

FISHES OF CHILE

SYSTEMATIC CATALOG

by

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Part I

LANCELETS, LAMPREYS, SHARKS, RAYS, CHIMAERAS

In this work I have attempted to bring together the scientific records of fishes credited to the confines of the Republic of Chile: As this would include the Straits of Magellan and a great part of Tierra del Fuego I also include the similar though meagre fauna of the Falklands and Burdwood Bank, situated to the eastward in the south Atlantic. This appears desirable as their faunal elements belong with the Sud-Antartic Zone of Regan, which in Chile has been delimited northward to the Chiloe Islands.

DR. FEDERICO T. DELFIN'S valuable "CATALOGÓ DE LOS PECES DE CHILE" in 1901 has long been the standard work for reference to the source of our knowledge of the Chilean ichthyfauna. It listed 251 species and the present work lists 348. A later and very important work bearing on this fauna is Mr. J. R. NORMAN'S valuable account of the coast fishes of the Patagonian Region in the "DISCOVERY" Report (vol. 14, Feb. 1937, pp. 1—150, pls. 1005) where both historical and distributional aspects are sketched.

My own studies of Chilean fishes began in 1916 with an examination of a mounted collection of some of the larger and more important market fishes, installed in the Commercial Museum of Philadelphia. (1).

Some other specimens in the same institution were studied later. (2).

In 1920 I had opportunity to study the collections of the U. S. Exploring Expedition and it contained a fair lot of Chilean species, all of which are included in my preliminary list (3). Finally several lots of fishes were sent to me by Mr. D. S. BULLOCK, of Angol, between 1930 and 1940 (4). Several specimens belonging in these lots were misplaced and therefore not included in the report. They are mentioned under their respective species headings in the present work.

I wis to extend appreciation to Prof. Carlos Porter for granting me the opportunity to prepare the present catalog. I also gratefully acknowledge his encouragement and helpful supervision in seeing it through the press.

Following the references to each species is a summary of distribution. First the localities are grouped under the heading Chile in parenthesis, and those from which materials have been studied or examined are indicated by an asterisk. Other countries in South America are mentioned and finally reference if extralimital. In quoting the various references the original is given for each species, also indication of type locality and when several or more localities are mentioned the first is understood to carry the type locality designation. Original synonymic references pertaining to Chile are given in similar way. Beyond these very few others are given and then only if of some important nomenclatorial or distributional significance.

(1) Copeia, New York, N.º 34, August 24, 1916, pp. 64—65.

(2) Proc. Acad. Nat. Sci. Phila., 1926, pp. 275—285.

(3) Proc. Amer. Philos. Soc. vol., vol. 82, N.º 5, 1940, pp 733—800, figs. 1—76.

(4) Proc. Acad. Nat. Sci. Phila., 1940, pp. 171—190, figs 1—18.

Class LEPTOCARDII
Lancelets

Orden AMPHIOXI

Family BRANCHIOSTOMIDAE
Lancelets

BRANCHIOSTOMA ELONGATUM (Sundevall)

Amphioxus elongatus Sundevall, öfver. Vet. Akad. Forh. Stockholm, vol. 9, 1852, p. 147 (type locality, Chinchas Islands, Perú).

Branchiostoma elongatum Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 334 (Cavancha Bay).—Porter, Revista Chil. Hist. Nat., vol. 13, 1909, p. 123 (Valparaíso). Chile (Valparaíso, Cavancha Bay). Perú. No specimens seen.

Class MARSIPOBRANCHII
Lampreys

Order HYPEROTRETI
Hag Fishes

Family EPTATRETIDAE
Borers

POLISTOTREMA POLYTREMA (Girard)

Bdellostoma polytrema Girard, Proc. Acad. Nat. Sci. Phila, 1854, p. 119 (type locality, Valparaíso Bay, Chile); U. S. Naval Astrom., Exped., vol. 2, Zool., 1855, p. 252, pl. 33 (type).—Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 512 (compiled).—Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1873, p. 160 (Chile).—Günther, Rep. Voy. Challenger, Zool., vol. 1, pt. 6, 1880, p. 25 (Valparaíso).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 11, 1900, p. 186 (Talcahuano; Valparaíso).

Bdellostoma polytrema Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción) (error).

Homea polytrema Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 407 (reference).—Delfin Cat. Peces de Chile, 1901, p. 12 (reference); Revista Chil. Hist. Nat., vol. 6, 1902, p. 218.

- Polistotrema polytrema* Fowler, Proc. Acad. Nat. Sci, Phila, 1907, p. 461 (Chile).
Heptatretus polytrema Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 9, 1912, p. 534 (Günther's 1880 material).
Polistotrema dombey (not Shaw) Jordan and Evermann, Bull. U. S. Nat. Mus., N.o 47, pt. 1, 1896, p. 6 (part). Chile* (Valparaíso, Talcahuano, Bahía de Concepción).

POLISTOTREMA DECATREMA (Regan)

- Heptatretus decatrema* Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 9, 1912, p. 535 (type locality, Chile).
Gastrobranchus dombeyi Shaw, General Zoology, vol. 5, 1804, p. 267 (type locality, South American Seas) (on *Le Gastrobranche dombey* Lacépède, Hist. Nat. Poiss., vol. 1, 1798, p. 531, pl. 23 "Chile").
Polistotrema dombey Jordan and Evermann, Bull. U. S. Nat. Mus., N.o 47, pt. 1, 1896, p. 6 (compilel).
Polistotrema dombeyi Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 52 (reference).
Eptatretus dombeyi Fowler, Proc. Amer. Philos Soc., vol. 82, N.º 5, 1940, p. 743, fig. 1 (Napon Bay, Valparaíso).
Bdellostoma polytrema (not Girard) Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1873, p. 160 (Chile). Chile (Napon Bay, Valparaíso).

Family MYXINIDAE
Hag Fishes

MYXINE AUSTRALIS Jenyns

- Myxine australis* Jenyns, Zool. Voy. Beagle, Fish, 1842, p. 159 (type locality, Tierra del Fuego).—Günther, Cat. Fish. Brit. Mus. vol. 8, 1870, p. 511 (Tyssen Is., not Sandy Point).—Cunningham, Trans. Linn. Soc. London, vol. 27, pt. 4, 1871, p. 473 (Falkland Sound).—Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1873, p. 135 (on Günther).—Günther, Rep. Voy. Challenger, Zool., vol. 1, pt. 6, 1880, p. 23 (Grapler Harbor, Messier Channel; Port Chirrucha, Magellan Strait); Proc. Zool. Soc. London, 1881, p. 22 (no locality).—Perugia, Ann. Mus. Civ. Stor. Nat. Génova, vol. 30, 1891, p. 657 (Terra del Fuoco, Isola degli Stati).—Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 407 (reference).—Porter, Revista Chil. Hist. Nat.,

vol. 4, N.º 11, 1900, p. 184 (referencia). Delfín, Rev. Ch. His. Nat., vol. 4, N.º 11, 1900, p. 186 (referencia).— Lönnberg, Wiss. Erg. Schwed, Südpolar Exp., Fishes, vol. 5, pt. 6, 1905, p. 11 (Ushuaia, Tierra del Fuego); Erg. Hamburg, Magalh. Sammelr., vol. 1, Fische, 1907, p. 4 (Smyth Channel; Punta Arenas; Magellan Straits; Tierra del Fuego). — Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 11, 1913, p. 397. (Orange Bay; Cape Gregory; Messier Channel; Sandy Point; Puerto Bueno; Cockle Cove; Tyssar Is.; Magellan Strait).— Norman, Discovery Rep., vol. 16, 1937, p. 6 (Falklands, Stanley Harbor; Salvador Waters; Magellan Strait; Tyssar Is. Cockle Cove). — Tortonese, Boll. Mus. Zool. Anat. Comp., Univ. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 16 (Magellan Strait).

Myxine glutinosa var. *australis* Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1874, p. 135 (Chile).

Myxine glutinosa var. *australis* Delfin. Cat. Peces de Chile, 1901, p. 12 (compiled) (error).

Myxine acutifrons Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 347, pl. 68, fig. 6 (type locality. Magellan Straits), p. 407 (referencia).

¿*Muxine glutinosa* (not Linnaeus) Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol 120, 1935, p. 149 (lat. 35°30' to lat. 56°S). Chile (Ushuaia, Tierra del Fuego, Tyssen Island, Sandy Point, Grapler Harbor, Port Chirrucha). Patagonia, Falklands, South Shetland Islands. No materials seen.

MYXINE TRIDENTIGER Garman

Myxine tridentiger Garman, Mem. Mus. Comp. Zool, vol. 24, 1899, p. 345 (based on Günther 1870). — Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 11, 1913, p. 396 ('types of the species' credited to Sandy Point, Dr. Cunningham). — Norman, Discovery Rep., vol. 16, 1937, p. 7 (holotype credited to Sandy Point).

Myxine australis (not Jenyns) Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 511 (Sandy Point; part.); Rep. Voy. Challenger, Zool., vol. 22, 1887, p. 267 (Magellan Straits; part.).
Chile (Sandy Point, Magellan Strait). Known only from the unique holotype.

MYXINE AFFINIS Günther
Chkoutaouélik (Fuegian)

Myxine affinis Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 511 (type locality, No locality).—Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1873, p. 135 (copied).—Norman, Discovery Rep., vol. 16, 1937, p. 6 (lat. 53°42'40''S. long. 70°55'W.; Orange Bay; Cape Gregory; Puerto Bueno; Messier Channel; Sandy Point; type).

‡*Muraenoblenna olivacea* Lacépède, Hist. Nat. Poiss., vol. 5, 1803, p. 652 (type locality, "le détroit de Magellan").

Myxine australis (not Jenyns) Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 511 (Sandy Point).—Cunningham, Trans. Linn. Soc. London, vol. 27, pt. 4, 1871, p. 473 (Punta Arenas, Magellan Straits).—Vaillant, Miss. Sci. Cap. Horn, vol. 6, Poiss., 1888, p. (c6) c32. (Orange Bay, New Year Sound, Punta Arenas).—Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 334. (Seno Almirantazgo in Admiralty Sound; Cape Espiritu Santo, Tierra del Fuego).—Garman, Mem. Mus. Com. Zool., vol. 24, 1899, p. 345, pl. 68, fig. 8 (Port Famine, Sandy Point, Magellan Straits).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 11, 1913, p. 397 (part; type of *Myxine australis*).—Husakof, Bull. Amer. Mus. Nat. Hist., vol. 33, art. 4, Feb. 13, 1914, p. 85 (north of mouth of Rio Coyle, Patagonia).—Thompson, Proc. U. S. Nat. Mus., vol. 50, 1916, p. 419 (Port Churruca, Borja Bay, Sandy Point).

Myxine glutinosa var. *australis* Putnam, Proc. Boston Soc. Nat. Hist., vol. 16, 1873, p. 135 (south coast of South America).

Myxine glutinosa forma *australis* Smitt, Bih. Svensk. Vet. Akad. Handl., vol. 24, af. 4, N.º 5, 1898, p. 75 (Tierra del Fuego).

Myxine glutinosa var. *australis* Delfin, Cat. Peces de Chile, 1901, p. 12 (compiled; part) (error).

Chile (Orange Bay, Cape Gregory, Puerto Bueno, Messier Channel, Sandy Point, Punta Arenas, Magellan Straits, Admiralty Sound). Patagonia. No specimens seen.

Order HYPEROARTII

Lampreys

Family PETROMYZONIDAE

Lampreys

VELASIA CHILENSIS Gray

Lamprea

Velasia chilensis Gray, Proc. Zool. Soc. London, 1851, p. 239, pl. 4, fig. 1 (type locality, Chile, in fresh water); List Chondr. Fish., 1851, p. 143, pl. 1, fig. 4 (Chile); Ann. Mag. Nat. Hist. London, ser. 2, vol. 13, 1854, p. 63, (reference).—Philippi, Archiv Naturg., 1857, pt. 1, p. 207, pl. 10, fig. 2 (Chile).—Eigenmann, Mem. Nat. Acad. Sci., vol. 22, N.º 2, 1927, p. 32, pl. 3, figs. 13-14 (discussion).

Geotria chilensis Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 509 (type).—Gill, Mem. Nat. Acad. Sci., vol. 6, 1893, p. 110 (reference).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 11, 1900, p. 186 (compiled); Cat. Peces de Chile, 1901, p. 13 (compiled).—Eigenmann, Rep. Princeton Univ. Exped. Patagonia, 3, pt. 4, 1910, p. 376 (reference).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 7, 1911, p. 196 (type).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).

¿*Ammocoetes caeruleus* Philippi, Archiv Naturges, 1858, pt. 1, p. 306 (type locality, Valdivia).

¿*Ammocoetes landbecki* Philippi, op. cit., p. 307 (type locality, Valdivia).

¿*Petromyzon foncki* Philippi, op. cit., 1865, pt 1, p. 109 (type locality, Chile); Monatsb. Akad. Wiss. Berlin, 1866, p. 709 (name only).

Mordacia mordax (not Richardson) Schmeltz, Cat. Mus Godeffroy, N.º 6, 1877, p. 18, (Valdivia, Chile).—Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 334 (Tumbes).

Chile (Tumbes, Valdivia). No specimens seen.

VELASIA STENOSTOMA Ogilby

Velasia stenostomus Ogilby, Proc. Linn. Soc. New South Wales, vol. 21, 1896, p. 409 (type locality, New Zealand [one of Günther's specimens of *Geotria chilensis*]; Tasmania).

Velasia stenostoma Eigenmann, Mem. Nat. Acad. Sci., vol.

- 22, N.º 2, 1927, p. 33, pl. 2, figs. 4-6, pl. 3, figs. 7-12 (Valdivia).
- Geotria stenostoma* Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 7, 1911, p. 197 (part.).
- Geotria chilensis* (not Gray) Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 509 (part.).
- Macrophthalmia chilensis* Plate, Sitzs. Ges. Naturf. Fr. Berlin, 1897, p. 137.
Chile (Valdivia), Argentina, Patagonia, Extralimital in New Zealand, Tasmania and Australia. No specimens seen.

GEOTRIA AUSTRALIS Gray

Lamprea con bolsa

- Geotria australis* Gray, Proc. Zool. Soc. London, 1851, p. (235) 239, pl. 5 (type locality, South Australia, in fresh water); List Chondropt. Fish. Brit. Mus., 1851, p. 142, pl. 1, fig. 3 (dentition), pl. 2 (River Inkar pinki, South Australia).—Gill, Mem. Nat. Acad. Sci., vol. 6, 1893, p. 110 (reference).—Plate, Zool. Jahrb., Suppl. Band 5, 1902, p. 668, pl. 19, figs., 17-19 (Valdivia, Chile).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 7, 1911, p. 197 (material all Australian).—Eigenmann, Mem. Nat. Acad. Sci., vol. 22, N.º 2, 1927, p. 33, pl. 3, figs. 1-6 (photographs) (Valdivia; Lautaro).—Norman, Discovery Rep., vol. 16, 1937, p. 4 (Falkland Is.; Tierra del Fuego).—Fowler, Proc. Acad. Nat. Sci. Phila, 1940, p. 171, figs. 1-2 (Río Purén, Purén, Chile).
- Thysanochilus valdivianus* Philippi, Archiv Naturg., 1857, pt. 1, p. 268 (type locality, Valdivia, Chile).
- Velasia chilensis* (not Gray) Philippi, op. cit., 1857, pt. 1, p. 266; 1863, pt. 1, p. 207, pl. 10, fig. a (Valdivia). Chile (Tierra del Fuego, Lautaro, Purén*, Valdivia). Falklands. Extralimital in Australia.

MORDACIA ACUTIDENS (Philippi)

- Petromyzon acutidens* Philippi, Archiv Naturg., 1864, p. 107 (type locality, Chile); Ann. Mag. Nat. Hist. London, vol. 16, 1865, p. 221.
- Mordacia acutidens* Plate, Zool. Jahrb., Suppl. Band 5, 1902, p. 657, pl. 19, figs. 5-6 (Valdivia). — Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 7, 1911, p. 195 (Chile).—Eigenmann, Mem. Nat. Acad. Sci., vol. 22, N.º 2, 1927, p. 35, pl. 4, fig. 11 (mouth; copied) (Valdivia).

- Mordacia mordax* (not Richardson) Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción); Cat. Peces de Chile, 1901, p. 13 (part.) — Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).
- Mordacia mordae* Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 11, 1900, p. 185 (reference; error).
- Caregola mordax* Eigenmann, Rep. Princeton Univ. Exped. Patagonia, vol. 3, pt. 4, 1910, p. 377 (part.).
Chile (Valdivia, Bahía de Concepción). No specimens seen.

MORDACIA ANWANDTERI (Philippi)

- Petromyzon anwandteri* Philippi, Archiv Naturg., 1863, p. 207, pl. 10, fig. 6 (type locality, Valdivia, Chile).
- Mordacia anwandteri* Eigenmann, Mem. Nat. Acad. Sci., vol. 22, N.º 2, 1927, p. 35, pl. 4, figs. 9, 10 and 12 (photographs) (Valdivia; Río Renaico). — Fowler, Proc. Acad. Nat. Sci. Phila., 1940, p. 171, figs. 3-4 (El Vergal, Angol).
- Mordacia mordax* (not Richardson) Delfin, Cat. Peces de Chile, 1901, p. 13 (part.). — Eigenmann, Rep. Princeton Univ. Exped. Patagonia, vol. 3, pt. 4, 1910, p. 377 (reference; part.).
- Mordacia acutidens* (not Philippi) Regan, Ann. Mag. Nat. Hist. London, ser. 8 vol. 7, 1911, p. 195 (part.).
Chile (Valdivia, Río Renaico, Angol*).

CARAGOLA LAPICIDA Gray

- Caragola lapicida* Gray, Proc. Zool. Soc. London, 1851, p. 239, pl. 4, fig. 5 (type locality, Bay of Valparaíso, Chile); Ann. Mag. Nat. Hist. London, ser. 2, vol. 13, 1854, p. 63 (reference). — Eigenmann, Mem. Nat. Acad. Sci., vol. 22 N.º 2, 1927, p. 36, pl. 2, figs. 1-3, pl. 4, figs. 1-8 (photographs) (Osorno; Valdivia). — Fowler, Proc. Acad. Nat. Sci. Phila., 1940, p. 171, figs. 5-8 (Angol).
- Mordacia lapicida* Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 407 (reference). — Plate, Zoolog. Jahrb., Supl. Band 5, 1902, p. 656, pl. 19, figs. 3-4 (Bay of Talcahuano, Tumbes). — Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 7, 1911, p. 95 (type). — Tortonese, Boll. Mus. Zool. Anat. Comp. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 16 (Valparaíso).
- Mordacia mordax* (Not Richardson) Günther, Cat. Fish, Brit. Mus., vol. 8, 1870, p. 507 (part.; type of *Cara-*

gola lapicida Gray).—Delfin, Cat. Peces de Chile, 1901, p. 13 (part.).—Eigenmann, Rep. Princeton Exped. Patagonia, vol. 3, pt. 4, 1910, p. 377 (reference; part.).

Chile (Valparaíso, Osorno, Valdivia, Angol*, Bay of Talcahuano, Tumbes).

Class PISCES
Fishes

Sub-Class ELASMOBRANCHII
Shark-like Fishes

Order DIPLOSPONDYLI
Notidanoid Sharks

Family HEPTRANCHIDAE
Grisets

HEPTRANCHIAS PERLO (Bonnaterre)

Squalus perlo Bonnaterre, Tableau Encyclop. Ichth, 1788, p. 10 (type locality, Mediterranean) (on *Perlon* Broussonet.)

Heptranchias perlo Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 483 (reference); Bull. U. S. Nat. Mus., N.º 100, vol 13, 1941, p. 9 (Italy).

Notidanus ferox Pérez, Estudios Esecualos Chile, 1886, p. 7 (type locality, Chile).—Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 555, pl. 6, fig. 1 (Chile).—Quijada, Bol. Mus. Nac. Chile, vol. 5, pt. 1, 1913, p. 112 (Cartajena).

Notidanus (Heptancus) ferox Delfin, Revista Chil. Hist. Nat., vol 4, N.º 6, 1900, p. 82 (reference).

Notidanus medinae Philippi, Anal. Univ. Chile, vol. 109, 1901, p. 305 (type locality, Cartajena, Chile).

Notidanus wolniczkyi Philippi, Anal. Univ. Chile, vol. 109, 1901, p. 307 (type locality, Coquimbo, Chile).—Quijada, Bol. Mus. Nac. Chile, vol. 5, pt. 1, 1913, p. 112 (Coquimbo).

Notidanus wolnoczkii Philippi, Anal. Univ. Chile, vol. 109, 1901, pl. (4 upper figures of teeth).
Chile (Cartajena, Coquimbo). Extralimital in Japan, Australia and the Atlantic). Italian material studied.

HEXANCHUS GRISEUS (Bonnaterre).

Squalus griseus Bonnaterre, Tableau Encyclop. Ichth., 1788,

p. 9 (type locality, Mediterranean) (on *Le griset* Broussonet).

Hexanchus griseus Fowler, Proc. Fourth Pac. Sci. Congr. Java 1929 (1930), p. 484 (referencia); Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 11 (Italy?).

Notidanus vulgaris Pérez, Estudios Escualos Chile, 1886, p. 8 (type locality, Chile).—Philippi Anal. Univ. Chile, vol. 71, 1887, p. 554, pl. 6, fig. 1 (Santiago).—Delfín, Revista. Chil. Hist. Nat., vol. 4, N.º 6, 1900, p. 82 (Valparaíso).—Quijada, Bol. Mus. Nac. Chile, vol. 5, pt. 1, 1913, p. 112 (San Antonio, Chile). — Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Hexanchus vulgaris Delfin, Cat. Peces de Chile, 1901, p. 14 (referencia). Chile (Santiago, Valparaíso, Valdivia). Widely distributed in the Pacific and Atlantic. My materials from the Mediterranean.

Order ASTEROSPONDYLI

Family SCYLIIORHINIDAE

Cat Sharks

CEPHALOSCYLLIUM VENTRIOSUM (Garman)

Scyllium ventriosum Garman, Bull. Mus. Comp. Zool., vol. 6, 1880, p. 167 (type locality, Chile).—Jordan and Gilbert, Bull. U. S. Nat. Mus., N.º 16, 1882 (1883), p. 59 (compiled).

Scyliorhinus ventriosus Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 1, 1908, p. 458 (Chile) (part.).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 53 (referencia).

Cephaloscyllium ventriosum Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 80, pl. 9, figs. 6-9 (Chile).

Cephaloscyllium ventricosum Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 485 (referencia) (error).

Chile. No materials examined.

HALAELURUS BIVIUS (Andrew Smith)

Scyllium bivium Andrew Smith, in Müller and Henle, Syst. Besch. Plagiostomen, 1841, p. 8 (type locality, Cape of Good Hope).—Duméril, Hist. Nat. Elasmobr., vol. 1, 1865, p. 321 (Chile).

Scyliorhinus bivius Regan, Ann. Mag. Nat. Hist. London,

- ser. 8, vol. 1, 1903, p. 461 (Chile).—Porter, *Revista Chil. Hist. Nat.*, vol. 13, N.º 53 (reference).
- Scyliorhinus (Halaelurus) bivius* Norman, *Discovery Rep.*, vol. 16, 1937, p. 8, fig. 1.a (outline) (Magellan Straits).
- Halaelurus bivius* Garman, *Mem. Mus. Comp.*, vol. 36, 1913, p. 86 (Chile).—Fowler, *Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930)*, p. 485 (reference); *Bull. U. S. Nat. Mus.*, N.º 100, vol. 13, 1941, p. 43 (compiled).
- Scylliorhinus vibium* Pozzi and Bordale, *Anal. Soc. Sci. Argentina*, vol. 120, 1935, p. 150 (lat. 38º to 56ºS) (error).
- Scylium gayi* Philippi, *Anal. Univ. Chile*, vol. 71, 1887, p. 558 (type locality, Chile); *Zool. Garten*, 1887, p. 86.
- Scyllium brevicolle* Philippi, *Anal. Univ. Chile*, vol. 71, 1887, p. 558, pl. 7, fig. 5 (type locality, Valparaíso, Chile).—Delfín, *Revista Chil. Hist. Nat.*, vol. 4, N.º 6, 1900, p. 83 (reference).
- Scylliorhinus brevicollis* Delfín, *Cat. Peces de Chile*, 1901, p. 15 (reference).
- Scyllium chilense* (not Guichenot) Vaillant, *Miss. Sci. Cap. Horn.* vol. 6 Poiss, 1893, p. e-10, pl. 1, figs 1, a-f (Orange Bay).
- Scylliorhinus chilensis* Smith, *Bih Kon. Svensk. Vet. Akad. Handl.*, vol. 24, 1898; p. 72 (part.).
Chile (Orange Bay, Magellan Straits, Valparaíso). Also in Argentina and Patagonia. No Chilean specimens seen.

HALAELURUS CHILENSIS (Guichenot)

Kayachai, Kayachaya (Fuegian), Pintarroja

- Scyllium chilense* Guichenot, *Hist. Chile, Gay, Zool.*, vol. 2, 1848, p. 362 (type locality, "costas de la República").—Günther, *Cat. Fish. Brit. Mus.*, vol. 8, 1870, p. 405 (Islay).—Schmeltz, *Cat. Mus. Godeffroy*, N.º 5, 1874, p. 207 (Iquique).—Günther, *Rep. Voy. Challenger, Zool.*, vol. 1, pt. 6, 1880, p. 19 (Gray's Harbour, Messier Channel, Magellan Straits); *Proc. Zool. Soc. London*, 1881, p. 19 (Puerto del Morio; Portland Bay).—Philippi, *Anal. Univers. Chile*, vol. 71, 1887, p. 556, pl. 7, fig. 4 (Chile).—Vaillant, *Mission Sci. Cap. Horn. Poiss.* vol. 6, 188, p. (e5) e-10 (part.).—Perugia, *Ann. Mus. Civ. Stor. Nat. Génova*, vol. 30, 1891, p. 608 (Baia di Monte Sarmiento; St. Nicolas Bay, Stretto di Magellano).—Delfin, *Revista Chil. Hist. Nat.*, vol. 4, N.º 6, 1900, p. 83 (Valparaíso; San-

- tiago).—? Steindachner, Zool. Jahrb., Suppl. Band 6, 1903, p. 212 (Calbuco).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 115 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).
- Scyllium chilensis* Delfin, Revista Ch. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción).
- Scyllum chilense* Porter, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 66 (bahía de Valparaíso).
- Scylliorhinus chilensis* Smitt, Bih. Kon. Svensk. Vet. Akad. Handl., vol. 24, 1898, p. 72, (part) (Tierra del Fuego).—Delfin Cat. Peces de Chile, 1901, p. 15 (Chile).—Lönnerberg, Erg. Hamburg. Magalh. Sammelr. vol. 1, Fische, 1907, p. 4 (Molineux Sound, Smyth Channel, Punta Arenas).—Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 150 (lat. 50° to 56°S.).
- Scylliorhinus chilensis* Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 1, 1908, p. 462 (Chile).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 53 (reference).—Norman, Discovery, Rep., vol. 16, 1937, p. 8 (Lota, Chile).
- Scylliorhinus (Halaclurus) chilensis* Norman, Discovery Rep., vol. 16, 1937, p. 87, fig. 1b (outline).
- Halaclurus chilensis* Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 83 (Valparaíso; Patagonia).—Fowler, Proc. Fourth Pac. Sci., Congr. Java, 1929 (1930), p. 485 (reference).—Tortonese, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 21 (Valparaíso).
- Catulus chilensis* Fowler, Copeia, N.º 34, Aug. 24, 1916, p. 64 (Valparaíso).
- Poroderma chilense* Fowler, Proc. Acad. Nat. Sci. Phila., 1926, p. 276 (Valparaíso).
- Chile (Bahía de Concepción, Bahía de Monte, Calbuco, Gray's Harbor, Iquique, Islay, Lota, Magellan Straits, Molineaux Sound, Portland Bay, Punta Arenas, Santiago, Sarmiento, Smyth Channel, St. Nicholas Bay, Valdivia, Valparaíso*).

HALAELURUS CANESCENS (Günther)

- Scyllium canescens* Günther, Ann. Mag. Nat. Hist. London, ser. 5 vol. 2, 1878, p. 18 (type locality, West coast of South America, in 400 fathoms); Rep. Voy. Challenger, Zool., vol. 22, 1887, p. 1, pl. 1A (type).

Scylliorhinus canescens Goode and Bean, Oceanic Ichth., 1895, p. 508, (reference).—Brauer, Erg. Deutsch-Tiefsee Exped. Valdivia, vol. 15, Fische, 1905, p. 366 (reference).

Scylliorhinus canescens Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 380 (reference).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 1, 1908, p. 461 (type).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 53 (reference).

Halaclurus canescens Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 87 (compiled).—Fowler, Proc. Fourth Pac. Sci., Congr. Java, 1929 (1930), p. 485 (reference).

Only known from the type from off the south-western coast of South America.

Family ISURIDAE

Mackerel Sharks

ISURUS GLAUCUS (Müller and Henle)

Oxyrhina glauca Müller and Henle, Syst. Besch. Plagios-tomen, 1841, p. 69, pl. 29 (type locality, Java).

Isurus glaucus Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 488 (reference); Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 104 (compiled).

Lamna huidobrii Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 548, pl. 3, fig. 1 (type locality, Santiago).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 70 (Santiago).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 111 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Lamna huidobroi Delfin, Cat. Peces de Chile, 1901, p. 19, (costa de Cartagena).

Chile (Santiago, Valdivia, Cartagena). Widely distributed in the Indo-Pacific. Specimen from California seen.

LAMNA NASUS (Bonnaterre)

Squalus nasus Bonnaterre, Tableau Encyclop. Ichth., 1788, p. 10, pl. 85, fig. 350 (type locality, No locality) (on *Le nez Broussonet*).

Isurus nasus Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 488 (reference).

Lamna nasus Fowler, Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 107, (Italy).

Lamna philippi Pérez, Estudios Escualos Chile, 1886, p. 1

(type locality, Chile). — Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 17, pl. 3, fig. 2 (Chile):—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 70 (Valparaíso).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 111 (Chile).

Lamna philippii Delfin, Cat. Peces de Chile, 1901, p. 19 (compiled).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Isurus conubicus Gill, Mem. Nac. Acad. Sci., vol. 6, 189, p. 111 (reference).

Chile (Valparaíso, Valdivia). Mediterranean example examined.

CARCHARODON CARCHARIAS (Linnaeus) Tiburón

Squalus carcharias Linnaeus, Syst. Nat., ed. 10, pt. 1, 1758, p. 235 (type locality, Europe).

Carcharodon carcharias Gill, Mem. Nat. Acad. Sci., vol. 6, 1893, p. 110 (reference).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 54 (reference).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 488 (reference); Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 110 (compiled).

Carcharodon rondeletti Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 50, pl. 4, fig. 4 (dientes).—Delfin, Cat. Peces de Chile, 1901, p. 20 (Talcahuano).

Carcharodon rondeleti Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción).

Carcharodon rondeletii Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 70 (Talcahuano).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 111 (Chile). Chile (Bahía de Concepción, Talcahuano). New Jersey and Massachusetts materials examined.

Family CETORHINIDAE Basking Sharks

CETORHINUS MAXIMUS (Gunner)

Squalus maximus Gunner, Selsk. Skrift. Trondhjem, vol. 3, 1765, p. 33, pl. 2, fig. 1 (type locality, Trondhjem, Norway).

Cetorhinus maximus Norman, Proc. Zool. Soc. London, 1833, p. 1121 (Falklands); Discovery Rep., vol. 16, 1937, p. 7 (Falklands). Falklands, California and New Jersey materials examined.

The great Whale Shark (*Rhincodon typus* Andrew Smith) has been listed from Chile by Günther (Journ. Mus. Godeffroy, pt. 17, 1910, p. 486, as *Rhinodon typicus*). Gudger says (Proc. Zool. Soc. London, 1935, p. 874) "Some ichthyologists have the habit (a very reprehensible one in my judgement) of listing in the fauna of a particular region fishes which have never been taken there but which they think will sooner or later be found there. Thus Günther has done for *Rhincodon* in the concluding of his work on "Andrew Garrett's Fische der Südsee". He also says: "A very far wandering fish is that reported by Nation from Callao, Perú, in 1878. I am at a loss to account for this occurrence, since this coast is swept by the northward-flowing cold Humboldt Current. One might think this a mistaken identification of the basking shark, *Cetorhinus maximus*, which is found in cold waters on this coast, but for Günther's positive identification of the teeth. The only possible conjecture is that the Whale Shark swam there".

Family ALOPIIDAE

Thrasher Sharks

ALOPIAS VULPINUS (Bonnaterre)

Peje Zorra

Squalus vulpinus Bonnaterre, Tableau Encyclop. Ichth., 1788, p. 9, pl. 85, fig. 349 (type locality, Mediterranean).

Alopias vulpinus, Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 488 (reference).—Tortonese, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 47, ser. 3 N.º 100, 1939, p. 30 (Valparaíso).—Fowler, Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 125 (Rhode Island).

Carcharias vulpes Guichenot, Hist. Chile, Gay, Zool. vol. 2, 1848, p. 363, (costas de Chile).

Alopias vulpes Pérez, Estudio Escualos Chile, 1886, p. 5 (Chile).—Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 551, pl. 5, figs. 1 a-b (Chile).—Delfín, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 71 (Valparaíso; Concepción).—Pellegrin, Bull. Soc. Zool. France, vol. 29, 1904, p. 119 (Antofagasta).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 111 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Alopias vulpes Gill, Mem. Nat. Acad. Sci., 1893, p. 111

(reference).— Delfín, Cat. Peces de Chile, 1901, p. 18 (Valparaíso; Concepción).— Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 54 (reference).

Alopecias barrae Pérez, Estudios Escualos Chile, 1886, p. 6 (type locality, Valparaíso).— Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 553, pl. 5, fig. 2 (Valparaíso).

Alopias barrai Delfin, Cat. Peces de Chile, 1901, p. 19 (compiled).

Alopecias longimana Philippi, Anal. Univ. Chile, vol. 109, 1901, p. 308 (type locality, Talcahuano Bay, Chile).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 111 (Chile).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Chile (Antofagasta, Concepción, Talcahuano Bay, Valdivia, Valparaíso). Specimen from Rhode Island examined.

Family GALEORHINIDAE Requeim Sharks

HYPOPRION HETERODUS Philippi

Hypoprion? Hemigaleus? heterodus Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 541, pl. 2, fig. 6 (dentition) (type locality, Chile).

Hipoprion? Hemigaleus? heterodus Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 4, 1900, p. 58 (referencia).

Hemigaleus heterodus Delfin, Cat. Peces de Chile, 1901, p. 16 (referencia).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).

Chile. This and the next are included simply to complete the published record, as they are only known from descriptions of their dried jaws and dentition.

HYPOPRION ISODUS Philippi

Hypoprion? Hemigaleus? isodus Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 542, pl. 2, fig. 5 (type locality, Chile).

Hipoprion? Hemigaleus? isodus Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 4, 1900, p. 58 (referencia).

Hemigaleus isodus Delfin, Cat. Peces de Chile, 1901, p. 15 (referencia).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).

EULAMIA ROBUSTA (Philippi)

Carcharias robustus Philippi, Anal. Univ. Chile, vol.

93, 1896, p. 389 (type locality, Valparaíso, Chile). — Delfín, *Revista Chil. Hist. Nat.*, vol. 4, N.º 4, 1900, p. 57 (reference). — Quijada, *Bol. Mus. Nac. Chile*, Bol. 5, N.º 1, 1913, p. 107 (Chile). — Gotschlich, *Bol. Mus. Nac. Chile*, vol. 6, N.º 1, 1913, p. 201 (Valdivia).

Carcharhinus robustus Delfín, *Cat. Peces de Chile*, 1901, p. 16 (reference).

Eulamia robusta Fowler, *Proc. Fourth Pac. Sci. Congr. Java*, 1929 (1930), p. 492 (reference).

Chile (Valparaíso, Valdivia). No specimen seen.

EULAMIA PHILIPPI Fowler

Eulamia philippi Fowler, *Proc. Fourth Pac. Sci. Congr. Java*, 1929 (1930), p. 491 (on Philippi).

Carcharias brachyrrhynchus (not Bleeker) Philippi, *Anal Univ. Chile*, vol. 71, 1887, p. 540, pl. 1, fig. 1 (type locality, Iquique, Chile). — Delfín, *Revista Chil. Hist. Nat.*, vol. 4, N.º 4, 1900, p. 57 (Iquique).

Carcharias brachyrrhynchus Quijada, *Bol. Mus. Nac. Chile*, vol. 5, N.º 1, 1913, p. 107 (Chile).

Carcharhinus brachyrrhynchus Delfín, *Cat. Peces de Chile*, 1901, p. 16 (Iquique).

Chile (Iquique). No specimen seen.

GLYPHIS GLAUCUS (Linnaeus)

Azulejo

Squalus glaucus Linnaeus, *Syst. Nat.*, ed. 10, pt. 1, 1758, p. 235 (type locality, Ocean Europaeo).

Carcharias glaucus Guichenot, *Hist. Chile*, Gay, *Zool.*, vol. 2, 1848, p. 364 (Chile). — Delfín, *Revista Chil. Hist. Nat.*, vol. 4, N.º 4, 1900, p. 57 (reference).

Glyphis glaucus Fowler, *Proc. Acad. Nat. Sci., Phila.*, 1926, p. 276 (Valparaíso); *Proc. Fourth Pac. Sci. Congr. Java*, 1929 (1930), p. 491 (Chile); *Bull. U. S. Nat. Mus.*, N.º 100, vol. 13, 1941, p. 178 (Hawaii).

Carcharias pugae Pérez, *Estudios Escualos Chile*, 1886, p. 2 (type locality, Chile). — Philippi, *Anal Univ. Chile*, vol. 71, 1887, p. 538, pl. 1, fig. 2 (Valparaíso). — Delfín, *Revista Chil. Hist. Nat.*, vol. 4, N.º 4, 1900, p. 56 (reference).

Carcharhinus pugae Delfín, *Cat. Peces de Chile*, 1901, p. 15 (type).

Carcharias gracilis Philippi, *Anal Univ. Chile*, vol. 71, 1887, p. 539, pl. 2, fig. 1 (type locality, Chile). —

- Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 4, 1900, p. 51 (reference).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 201 (Valdivia).
- Carcharhinus gracilis* Delfin, Cat. Peces de Chile, 1901, p. 16 (reference).
- Carcharias aethiops* Philippi, Anal. Univ. Chile, vol. 109, 1901, p. 109 (type locality, Chile). — Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 4, 1900, p. 57 (Coquimbo).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 201 (Valdivia).
Chile (Coquimbo, Valdivia, Valparaíso). New Jersey and California specimens examined.

GALEORHINUS GALEUS (Linnaeus)

Peje-calzón

- Squalus galeus* Linnaeus, Syst. Nat., ed. 10, pt. 1, 1758, p. 234 (type locality, European Ocean).
- Galeorhinus galeus* Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1928 (1930), p. 490 (reference); Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 190 (Italy; California).
- Galeus chilensis* Pérez, Estudios Escualos Chile, 1886, p. 3 (type locality, Chile).— Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 543, pl. 4, fig. 2 (Valparaíso). — Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 4, 1900, p. 58 (Valparaíso).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).
- Galeorhinus chilensis* Delfin, Cat. Peces de Chile, 1901, p. 17 (Valparaíso).
- Galeus molinae* Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 544, pl. 4, fig. 1 (type locality, Valparaíso).
Chile (Valparaíso, Valdivia). Specimens from Italy and California examined.

TRIAENODON NIGRICANS Philippi

- Triaenodon nigricans* Philippi, Anal. Univ. Chile, vol. 48, 1876, p. 261 (type locality, Isla San Ambrosio; San Félix).— Delfin, Cat. Peces de Chile, 1901, p. 17 (Chile).
Chile (Isla San Ambrosio, San Félix). Not seen.

- TRIAKIS MACULATA*, Kner and Steindachner
Triakis scyllium or *maculatus* Kner and Steindachner, Sitzs.

Akad. Wiss. Wien, vol. 54, pt. 1, 1866, p. 391 (type locality. No locality).

Triacis scyllium var. *maculatus* Schmeltz, Cat. Mus. Godeffroy, N.º 5, 1874, p. 41 (Iquique).

Triacis maculatus Günther, Journ. Mus. Godeffroy, vol. 3, pt. 17, 1910, p. 491 (Iquique).

Triakis maculata Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 167 (Callao, Perú).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 490 (reference).

Mustelus maculatus Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 387 (type).

Chile (Iquique). Also Perú. *Chiloscyllium punctatum*, Müller and Henle as listed by Schmeltz (Cat. Mus. Godeffroy, N.º 5, 1874, p. 41, Iquique; N.º 7, 1879, p. 64, Iquique) is likely an erroneous identification, and may pertain to the present species?

MUSTELUS MENTO Cope

Mustelus mento Cope, Proc. Amer. Philos. Soc., vol. 19, 1877, p. 43 (type locality, Pacific Ocean at Pecosmayo, Perú).—Fowler, Proc. Acad. Nat. Sci. Phila., July 22, 1908, p. 57, fig. 1 (type); Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 489 (referencia); Proc. Acad. Nat. Sci., Phila., 1940, p. 173, figs. 10-13 (Mocha).

Galeorhinus mento Delfin, Cat. Peces de Chile, 1901, p. 17 (part).—Porter, Revista Chil. Hist. Nat., vol. 13, N.os 4-5, 1909, p. 281.

Galeus mento Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 53 (Golfo de Arauco).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 107 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Galeus dorsalis (not Gill) Pellegrin, Bull. Soc. Zool. France, vol. 29, 1904, p. 119 (Antofagasta).

Galeorhinus dorsalis Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 178 (part.).

Chile (Antofagasta, Golfo de Arauco, Mocha*, Valdivia). Also Perú*.

MUSTELUS EDULUS Pérez

Tollo

Mustelus edulus Pérez, Estudios Escualos Chile, 1886, p. 4 (type locality, Chile).—Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 547, pl. 6, fig. 5 (Valparaíso).—

Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción); vol. 4, N.º 5, 1900, p. 69 (Juan Fernández).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 489 (referencia); Proc. Acad. Nat. Sci. Phila., 1940, p. 173, fig. 9 (copied Philippi).

Galeorhinus mento (not Cope) Delfin, Cat. Peces de Chile, 1901, p. 17 (Chañaral; Algarrobo; Juan Fernández).

¿*Mustelus canis* (not Mitchill) Lönnberg, Erg. Hamburg. Magalh. Sammelr., vol. 1, Fische, 1907, p. 4 (Smyth Channel).

Galeorhinus dorsalis (not Gill) Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 178 (part).

Chile (Algarrobo, Bahía de Concepción, Chañaral, Juan Fernández, Smyth Channel?). No specimens examined.

Family SPHYRNIDAE Hammer-head Sharks

SPHYRNA PERUANA (Philippi) Pez-martillo

Zygaena peruana Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 545, pl. 2, fig. 2 (type locality, Perú).—Delfin, Cat. Peces de Chile, 1901, p. 18 (Tarapacá).

Sphyrna peruana Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 69 (compiled).—Porter, Revista Chil. Hist. Nat., vol. 13, Nos 4-5, 1909, p. 281 (Tarapacá).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 494 (referencia).

Zygaena malleus (not Valenciennes) Pérez, Estudios Escuelas Chile, 1886, p. 5 (Chile).
Chile (Tarapacá). Also Perú. No specimens seen.

Order CYCLOSPONDYLI

Family SQUALIDAE Spiny Dog Sharks

SCYMNODON MACRACANTHUS (Regan)

Centroscymnus macracanthus Regan, Ann. Mag. Nat. Hist. London, ser. 7, vol. 18, 1906, p. 436 (type locality, Magellan Strait).

Centroscymnus macracanthus Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 152 (lat. 52°30'S) (error).

Scymnodon macracanthus Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 210 (copied).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 496 (referencia).

Chile (Magellan Strait). Not seen.

ETMOPTERUS PAESSLERI, Lönnberg

Etmopterus paessleri Lönnberg, Erg. Hamburg. Magalh. Sammelr., vol. 1, Fische, 1907, p. 5, fig. 1 (type locality, Smyth Channel, Island Harbor, Magellan Strait).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 2, 1908, p. 43 (reference).—Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 229 (Smyth Channel).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 496 (reference).

Spinax paessleri Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 55 (referencia).—Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 151 (lat. 52º 30' S.).

Chile (Magellan Strait, Smyth Channel). No specimens seen.

ETMOPTERUS GRANULOSUS (Günther)

Spinax granulatus Günther, Rep. Voy. Challenger, Zool., vol. 1, pt. 6, 1880, p. 19, pl. 2, fig. C (type locality, South west coast of South America, in 120 fathoms); vol. 22, 1887, p. 4 (lat. 47º 48' 30' S., long. 74º 47' W., in 125 fathoms).—Vaillant, Miss. Sci. Cap. Horn, vol. 6, Poiss, 1888, p. c5 (name only).—Porter, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 66 (copied Günther).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 2, 1908, p. 44 (type).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 55 (referencia).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).—Pozzi and Bordale, Annal. Soc. Cient. Argentina, vol. 120, 1935, p. 151 (lat. 52º 30' S.).

Hetmopterus granulatus Delfin, Cat. Peces de Chile, 1901, p. 22 (compiled) (error).

Etmopterus granulatus Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 230 (compiled).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 496 (referencia).

Chile (Valdivia). Not seen.

CENTROSCYLLIUM FABRICII (Reinhardt)

Spinax fabricii Reinhardt, Danske Vidensk. Selsk. Förh. Kjöbenhavn, vol. 3, 1828, p. 16 (type locality, Greenland).

Centroscyllum fabricii Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 2, 1908, p. 40 (type of "*Centroscyllum granulatum*" = *Centroscyllum granulatum* Günther).—Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 152 (lat. 52° S.).

Centroscyllum granulatum Günther, Rep. Voy. Challenger, Zool., vol. 22, 1880, p. 7 (type locality, Port Stanley, Falklands, in 245 fathoms).—Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 380 (referencia).—Brauer, Erg. Deutsch. Tiefsee Exp. Valdivia, vol. 15, Fische, 1905, p. 367 (referencia).—Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 233, (on Günther).

Falklands. No material seen from the South Atlantic. Specimen studied from Georges Bank of Nova Scotia.

SQUALUS FERNANDINUS Molina

Kaiss, Kaigis (Fuegian)

Squalus fernandinus Molina, Saggio Stor. Nat. Chili, 1782, p. 229 (type locality, Chile).—Bonnaterre, Tableau Encyclop. Ichth., 1788, p. 13 (Chile).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 7, 1900, p. 110 (Juan Fernández).—Regan, Ann. Mag. Nat. Hist. London, ser. 8, vol. 2, 1908, p. 46 (Chile; Patagonia).—Porter, Revist. Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 54 (referencia).—Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 195 (Juan Fernández).—Hussakof, Bull. Amer. Mus. Nat. Hist., vol. 23, art. 4, Feb. 13, 1914, p. 85 (25 miles south of mouth of Rio Coyle, Patagonia).—Thompson, Proc. U. S. Nat. Mus., vol. 50, 1916, p. (418) 420 (Gregory Bay, Magellan Straits).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 495 (referencia).—Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 151 (lat. 35° to 56° S.).—Tortonesi, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 29 (Valparaíso).—Fowler, Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 260 (Philippines).

- Acanthias fernandinus* Steindachner, Sitzs. Akad. Wiss. Wien, vol. 71, pt. 1, 1875, p. 466 (Juan Fernández).
- Spinax fernandezianus* Guichenot, Hist. Chile, Gay, Zool., vol. 2, 1848, p. 365 (type locality, Chile).—Pérez, Estudios Escualos Chile, 1886, p. 10 (Chile).
- Acanthias fernandezianus* Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 559, pl. 4, fig. 3 (Valparaíso and Santiago museums).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 116 (Chile).
- Squalus fernandezianus* Delfin, Cat. Peces de Chile, 1901, p. 21 (Juan Fernández).
- Acanthias vulgaris* (not Risso) Cunningham, Trans. Linn. Soc. London, vol. 27, pt. 4, 1871, p. 473 (Falkland Sound and Punta Arenas, Magellan Strait).—Vaillant, Miss. Sci. Cap. Horn., vol. 6, Poiss., 1888, p. c5 (Patagonia; Falklands).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).
- Acanthias blainvilli* Günther, Rep. Voy. Challenger, Zool., vol. 1, pt. 6, 1880, p. 23 (Juan Fernández).—Porter, Revista Chil. Hist. Nat., vol. 7, 1903, p. 193 (reference).
- Acanthias blainvillii*, Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 331 (Juan Fernández).
- Squalus blainvillei* Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 7, 1900, p. 110 (compiled); Cat. Peces de Chile, 1901, p. 22 (compiled).
- Acanthias lebruni* Vaillant, Miss. Sci. Cap. Horn., vol. 6, Poiss., 1888, p. (c5) c13, pl. 1, figs. 2a-b (type locality, Orange Bay; Punta Arenas).
- Squalus lebruni* Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 6, 1900, p. 84 (compiled); Cat. Peces de Chile, 1901, p. 22 (compiled).—Norman, Discovery Rep., vol. 16, 1937, p. 9, fig. 2 (outline) (13 miles N. 83° E. of Cape Virgins Light, Argentina).
- Squalus acanthias* (not Linnaeus) Gill, Mem. Nat. Acad. Sci., vol. 6, 1893, p. 110 (reference).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 6, 1900, p. 83 (compiled); Cat. Peces de Chile, 1901, p. 21 (compiled).—Lönner, Erg. Hamburg. Magalh. Sammelr., vol. 1, Fische, 1907, p. 5 (Smyth Channel).—Fowler, Copeia, N.º 34, Aug. 24, 1916, p. 64 (Valparaíso); Proc. Acad. Nat. Sci. Phila., 1926, p. 276 (Valparaíso).—Pozzi, and Bordale, Anal. Soc. Sci. Argentina, vol. 120, 1935, p. 151, (lat. 39° to 52° 30' S.).

Chile (Gregory Bay, Juan Fernández, Orange Bay, Punta Arenas, Smyth Channel, Valdivia, Valparaíso*).

Patagonia and Falklands. Extralimital in the southern Indian and Pacific Oceans.

Family DALATIIDAE

ECHINORHINUS BRUCUS (Bonnaterre)

Squalus brucus Bonnaterre, Tableau Encyclop. Ichth., 1788, p. 11 (type locality, The Ocean=Atlantic) (on *Le boucle* Broussonet).

Echinorhinus brucus Fowler, Bull. Amer. Mus. Nat. Hist., vol. 70, pt. 1, Jan. 21, 1936, p. 88, fig. 32 (compiled).

Echinorhinus spinosus Gill, Mem. Nat. Acad., Sci., vol. 6, 1893, p. 110 (reference).— Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 152 (lat. 35° to 56° S.).

Southern Atlantic and Pacific Oceans. No material seen.

Order SQUATINAE

Family SQUATINIDAE

Angel Sharks

SQUATINA PHILIPPI (Garman)

Rhina philippi Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 254 (type locality, Mejillones, Chile).

Squatina philippi Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 497 (reference).

†*Rhina squatina* (not Linnaeus) Pellegrin, Bull. Soc. Zool. France, vol. 29, 1904, p. 119 (Antofagasta).

Chile (Antofagasta? Mejillones). No specimens seen.

SQUATINA ARMATA (Philippi)

Rhina armata Philippi, Anal. Univ. Chile, vol. 71, 1887, p. 29, pl. 7, fig. 1 (type locality, Iquique, Chile). — Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 7, 1900, p. 111 (Iquique). — Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 252 (copied). — Quijada, Bol. Mus. Nac. Chile, vol. 5, pt. 1, 1913, p. 119 (Chile).

Squatina armata Delfin, Cat. Peces de Chile, 1901, p. 20 (Iquique). — Fowler, Proc. Fourth Pac. Sci. Congr.

Java, 1929 (1930), p. 497 (reference).— Norman, Discovery Rep., vol. 16, 1937, p. 10 (Argentina; Chile). Chile (Iquique). Argentina. No specimens seen.

Order RAJAE

Family RHINOBATIDAE

Guitar Fishes

TARSISTES PHILIPPI Jordan

Tarsistes philippi Jordan. Proc. Acad. Nat. Sci. Phila., 1918, p. 344 (name only, based on Philippi).— Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929, p. 499 (reference).

Rhynchobatis sp. Philippi, Archiv. Naturg., 1857, p. 271 (type locality, Juan Fernández). Chile (Juan Fernández). Known only from Philippi's account.

Family TORPEDINIDAE

Electric Rays

DISCOPYGE TSCHUDII Heckel

Discopyge tschudii Heckel in Tschudi, Fauna Perú, Zool., 1845, p. 33, pl. 6 (type locality, Haradura, between Huacho and Chancay, Perú).— Steindachner, Zool Jahrb., Suppl. Band 4, 1898, p. 332 (Calbuco at Puerto Montt).— Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 129 (compiled); Cat. Peces de Chile, 1901, p. 25 (Calbuco).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 120 (Chile).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).— Fowler, Proc. Fourth Pac. Sei. Congr. Java, 1929 (1930), p. 499 (reference).— Norman, Discovery Rep., vol. 16, 1937, p. 11, fig. 3 (outline) (Coronel, Chile).

Discopyge tschudi Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 55 (Coquimbo); vol. 13, N.os 4-5, 1909, p. 281.

Chile (Calbuco, Coquimbo, Coronel, Valdivia). Perú. No materials seen.

DISCOPYGE CHILENSIS (Guichenot)

Tembladera

Torpedo chilensis Guichenot, Hist. Chile, Gay, Zool., vol. 2, 1848, p. 368 (type locality, Coquimbo; Valparaíso, Chile).—Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 368 (reference).—Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción); vol. 4, N.º 7, 1900, p. 111 (reference); Cat. Peces de Chile, 1901, p. 25 (Chile).—Porter, Revista Chil. Hist. Nat., vol. 13, N.º 3, 1909, p. 55 (reference).—Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 312 (copied).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 120 (Tomé).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 202 (Valdivia).

Discopyge chilensis Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930) p. 499 (reference).

¿*Torpedo scobaena* Philippi, in Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción); vol. 4, N.º 7, 1900, p. 111 (Santiago) (no description).

¿*Discopyge limbata* Philippi, in Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 120 (Chile).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 499 (reference) (no description).

Chile (Bahía de Concepción, Coquimbo, Santiago, Valdivia, Valparaíso). No specimens seen.

Family RAJIDAE

*Skates**RAJA FLAVIROSTRIS* Philippi

Raya, Volantín

Raja flavirostris Philippi, Anal. Mus. Nac. Chile, Zool., pt. 1, N.º 3, 1892, p. 3, pl. 1, fig. 2 (type locality, Bahía de Quinteros, Chile).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 123 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).—Fowler, Copeia, N.º 34, Aug. 24, 1916, p. 64 (Valparaíso); Proc. Acad. Nat. Sci. Phila., 1926, p. 277 (Valparaíso).—Norman, Discovery Rep., vol. 16, 1937, p. 13, fig. 4 (outlines) (lat. 51° —53° S., long. 64° —68° W.; Patagonia; Falklands; Magellan Strait, Chile).

Raja glavirrostris Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 130 (Bahía Quintero; Valparaíso); Cat.

- Peces de Chile, 1901, p. 24 (reference).
- Raia flavirostris* Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 361 (Chile).
- Raia chilensis* Guichenot, Hist. Chile, Gay, Zool., vol. 2, 1848, p. 367 (type locality, Chile).
- Raja chilensis* Philippi, Anal. Mus. Nac. Chile, Zool. pt. 1, N.º 3, 1892, p. 1 (Quinteros).—Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 332, pl. 21, fig. 15 (type locality, Cavancha Bay, Iquique) (described as a new species).—Delfin, Revista Chil. Hist. Nat., vol. 3, N.º 12, 1899, p. 178 (Bahía de Concepción); vol. 4, N.º 8, 1900, p. 130 (reference); Cat. Peces de Chile, 1901, p. 23 (compiled)—Steindachner, Zool. Jahrb., Suppl. Band 6, 1903, p. 211 (Coquimbo).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 502 (reference).
- Raja lima* (not Poëppig) Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 455 (on Guichenot; reference; part.)
- Raja oxyptera* Philippi, Anal. Univ. Chile, Zool., N.º 3, 1892, p. 4, pl. 2, fig. 1 (type locality, Chile).—Delfin, Cat. Peces de Chile, 1901, p. 24 (reference).—Lönnberg, Erg. Hamburg. Magalh. Sammelr., vol. 1, Fische, 1907, p. 6 (Smyth Channel).—Quijada, Bol. Mus. Nat. Chile, vol. 5, N.º 1, 1913, p. 123 (reference).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).
- Raja latastei* Delfin, Revista Chil. Hist. Nat., vol. 6, 1902, p. 264, pl. 11, figs. a-b (type locality, Chile).
- Raja steindachneri* (not Delfin) Tortonese, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 38 (Valparaíso).
Chile (Bahía de Concepción, Bahía de Quinteros, Coquimbo, Iquique, Smyth Channel, Valdivia, Valparaíso*).
Argentina, Patagonia, Falklands.

RAJA DOELLO-JURADOI Pozzi

- Raja doello-juradoi* Pozzi, Phycis, vol. 11, 1935, p. 491 (type locality, lat. 39° 11' S., long. 56° 00' 06" W., of northern Argentina).—Norman, Discovery Rep., vol. 16, 1937, p. 15, pls. 2-3 (lat. 52° S., long. 62° to 64° W.).
Argentina, Patagonia, Falklands. No specimens seen.

RAJA MACLOVIANA Norman

- Raja macloviana* Norman, Discovery Rep., vol. 16, 1937, p. 17, fig. 5 (type locality, Lat. 45 to 52° S., long. 59° to 64° W., Patagonia-Falklands).

Raja magellanica (not Philippi) Regan, Trans. Roy Soc. Edinburgh, vol. 49, 1914, p. 231, pl. 1 (lat. 54° 25' S., long. 57° 32' W., Burdwood Bank).
Patagonia, Falklands. Not seen.

RAJA MAGELLANICA Philippi

♂ *Raja magellanica* Philippi, Revista Chil. Hist. Nat., vol. 6, N.º 1, 1902, p. 59 (type locality, Magellan Strait).—Steindachner, Zool. Jahrb., Suppl. Band 6, 1903, p. 212 (Punta Arenas) (described as a new species).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 123 (Chile).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 502 (reference).—Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 153 (lat. 52° 30' S.).—Norman, Discovery Rep., vol. 16, 1937, p. 18, pl. 4 (Patagonia, Falklands, Magellan Strait).

Raja magellanica Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 360 (Punta Arenas).—Thompson, Proc. U. S. Nat. Mus., vol. 50, 1916, p. 421 (Magellan Straits). Chile (Magellan Straits, Punta Arenas). Patagonia, Falklands. No specimens seen.

RAJA MULTISPINIS Norman

Raja multispinis Norman, Discovery Rep., vol. 16, 1937, p. 20, fig. 6 (type locality, lat. 51° 39' 30" S., long. 62° 01' 15" W., north-west of Falklands).
North-west of Falklands. Not seen.

RAJA SCAPHIOPS Norman

Raja scaphiops Norman, Discovery Rep., vol. 16, 1937, p. 20, fig. 7a-b (type locality, lat. 45° 45' S., long. 59° 35' W.; lat. 51° 45' S.; long. 57° W.; lat. 52° 29' 15" S., long. 58° 27' 15" W.; all north of Falklands).
South Atlantic north of Falklands. Not seen.

RAJA ALBOMACULATA Norman

Raja albomaculata Norman, Discovery Rep., vol. 16, 1937, p. 22, pl. 5 (type locality, lat. 52° 23' S., long. 64° 19' W.; Patagonia; Falklands).
Patagonia, Falklands. Not seen.

RAJA BRACHYUROPS Fowler

Ouçaèghia (Fuegian)

Raja brachyurops Fowler, Proc. Acad. Nat. Sci. Phila., 1910, p. 468 (on Günther); Proc. Fourth Pac. Sci.

Congr. Java, 1929 (1930), p. 502 (reference).— Norman Discovery Rep., vol. 16, 1937, p. 23 fig. 8 (Patagonia; Falklands; Magellan Strait).

Raia brachyurops Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 360 (Magellan Straits).

Raja brachyura (not Lafont 1871) Günther, Rep. Voy. Challenger. Zool., vol. 1, pt. 6, 1880, p. 20, pl. 6 (type locality, Magellan Straits and west, in 55 fathoms).— Vaillant, Miss. Sci. Cap Horn, vol. 6, Poiss, 1888, p. (c5) c14, pl. 2, figs. 1a-b (Orange Bay).— Porter, Revista Chil. Hist. Nat., vol. 4, N.º 5, 1900, p. 67 (copied Günther).— Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 131 (reference); Cat. Peces de Chile, 1901, p. 24 (compiled).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia). Chile (Magellan Strait, Orange Bay, Valdivia) Argentina?, Patagonia, Falklands. No specimens examined.

RAJA GRISEOCAUDA Norman

Raja griseocauda Norman, Discovery Rep., vol. 16, 1937, p. 26, fig. 9, (type locality, lat. 45° 45' S., long. 59° 35' W.; Patagonia; Falklands).

Patagonia, Falklands; Not seen.

RAJA CYNOSBATUS Philippi

Raja cynosbatus Philippi, Anal. Univers. Chile, vol. 93, 1896, p. 385 (type locality, Chile).— Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 130 (reference).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).— Norman, Discovery Rep., vol. 16, 1937, p. 12 (on Philippi).

Raja synosbatus Delfin, Cat. Peces de Chile, 1901, p. 23 (Santiago).— Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 123 (Chile).

Chile (Santiago, Valdivia). Apparently a doubtful species.

Two other references, the source of which is otherwise unknown to me, are apparently undescribed nominal forms:

Raja cordata Philippi, in Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 131. Santiago

Raja hirtella Philippi, in Delfin, op. cit. Santiago.

PSAMMOBATIS SCOBINA (Philippi)

Pequén

Raja scobina Philippi, Archiv Naturgesch., 1857, p. 270

(type locality, Valparaíso coast, Chile); Anal. Univ. Chile, vol. 14, 1857, p. 186 (Chile); An. Mus. Nac. Chile, Zool. vol. 3, N.º 1, 1892, p. 2, pl. 1, fig. 1 (Chile). —Lönnberg, Erg. Hamburg. Magalh. Sammelr., vol 1, Fische, 1907, p. 7 (Smyth Channel).

Uroptera scobina Duméril, Hist. Nat. Poiss., Elasmobr., 1865, p. 574 (compiled).

Psammobatis scobina Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 370 (Sandy Point, Cape Virgins, Porto Bueno, in 55 fathoms). — Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 503 (reference). — Norman, Discovery Rep., vol. 16, 1937, p. 29, fig. 10 (Argentina, Patagonia, Chile).

Malacorhina scobina Tortonese, Boll. Mus. Zool. Anat. Comp. Univ. Torino, vol. 47, ser. 3, N.º 100, 1939, p. 38, fig. 5 (Callao, Perú).

Psammobatis rudis Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 470 (type locality, Sandy Point, southern South America). — Cunningham, Trans. Linn. Soc. London, vol. 27 pt. 4, 1871, p. 473 (Punta Arenas, Straits of Magellan). — Günther, Rep. Voy. Challenger, Zool., vol. 1, pt. 6, 1880, p. 20, pl. 10 (off Cape Virgins, in 55 fathoms); Proc. Zool. Soc. London, 1881, p. 19 (Trinidad Channel, in 30 fathoms). — Vaillant, Miss. Sci. Cap Horn, vol. 6, Poiss 1888, p. (c5) c15 (no locality). —? Smitt, Bih Svensk. Vet. Akad, Handl., vol 24, afd. 4 N.º 5, 1898, p. 69 (Ushuaia, Beagle Canal, Tierra del Fuego). — Porter, Revista Chil. Hist. Nat., vol. 4, N.º 10, 1900, p. 153 (copied Günther). — Delfin, Cat. Peces de Chile, 1901, p. 24 (Quinteros; Valparaíso). — Lönnberg, Erg. Hamburg. Magalh. Sammelr., vol. 1, Fische, 1907, p. 7 (Smyth Channel; Punta Arenas). — Thompson, Proc. U. S. Nat. Mus., vol. 50, 1916, p. (418) 421 (Second Narrows, Straits of Magellan). — Pozzi and Bordale, Anal. Soc. Cient. Argentina, vol. 120, 1935, p. 153 (lat. 38° to 56° S.).

Psammobatis rudis Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 10, 1900, p. 166 (Quinteros) (error).

Raja (Malacorhina) mira Garman, Proc. Boston Soc. Nat. Hist., vol. 19, 1877, p. 207 (type locality, Mejillones, Chile).

Malacorhina mira Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 372, pl. 27, figs. 3-5, pl. 69, figs. 1-2 (skeleton) (type). — Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 503 (reference).

Raja philippi Delfin, Revista Chil. Hist. Nat., vol. 6, N.º 4, 1902, p. 262 (type locality, Coquimbo).

Raja philippi Delfin, op. cit., pl. 10, figs. 2-b.

Chile (Coquimbo, Mejillones, Punta Arenas, Quinteros, Sandy Point, Second Narrows, Smyth Channel, Trinidad Sound, Ushuaia, Valparaíso). Argentina, Patagonia. No specimens examined.

PSAMMOBATIS LIMA (Poeppig)

Trucha de mar

Raja lima Poeppig, Reis. Chile, vol. 1, 1835, p. 148 (type locality, Chile).—Duméril, Hist. Nat. Poiss., Elasm., vol. 1, 1865, p. 553 (compiled).—Günther, Cat. Fish. Brit. Mus., vol. 8, 1870, p. 455 (reference).—Philippi, Anal. Mus. Nac. Chile, Zool., pt. 1, N.º 3, 1892, p. 2, pl. 1, fig. 3 (Concón; Algarrobo).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 129 (Algarrobo); Cat. Peces de Chile, 1901, p. 23 (reference).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).—Fowler, Copeia, N.º 34, Aug. 24, 1916, p. 64 (Valparaíso); Proc. Acad. Nat. Sci. Phila., 1926, p. 276 (Valparaíso); Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 502 (reference).

Raja lima Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 359 (near Iquique).

Raja acanthostyla Philippi, Anal. Univers. Chile, vol. 93, 1896, p. 388 (type locality, Matanzas coast, Chile).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 8, 1900, p. 130 (reference); Cat. Peces de Chile, 1901, p. 23 (compiled).—Quijada, Bol. Mus. Nac. Chile, vol. 5, N.º 1, 1913, p. 123 (Chile).—Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 203 (Valdivia).

Raja chilensis (not Guichenot) Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 332, pl. 21, fig. 15 (type locality, Cavancha Bay at Iquique, Chile); Zool. Jahrb., Suppl. Band 6, 1903, p. 211.

Raja steindachneri Delfin, Cat. Peces de Chile, 1901, p. 23 (compiled).—Fowler, Proc. Acad. Nat. Sci. Phila., 1910, p. 468 (on Steindachner).

Raja burgeri Delfin, Revista Chil. Hist. Nat., vol. 6, 1902, p. 267, pl. 12 (type locality, Coquimbo). Chile (Algarrobo, Concón, Coquimbo, Iquique, Matanzas, Valdivia, Valparaíso*). Perú.

PSAMMOBATIS BREVICAUDATUS Cope

Psammobatis brevicaudatus Cope, Proc. Amer. Philos. Soc., vol. 17, 1877, p. 48 (type locality, Pacasmayo Bay, Perú).—Fowler, Proc. Acad. Nat. Sci. Phila., 1910, p. 471, fig. 2 (type).—Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 371 (copied).—Fowler Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 503 (reference).—Norman, Discovery Rep., vol. 16, 1937, p. 35 (compiled). Perú. Not known from Chile, though here included to complete the series of species known from the west coast of South America.

Family DASYATIDAE

Sting Rays

UROTRYGON CHILENSIS (Günther)

Urolophus chilensis Günther, Proc. Zool. Soc. London, 1871, p. 653, pl. 53 (type locality, Chile).

Urotrygon chilensis Garman, Mem. Mus. Comp. Zool., vol. 36, 1913, p. 405 (copied).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 503 (reference).

Chile. Only known from Günther's type.

UROBATIS MARMORATUS (Philippi)

Urolophus marmoratus Philippi, Anal. Mus. Nac. Chile, Zool. pt. 1, N.º 3, 1892, p. 6, pl. 2, figs. 2-3a-b (type locality, Quinteros, Chile).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 10, 1900, p. 167 (reference); Cat. Peces de Chile, 1901, p. 26 (reference).

Urobatis marmoratus Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 504 (reference).

Chile. Only known from Philippi's account, not seen since originally described.

Family MYLIOBATIDAE

Eagle Rays

HOLORHINUS CALIFORNICUS (Gill)

Myliobatis californiensis Gill, Ann. Lyc. Nat. Hist. New York, vol. 8, 1865, p. 137 (on Girard).—Pellegrin, Bull. Soc. Zool. France, vol. 29, 1904, p. 119 (Antofagasta).—Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 506 (reference).

Rhinoptera vespertilio (not Bleeker) Girard, Proc. Acad. Nat. Sci. Phila., 1856, p. 137 (type locality, Tomales Bay, California).

Chile (Antofagasta). California*.

RHINOPTERA CHILENSIS (Philippi)

Aguila de mar

Myliobatis chilensis Philippi, Anal. Mus. Nac. Chile, Zool. pt. 1, N.º 3, 1892, p. 6, pl. 3, fig. 1a-e (type locality, Quinteros, Chile).—Delfin, Cat. Peces de Chile, 1901, p. 26 (alrededores de Quinteros).

Myliobates chilensis Delfin, Revista Chil. Hist. Nat., vol 4, N.º 8, 1900, p. 167 (Quinteros).

Rhinoptera chilense Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 507 (reference).

Chile (Quinteros). Not reported since originally described.

Family MANTIDAE

Devil Fishes

MOBULA TARAPACANA (Philippi)

Cephaloptera tarapacana Philippi, Anal. Mus. Nac. Chile, Zool. pt. 1, N.º 3, 1892, p. 9, pl. 3, fig. 2 (type locality, Twelve miles west of Iquique, Chile).—Delfin, Revista Chil. Hist. Nat., vol. 4, N.º 10, 1900, p. 167 (reference).

Aodon tarapacana Delfin, Cat. Peces de Chile, 1901, p. 26 (reference).

Mobula tarapacana Fowler, Proc. Fourth Pac. Sci. Congr. Java, 1929 (1930), p. 507 (reference).

Chile (Iquique). A purely nominal form based on a drawing of a specimen 900 mm, long. with the mouth inferior. Though no caudal spine is indicated the crude details of Philippi's published figure hardly leave or indicate the species as defined.

Sub-Class HOLOCEPHALI

Chimaeras

Order CALLORHINCHOIDEI

Elephant Fishes

Family CALLORHINCHIDAE

Elephant Fishes

CALLORHINCHUS CALLORYNCHUS (Linnaeus)

Peje-Gallo

Chimaera callorynchus Linnaeus, Syst. Nat., ed. 10, pt. 1, 1758, p. 236 (type locality, "In Mari Aethiopico").—Bonniaterre, Tableau Encyclop. Ichth., 1788, p. 14 (Chile).

- Chimaera callorhynchus* Gmelin, Syst. Nat. Linn, vol. 1, 1789, p. 1489 (Chile).— Schneider, Syst. Ichth. Bloch, 1801, p. 350 (Chile).
- Chimaera callorhinchus* Lacépède, Hist. Nat. Poiss., vol. 1, 1798, p. 401, pl. 12, fig. 2 (Chile).
- Callorhynchus callorhynchus* Garman, Mem. Mus. Comp. Zool., vol. 22, 1899, p. 380 (reference).— Delfin, Cat. Peces de Chile, 1901, p. 27 (Chile).— Pozzi and Bordale, Anat. Soc. Cient. Argentina, vol. 120, 1935, p. 154 (lat. 38° to 56° S.).— Norman, Discovery Rep., vol. 16, 1937, p. 35, figs. 12-13 (lat. 50° 15' 45" S., long. 60° 57' W.).
- Callorhynchus callorynchus* Porter, Revista Chil. Hist. Nat., vol. 13, Nos 4-5, 1909, p. 281.
- Callorynchus callorynchus* Garman, Mem. Mus. Comp. Zool., vol. 40, 1911, p. 98 (of southern South America).— Fowler, Copeia, N.º 34, Aug. 24, 1916, p. 64 (Valparaíso); Proc. Acad. Nat. Sci. Phila., 1926, p. 277 (Chile).
- Callorhinchus callorynchus* Fowler, Bull. U. S. Nat. Mus., N.º 100, vol. 13, 1941, p. 507 (copied).
- Chimaera australis* Shaw, General Zoology, vol. 5, 1804, p. 368, pls. 157 (upper fig.) and 158 (type locality, Southern seas).
- Callorynchus elephantinus* Bory Dict. Class. Hist. Nat. Paris, vol. 3, 1823, p. 61 (type locality, Chile).
- Callorynchus elephantinus* Gistel, Naturg-Thierreichs, 1848, p. 103 (Chile).
- Callorhynchus antarcticus* Lay and Bennett, Zool. Voy. Blossom, Beechey, Fishes, 1839, p. 75 (type locality, No locality).— Duméril, Hist. Nat. Poiss., vol. 1, 1865, p. 693, pl. 13, figs., 1a-b, 2 pl. 14, fig. 2a-b (no locality).— Günther, Cat. Fish, Brit. Mus., vol. 8, 1870, p. 351 (Chiloé).— Cunningham, Trans. Linn. Soc. London, vol. 27, pt. 4, 1871, p. 473 (Chiloé; Bay of Arauco).— Schmeltz, Cat. Mus. Godeffroy, N.º 5, 1874, p. 40 (Iquique).— Günther, Proc. Zool. Soc. London, 1881, p. 19 (Francisco Bay).— Vaillant, Miss. Sci. Cap Horn, vol. 6, Poiss., 1888, p. (c5) c16 (Estuaire de Santa-Cruz de Patagonie).— Steindachner, Zool. Jahrb., Suppl. Band 4, 1898, p. 331 (Coquimbo, Tumbes).— Smitt, Bih. Svensk. Vet. Akad. Handl., vol. 24, 1899, p. 66, pl. 6, fig. 43a. (Bay of Puerto Madryn, Tierra del Fuego).— Gotschlich, Bol. Mus. Nac. Chile, vol. 6, N.º 1, 1913, p. 201 (Valdivia).

- Callorhynchus antarcticus* Guichenot, Hist. Chile, Gay, Zool., vol. 2, 1848, p. 358 (costa de Chile).
- Callorhynchus antarcticus* Philippi, Anal. Mus. Nac. Chile, Zool., pl. 1, N^o 3, 1892, p. 9, pl. 4 (Chile).
- Callorhynchus antarcticus* Gill, Mem. Nat. Acad. Sci., vol. 6, 1893, p. 111 (reference) (error). — Delfin, Revista Chile, Zool., pl. 1, N^o 3, 1892, p. 9, pl. 4 (Chile).
de Concepción); vol. 4, N^o 4, 1900, p. 55 (Coquimbo).
- Callorhynchus smythii* Lay and Bennett, Zool. Voy. Blossom, Beechey, Fishes, 1839, p. 75, pl. 22, fig. 3 (type locality, Pacific Ocean, La Concepción, South America).
- Callorhynchus smythii* Duméril, Hist. Nat. Poiss., vol. 1, 1865, p. 697, (copied).
- Callorhynchus smythii* Garman, Bull. Mus. Comp. Zool., vol. 41, 1904, p. 271, pl. 6, figs. 1-4 (teeth) (reference); Mem. Mus. Comp. Zool., vol. 40, 1911, p. 98 (Chile; Perú).
- Callorhynchus smythii* Fowler, Bull. U. S. Nat. Mus., N^o 100, vol. 13, 1941, p. 509 (compiled).
- Callorhynchus peronii* Duméril, Hist. Nat. Poiss., vol. 1, 1865, p. 694, pl. 14, figs. 4-4a (spines) (type locality, "Peron de son voyage aux terres australes; Valparaíso").
- Callorhynchus argenteus* Philippi, Anal. Mus. Nac. Chile, Zool. pt. 1, N^o 3, 1892, p. 11, pl. 5, fig. 1 (type locality, Chile). — Delfin, Revista Chil. Hist. Nat., vol. 4, N^o 4, 1900, p. 56 (reference); Cat. Peces de Chile, 1901, p. 28 (reference).
- Callorhynchus tritoris* Garman, Bull. Mus. Comp. Zool., vol. 41, 1904, p. 271, pl. 6, fig. 9 (type locality, Mejillones, Perú) (on nearly complete skeleton); Mem. Mus. Comp. Zool., vol. 40, 1911, p. 101 (copied).
Chile (Bay of Arauco, Bahía de Concepción, Bay of Puerto Madryn, Chiloé, Coquimbo, Francisco Bay, La Concepción, Mejillones, Tumbes, Valdivia, Valparaíso*). Patagonia, Perú.
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