheha Pass
Artemise Bk.
Motu Puuru
Teruhaaroa
Tatatua
Punaauia
TAHITI OR OTAHEITE (see plan 1382)
Mapet I.
Tepuna Pass
Taiarapu Pen.la
Barac Pass
150°

PLATE 203.

PLATE **203.**

The eastern Paumotus as far as Pinaki, including the Duke of Gloucester Islands, from A. Chart 767.

EASTERN PAUMOTUS
144°
142°
140°
16°
18°
20°
Taiaro or Kings I. (Inhabited.)
Kauehi or Vincennes I.
Raraka I. (Inhabited.)
Katiu or Saken I. (occasionally inhabited.)
Tirifa
Tuanaka or Reid I.
Hiti or Elisa I.
Tepoto or Ofitu I.
Roetlisky I.
Tahanea or Tchitchagoff I. (Inhabited.)
Motutunga or Aiwaiki (occasionally inhabited.)
Takume or Wolkonsky I. (Inhabited.)
Raroia or Barclay I. (Inhabited.)
Taenga or Holt I. (Inhabited.)
Makemo or Philip I. (Inhabited.)
Tetauringa (see plan 1178)
Nihiru or Nigeri I. (Inhabited.)
Marutea or Furneaux I. (Inhabited.)
Rekareka or Good Hope I.
Angatau or Araktcheff I. (Inhabited.)
Fakaina or Predpriatie I. (Inhabited.)
Tekokoto or Doubtful I.
Haraiki St Quentin or Croker I.
Hikueru or Melville I.
Reitoru or Bird I.
Taueri or St Simon or Resolution I. (Inhabited.)
Amanu or Molle I. (Inhabited.)
Marokau
Two Groups (Inhabited.)
Kuwahere or Dawahaidi
Puratea (P.D.)
(See plan IIII)
Hao or Harpe or Bow I. (Inhabited.)
Akiaki or Thrum Cap (Inhabited.)
Vahitahi or Cook Lagoon I. (Inhabited.)
Nengvnengo or Pr. Wm Henry I.
Manihangi or Cumberland I.
Faraoa or Gloucester I.
Pukarua
Vairaatea or Egmont I. (Inhabited.)
Puka-runga
Nukutavake or Queen Charlotte I. (Inhabited.)
Fraaki or Whitsunday I.
Ahunui or Byam Martin I.
Hereheretue or San Pablo (Inhabited.)
130
2500
70
90
Anu-Aniuravo or Archangel I.
Duke of Gloucester Is
Anu-Anurunga Coronados or Four Crowns
Nukutipipi or Margaret I.
Vanavana, Kurateke or Barrow I. (Inhabited.)

PLATE 204.

Plate 204.

THE PAUMOTUS.

1. Fakarava, from A. Chart 767, and corrected by officers of the "Albatross," scale twelve miles to the inch.
2. Fakaina, from a sketch by Captain Garnier, scale three miles to the inch.
3. Tiputa Pass, Rangiroa, from H. O. Chart 75, scale three fourths of a mile to the inch.
4. Rangiroa, Tikahau, and Matahiva, from H. O. Chart 75, and corrections by officers of the "Albatross," scale twenty miles to the inch.
5. Strait between Marokau and Ravahere, from H. O. Chart 79, scale nine miles to the inch.
6. Northeast pass into Makemo, from surveys by officers of the "Albatross," scale one third of a mile to the inch.
7. Northwest face of Fakarava, from A. Chart 1175, scale two miles to the inch.

1

2

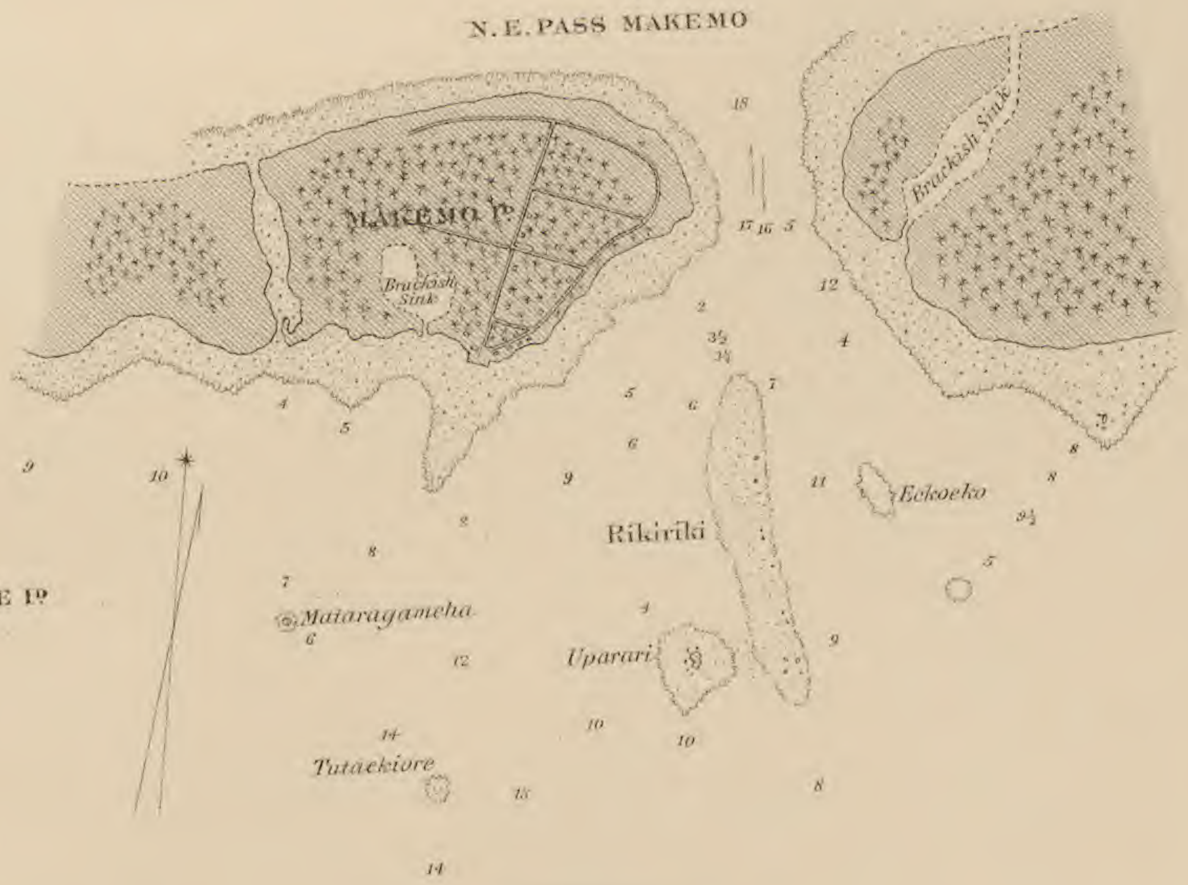
3

4

5

6

N.E. PASS MAKEMO



7

NORTH PASSAGE TO ROTOAVA

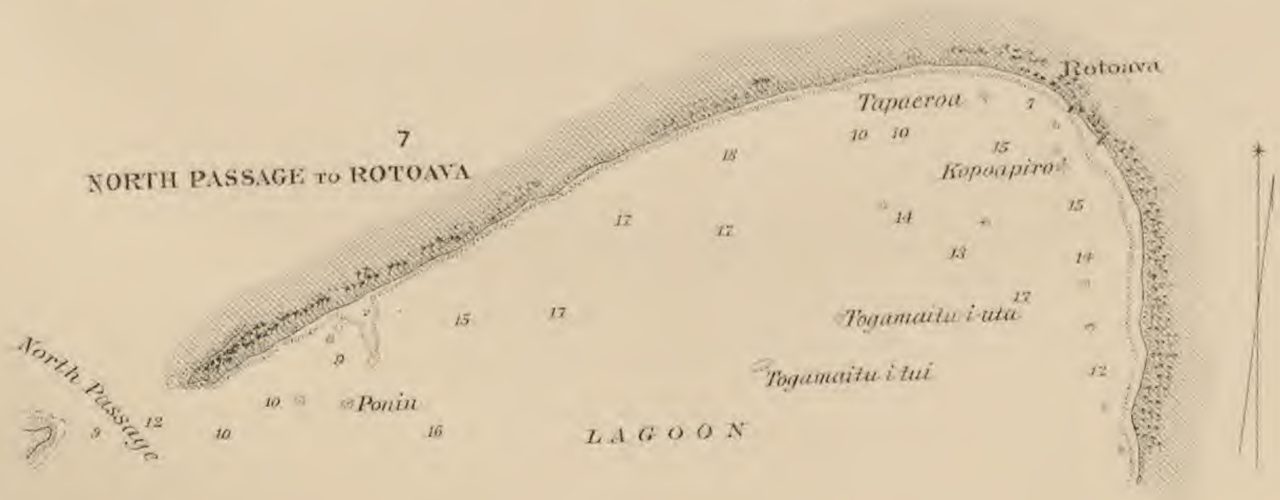


PLATE 204.

THE PAUMOTUS.

1. Fakarava, from A. Chart 79[illegible] and corrected by officers of the "Albatross," scale twelve miles to the inch.
2. Vahitahi, from a sketch by Capt. [illegible] Harrison, scale [illegible] miles to the inch.
3. Tipuka Pass, Rangiroa, from A. Chart [illegible], scale three fourths of a mile to the inch.
4. Rangiroa, Carlaret and Marokau, from H. O. Chart [illegible] and corrected by officers of the "Albatross," scale [illegible] miles to the inch.
5. Entry between Marokau and Kauehi, from H. O. Chart 79[illegible], scale nine miles to the inch.
6. Northeast pass into Makemo, from surveys by officers of the "Albatross," scale one third of a mile to the inch.
7. Southwest pass of Fakarava, from A. Chart 1175, scale two miles to the inch.

PLATE 205.

PLATE **205.**

1. Makatea, from H. O. Chart 83, scale two miles to the inch.
2. Hao, from A. Chart 1111, scale six miles to the inch.
3. Avatoru Pass, Rangiroa, from H. O. Chart 960, scale two miles to the inch.
4. Takume, from H. O. Chart 83, scale three miles to the inch.

MAKATEA
1
VILLAGE
LAGOON
HAO
2
BRACKISH POND
AVATORU
Motoufara
AVATORU PASS
3
4
VILLAGE
TAKUME

PLATE 206.

PLATE 206.

1. Anu-Anurunga, scale one mile to the inch.
2. Anu-Anuraro, scale one mile to the inch.
3. Pinaki, scale one mile to the inch.
4. Nukutipipi, scale one fourth of a mile to the inch.

1, 2, 4, from sketches by H. C. Fassett; 3, from a sketch by C. H. Townsend.

1

ANU-ANURUNGA

2

ANU-ANURARO

3

PINAKI

4

NUKUTIPIPI

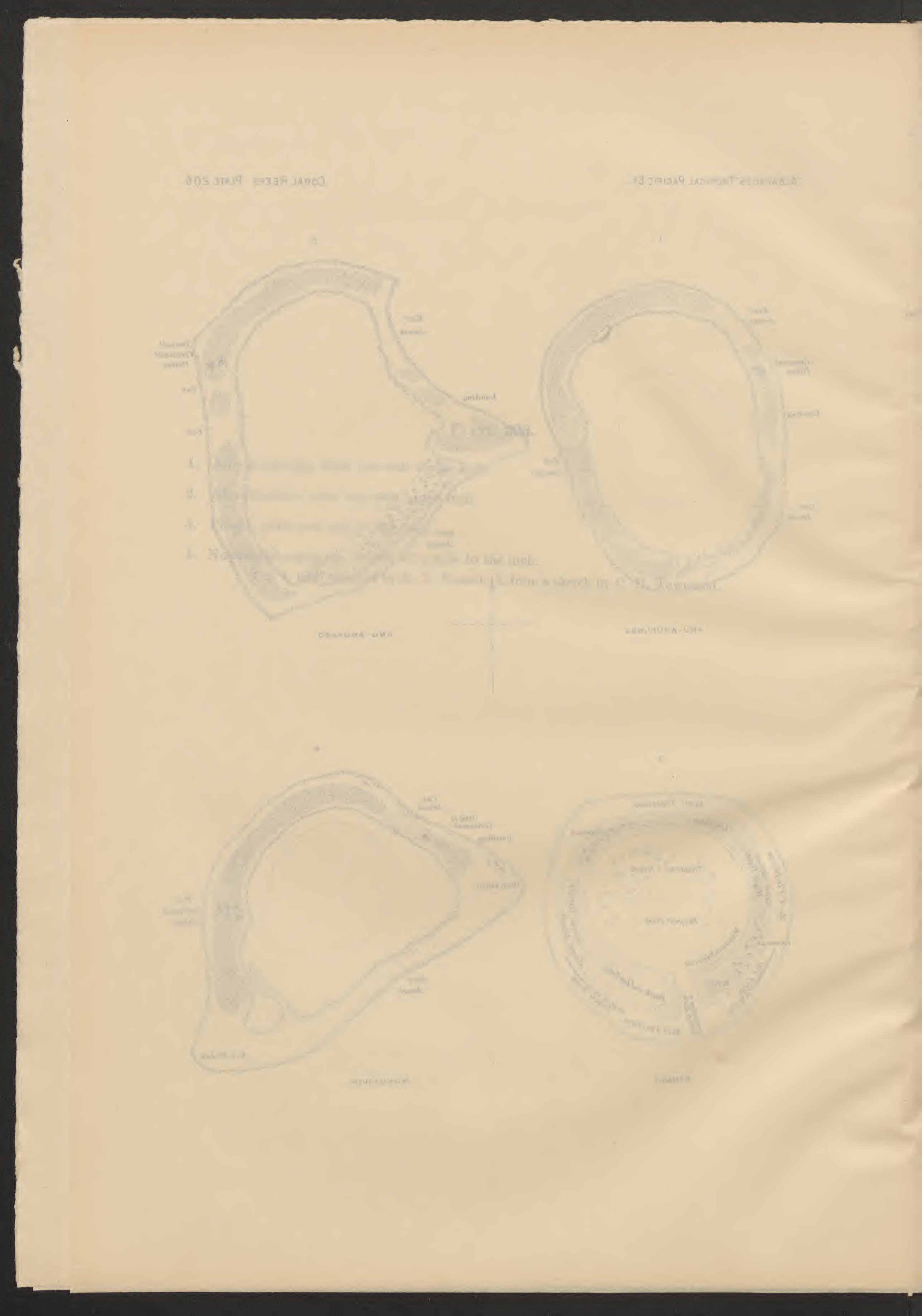


PLATE 207.

PLATE **207**.

The Gambier Islands, from A. Chart 1112, scale two miles to the inch.

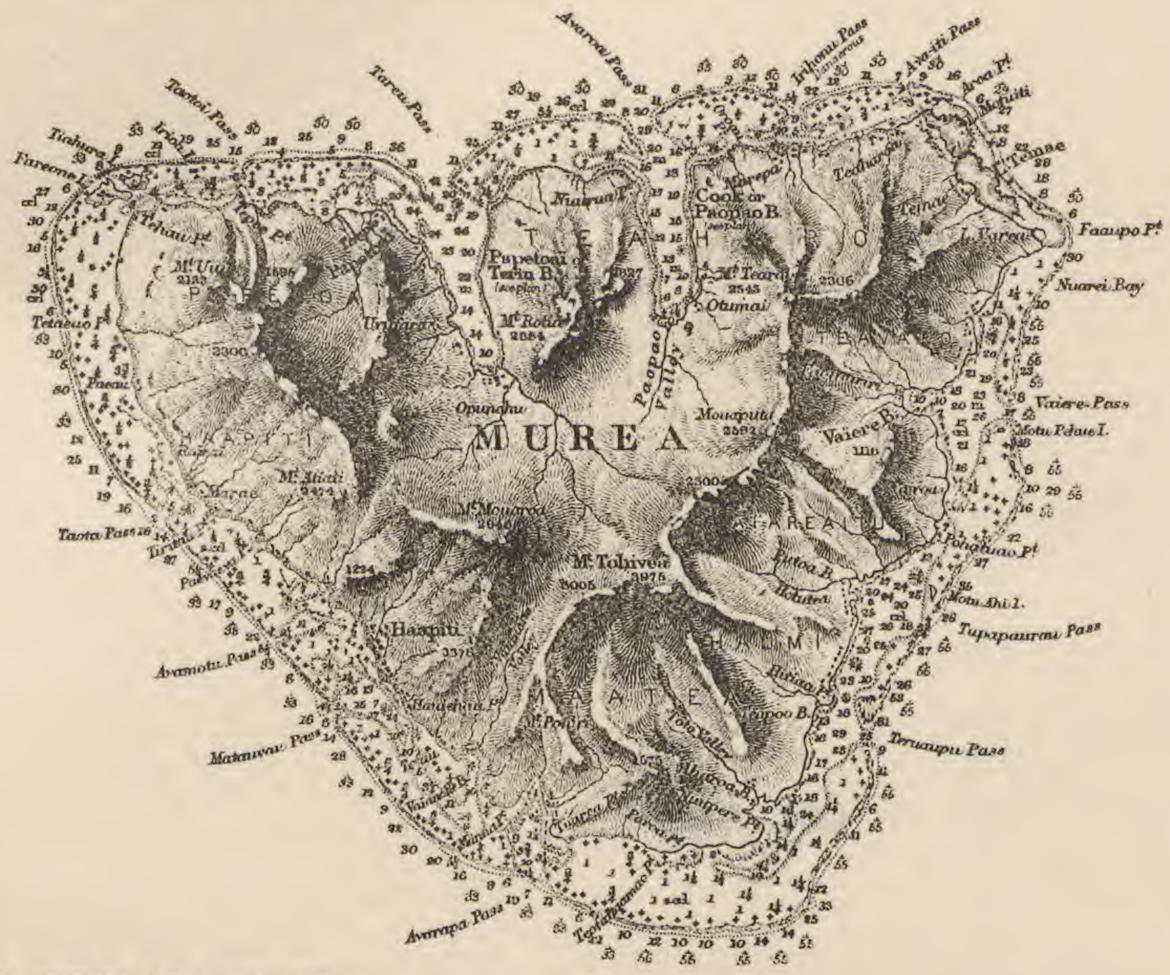
MANGA REVA
OR
GAMBIER ISLANDS

PLATE 208.

PLATE **208.**

1. Taiarapu Peninsula (Tahiti), with its surrounding fringing reefs.
2. Fringing reefs of the east side of Tahiti, from Taravao Bay to Artémise Bank.
3. The fringing and barrier reefs of the south shore of Tahiti, from Popote Bay to the Isthmus of Taravao.
4. The fringing and barrier reefs of the southwest part of Tahiti, from Paea to West Ava-iti.
5. The fringing and barrier reefs from Papieté Pass to north of Acna.
6. Murea, with its fringing and barrier reefs. All figures reduced from A. Chart 1382, scale three miles to the inch.

6



SECT. OF TAHITI

2

1

SECT. OF TAHITI

5

SECT. OF TAHITI

4

3

SECT. OF TAHITI

PLATE 209.

PLATE **209.**

Northwest shore of Tahiti, from Point Venus to Papieté Pass, from A. Chart 1382, scale two miles to the inch.

TAHITI

PAPIETE PASS TO POINT VENUS

PAPIETE
PAPIETE HARBOUR
Motu uta I.
Patutoa
Pirae
PAPAUA HARBOUR
Papawa
Pirine
Tipaerui
Papeari
Papeno'o
Papeuriri
Papeno'o Valley
Papeari Valley
Tipaerui Valley
Matavai
Matavai Bay
Port Phaeton
Motu Au
Tahiti Reef
Tahiti Pass
Papeete Pass
Point Venus
Mapuna
Tiarei
Papeiha
Papeiha Harbour
Papeiha Valley
Papeiha Pass
Papeiha Reef
Papeiha Point
Papeiha Village
Papeiha Cemetery
Papeiha Church
Papeiha Mission
Papeiha Bridge
Papeiha River
Papeiha Road
Papeiha Stream
Papeiha Spring
Papeiha Hill
Papeiha Mountain
Papeiha Valley
Papeiha Harbour

PLATE **210**.

PLATE **210**.

1. Huaheine, scale two miles to the inch.
2. Raiatea and Tahaa, scale three miles to the inch.
3. Bora Bora, scale two miles to the inch.
4. Maupiti, scale three miles to the inch.

1–4 from A. Chart 1060.

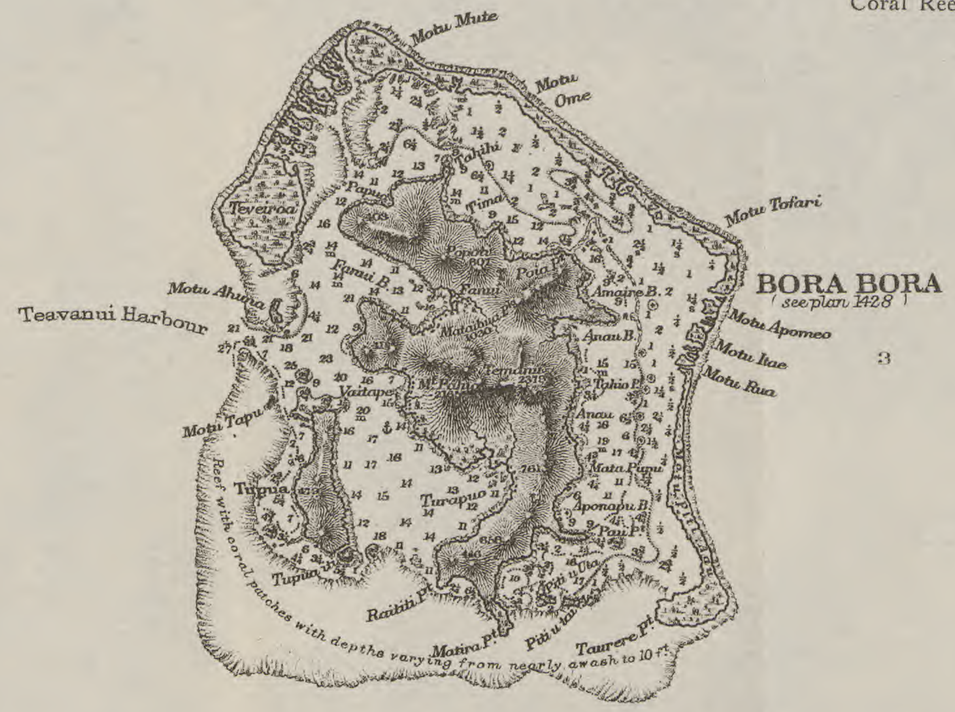
TAHAA

2

RAIATEA

BORA BORA
(see plan 1428)

3



MAUPITI

4

HUAHEINE

1

PLATE **211**.

PLATE **211**.

Track of "Albatross" from the Society Islands to Niue.

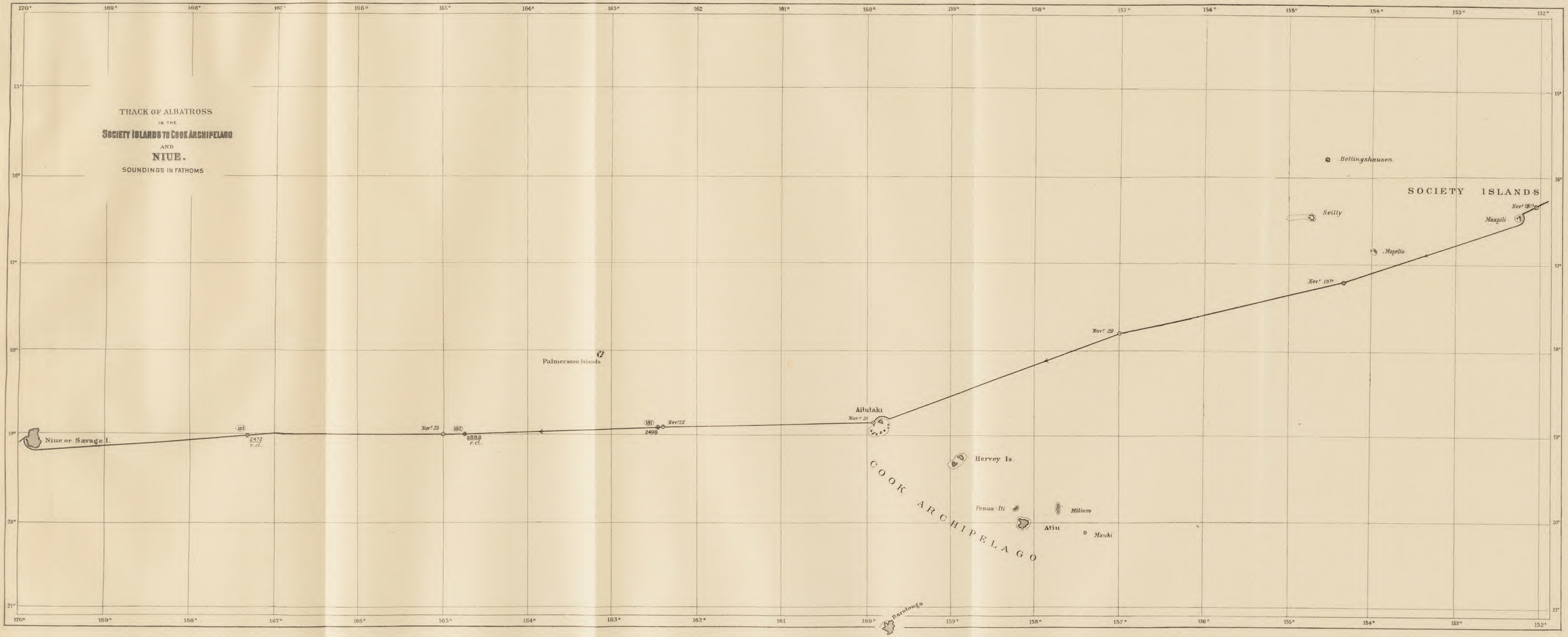

TRACK OF ALBATROSS
IN THE
SOCIETY ISLANDS TO COOK ARCHIPELAGO
AND
NIUE.
SOUNDINGS IN FATHOMS
Niue or Savage I.
183
2472
F.cl.
Nov.r 23
182
2888
F.cl.
Palmerston Islands
181
Nov.r 22
2498
Aitutaki
Nov.r 21
Nov.r 20
Nov.r 19th
Nov.r 18th
Maupiti
Mopelia
Seilly
Bellingshausen
SOCIETY ISLANDS
Hervey Is.
COOK ARCHIPELAGO
Fenua-Iti
Miliero
Atiu
Mauki
Rarotonga
170°
169°
168°
167°
166°
165°
164°
163°
162
161
160°
159°
158°
157°
156°
155°
154°
153°
152°
15°
16°
17°
18°
19°
20°
21°

PLATE **212**.

PLATE **212.**

1. Niue, from A. Chart 1176, scale six miles to the inch.
2. Aitutaki, from A. Chart 1264, scale two and one-half miles to the inch.
3. Palmerston Islands, from A. Chart 1176, scale two miles to the inch.
4. Eua, from A. Chart 1385, scale four miles to the inch.
5. Atiu, from A. Chart 1264, scale four miles to the inch.
6. Nukufetau, from A. Chart 766, scale four miles to the inch.
7. Niutao, from A Chart 987, scale two miles to the inch.
8. Nurakita, from A. Chart 766, scale one third of a mile to the inch.

NIUE

1

EUA

4

PALMERSTON

3

AITUTAKI

2

ATIU

5

NIUTAO

7

NUKUFETAU

6

NURAKITA

8

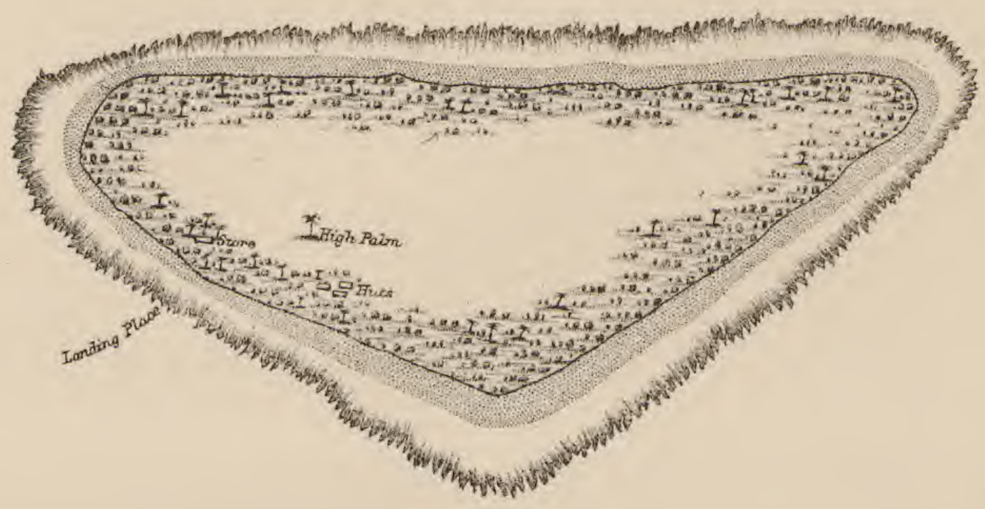


PLATE **213**.

PLATE **213**.

Track of the "Albatross," Niue to Fiji.

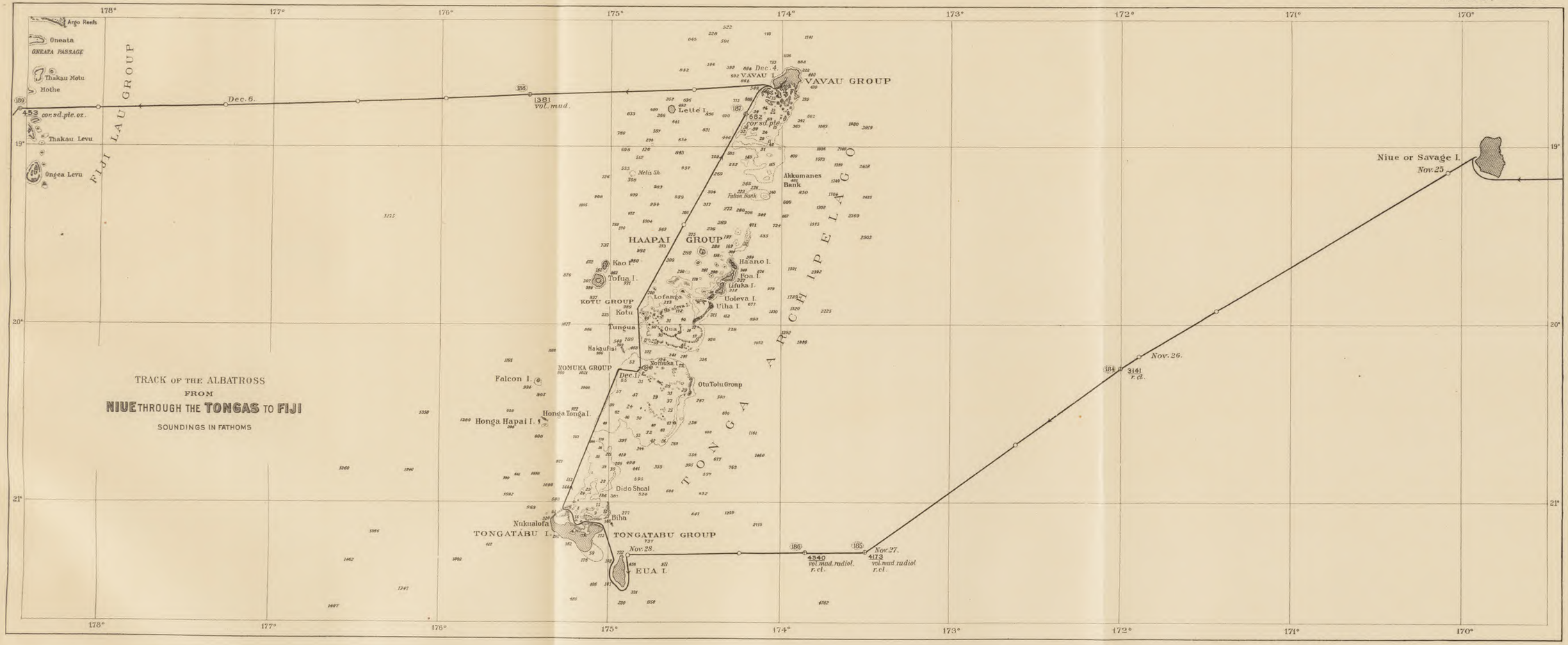

TRACK OF THE ALBATROSS
FROM
NIUE THROUGH THE TONGAS TO FIJI
SOUNDINGS IN FATHOMS
Argo Reefs
Oneata
ONEATA PASSAGE
Thakau Motu
Mothe
Thakau Levu
Ongea Levu
FIJI LAU GROUP
453 con.sd.pte.oz.
Dec. 6.
1381 vol. mud.
Dec. 4.
VAVAU I.
VAVAU GROUP
682 cor.sd.pte.
Tetle I.
Akkumanes Bank
HAAPAI GROUP
Kao
Tofua I.
Haano I.
Foa I.
Lifuka I.
Lofanga
Uoleva I.
Uiha I.
KOTU GROUP
Kotu
Tungua
Oua I.
Hakaufisi
NOMUKA GROUP
Nomuka I.
Dec. 1.
Falcon I.
Otu Tolu Group
Honga Tunga I.
Honga Hapai I.
TONGA ARCHIPELAGO
Dido Shoal
Biha
Nukualofa
TONGATABU I.
TONGATABU GROUP
Nov. 28.
EUA I.
4540 vol. mud. radiol. r. cl.
Nov. 27.
4173 vol. mud. radiol. r. cl.
Nov. 26.
3141 r. cl.
Niue or Savage I.
Nov. 25.
178°
177°
176°
175°
174°
173°
172°
171°
170°
19°
20°
21°

PLATE **214**.

PLATE **214**.

The Tonga Archipelago, from A. Chart 2421.

TONGA OR FRIENDLY Is.

Surveyed by

Captain Pelham Aldrich, Commr C.F. Oldham and the Officers of H.M. Surveying Ship 'Egeria' 1888-90
Commr A. Balfour and the Officers of H.M. Surveying Ship 'Penguin' 1895
and Captain A.M. Field and the Officers of H.M. Surveying Ship 'Penguin' 1898

SOUNDINGS IN FATHOMS

PLATE **215**.

PLATE **215.**

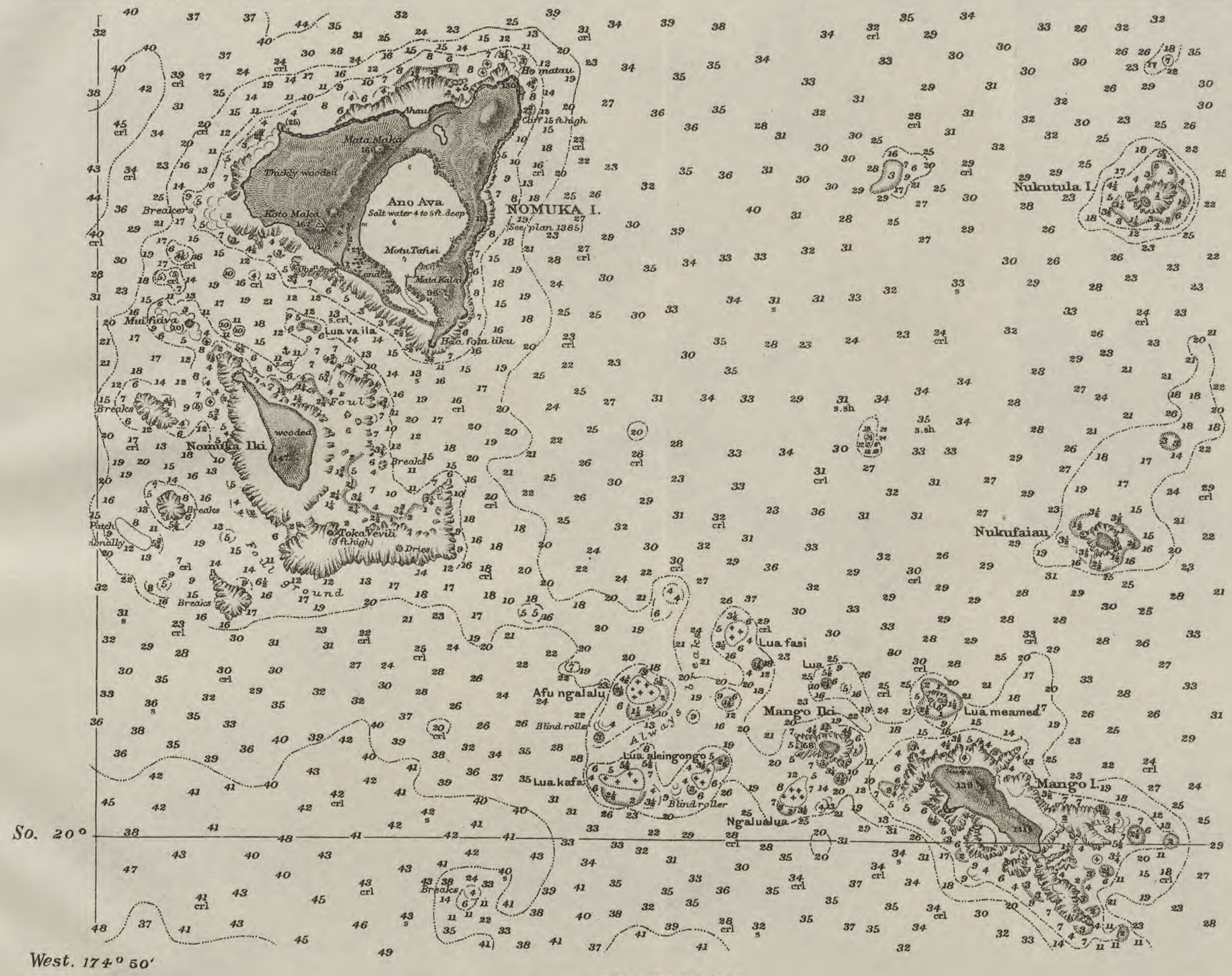
Tongatábu, from A. Chart 2363, scale five miles to the inch.

HAKAU MAMAO
MARIA BAY
ATATA
EGERIA CHANNEL
Hakau Tabu
Niu Aunofo
Take Toke
Tufaka
Alakibeau
Boloa
Kolevai
Ulanga lalu
Ulanga uta
Pafa
Velitoa
Mokotau
Onevai
Onevao
Moiu Tabu
Fakare
Nuku
Ata
Tau
Monu ate
Maka haa
BIHA PASSAGE
Eua iki
Monu
Pangai
Manima
Oneata
Nukualofa
Nukunuku
Kolonga
Mui Hobohobonga
Nukuteka
FANGA KAKAU
FANGA UTA
Mu'a
Yaolu'u
Fatuma
Fua'amotu
Cooks Pt
Homma Colua
TONGATÁBU ISLAND
SOUNDINGS IN FATHOMS

PLATE 216.

PLATE **216**.

Nomuka group, from A. Chart 471, scale one and one-fourth miles to the inch.

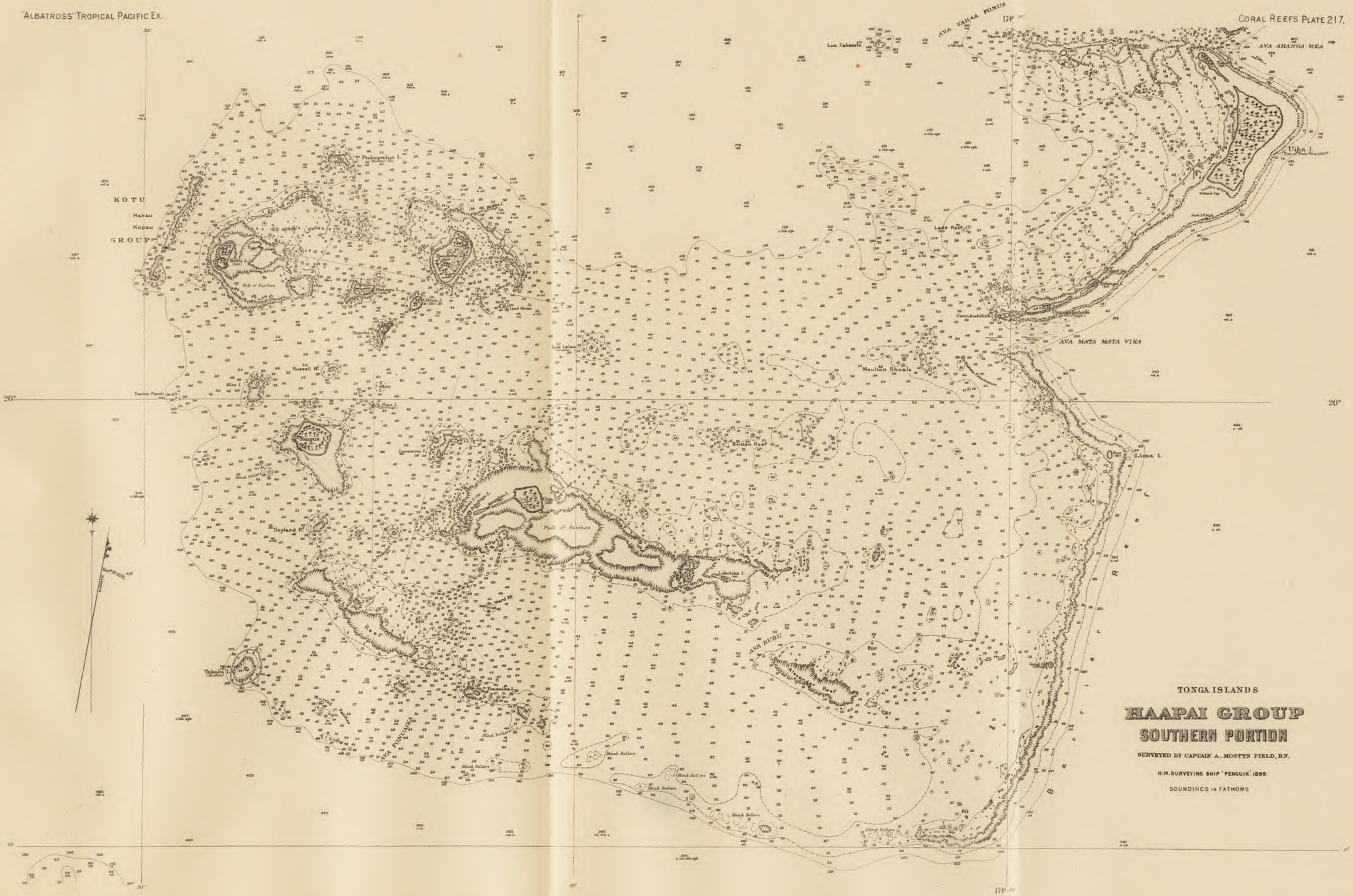


NOMUKA GROUP

PLATE **217**.

PLATE **217**.

Haapai group, southern part, from A. Chart 3100.



TONGA ISLANDS

HAAPAI GROUP
SOUTHERN PORTION

SURVEYED BY CAPTAIN A. MOSTYN FIELD, R.N.

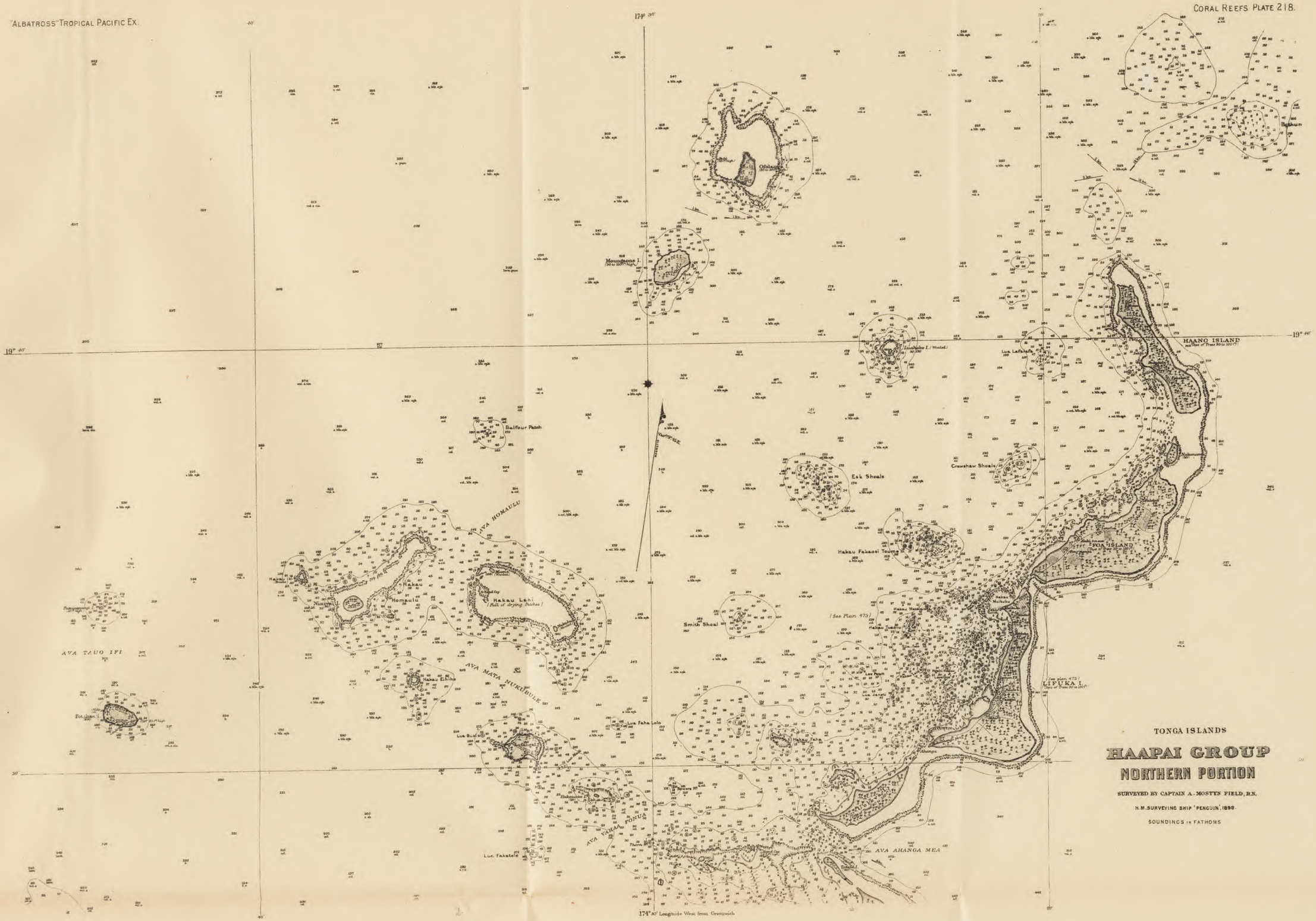
H.M. SURVEYING SHIP "PENGUIN" 1898.

SOUNDINGS IN FATHOMS

PLATE 218.

PLATE **218**.

Haapai group, northern part, from A. Chart 3099.



TONGA ISLANDS

HAAPAI GROUP
NORTHERN PORTION

SURVEYED BY CAPTAIN A. MOSTYN FIELD, R.N.

H.M. SURVEYING SHIP 'PENGUIN', 1898.

SOUNDINGS IN FATHOMS

PLATE 219.

PLATE **219**.

Vavau group, from A. Chart 3098.

VAVAU GROUP

SURVEYED BY CAPTAIN A. MOSTYN FIELD, R.N.

H.M. SURVEYING SHIP 'PENGUIN' 1898

All Bearings are Magnetic.

SOUNDINGS IN FATHOMS

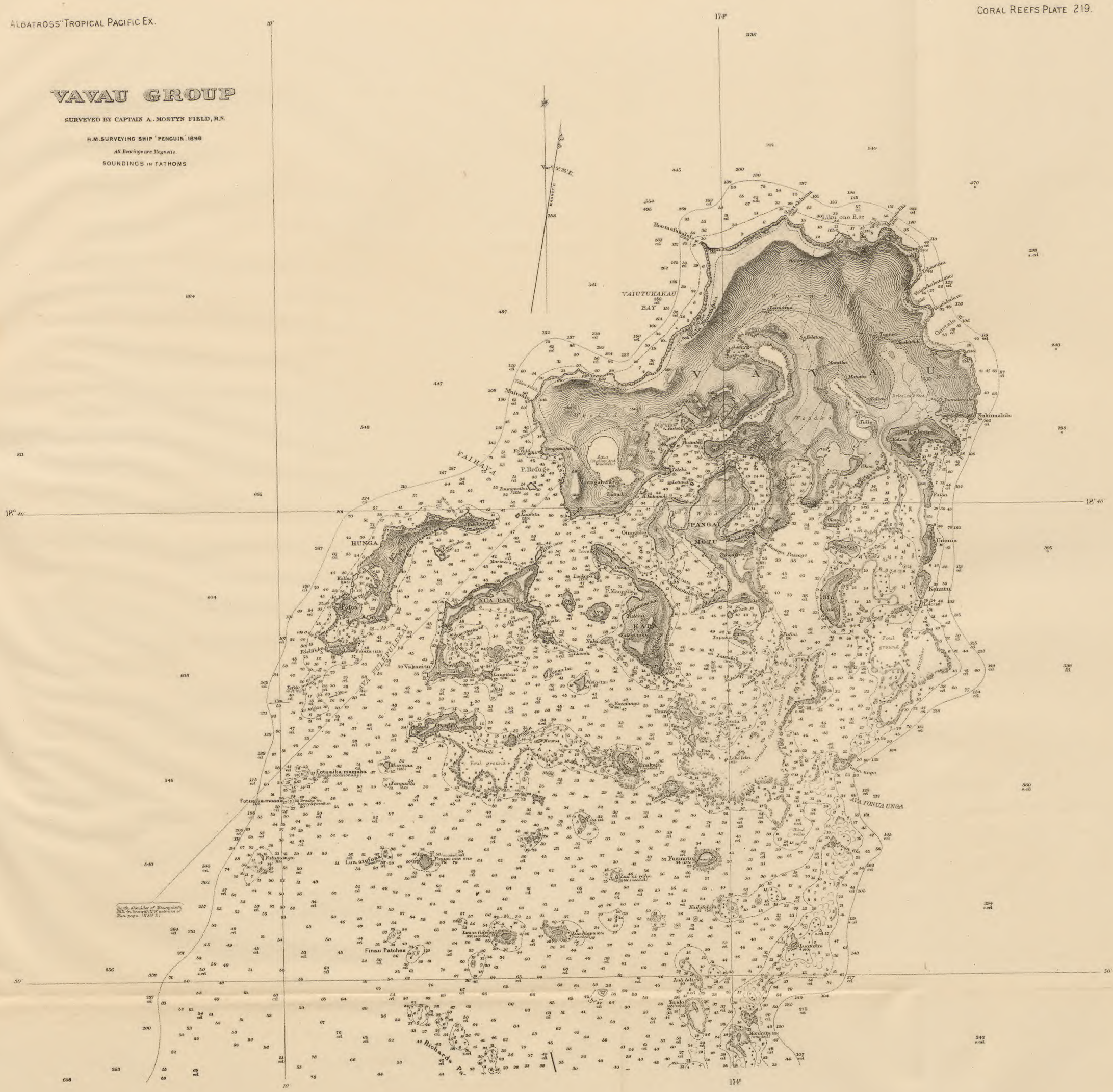


PLATE 220.

PLATE **220**.

The Fiji Islands, from A. Chart 2691.

TRACK OF ALBATROSS
IN THE
FIJI ISLANDS
REDUCED FROM
ADMIRALITY CHART Nº 2691.
VANUA LEVU
VITI LEVU
KORO
KORO SEA
YASAWA GROUP
YASAWA
Asawa-ilau
NAVITI
Viwa I.
MAMANUTHA ISLANDS
ROUND ISLAND PASSAGE
The Great Sea Reef
Charybdis Reef
Namena Barr Reef
SOMO SOMO STRAIT
NATEWAI BAY
RINGGOLD ISLES
Thikombia
Vatauna
Ngele Levu
Cape Undu
Matathuthu
Adolphus Rf.
Nuku Mbasanga
Kambe I.
Budd Rf.
Nanuku Rf.
NANUKU PASSAGE
Motua Levu
Motua Lailai
NGAMIA
Nailangilala
Duff Reef
Naitamba
Dibbles Rf.
Kimbombo Is.
Malima Is.
Yathata
Kanathea
EXPLORING ISLES
Malevuvu Reef
Katafanga
Vatu Vara
Mango I.
Makongai
Wakaya
OVALAU
Horse Shoe Reef
Mbatiki
Nairai
NGAU
Thithia
Tuvutha
Yekai I.
Thakau Tambu
Thakau Lasemarawa
LAKEMBA PASSAGE
Reid Reef
Naiau
Lakemba
Aiwa
Argo Reefs
EASTERN GROUP
Vanua Vatu
Oneata
ONEATA PASSAGE
Thakau Lekaleka
Olorua
Mothe
Komo
Thakau Motu
MOALA
Tova
Tavunasithi
FULANGA PASSAGE
Wangava
Namuka
Thakau Levu
Kambara
Marimoro
Yangasa Cluster
Fulanga
Ongea Levu
Totova
Matuku
Mbengha
Vatu Leile
KANDAVU PASSAGE
Great Astrolabe Reef
North Astrolabe Rf.
Dec.19
Dec.20
Dec.7
FIJI ISLANDS
Continuation of Group
to Southward.
Vatoa or Turtle I.
Onoilaw
Simonoff
Vatoa or Turtle I.

PLATE 221.

PLATE **221**.

Track of the "Albatross," from the Fiji Islands through the Ellice group.

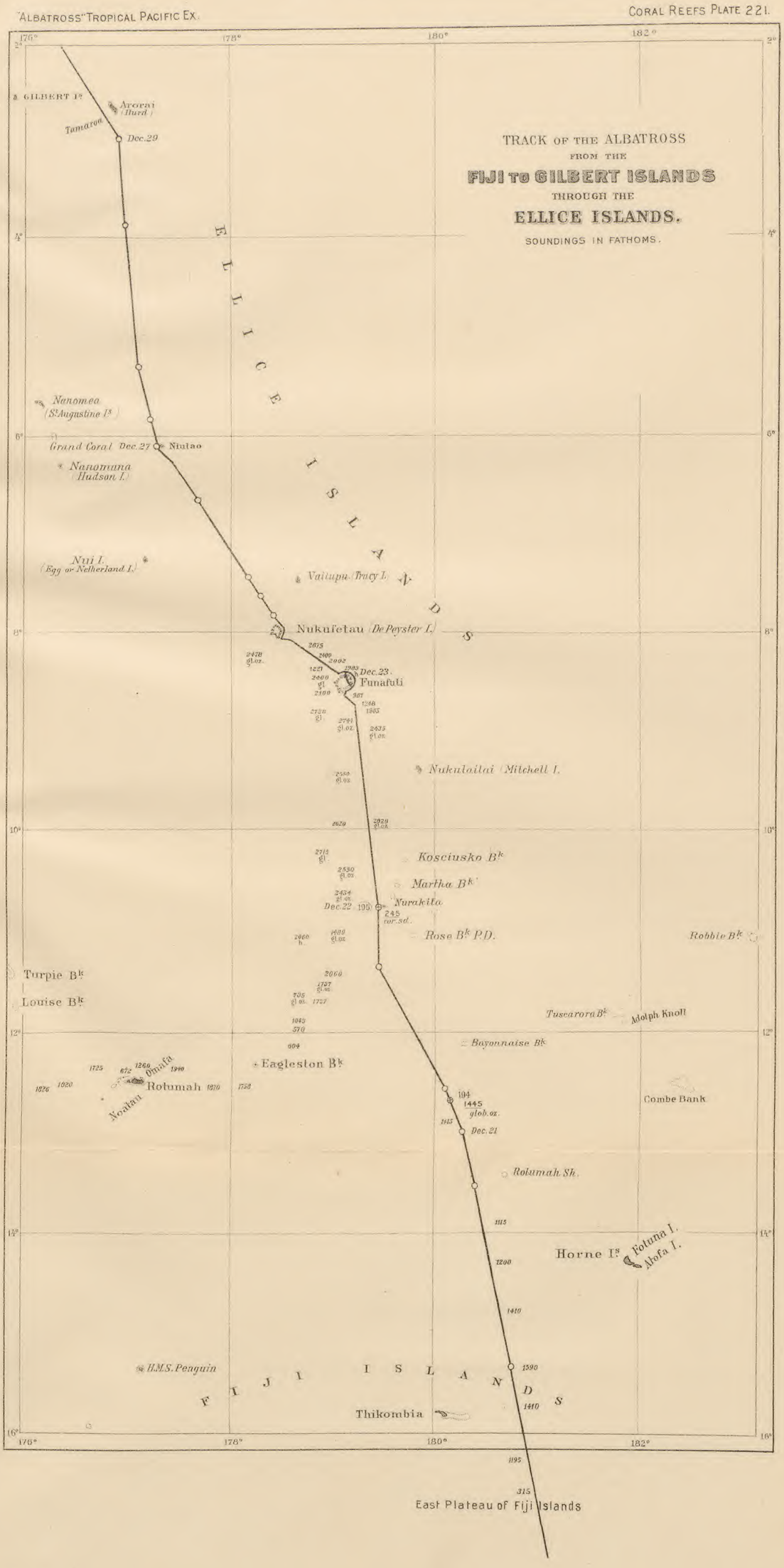

TRACK OF THE ALBATROSS
FROM THE
FIJI TO GILBERT ISLANDS
THROUGH THE
ELLICE ISLANDS.
SOUNDINGS IN FATHOMS.
176°
178°
180°
182°
2°
4°
6°
8°
10°
12°
14°
16°
GILBERT Is
Arorai (Hurd)
Tamaroa
Dec. 29
ELLICE ISLANDS
Nanomea (St Augustine Is)
Grand Coral
Dec. 27
Niutao
Nanomuna (Hudson I.)
Nui I. (Egg or Netherland I.)
Vaitupu (Tracy I.)
Nukufetau (De Peyster I.)
Dec. 23
Funafuti
Nukulailai (Mitchell I.)
Kosciusko Bk
Martha Bk
Dec. 22
Nurakita
Rose Bk P.D.
Robbie Bk
Turpie Bk
Louise Bk
Tuscarora Bk
Adolph Knoll
Bayonnaise Bk
Eagleston Bk
Omafa
Rotumah
Nodau
Combe Bank
Dec. 21
Rotumah Sh.
Horne Is
Fotuna I.
Alofa I.
H.M.S. Penguin
FIJI ISLANDS
Thikombia
East Plateau of Fiji Islands

PLATE 222.

PLATE **222**.

Funafuti, from A. Chart 2983, scale one and one-half miles to the inch.

Te Ava Tebuka
Te Ava Tebuka Vili
Te Ava Kumkum
Te akau Fusfku
Te Ava Fapa
Te Ava Fungua
Te Ava Uni-uni
Te Ava Masika
Te Ava Tuafuna
Te Ava Tuafuna Vili
Te Ava Fanua
Te Ava Fanua Vili
Te Ava Fanua Kaupa
Te Ava Fanua Kaupa Vili
Te Ava Fanua Kaupa Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
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Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili Vili
Te Ava Fanua Kaupa Vili

PLATE 223.

PLATE 223.

Track of the "Albatross" through the Gilbert Islands.

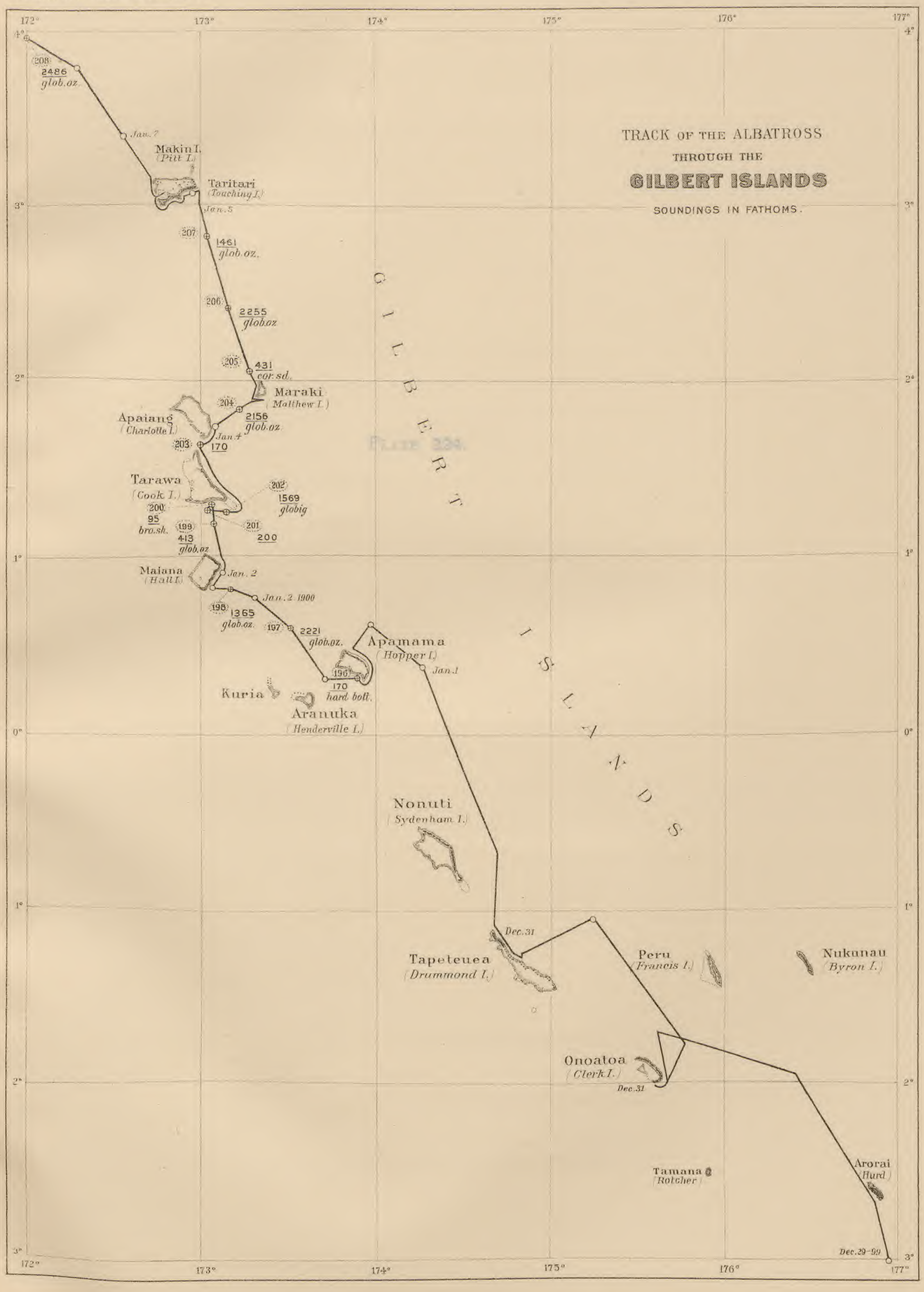
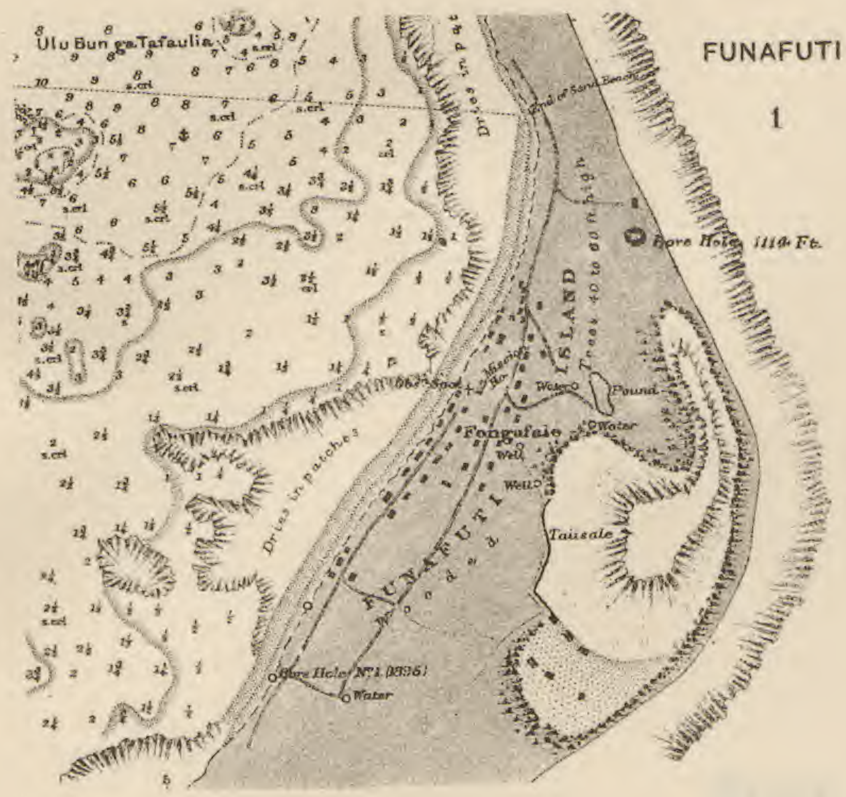

TRACK OF THE ALBATROSS
THROUGH THE
GILBERT ISLANDS
SOUNDINGS IN FATHOMS.
GILBERT ISLANDS
172°
173°
174°
175°
176°
177°
4°
3°
2°
1°
0°
208
2486
glob.oz.
Jan. 7
Makin I.
(Pitt I.)
Taritari
(Touching I.)
Jan. 5
207
1461
glob.oz.
206
2255
glob.oz
205
431
cor. sd.
Maraki
(Matthew I.)
204
2156
glob.oz.
Apaiang
(Charlotte I.)
Jan. 4
203
170
Tarawa
(Cook I.)
202
1569
globig
200
95
bro.sh.
199
413
glob.oz
201
200
Maiana
(Hall I.)
Jan. 2
Jan. 2. 1900
198
1365
glob.oz.
197
2221
glob.oz.
Apamama
(Hopper I.)
Jan. 1
196
170
hard bott.
Kuria
Aranuka
(Henderville I.)
Nonuti
(Sydenham I.)
Dec. 31
Tapeteuea
(Drummond I.)
Peru
(Francis I.)
Nukunau
(Byron I.)
Onoatoa
(Clerk I.)
Dec. 31
Tamana
(Rotcher)
Arorai
(Hurd)
Dec. 29-99

PLATE 224.

PLATE **224**.

1. Funafuti Island, eastern horn and secondary lagoon of Funafuti, from A. Chart 2983, scale one third of a mile to the inch.
2. Apaiang, from A. Chart 732, scale four miles to the inch.
3. Maraki, from A. Chart 732, scale three and one-half miles to the inch.
4. Taritari, from A. Chart 732, scale four miles to the inch.
5. Tarawa, from A. Chart 732, scale five miles to the inch.
6. Maiana, from A. Chart 732, scale three and one-half miles to the inch.


FUNAFUTI
1
Ulu Bunga Tafaulia
ISLAND
Bore Hole 1114 Ft.
Fongafale
Pound
Water
Well
Taisala
Drier in patches
Bore Hole No 1 (1336)
Water

APAIANG
2
Shallow water
Lagoon
numerous shoals
Little Makia I.
Tebero
Bingham Channel
S.E. Point

4.
MAKIN OR TARITARI
Tabarere
Entrance
Lagoon Entrance
Tarawa
Uleanian

MARAKI
3
Lagoon
No passage
Boat Passage at H.W.

MAIANA
6
Best Anchorage
Dry at L.W.
nearly dry at L.W. Sp.
Lagoon
Tebiauea (King)
Tide

TARAWA
5
Shallow
Full of patches
Bikman
Buota I.

PLATE 225.

PLATE 225.

Track of the "Albatross" through the Marshall Islands and to Ponapi (Carolines).

TRACK OF THE ALBATROSS
THROUGH THE
MARSHALL ISLANDS
AND TO
PONAPI, (CAROLINES.)
SOUNDINGS IN FATHOMS
MARSHALL ISLANDS
CAROLINE ISLANDS
RATAK CHAIN
RALIK CHAIN
Taongi
Smyth or Gaspar Rico Atoll
Bikar or Dawson Atoll
Eniwetok or Brown Atoll
Bikini or Eschholtz Atoll
Rongelab Atoll
Rongerik Atoll
Utirik or Kutusov I.
Taka or Suvarov
Ailinginae Atoll
Ailuk or Tindal & Watts Atoll
Mejit Atoll
Likieb Atoll
Jemo I.
Wolthо or Schanz Atoll
Ujelang, Arecifos or Providence Atoll
Wotje or Romanzov Atoll
Ujae or Katharine Atoll
Kwajalong or Menschikov Atoll
Lae Atoll
Erikub
Maloelab Kaven or Calvert Atoll
Lib I.
Aurh or Ibbetson Atoll
Namu or Musquillo Atoll
Elmore or Odia Atoll
Majuro or Arrowsmith Atoll
Arhno Atoll
Ponapi or Puynepet I. (Seniavina I.)
Kitt Harbor
Mokil or Duperrey I.
Dingelap or Marakill I.
Mille or Mulgrave Atoll
Knox I.
Keals Bank
Jaluit or Bonham Atoll
Namorik or Baring Atoll
Kitt or Hunter I.
Kusaie or Ualan I.
P. Lottin
Chabrol
Ebon or Boston Atoll

PLATE 226.

Plate 226.

1. Tapeteuea, from H. O. Chart 120, scale four miles to the inch.
2. Apamama, from A. Chart 731, scale four miles to the inch.
3. Peru, from H. O. Chart 497, scale four miles to the inch.
4. Jemo, from German Hydrog. Bureau, No. 113; scale eight miles to the inch.
5. Ailinglap, scale eight miles to the inch.
6. Jaluit, scale seven miles to the inch.
7. Lib, scale eight miles to the inch.
8. Rongelab, scale ten miles to the inch.
9. Lai, scale five miles to the inch.
10. Namorik, scale eight miles to the inch.

5–10 from German Hydrog. Bureau, No. 113.

1
TAPUTEOUEA
Peacock Anchorage
Sand Bank
APAMAMA
2
Western Passage
Binoinano
Tabonua
Tabiteuea
PERU
3
4
Brandung
11-18
IEMO
Bogenaga
Urbeit
Ngaini
5
Passage
Bock
Jih
Kelluk
Medjill
Passage
Jeh
Bigeen
Bigatjelang
Wotja
AILINGLAP
Brandung
Eridj
Enggain
Debumaru
Debu
Enijal
Enilebing
Ailinglaplap
Japwan
Kubar
Passage
Airek
Hfn 2t IVb 15 min
S-Passage
6
Medjado
Ribong
Agidjen
Emidj
Ost Kap
JALUIT
Prühstücks I
Pinglapp
Kabbenbock
Enibor
Jabor
Lüllek
Jahit
7
LIB
8
Kabelle
Boggereidok
Mellu
Passage
Enibarrbarr
Boots-Passage
Enirvatlok
Rongelab
RONGELAB
Busch
Rongelappelap
Süd-Passage
9
Ribong
Bigilapij
Bigenaj
Luisap
Eridj
Passage
LAI
Lotj
Lai (Lae)
10
Matumalt
Namorik

PLATE 227.

PLATE 227.

1. Namu, German Hydrog., No. 113; scale five miles to the inch.
2. Kwajalong, scale thirteen miles to the inch.
3. Taongi, scale eight miles to the inch.
4. Wotje Island (Wotje), scale one mile to the inch.
5. Pingelap, Carolines (A. Chart 772), scale one and one-fourth miles to the inch.

2–4 from German Hydrog. Bureau, No. 113.

KWAJALONG
(MENSCHIKOV)
2
TAONGI
3
Steine v. Scylla
Fluch mit zahlreichen Tiefen
Boots-Passage
Sibylla
hoher Sand
Trockenes Riff
Kwadjelin
WOTJE
4
Wotje
oder
Otdia
Nemu
Obs. Pkt.
Madamett
Eaginen
1
NAMU
Ebenmg
Bock
Pshorr-Passage
Tokenraito
Tekerlip
Ennainen
Vet
Enijet
Menet
Enimak
Anil
Passage
Emer
Lugagi
Lugaren
Leuen
PINGELAP
5
Tugulu I.
Talsai
Pingelap I.
(Inhabited)

PLATE 228.

Plate 228.

1. Wotje, German Hydrog., No. 113; scale six miles to the inch.
2. Jaluit, Southeast Pass, corrected by officers of the "Albatross," scale one-half mile to the inch.
3. Likieb, corrected by officers of the "Albatross," scale nine miles to the inch.
4. Arhno, corrected by officers of the "Albatross," scale five miles to the inch. An excellent sketch of Arhno has just been published by the German Hydrographic Bureau (1902).

2–4 from German Hydrog. Bureau, No. 113.

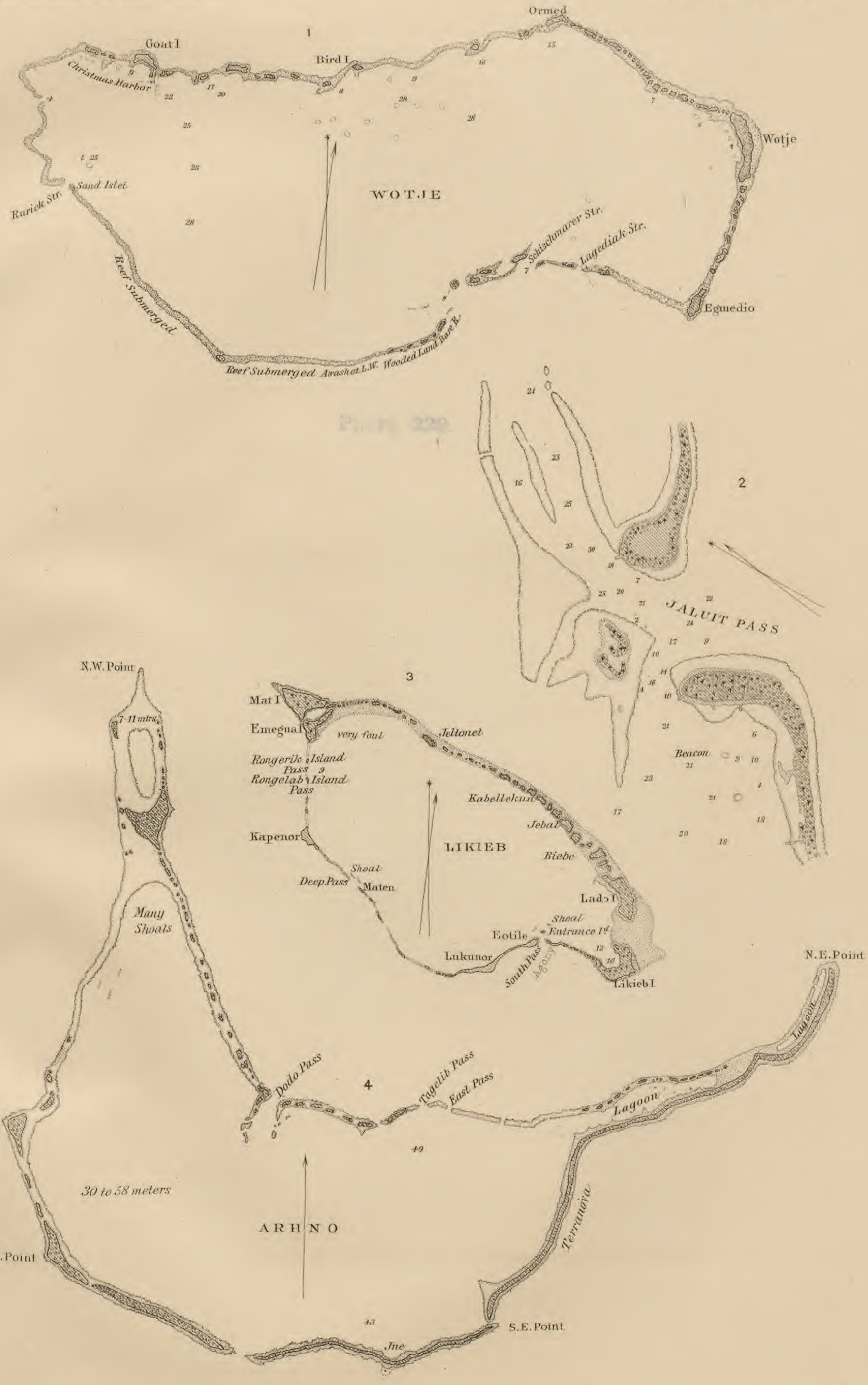

1
Ormed
Goat I
Bird I
Christmas Harbor
Wotje
WOTJE
Sand Islet
Rurick Str.
Schischmarev Str.
Lagediak Str.
Reef Submerged
Egmedio
Reef Submerged Awash at L.W. Wooded Land Bare R.
2
JALUIT PASS
3
N.W. Point
Mat I
Emegua I
very foul
Jeltonet
Rongerik Island
Pass
Rongelab Island
Pass
Kapenor
Kabellekun
Jebat
LIKIEB
Biebe
Shoal
Deep Pass
Maten
Beacon
Many
Shoals
Lado I
Shoal
Entrance Id.
Eotile
Lukunor
South Pass
Agony
Likieb I
N.E. Point
Lagoon
Podo Pass
4
Tagelib Pass
East Pass
S.W. Point
30 to 58 meters
ARHNO
Terranova
S. Point
S.E. Point
Jne

PLATE 229.

PLATE 229.

Kusaie, or Ualan, Carolines, from A. Chart 878, scale one and one-fourth miles to the inch.

KUSAIE OR UALAN

PLATE 230.

PLATE **230.**

Ponapi and the Andema Islands, from A. Chart 981, scale four and one-fourth miles to the inch.

PONAPI

PONAPE OR PUYNIPET I.
ANT OR ANDEMA I.
Mt Paligor
Mt Tolcolme
Mt Wheatu
Mt Rupuriche
Mt Nan
Mt Ou
Mt Ara
Mt Mijipe
Mt Leolap
Mt Metalanim
Mt Nanmatal
Mt Nanpil
Mt Tauche
Mt Nanmwarki
Mt Nantomwin
Mt Nanmatal
Mt Nanpeik
Mt Nanpeik
Mt Nanpeik

PLATE 231

PLATE **231**.

Truk and the Royalist Islands, from A. Chart 982, scale seven miles to the inch.

TRUK OR HOGOLU ISLANDS

PLATE 232.

PLATE 232.

Track of the "Albatross" west of Ponapi, through Truk to Guam.

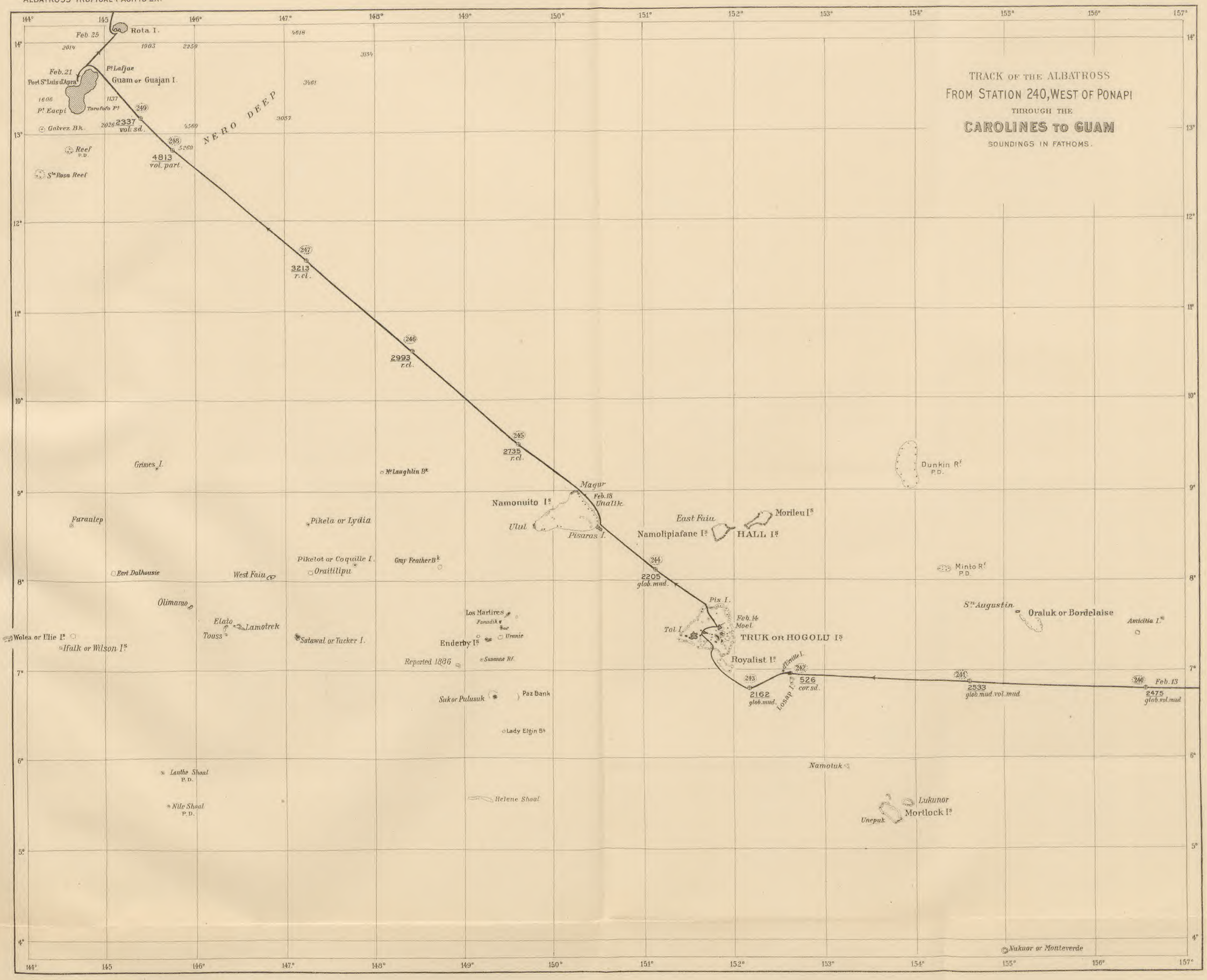

TRACK OF THE ALBATROSS
FROM STATION 240, WEST OF PONAPI
THROUGH THE
CAROLINES TO GUAM
SOUNDINGS IN FATHOMS.
Rota I.
Feb. 25
Feb. 21
Pt Lafjae
Port St Luis d'Apra
Guam or Guajan I.
Pt Eacpi
Tarofofo Pt
Galvez Bk.
Reef P.D.
Ste Rosa Reef
NERO DEEP
249
2337 vol. sd.
248
4813 vol. part.
247
3213 r. cl.
246
2993 r. cl.
245
2735 r. cl.
244
2205 glob. mud.
243
2162 glob. mud.
242
526 cor. sd.
241
2533 glob. mud. vol. mud.
240
2475 glob. vol. mud.
Feb. 13
Grimes I.
McLaughlin Bk
Magur
Feb. 18
Unalik
Namonuito Is
Ulul
Pisaras I.
East Faiu
Morileu Is
Namolipiafane Is
HALL Is
Dunkin Rf P.D.
Minto Rf P.D.
Faraulep
Pikela or Lydia
Pikelot or Coquille I.
Oraitilipu
Gny Feather Bk
Earl Dalhousie
West Faiu
Olimarao
Wolea or Ulie Is
Ifalk or Wilson Is
Elato
Lamotrek
Toass
Satawal or Tucker I.
Los Martires
Fanadik
Uranie
Enderby Is
Susanne Rf.
Reported 1886
Suk or Pulusuk
Paz Bank
Lady Elgin Bk
Pis I.
Feb. 14
Moel
Tol I.
TRUK OR HOGOLU Is
Royalist Is
Uraite I.
Losap I.
St Augustin
Oraluk or Bordelaise
Amicitia I.
Lanthe Shoal P.D.
Nile Shoal P.D.
Helene Shoal
Namotuk
Lukunor
Unepuk
Mortlock Is
Nukuor or Monteverde

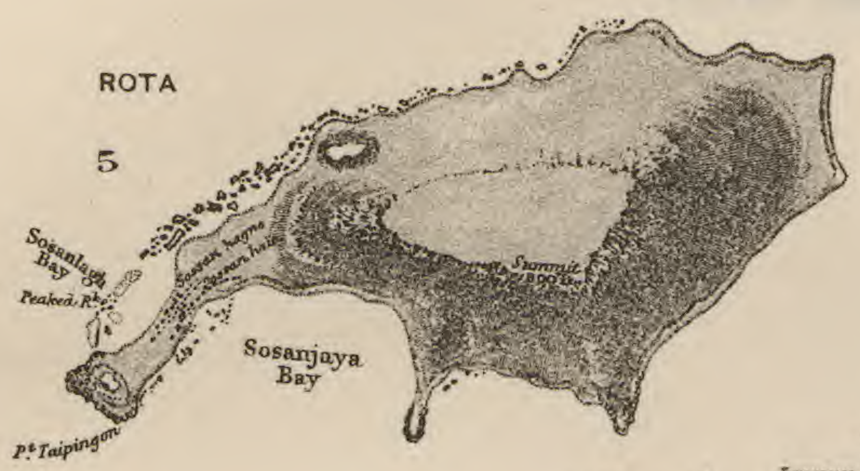
PLATE 233.

PLATE 233.

1. Namonuito, from A. Chart 772, scale twelve miles to the inch.
2. Feys, or Tromelin Island, from A. Chart 772, scale three fourths of a mile to the inch.
3. Losap, from A. Chart 982, scale two miles to the inch.
4. Guam, from A. Chart 1748, scale six miles to the inch.
5. Rota, from A. Chart 1748, scale three miles to the inch.

NAMONUITO
1

FEYS
2
about 40 ft. high


ROTA
5
Sosanlagi Bay
Peaked Pt.
Sosanjaya Bay
Pt. Taipingon

GUAM
4
Pt. de Nigo
Falcona Anchorage
Ipopao Pt.
Pt. Aputo
Pt. Agay
Pt. Tangisenon
Pt. Hilosan
Pt. de los Amantes
Pt. Talofofo
Tumon Bay
Gnalon
Tayanunezro Pt.
Apurguan Pt.
Alupan
Agaña Bay
AGAÑA
Asan
Tepungan
Alegvase
Watering Place
Pt. Oroté
Oroté Peninsula
Pt. Japuatui
Pt. Peladgi
Agate Bay
Pt. Alaxey
Pt. Borgne
Pt. Finalle
Anaya I.
Pt. Taipingon
Pt. Atichongo
Pt. Agaga
Pt. Odo
Pt. Pinay
Pt. Konha
Umata Bay
Pt. Machanao
Merizo
Port Merizo
Pt. Autan
Pt. Manello
Cocos I.
Manelle Channel
Pt. Tachin
Pt. Ilahinan
Pt. Achu
Pt. Afayen
Agrigan I.
Tchiuanda Pt.
Pt. Lagoff
Port Pago
Pago South Pt.
Ylic North Pt.
Ylic Bay
Ylic or Malesso Pt.
Tochia R.
Arutt Sagan Channel
Port Tarofofo
Pt. Matolu
Pt. Assigo
R. Ulamnia
Ynarajan
Port Ynarajan
Agfluyan Bay
Pt. Sasayan
Pt. Guai
Pt. Fadigan
Pt. Tamgan
Pt. Pagat
Pt. Lujeña
Pt. Hanoum
Pt. Matay
Pt. Anae
Pt. Loffao
Pt. Tatay
Pt. Tagua
Tatay N. Point
Tatay E. Point
Santa Rosa Peak
Pt. de Pagon
Pt. Ritidian

LOSAP
3
Lenel I.
Lapur I.
Losap I.
Boat Pass
Boat Pass
Pich I.

PLATE 234.

PLATE **234.**

Geological Chart of the islands in the tropical Pacific:

Yellow, coral reefs, underlying base not known.

Blue, volcanic islands.

Carmine, elevated limestones.

Blue and carmine, volcanic islands surrounded by reefs, partly elevated.

Green, coral reefs, probably underlaid by rocks of nearest land.

Blue and yellow, volcanic islands surrounded by encircling reefs.

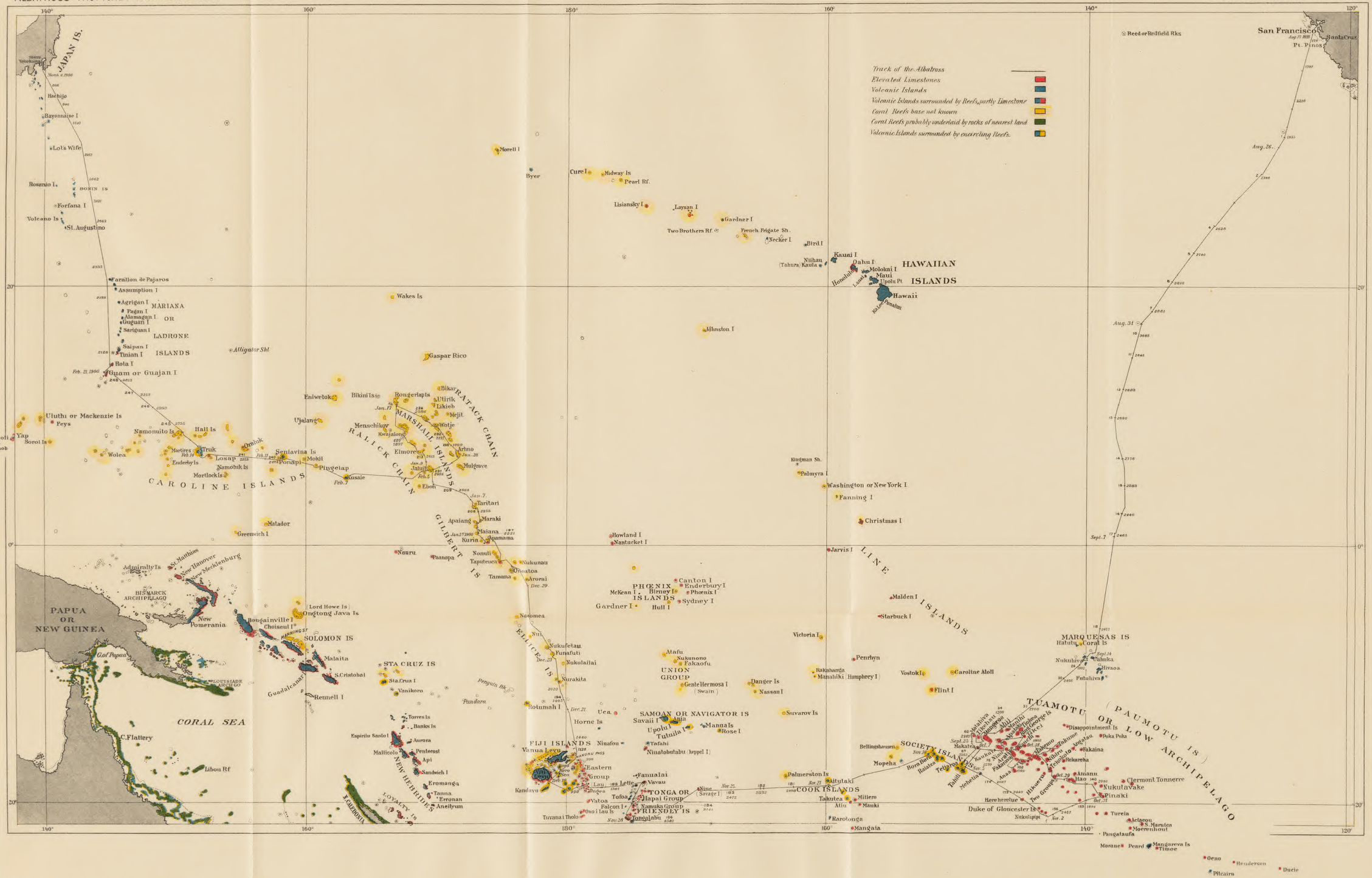

Track of the Albatross
Elevated Limestones
Volcanic Islands
Volcanic Islands surrounded by Reefs, partly Limestone
Coral Reefs base not known
Coral Reefs probably underlaid by rocks of nearest land
Volcanic Islands surrounded by encircling Reefs.
JAPAN IS.
Hachijo
Bayonnaise I
Lot's Wife
Rosario I.
BONIN IS
Forfana I
Volcano Is
St. Augustino
Farallon de Pajaros
Assumption I
Agrigan I
Pagan I
Alamagan I
Guguan I
Sariguan I
MARIANA OR LADRONE ISLANDS
Saipan I
Tinian I
Rota I
Guam or Guajan I
Alligator Shl
Uluthi or Mackenzie Is
Feys
Yap
Ngoli
Soroi Is
Palau or Pelew Is
Kajangle
Baobeltaob
Korror
Pilithu
Angaur
Wolea
Namonuito Is
Hall Is
Martires
Truk
Enderby Is
Losap
Mortlock Is
Namotuk Is
Oraluk
Senjavina Is
Ponapi
Mokil
Pingelap
Kusaie
Ujalang
Eniwetok
Bikini Is
Rongerlapts
Menschikov
Kwajalong
Elmore
Jaluit
Ebon
Bikar
Utirik
Likieb
Mejit
Wotje
Arno
Mulgrave
RATACK CHAIN
MARSHALL ISLANDS
RALICK CHAIN
CAROLINE ISLANDS
Taritari
Maraki
Apaiang
Maiana
Kuria
Apamama
Nonuti
Taputeuea
Tamana
Nukunau
Onoatoa
Arorai
GILBERT IS
Nauru
Paanopa
Greenwich I
Matador
Admiralty Is
St. Matthias
New Hanover
New Mecklenburg
BISMARCK ARCHIPELAGO
New Pomerania
PAPUA OR NEW GUINEA
G. of Papua
LOUISIADE ARCHIPELAGO
CORAL SEA
C. Flattery
Libou Rf
Lord Howe Is
Ongtong Java Is
Bougainville I
Choiseul I
MANNING ST
SOLOMON IS
Malaita
S. Cristobal
Guadalcanar
Rennell I
STA CRUZ IS
Sta. Cruz I
Vanikoro
Torres Is
Banks Is
Espiritu Santo I
Aurora
Mallicolo
Pentecost
Api
Sandwich I
Eromanga
Tanna
Erronan
Aneityum
NEW HEBRIDES
LOYALTY IS
N. CALEDONIA
Morell I
Byer
Cure I
Midway Is
Pearl Rf.
Lisiansky I
Laysan I
Gardner I
Two Brothers Rf.
French Frigate Sh.
Necker I
Bird I
Nihau
Tahura Kaula
Kauai I
Oahu I
Molokai I
Maui
Lanai
Tipolu Pt
Honolulu
HAWAIIAN ISLANDS
Hawaii
Pilo
Punalu
Wakes Is
Johnston I
Gaspar Rico
Kingman Sh.
Palmyra I
Washington or New York I
Fanning I
Christmas I
Howland I
Nantucket I
Jarvis I
LINE ISLANDS
Canton I
Enderbury I
PHŒNIX ISLANDS
McKean I.
Birney Is
Phœnix I
Sydney I
Gardner I
Hull I
Malden I
Starbuck I
Victoria I
Penrhyn
Rakahanga
Manahiki
Humphrey I
Vostok I
Caroline Atoll
Flint I
Danger Is
Nassau I
Suvarov Is
Nukufetau
Funafuti
Nukulailai
Nurakita
Rotumah I
Penguin Bk.
Pandora
Nanomea
Nui
Atafu
Nukunono
Fakaofu
UNION GROUP
Gente Hermosa I (Swain)
SAMOAN OR NAVIGATOR IS
Savaii I
Upolu I
Tutuila I
Manua Is
Rose I
Tafahi
Niuatobutabu (Keppel I)
Ninafou
Horne Is
Uea
FIJI ISLANDS
Vanua Levu
Viti Levu
Kandavu
Eastern Group
Lau
Lette
Vavau
Fanualai
Vatoa
Ongea
Tuvana i Tholo
Ono i Lau Is
Falcon I
TONGA OR FRIENDLY IS
Tofoa
Hapai Group
Nomuka Group
Tongatabu
Niue (Savage I)
Palmerston Is
COOK ISLANDS
Aitutaki
Takutea
Mitiero
Mauki
Atiu
Rarotonga
Mangaia
Bellingshausen
Mopeha
Bora Bora
Raiatea
Tahaa
Tetiaroa
Tahiti
Meheti'a
SOCIETY ISLANDS
Makatea
Kauehi
Aratika
Fakarava
Kaukura
Tikehau
Rangiroa
Arutua
Manihi
Takaroa
Takapoto
Ahamaru
Nukutavake
Pinaki
Hereherelue
Duke of Gloucester Is
Nukutipipi
Tureia
Actaeon
S. Marutea
Maerenhout
Pangatautia
Morane
Peard
Mangareva Is
Timoe
Oeno
Henderson
Ducie
Pitcairn
TUAMOTU (PAUMOTU IS) OR LOW ARCHIPELAGO
Disappointment Is
Puka Puka
Angatau
Fakaina
Rekareka
Amanu
Hao
Clermont Tonnerre
Reed or Redfield Rks
San Francisco
Santa Cruz
Pt. Pinos
Aug. 27. 1899
Aug. 26.
Aug. 31
Sept. 7
Sept. 14
Sept. 21
Oct. 1
Oct. 8
Oct. 15
Oct. 22
Oct. 29
Nov. 2
Nov. 5
Nov. 12
Nov. 19
Nov. 21
Nov. 25
Nov. 28
Jan. 1st 1900
Jan. 7
Jan. 9
Jan. 17
Jan. 26
Feb. 5
Feb. 7
Feb. 11
Feb. 14
Feb. 21, 1900
March 2, 1900
MARQUESAS IS
Hatutu
Coral Is
Nukuhiva
Tahuka
Hivaoa
Fatuhiva
140°
160°
180°
160°
140°
120°
20°
0°
20°

PLATE 235.

PLATE **235**.

Bora Bora. Drawn by J. H. Emerton, from sketches by A. Agassiz and A. G. Mayer.

PLATE 236.

PLATE 236.

Pinaki (Whitsunday). Drawn by J. H. Emerton, from sketches by A. Agassiz and A. G. Mayer.

H. Mansel lith Boston

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