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CATALOGUE OF BIRDS OF THE AMERICAS

BY

CHARLES E. HELLMAYR

ASSOCIATE CURATOR OF BIRDS, 1922-1944

AND

BOARDMAN CONOVER

RESEARCH ASSOCIATE, BIRDS

SEP 30 1948

PART I, NUMBER 2

SPHENISCIDAE - GAVIIDAE - COLYMBIDAE - DIOMEDEIDAE

PROCELLARIIDAE - HYDROBATIDAE - PELECANOIDIDAE

PHAETHONTIDAE - PELECANIDAE - SULIDAE

PHALACROCORACIDAE - ANHINGIDAE - FREGATIDAE

ARDEIDAE - COCHLEARIIDAE - CICONIIDAE

THRESKIORNITHIDAE - PHOENICOPTERIDAE

ANHIMIDAE - ANATIDAE



ZOOLOGICAL SERIES

FIELD MUSEUM OF NATURAL HISTORY

VOLUME XIII, PART I, NUMBER 2

AUGUST 18, 1948

PUBLICATION 615

NAT.
HIST.



CATALOGUE OF BIRDS OF THE AMERICAS AND THE ADJACENT ISLANDS

IN

FIELD MUSEUM OF NATURAL HISTORY

INCLUDING ALL SPECIES AND SUBSPECIES KNOWN TO OCCUR IN NORTH AMERICA,
MEXICO, CENTRAL AMERICA, SOUTH AMERICA, THE WEST INDIES AND
ISLANDS OF THE CARIBBEAN SEA, THE GALAPAGOS ARCHIPELAGO
AND OTHER ISLANDS WHICH MAY BE INCLUDED ON
ACCOUNT OF THEIR FAUNAL AFFINITIES

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PREFACE TO PART I, NUMBERS 2-4

In style and arrangement this installment of Part I closely follows the guiding principles of the previous parts. However, because of the war and the death of Charles E. Hellmayr in 1944, the method of collaboration had to be changed somewhat from that followed in Part I, Number 1. As before, the senior author is mainly responsible for the compilation of the bibliographic references and for the outline of geographical distribution. Because of war conditions, however, his manuscript did not reach this country until after his death. It was impossible, therefore, to submit to him any changes found necessary because of material in Field Museum and certain critical specimens examined in other American collections. Such emendations have been kept as few as possible.

In the case of the Anseriformes and some of the Charadriiformes, I prepared the manuscript and submitted it to Dr. Hellmayr, who made certain additions and suggestions. Likewise, I am responsible for the compilation of the list of specimens in Field Museum and in the Conover Collection, and for additions to the bibliography after 1938 in the Falconiformes and 1939 in the rest of the manuscript. Literature has been taken into account up to December 31, 1944 (as given in the Zoological Record). Some new forms described since that date and before December 31, 1946, and a few important papers will be found mentioned in the footnotes.

As before, the authors have been greatly benefited by the cordial co-operation of many institutions and individuals, who have lent material and submitted information. To all of them we wish to express our appreciation. Among those who have helped are Dr. John W. Aldrich, U. S. Fish and Wildlife Service; Dr. Alfred M. Bailey, Colorado Museum of Natural History; Professor J. Berlioz, Musée d'Histoire Naturelle, Paris; Mr. James Bond, Academy of Natural Sciences, Philadelphia; Mr. H. W. Brandt, Cleveland, Ohio; the late Major Allan Brooks, Okanagan Landing, Canada; the Chicago Academy of Sciences; Dr. Herbert Friedmann, United States National Museum; Professor O. Fuhrmann, University of Neuchâtel; Count Nils Gyldenstolpe, Vetenskapsakademien, Stockholm; the Museum of the University of Kansas, Lawrence; Captain N. B. Kinnear, British Museum (Natural History); Professor A. Laubmann, Zoological Museum, Munich; Messrs. F. C. Lincoln and W. L. McAtee, U. S. Fish and Wildlife Service; Mr. J. D.

M. SMITH 27 Dec. 48
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Macdonald, British Museum (Natural History); Dr. Alden H. Miller, Museum of Vertebrate Zoology, Berkeley, California; the late James Moffitt, California Academy of Sciences, San Francisco; Mr. Olaus Murie, U. S. Fish and Wildlife Service; Dr. Robert T. Orr, California Academy of Sciences; Dr. James L. Peters, Museum of Comparative Zoology, Cambridge, Massachusetts; Mr. William H. Phelps, Caracas, Venezuela; Professor Rodolfo A. Philippi B., Museo Nacional de Chile, Santiago; Professor William Rowan, University of Edmonton, Alberta; Mr. R. M. de Schauensee, Academy of Natural Sciences, Philadelphia; Count Josef Seilern, Lukov; Professor Morriz Sassi, Naturhistorisches Museum, Vienna; Mr. L. L. Snyder, Royal Ontario Museum, Toronto; the late P. A. Taverner, National Museum of Canada, Ottawa; Mr. W. E. Clyde Todd, Carnegie Museum, Pittsburgh; Mr. A. J. van Rossem, Los Angeles, California; Dr. Josselyn Van Tyne, Museum of Zoology, University of Michigan, Ann Arbor; Dr. Alexander Wetmore, U. S. National Museum; Mr. John T. Zimmer, American Museum of Natural History, New York.

We are also indebted to Dr. Charles Baehni, Director of the Conservatoire et Jardin Botaniques, Geneva, Switzerland, for his custodianship of the manuscript after Dr. Hellmayr's death.

Of the Museum Staff, especial acknowledgment is due to the late Dr. Wilfred H. Osgood, Curator Emeritus, Department of Zoology; Mr. Karl P. Schmidt, Chief Curator, Department of Zoology; and Dr. Austin L. Rand, Curator, Division of Birds, for their help and advice to the junior author; to Mr. Melvin A. Traylor, Jr., Associate, Division of Birds; to Mr. Emmet R. Blake, Associate Curator, Division of Birds, who was responsible for the compilation of the index; and to Miss Lillian A. Ross, Associate Editor of Scientific Publications, for reading proof and seeing through the press the last six parts of the *Catalogue of Birds of the Americas*.

BOARDMAN CONOVER

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CATALOGUE
OF
BIRDS OF THE AMERICAS

PART I

NO. 2

BY CHARLES E. HELLMAYR AND BOARDMAN CONOVER

Superorder NEOGNATHAE

Order SPHENISCIFORMES

Family SPHENISCIDAE. Penguins

Genus APTENODYTES J. F. Miller

Aptenodytes J. F. Miller,¹ Var. Subj. Nat. Hist., Part 4, pl. 23, 1778—type, by monotypy, *Aptenodytes patagonica* Miller.

Pinguinaria Shaw, Mus. Lever., 1, No. 3, p. 144, 1792—type, by monotypy, *Aptenodytes patachonica* "Latham"=Forster.

Aptenodytes patagonica patagonica J. F. Miller. KING
PENGUIN.

Aptenodytes patagonica J. F. Miller, Var. Subj. Nat. Hist., Part 4, pl. 23, 1778—"in mare Antartico"=South Georgia (cf. I. R. Forster, Comment. Phys. Soc. Reg. Sci. Götting., 3, p. 138, pl. 11, 1781); Forster, Descr. Anim., pp. 347, 349, 1844—Falkland Islands (ex Pennant), South Georgia, and "New Guinea" (ex Sonnerat) (descr., habits); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 627, 1898—part, spec. a-h, Falkland Islands; Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 633, 1900—Penguin Rookery, Staten Island; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 397, 1902—Tierra del Fuego; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 85, 1904 (descr., range in part); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 200, 1910—range in Argentina;

¹ *Aptenodytes* I. R. Forster (in G. Forster, Voy. World, 1, p. 98, 1777) is a nomen nudum. The name has been variously "emended" to *Apterodytes* Hermann (Tabl. Aff. Anim., p. 235, 1783), *Apterodita* Scopoli (Del. Flor. Faun. Insubr., 2, p. 91, 1786), *Aptenodyta* Gmelin (Syst. Nat., 1, (1), p. 242, 1788), *Aptenodita* Bonnaterre (Tabl. Enc. Méth., Orn., 1, livr. 47, p. lxxxiv, 1791), *Aptenodites* Lesson (Compl. Buffon, 9, p. 542, 1837), and *Apteniodytes* Swainson (Nat. Hist. Class. Bds., 2, p. 193, 1837).

Brooks, Bull. Mus. Comp. Zool., 61, p. 136, 1915—Port Stephens, Falkland Islands (visitor); Wilkins, Ibis, 1923, p. 486—South Georgia; Bennett, Ibis, 1926, p. 311—Falkland Islands; Mathews, Discovery Rep., 1, p. 590, pl. 55, fig. 4, pl. 56, figs. 1-4, 1929—South Georgia (nesting, life hist.); Murphy, Ocean. Bds. S. Amer., 1, p. 343, col. pl., 1936 (monog.); Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities).

Aptenodytes patachonica I. R. Forster, Comment. Phys. Soc. Reg. Sci. Götting., 3, pp. 134, 137, pl. 2, 1781—South Georgia¹ (descr., habits); Reid, Proc. Zool. Soc. Lond., 3, p. 132, 1835—East Falkland Island (anatomy); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 88, 1906—South Georgia (breeding habits); Murphy, Sci. Bull., Mus. Brookl. Inst., 2, p. 104, pls. 20-31, 1915—South Georgia (habits).

Apterodita longirostris Scopoli, Del. Flor. Faun. Insubr., 2, p. 91, 1786—based on "Le Manchot de la Nouvelle Guinée" Sonnerat, Voy. Nouv. Guinée, p. 179, pl. 113, 1776 (locality erroneous).

Aptenodytes pennantii(i) G. R. Gray, Ann. Mag. Nat. Hist., 13, p. 315, 1844—based on "The Patagonian Pinguin" Pennant, Phil. Trans., 58, p. 91, pl. 5, 1769—Falkland Islands; Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, p. 775, 1856;² Gould, Proc. Zool. Soc. Lond., 27, p. 98, 1859—Falkland Islands; Sclater, l.c., 28, p. 390, 1860—Falkland Islands; Abbot, Ibis, 1861, p. 163—Falkland Islands (visitor); Sclater, Proc. Zool. Soc. Lond., 1868, p. 257—East Falkland Island; Sclater and Salvin, Ibis, 1869, p. 284—Tyssen Island, Falkland Islands; Hyett, Proc. Bost. Soc. N. H., 14, p. 247, 1872—Straits of Magellan (crit.); de Winton, Proc. Zool. Soc. Lond., 1898, p. 900 (molt); Vallentin, Mem. Proc. Manchester Lit. Phil. Soc., 48, No. 23, p. 24, 1904—West Falkland Island (visitor); Seth-Smith, Proc. Zool. Soc. Lond., 1912, (1), p. 60, pl. 1 (molt).

Aptenodytes forsteri (not of Gray) Sclater, Ibis, 1860, p. 432—Falkland Islands.

Spheniscus pennantii Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 5, 1867—Falkland Islands.

Aptenodytes longirostris Coues, Proc. Acad. Nat. Sci. Phila., 1872, p. 193—part, Straits of Magellan and Falkland Islands (monog.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 653—part, Falkland Islands; Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 16, 1885—South Georgia.

Aptenodytes patagonica patagonica Dabbene, El Hornero, 2, pp. 5, 7, 1920 (chars., range); Wace, l.c., p. 194, 1922—Falkland Islands; Peters, Bds. World, 1, p. 29, 1931 (range); Carcelles, El Hornero, 4, p. 398, 1931—Rosita Bay, South Georgia; Reynolds, Ibis, 1935, p. 96—Horn Island, Cape Horn region (breeding).

¹ Forster also includes the Straits of Magellan, Falkland Islands (ex Pennant), and "New Guinea" (ex Sonnerat) in the range, but his account is based upon his own observations in South Georgia.

² Bonaparte, in synonymy, mentions "rex, auct.," which appears to be merely the Latin equivalent of the vernacular name "King Penguin" used by certain authors.

Range.—Breeds on South Georgia, the northern South Sandwich Islands, Staten Island, Horn Island, wandering to the Falkland Islands.¹

***Aptenodytes forsteri* G. R. Gray.² EMPEROR PENGUIN.**

Aptenodytes forsteri G. R. Gray, Ann. Mag. Nat. Hist., 13, p. 315, April, 1844—Antarctic region (cotypes in British Museum); idem and Mitchell, Gen. Bds., 3, p. [642], pl. 176, fig. 2, 1846; Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, p. 775, 1856;³ Sclater, Ibis, 1888, p. 325 (hist.; ext. and osteol. char.); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 626, 1898—Antarctic seas (monog.); Clarke, Ibis, 1906, p. 166—South Orkney Islands; Dabbene, El Hornero, 2, pp. 5, 7, 1920 (chars., range); Bennett, l.c., p. 30, 1920—Isla Laurie, South Orkney Islands; Peters, Bds. World, 1, p. 30, 1931 (range); Kinnear, Ibis, 1935, p. 98 (note); Murphy, Ocean. Bds. S. Amer., 1, p. 354, 1936 (monog.); Ardley, Discovery Rep., 12, p. 352, 1936—South Orkney Islands (straggler only); Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities); Davis, Auk, 62, p. 144, pl. 8, 1945 (molt).

Spheniscus patagonicus (not *Aptenodytes patagonica* Miller) Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 3, 1867—Antarctica (crit.).

Aptenodytes patagonica (not of J. F. Miller) Coues, Proc. Acad. Nat. Sci. Phila., 1872, p. 192—Antarctic seas (crit.).

Aptenodytes excelsior Mathews and Iredale,⁴ Bull. Brit. Orn. Cl., 55, p. 101, Jan. 28, 1935—based on *Aptenodytes forsteri* Mathews, Bds. Norfolk and Lord Howe Islands, p. 63, pl. 30, Oct. 16, 1928; Cape Royds, McMurdo Bay.

Range.—Breeds on the shores of Antarctica (Cape Crozier; Queen Mary's Land); wanders occasionally north to the South Shetland and South Orkney Islands (Laurie Island).

Genus PYGOSCELIS Wagler⁵

Pygoscelis Wagler, Isis, 1832, col. 281, March, 1832—type, by monotypy, *Aptenodytes papua* Forster.

¹ A slightly differentiated race, *A. patagonica halli* Mathews, breeds on the Macquarie, Kerguelen, Crozet, and Marion Islands.

² Probably a race of *A. patagonica*.

³ Bonaparte, in synonymy, mentions "*imperator*, auct.," evidently the Latin transcription of the vernacular term "Emperor Penguin."

⁴ The renaming of the Emperor Penguin appears to us unjustified. While Gray admittedly erred in his interpretation of Forster's (and Miller's) plate, it is just as plain that the characters and measurements of his "Emperor," for which he proposed the name *A. forsteri*, cannot possibly have been gathered from these rather poor drawings, as Mathews and Iredale seem to think. They were clearly taken from the specimens brought home by the Antarctic Expedition, still in the British Museum, which must, therefore, be regarded as the original cotypes of *A. forsteri*.

⁵ The members of this genus differ from one another in the number of tail feathers. *P. papua* has sixteen, *P. antarctica* twelve, and *P. adeliae* fourteen

Dasyramphus (Hombron and Jacquinot MS.) G. R. Gray, Gen. Bds., 3, pp. 640, 641, July, 1846—type, by orig. desig., *Catarrhactes adeliae* Hombron and Jacquinot; Hombron and Jacquinot, Voy. Pôle Sud, Zool., 3, Ois., p. 154, 1853—same type.

Pygoscelys Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, p. 775, 1856 (emendation).

Pygosceles Scater, Proc. Zool. Soc. Lond., 28, p. 390, 1860 (emendation).

Dasycelis Mathews, Bull. Brit. Orn. Cl., 55, p. 74, Dec. 31, 1934—type, by orig. desig., *Aptenodytes antarctica* I. R. Forster.

Pucheramphus Mathews, Bull. Brit. Orn. Cl., 55, p. 113, Feb. 28, 1935—type, by orig. desig., *Catarrhactes adeliae* Hombron and Jacquinot.

Pygoscelis papua papua (I. R. Forster). GENTOO PENGUIN.

Aptenodytes papua I. R. Forster, Comment. Phys. Soc. Reg. Sci. Götting., 3, pp. 134, 140, pl. 3, 1781—Falkland Islands;¹ idem, Descr. Anim., p. 352, 1844—Falkland Islands (descr.).

Apterodita papuae Scopoli, Del. Flor. Faun. Insubr., 2, p. 91, 1786—based on "Le Manchot Papou" Sonnerat, Voy. Nouv. Guinée, p. 181, pl. 115, 1776 (locality erroneous).

Eudyptes papua Gould, Proc. Zool. Soc. Lond., 27, p. 98, 1859—Falkland Islands (egg descr.); Abbott, Ibis, 1860, p. 336—Falkland Islands (breeding habits); Scater, Ibis, 1860, p. 432—Falkland Islands.

Pygosceles wagleri Scater, Proc. Zool. Soc. Lond., 28, p. 390, 1860—Falkland Islands (substitute name for *Aptenodytes papua* Forster); Abbott, Ibis, 1861, p. 163—Falkland Islands; Scater, Proc. Zool. Soc. Lond., 1861, p. 47—Falkland Islands; idem, l.c., 1868, p. 527—East Falkland Island.

Spheniscus papua Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 5, 1867—Falkland Islands (descr.).

Pygoscelis papua Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 14, 1885—Falkland Islands (breeding); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 631, 1898—part, Falkland Islands; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 201, 1902—South Orkney Islands; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 87, 1906—South Georgia (breeding habits); Clarke, Ibis, 1906, p. 162, pl. 9—Laurie Island, South Orkney Islands (breeding; nest and chick descr.); Murphy, Sci. Bull., Mus. Brookl. Inst., 2, p. 113, pls. 32-43, 1915—South Georgia (habits); Brooks, Bull. Mus. Comp. Zool., 61, p. 136, 1917—Falkland Islands (habits); Bennett, El Hornero, 2, p. 30, 1920—South Shetland, South Orkney, and Falkland Islands; Wilkins, Ibis, 1923, p. 486—South Georgia and Elephant Island; Bennett, Ibis, 1926, p. 311—Falkland Islands; Mathews, Discovery Rep., 1, p. 58, pl. 47, figs. 10-12, pl. 54, figs. 3-4, pl. 55, fig. 1, 1929—South Georgia (nesting, monog.); Murphy, Ocean. Bds. S. Amer., 1, p. 367,

rectrices; otherwise they are nearly alike in structural details. It is quite useless to place each in a monotypic genus.

¹ Although "Le Manchot Papou" Sonnerat (Voy. Nouv. Guinée, p. 181, pl. 115, 1776) is quoted, Forster's description and figure were taken from the Falkland Islands specimen brought to London by J. S. Hausmann.

1936 (monog.); Ardley, *Discovery Rep.*, 12, p. 357, pl. 12, fig. 3, 1936—South Orkney Islands (nesting); Bagshawe, *Trans. Zool. Soc. Lond.*, 24, p. 185, 7 pls., 1938—Graham Land (life hist.); Roberts, *Sci. Rep. Brit. Graham Land Exped.*, 1, (3), p. 195, 1940 (life hist.).

Pygosceles taeniata (not *Aptenodytes taeniata* Peale) Vallentin, *Mem. Proc. Manchester Lit. Phil. Soc.*, 48, No. 23, p. 28, pl. 1, fig. 2, 1904—near Port William, Falkland Islands (breeding habits).

Pygoscelis papua papua Dabbene, *El Hornero*, 2, pp. 6, 8, 1920 (chars., range); Wace, l.c., p. 195, 1921—Falkland Islands; Peters, *Bds. World*, 1, p. 30, 1931 (range); Carcelles, *El Hornero*, 4, p. 398, pl. 13, 1931—South Georgia.

Range.—Breeds in the Falkland Islands, on Staten Island, South Georgia, the South Shetlands, South Orkneys, Graham Land and other small Antarctic islands.¹

Pygoscelis antarctica (I. R. Forster). RINGED PENGUIN.

Aptenodytes antarctica I. R. Forster, *Comment. Phys. Soc. Reg. Sci. Götting.*, 3, pp. 134, 141, pl. 4, 1781—"in mari Australi a gradu 48° in circulum usque antarcticum"; idem, *Descr. Anim.*, p. 56, 1844—same locality.

Eudyptes antarcticus Sclater, *Proc. Zool. Soc. Lond.*, 1861, p. 47—Berkeley Sound, Falkland Islands; Abbott, *Ibis*, 1861, p. 164—Falkland Islands (one spec.).

Spheniscus antarcticus Schlegel, *Mus. Pays-Bas*, livr. 9, *Urinatores*, p. 5, 1867—Falkland and Weddell Islands (descr.).

Pygoscelis antarctica Pagenstecher, *Jahrb. Hamb. Wiss. Anst.*, 2, p. 14, 1885—South Georgia (breeding); Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 634, 1898 (monog.); Clarke, *Ibis*, 1906, p. 152, pls. 4, 6, 7—Laurie and Saddle Islands, South Orkney Islands (plumages descr.; breeding habits); Lönnberg, *Svensk. Vetensk. Akad. Handl.*, 40, No. 5, p. 86, 1906—South Georgia; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 201, 1910—South Orkney Islands; Murphy, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 129, 1915—South Georgia; Brooks, *Bull. Mus. Comp. Zool.*, 61, p. 142, 1917—Falkland Islands; Dabbene, *El Hornero*, 2, pp. 6, 8, 1920 (chars., range); Bennett, l.c., p. 31, 1920—South Shetland and South Orkney Islands; Wace, l.c., 2, p. 195, 1922—Falkland Islands; Wilkins, *Ibis*, 1923, p. 487—South Georgia; Bennett, *Ibis*, 1926, p. 311 (breeding range; straggling to Port Stanley, Falkland Islands); Mathews, *Discovery Rep.*, 1, p. 588, 1929—South Georgia (rare); Peters, *Bds. World*, 1, p. 30, 1931 (range); Carcelles, *El Hornero*, 4, p. 399, pl. 13, 1931—South Georgia (breeding); Murphy, *Ocean. Bds. S. Amer.*, p. 406, 1936 (monog.); Ardley, *Discovery Rep.*, 12, p. 355, pl. 10, 1936—South Orkney Islands (nesting); Bagshawe, *Trans. Zool. Soc. Lond.*, 24, p. 185, 7 pls., 1938—Graham Land (life hist.); Roberts, *Sci. Rep. Brit. Graham Land Exped.*, 1, (3), p. 199, 1940 (breeding localities); Eklund, *Proc. Amer. Phil. Soc.*, 89, (1), p. 300, 1945—Palmer Peninsula (rookery 64° 42' S.—63° 25' W.).

¹ A nearly allied race, *P. papua taeniata* (Peale), replaces the nominate form on the Macquarie, Heard, Kerguelen, and Marion Islands.

Range.—Breeds on South Georgia, South Sandwich Islands, South Orkneys, South Shetlands, and islands off the Antarctic continent south to 64° 42' on Palmer Peninsula; straying in winter to the Falkland Islands.

Pygoscelis adeliae (Hombron and Jacquinot). BLACK-THROATED PENGUIN.

Catarrhactes adeliae Hombron and Jacquinot, Ann. Sci. Nat., (2), Zool., 16, p. 320, 1841—"les glaces de la terre Adélie" (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 59, 1929).

Aptenodytes longicauda Peale, U. S. Expl. Exped., 8, p. 261, 1848—Antarctic Ocean (cotypes in U. S. National Museum [cf. Coues, Proc. Acad. Nat. Sci. Phila., 1872, p. 197] and in Museum of Comparative Zoology, Cambridge, Mass. [cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 172, 1930]).

Dasyramphus adelia Hombron and Jacquinot, Voy. Pôle Sud, Zool., 3, Ois., p. 155, pl. 33, fig. 1, 1853—Adelia Land.

Pygoscelis adeliae Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 632, 1898—Antarctica (monog.); Clarke, Ibis, 1906, p. 157, pl. 8—South Orkney Islands (breeding habits); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 201, 1910—South Orkney Islands; idem, El Hornero, 2, pp. 6, 8, 1920 (chars., range); Bennett, l.c., p. 31, 1920—South Shetland Islands; Wilkins, Ibis, 1923, p. 494—near South Georgia and Zavodovski Island; Bennett, Ibis, 1926, p. 311—South Shetland and South Orkney Islands; Peters, Bds. World, 1, p. 30, 1931 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 386, 1936 (monog.); Ardley, Discovery Rep., 12, p. 352, pl. 11, fig. 1, 1936—South Orkney Islands (nesting, life hist.); Eklund, Proc. Amer. Phil. Soc., 89, (1), p. 299, 1945—Palmer Land (rookeries at 68° 17' S.—67° 12' W. and 67° 56' S.—67° 24' W.; life hist.).

Pucheramphus adeliae Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities, taxonomy).

Range.—Breeds on the South Shetland, South Orkney, and South Sandwich Islands, and on the shores of the Antarctic continent south to 68° 17' on Palmer Peninsula.

Genus **EUDYPTES** Vieillot

Eudyptes Vieillot, Anal. Nouv. Orn. Elém., pp. 67, 70, 1816—type by subs. desig., *Catarrhactes chrysocome* auct.=*Aptenodytes crestata* J. F. Miller.

Chrysocoma Stephens, in Shaw, Gen. Zool., 13, (1), p. 57, 1825—new name for *Eudyptes* Vieillot.

Microdyptes Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 58, 1880—type, by orig. desig., *Eudyptula serresiana* Oustalet=*Aptenodytes crestata* Miller.

Catadyptes Mathews, Bull. Brit. Orn. Cl., 55, p. 74, Dec. 31, 1934—type, by orig. desig., *Catarrhactes chrysolophus* Brandt.

**Eudyptes crestatus crestatus* (J. F. Miller).¹ ROCK-HOPPER PENGUIN.

Aptenodytes crestata J. F. Miller, Var. Subj. Nat. Hist., Part 9, pl. 49, 1784—Falkland Islands (cf. Mathews and Iredale, Austr. Av. Rec., 4, pp. 145-147, 1921).

Pinguinaria cirrhata Shaw, Cimelia Physica, p. 92, 1796—Falkland Islands.

Pinguinaria cristata Shaw and Nodder, Nat. Misc., 11, pl. 437, July 1, 1800—"in insulis Antarcticis" (ex Miller, pl. 49).

Chrysocoma saltator Stephens, in Shaw, Gen. Zool., 13, (1), p. 58, pl. 8, 1825—based primarily on "Pingoïn Sautteur" Bougainville, Voy. Monde, p. 69, 1771; Falkland Islands (in part).

Aptenodytes chrysocome (not of Forster, 1781)² Abbott, Ibis, 1860, p. 337—Falkland Islands (breeding habits).

Eudyptes chrysocome Sclater, Proc. Zool. Soc. Lond., 28, p. 390, 1860—Falkland Islands; idem, l.c., 1861, p. 47—Falklands; Abbott, Ibis, 1861, p. 164—North Camp, Falkland Islands; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 654—part, Falkland and Inaccessible Islands (crit.); iidem, Rep. Voy. Challenger, Zool., 2, Birds, p. 128, pl. 30, 1880—part, Inaccessible and Falkland Islands (crit.); Vallentin, Mem. Proc. Manchester Lit. Phil. Soc., 48, No. 23, p. 26, pl. 1, fig. 1, 1904—Berkeley Sound, Falkland Islands (breeding habits).

Eudyptes nigrivestis Gould, Proc. Zool. Soc. Lond., 28, p. 418, 1860—Falkland Islands (type lost, formerly in coll. of J. Gould); Abbott, Ibis, 1861, p. 163—Falkland Islands; Sclater, Proc. Zool. Soc. Lond., 1861, pp. 46, 47—Falkland Islands; Dabbene, Bol. Soc. Physis, 1, p. 257, 1913 (crit., range); Brooks, Bull. Mus. Comp. Zool., 61, p. 143, 1917—Falkland Islands (habits); Bennett, Ibis, 1926, p. 312—Falkland Islands and "South Georgia."

¹ *Phaëton demersus* Linnaeus (Syst. Nat., 10th ed., 1, p. 135, 1758), based exclusively on "The Penguin" Edwards (Nat. Hist. Uncom. Bds., 1, p. 49, pl. 49), has been claimed by certain authors to refer to the Rock-hopper Penguin. Edwards' plate represents a young bird of unknown origin, and while possibly intended for the juvenile plumage of some species of *Eudyptula*, appears to us wholly unidentifiable. *Aptenodytes catarractes* I. R. Forster (Comment. Phys. Soc. Reg. Sci. Götting., 3, pp. 135, 145, 1781) and *Aptenodytes gorfua* Bonnaterre (Tabl. Enc. Méth., Orn., 1, livr. 47, p. 68, 1791), being likewise based on "The Penguin" of Edwards, are not available either. The genus *Catarractes* Brisson (Orn., 6, p. 102, 1760), whose type, by monotypy, is *Phaëthon demersus* Linnaeus, falls accordingly to the ground.

² *Aptenodytes chrysocome* I. R. Forster (Comment. Phys. Soc. Reg. Sci. Götting., 3, pp. 133, 135, 1781) is a composite of the Australian *Eudyptes pachyrhynchus* (from Tasmania) and the two South American species (*E. crestatus* and *E. chrysolophus*), and although the accompanying figure (pl. 1) represents the Rock-hopper Penguin, it is perhaps advisable to discard the term *chrysocome* in favor of *crestatus*, as has been advocated by Mathews and Iredale (l.c.). It may be mentioned here that Milne-Edwards (Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 47, 1880) errs in presuming Forster's specimen to have originated in South Georgia. It is J. S. Hausman, M.D., the owner of the American specimen figured by Miller, who once was a citizen of Augusta, Georgia ("civis nuper Georgiae Augustae"), which is by no means the same as South Georgia Island! Cf. also Forster, Descr. Anim., p. 99, 1844, where *A. chrysocome* is given as inhabiting the south part of New Holland and the Falkland Islands.

- Eudyptes catarractes* (not *Aptenodytes catarractes* Forster) Hyatt, Proc. Bost. Soc. N. H., 14, p. 250, 1872—Falkland Islands (crit.).
- Eudyptula serresiana* Oustalet, Ann. Sci. Nat., (6), Zool., 8, art. 4, p. 1, Aug., 1878—Port Churruca, Tierra del Fuego (descr. of young; type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 59, 1929).
- Eudyptes chrysocoma*(us) Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 46, pl. 18, fig. 6, 1880 (crit., in part, Falkland Islands); Oustalet, Miss. Sci. Cap Horn, 6, p. 238, 1891—Bahia Orange, Tierra del Fuego.
- Microdyptes serresiana* Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 58, pl. 20 (fig. of type), 1880—Port Churruca, Tierra del Fuego (crit.); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 242, 1891—Burnt Island and New Year Sound, False Cape Horn.
- Catarrhactes chrysocome* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 635, 1898—part, spec. a-i, o-s, Tierra del Fuego, and Falkland, Tristan d'Acunha, and Inaccessible Islands; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 398, 1902—Tierra del Fuego; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 96, 1904—part, Tierra del Fuego and Falkland Islands; Venturi, Nov. Zool., 16, p. 256, 1909—Isla Año Nuevo, Staten Island (egg descr.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 201, 1910—Tierra del Fuego and Isla Año Nuevo.
- Eudyptes chrysocome nigrivestis* Dabbene, El Hornero, 2, pp. 6, 8, 1920 (char., range, in winter to Buenos Aires); Wace, l.c., p. 195, 1921—Falkland Islands; Dabbene, l.c., p. 226, 1921—Cabo Domingo, Rio Grande, Tierra del Fuego (chick fig.); Tremoleras, l.c., 4, p. 17, 1927—coast of Montevideo, Uruguay; Anon., l.c., 5, p. 104, 1932—Mar del Plata, Buenos Aires (winter, 1928); Reynolds, Ibis, 1935, p. 99—Freycinet, Deceit, and Herschel Islands, Cape Horn region.
- Eudyptes crestatus crestatus* Peters, Bds. World, 1, p. 31, 1931 (range).
- Eudyptes crestatus* Murphy, Ocean. Bds. S. Amer., p. 415, 1936 (monog.).
- Eudyptes cristatus* Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities).

Range.—Breeds in Tierra del Fuego, the Cape Horn region, the Falkland Islands, and (extralimitally) on Tristan d'Acunha and Gough Islands; in winter straggling north to the coast of Buenos Aires and Uruguay (Montevideo Bay).¹

Field Museum Collection.—3: Chile (Isla Hermite, Magallanes, 3).

***Eudyptes chrysolophus* (Brandt).² MACARONI PENGUIN.**

Catarrhactes chrysolophus Brandt, Bull. Sci. Acad. Sci. St. Pétersb., 2, col. 315, 1837—no locality³ (cotypes in Leningrad Museum).

¹ Birds from Tierra del Fuego (*E. serresiana*) are evidently not separable from those of the Falkland Islands. A nearly allied race, *E. crestatus filholi* Hutton, breeds on Campbell, Antipodes, St. Paul, Kerguelen, Crozet, Prince Edward, and Marion Islands.

² *Eudyptes chrysolophus* (Brandt) has been made the type of *Catadyptes* on account of having fourteen instead of sixteen tail-feathers, a naked space at the base of the bill, and a somewhat differently arranged crest. These appear to us good specific characters.

³ Roberts (Ibis, 1939, p. 710) suggests South Georgia as type locality.

Eudyptes chrysolophus(a) Gray and Mitchell, Gen. Bds., 3, p. [641], pl. 176, fig. 1, 1846; Sclater, Proc. Zool. Soc. Lond., 28, p. 390, 1860—Falkland Islands; Abbott, Ibis, 1860, p. 338—Falkland Islands (breeding); idem, Ibis, 1861, p. 163—Falkland Islands (breeding); Sclater, Proc. Zool. Soc. Lond., 1861, p. 47—Falkland Islands; idem, l.c., 1868, p. 527—Falkland Islands (breeding); Hyatt, Proc. Bost. Soc. N. H., 14, p. 250, 1872—Falkland Islands (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 654—Kerguelen Island (crit.); iidem, Rep. Voy. Challenger, Zool., 2, Birds, p. 127, pl. 29, 1880—Kerguelen Island (crit.); Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 79, pl. 17, fig. 1, 1880—Falkland Islands (crit.); Murphy, Sci. Bull., Mus. Brookl. Inst., 2, p. 130, 1915—Cape North, South Georgia (breeding); Dabbene, El Hornero, 2, pp. 7, 8, 1920 (chars., range); Bennett, l.c., p. 32, 1920—South Shetland (Deception Island) and South Orkney Islands (breeding); Wace, l.c., p. 195, 1921—Falkland Islands; Wilkins, Ibis, 1923, p. 486—South Georgia; Bennett, Ibis, 1926, p. 312, pl. 4—Decepción Island, South Shetland Islands (breeding) and Falkland Islands (straggler); Mathews, Discovery Rep., 1, p. 588, pl. 55, figs. 2–3, 1929—South Georgia (life hist.); Peters, Bds. World, 1, p. 32, 1931 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 432, 1936 (monog.); Ardley, Discovery Rep., 12, p. 358, 1936—South Orkney Islands (straggler, not nesting); Roberts, Ibis, 1939, p. 709, pl. 15d (crit.); idem, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities).

(?)*Eudyptes diadematus* Gould, Proc. Zool. Soc. Lond., 28, p. 419, 1860—Falkland Islands (type lost, formerly in coll. of J. Gould; cf. Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 654); Abbott, Ibis, 1861, p. 163 (type singled out of a flock of Rock-hoppers early in September, 1858, at Eagle Point Rookery, Falkland Islands); Sclater, Proc. Zool. Soc. Lond., 1861, pp. 46, 47—Falkland Islands (the unique type).¹

Catarrhactes chrysolophus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 641, 1898—Kerguelen and Falkland Islands (Berkeley Sound); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 103, 1904 (monog.); Clarke, Ibis, 1906, p. 164—South Orkney Islands; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 201, 1910—Falkland and South Orkney Islands.

Eudyptes chrysolophus nigrivestris (not *E. nigrivestris* Gould) Carcelles, El Hornero, 4, p. 399, 1931—South Georgia (cf. l.c., 5, p. 104, 1932).

Range.—Breeds on the Falkland Islands,² South Georgia, South Sandwich Island, South Orkneys, South Shetlands (and [extraliminally] on Bouvet, (?)Prince Edward Island, Marion Island, Heard Island, and Kerguelen).

¹ The unique type, shot by Abbott out of a rookery of *E. c. crestatus* at Eagle Point, in September, 1858, is said to differ by the yellow superciliaries commencing at the nostrils. No other specimen like it has ever been found. The type being lost, its status remains in doubt.

² Though both Abbott (Ibis, 1860, p. 338) and Lecomte (Proc. Zool. Soc. Lond., 1868, p. 527) found the Macaroni Penguin sparingly breeding in rookeries of *E. c. crestatus*, there is no recent nesting record of the species from the Falkland

Genus SPHENISCUS Brisson¹

Spheniscus Brisson, Orn., 1, p. 52; 6, p. 96, 1760—type, by monotypy, "Le Manchot" and "Le Manchot tacheté"=*Diomedea demersa* Linnaeus.

***Spheniscus humboldti* Meyen. HUMBOLDT'S PENGUIN.**

Spheniscus humboldti(i) Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur., 16, Suppl., p. 110, pl. 21, 1834—Callao, Peru (type in Berlin Museum); Tschudi, Unters. Faun. Peru., Orn., p. 315, 1846—coast of Peru; Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 467, 1847—coast of Chile; Philippi, Reise Wüste Atacama, p. 165, 1860—coast of Atacama, Chile; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 142, 1865—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, pp. 337, 340—Chile; Philippi, Anal. Univ. Chile, 31, p. 285, 1868—coast of Chile and Peru; idem, Zeits. Ges. Naturw., (N.F.), 7, p. 126, 1873—*island off Algarrobo, Valparaiso, Chile (breeding habits); Streets, Bull. U. S. Nat. Mus., 7, p. 33, 1877—Talcaguano, Concepción Bay, Chile; Bartlett, Proc. Zool. Soc. Lond., 1879, p. 6 (molt); Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9, p. 63, 1880 (crit.); Sclater and Salvin, Rep. Voy. Challenger, Zool., 2, Birds, p. 126 (in text), 1880—Chile and Peru (crit.); Philippi, Ornith., 4, p. 160, 1888—coast of northern Chile; Reed, Anal. Univ. Chile, 93, p. 212, 1896—part, coast of Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 650, 1898—Isla dos Pájaros, Coquimbo, Chile;² Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 650, 1898—Chile (Iquique, Valparaiso); Philippi, Anal. Mus. Nac. Chile, 15, p. 86, pls. 36 (figs. 1, 2), 37, 39 (fig. 2), 1902—Chile (crit.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 106, 1904—coast of Chile and Peru (descr.); Paessler, Orn. Monatsber., 17, p. 102, 1909—Caleta Buena, Tarapacá, Chile; Coker, Proc. U. S. Nat. Mus., 56, p. 455, pl. 53, fig. 1, 1919—Lobos de Afuera, Guañape, and Ballestas Islands, Peru (breeding); Paessler, Journ. Orn., 70, p. 439, 1922—coast of Antofagasta and Coronel, Chile; Peters, Bds. World, 1, p. 33, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 422, 1932—Chile (range); Murphy, Ocean. Bds. S. Amer., 1, p. 452, 1936 (monog.); Philippi, Bol. Mus. Nac. Santiago, 16, p. 63, 1938—Arica Bay, Tacna, Chile; Housse, Rev. Univ. Santiago, 25, p. 83, 1940 (habits in Chile).*

Aptenodytes chiloënsis (not *Diomedea chiloënsis* Molina) Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 132, 1853—coast of Chile (Valparaiso).

Spheniscus magellanicus (not *Aptenodytes magellanicus* Forster) Schalow, Zool. Jahrb., Suppl., 4, p. 648, 1898—part, spec. a, b, Iquique, Tarapacá, Chile.

Spheniscus meyeri Philippi, Anal. Univ. Chile, 103, p. 670, April, 1899—Chile (type in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, 13, p. 32, 1930); idem, Arch. Naturg., 65, (1),

Islands. Sight records from Deceit Island, Cape Horn (cf. Reynolds, Ibis, 1935, p. 99) require confirmation by specimens.

¹ The four recognized members of this genus are probably offshoots of a common ancestor, and may have to be treated as races of a single specific entity.

² The egg from Tierra del Fuego belongs, of course, to *S. magellanicus*.

p. 171, 1899—Chile; idem, Anal. Mus. Nac. Chile, 15, p. 87, pl. 38, 1902—Chile.

Spheniscus flavipes Philippi, Anal. Univ. Chile, 103, p. 670, Apr., 1899—Chile; idem, Arch. Naturg., 65, (1), p. 172, 1899 (stated to be from Cartajena, south of Valparaiso; type not in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, 13, p. 32, 1930); idem, Anal. Mus. Nac. Chile, 15, p. 88, pl. 40, 1902—Chile (=young).

Range.—Breeds on islands off the coast of Peru and Chile from Lobos de Afuera, Lambayeque, to Algarrobo, Valparaiso, spreading in winter south to Concepción (Talcaguano, Coronel).¹

**Spheniscus magellanicus* (I. R. Forster).² JACKASS PENGUIN.

Aptenodytes magellanica I. R. Forster, Comment. Phys. Soc. Reg. Sci. Götting., 3, pp. 134, 143, pl. 5, 1781—"in vicinia Terrarum Magellanicarum, Insulae Statuum, Terrae del Fuego et in insulis Falklandicis"; idem, Descr. Anim., p. 351, 1844—"in Terra del Fuego, Statuum Insula Novi Anni, freto Magellanico, et insulis Falklandiis" (descr.).

Aptenodytes brasiliensis Lichtenstein, in Forster, Descr. Anim., p. 355 (in text), 1844—"ad littora Brasiliae" (descr. of young; type in Berlin Museum).

Aptenodytes magnirostris Peale, U. S. Expl. Exped., 8, p. 263, 1848—Orange Bay, Tierra del Fuego (type in U. S. National Museum; cf. Coues, Proc. Acad. Nat. Sci. Phila., 1872, p. 211).³

Spheniscus demersa(us) (not *Diomedea demersa* Linnaeus) Tschudi, Journ. Orn., 4, p. 181, 1856—Soledad Bay, Falkland Islands, and Chiloé (San Carlos), Chile; Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 10, 1867—part, spec. nos. 3–5, Chile and Falkland Islands; Hyatt, Proc. Bost. Soc. N. H., 14, p. 248, 1874—part, Tierra del Fuego.

Aptenodytes demersa Abbott, Ibis, 1860, p. 336—East Falkland Island (breeding).

Spheniscus magellanicus Sclater, Ibis, 1860, p. 432—Falkland Islands; idem, Proc. Zool. Soc. Lond., 28, p. 390, 1860—Falkland Islands; Abbott, Ibis, 1861, p. 163—East Falkland; Sclater, Proc. Zool. Soc. Lond., 1868, p. 527—East Falkland Island; Sclater and Salvin, Ibis, 1869, p. 284—Santa Magdalena, Straits of Magellan; idem, Proc. Zool. Soc. Lond., 1878, p. 653—Port Churrucha (Tierra del Fuego) and Falkland Islands; idem, Rep. Voy. Challenger, Zool., 2, Birds, p. 125, pl. 28 (adult and young), 1880—same localities; Sharpe, Proc. Zool. Soc. Lond., 1881, p. 17—Tom Bay, Magellan Straits; Sclater, Ibis, 1889, p. 144—estuary of the Rio de la

¹ Records of this penguin from Tierra del Fuego and the Cape Horn region are due to confusing it with *S. magellanicus*. Birds from Chile (*meyeni*) are nowise different from those of Peru.

² *Diomedea chilensis* Molina (Sagg. Stor. Nat. Chile, pp. 238, 344, 1782) is unidentifiable because of the incomplete diagnosis, together with the absence of any definite locality. Either this or the preceding species was probably intended.

³ Bangs (Bull. Mus. Comp. Zool., 70, p. 172, 1930) says that the type is in the Museum of Comparative Zoology at Cambridge. This specimen is, however, labeled "Cape Horn."

Plata and shore near Rio Negro; Berlepsch, l.c., p. 258—seashore near Rio Grande, Rio Grande do Sul, Brazil; Oustalet, Miss. Sci. Cap Horn, 6, p. B.243, 1891—Staten Island, Tierra del Fuego (Bahia Orange), Hermit Island, and New Year Sound, False Cape Horn; Aplin, Ibis, 1894, p. 212—Maldonado, Uruguay; Lane, Ibis, 1897, p. 314—Corral, Valdivia, Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 648, 1898—part, spec. c, Coquimbo, Chile; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 651, 1898—Chile (Corral), Straits of Magellan (Tom Bay, Port Churrucha), Hermit Island, and Falkland Islands; Ihering, Rev. Mus. Paul., 3, p. 456, 1899—Ilha de São Sebastião, Guarujá, Santos, and Iguapé, São Paulo; Salvadori, Ann. Mus. Civ. Stor. Nat. Gen., 40, p. 634, 1900—Isla de Leones, Santa Cruz, and Staten Island (Penguin Rookery); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 398, 1902—Tierra del Fuego; Vallentin, Mem. Proc. Manchester Lit. Phil. Soc., 48, No. 23, p. 24, 1904—Falkland Islands (breeding habits, eggs descr.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 110, 1904 (monog.); Ihering, Cat. Faun. Braz., 1, p. 35, 1907—Ilha de São Sebastião, Guarujá, Santos, and Iguapé, São Paulo; Paessler, Orn. Monatsber., 17, p. 102, 1909—Isla Santa María, Arauco, Chile; Venturi, Nov. Zool., 16, p. 256, 1909—Isla Leones, Santa Cruz, Patagonia (breeding); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 201, 1910—Patagonia, Tierra del Fuego, Staten Island, and coast of Buenos Aires Province; Brooks, Bull. Mus. Comp. Zool., 61, p. 144, 1917—Kidney Cove, near Port Stanley, Falkland Islands (breeding habits); Doello-Jurado, El Hornero, 1, p. 10, 1917—Puerto Deseado, Santa Cruz (breeding); Dabbene, l.c., 2, pp. 7, 8, 1920 (chars.; range); Tremoleras, l.c., p. 12, 1920—coast of Montevideo, Canelones, and Maldonado, Uruguay; Wace, l.c., p. 195, 1921—Falkland Islands; Lönnberg, in Skottsberg, Nat. Hist. Juan Fernandez and Easter Island, 3, Zool., Part 1, p. 16, 1921—Santa Clara Island and Mas A Tierra, Chile; Chapman, Bull. Brit. Orn. Cl., 46, p. 120, 1926—Puerto Montt to Guaitecas Islands, Chile; Bennett, Ibis, 1926, p. 312—Falkland Islands; Peters, Bds. World, 1, p. 33, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 421, 1932—Chile (range); Reynolds, Ibis, 1935, p. 100—Nassau Bay and channels of the Cape Horn region; Bullock, Rev. Chil. Hist. Nat., 39, p. 251, 1935—Isla la Mocha, Arauco, Chile (resident and breeding); Murphy, Ocean. Bds. S. Amer., 1, p. 437, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 14, 1938—Iguapé, Santos, and São Sebastião, São Paulo (range); Biraben and Scott, Physis, Rev. Soc. Arg. Cienc. Nat., 16, p. 245, pls. 1-4, 1939 (notes on in Argentina); Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (3), p. 199, 1940 (breeding localities); Housse, Rev. Univ. Santiago, 25, p. 83, 1940 (habits in Chile).

Spheniscus demersus var. *magellanicus* Coues, Proc. Acad. Nat. Sci. Phila., 1872, p. 211—Tierra del Fuego (crit.).

Spheniscus trifasciatus (Landbeck MS.) Philippi, Zeits. Ges. Naturw., (N.F.), 7, p. 121, pls. 1, 2, 1873—Valdivia, Chile (type in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, 13, p. 31, 1930); idem, Anal. Mus. Nac. Chile, 15, p. 81, pl. 36, fig. 3 (head), 1902—Valdivia.

Spheniscus humboldti (not of Meyen) Reed, Ibis, 1874, p. 83—"Masafuera"; Salvin, Ibis, 1875, p. 377—Juan Fernandez; Johow, Est. Flora Isl. Juan

Fernandez, pp. 29, 238, 1896—Mas A Tierra and Santa Clara Islands (breeding); Reed, Anal. Univ. Chile, **93**, p. 212, 1896—part, Juan Fernandez and Santa Clara Islands; Venturi, Nov. Zool., **16**, p. 256, 1909—Isla Año Nuevo, Staten Island (eggs); Dabbene, Anal. Mus. Nac. Buenos Aires, **18**, p. 201, 1910—Tierra del Fuego (ex Schalow) and Isla Año Nuevo (ex Venturi); idem, Bol. Soc., Physis, **1**, p. 257, 1913—same localities; idem, El Hornero, **2**, pp. 7, 9, 1920 (chars.; Tierra del Fuego, errore); Housse, Rev. Chil. Hist. Nat., **28**, p. 53, 1924—Isla la Mocha, Arauco, Chile (breeding).

(?) *Spheniscus modestus* Philippi, Anal. Univ. Chile, **103**, p. 671, April, 1899—Chile; idem, Arch. Naturg., **65**, (1), p. 171, 1899 (stated to be from Chiloé Island, Jardín Zoológico de Santiago and Quinteras, near Valparaíso; cotypes in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, **13**, p. 32, 1930); idem, Anal. Mus. Nac. Chile, **15**, p. 84, pl. 39, figs. 1, 2, 1902—Chiloé Island (=young).

Range.—Breeds on the coast of southern Chile, from Santa Marta María and La Mocha Islands, Arauco, south to the Cape Horn region; Más A Tierra and Santa Clara Islands, Juan Fernandez group; on the Falkland Islands; and on the east coast of Patagonia north to Puerto Deseado, Santa Cruz;¹ ranging except in breeding season north as far as Coquimbo, Chile, in the west, and to São Paulo (rarely to Rio de Janeiro and even to Valença, Bahia [fide Pinto]), Brazil, in the east.

Field Museum Collection.—2: Chile (Rio Inio, Chiloé Island, 1); Argentina (Rivadavia, Chubut, 1).

**Spheniscus mendiculus* Sundevall. GALAPAGOS PENGUIN.

Spheniscus mendiculus Sundevall, Proc. Zool. Soc. Lond., 1871, pp. 126, 129—James Island, Galápagos Islands (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., **19**, A, No. 1, p. 96, 1927); Salvin, Trans. Zool. Soc. Lond., **9**, p. 508, pl. 89, 1876—James Island, Galápagos Islands (crit.); Ridgway, Proc. U. S. Nat. Mus., **12**, p. 119, 1890—Albemarle Island; idem, l.c., **19**, p. 660, 1897—Albemarle Island (monog.); Ogilvie-Grant, Cat. Bds. Brit. Mus., **26**, p. 653, 1898—Galápagos Islands; Rothschild and Hartert, Nov. Zool., **6**, p. 199, 1899—Albemarle, Duncan, and Brattle Islands (crit.); idem, l.c., **9**, p. 416, 1902—Albemarle and Narborough Islands; Snodgrass and Heller, Proc. Wash. Acad. Sci., **5**, p. 235, 1904—Albemarle, Narborough and Seymour Islands, seldom on Abingdon, Bindloe, Tower, Wenman, and Culpepper Islands; Gifford, Proc. Calif. Acad. Sci., (4), **2**, p. 16, pl. 1, fig. 1, 1913—Albemarle, Brattle, Charles, Duncan, James, Jervis, Narborough, Onslow, and Seymour Islands (habits, meas., soft parts); Swarth, Occ. Paps. Calif. Acad. Sci., **18**, p. 33, 1931—Galápagos Islands; Peters, Bds. World, **1**, p. 33, 1931—Galápagos Islands;

¹ The record from South Georgia, based on "Jack-ass Penguin" Weddell, Voy. South Pole, p. 57, 1825, certainly does not refer to the present species.

Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 25, 1931—
Albemarle Island; Murphy, Ocean. Bds. S. Amer., 1, p. 466, 1936 (monog.).

Spheniscus mendicatus Milne-Edwards, Ann. Sci. Nat., (6), Zool., 9, art. 9,
p. 64, 1880 (emendation).

Range.—Galápagos Archipelago.

Field Museum Collection.—3: Galápagos Islands (Narborough
Island, 1; Albemarle Island, 2).

Order GAVIIFORMES

Family GAVIIDAE. Loons

Genus GAVIA J. R. Forster

Gavia J. R. Forster, Euchirid. Hist. Nat., p. 38, 1788—type, by subs. desig.
(Allen, Bull. Amer. Mus. N. H., 24, p. 35, 1908), *Colymbus imber* Gunnerus
=*Colymbus immer* Brünnich.

Urinator Lacépède, Tabl. Méth. Ois., p. 14, 1799—type, by subs. desig.
(Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 486, 1898), *Colymbus glacialis*
Linnaeus=*Colymbus immer* Brünnich.

Eudytes Illiger, Prodr. Syst. Mamm. Av., p. 282, 1811—type, by subs. desig.
(Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 486, 1898), *Colymbus sep-*
trionialis Linnaeus=*Colymbus stellatus* Pontoppidan.

**Gavia stellata* (Pontoppidan). RED-THROATED LOON.

Colymbus Stellatus Pontoppidan, Danske Atlas, 1, p. 621, 1763—based on
“*Colymbus maximus stellatus*” Willoughby, Orn., [p. 258], pl. 62, Tame
River, Warwickshire, England.¹

Colymbus Lumme Gunnerus, Trondj. Selsk. Skr., 1, p. 244, pl. 2, fig. 2, 1761;
Brünnich, Orn. Bor., p. 39, 1764—“ex Islandia, Norvegia et Grönlandia,
occicus quoque circa Hafniam.”

Colymbus borealis Brünnich, Orn. Bor., p. 39, 1764—near Copenhagen, Den-
mark.

Colymbus septentrionalis Linnaeus, Syst. Nat., 12th ed., 1, p. 220, 1766—
“in Europae borealis lacubus”; Winge, Medd. Grønl., 21, p. 131, 1898—
Greenland.

Colymbus Mülleri Brehm, Isis, 1826, col. 984—Greenland (type evidently lost).²

Gavia stellata Bent, Bull. U. S. Nat. Mus., 107, p. 72, 1919 (life hist., range);
Grinnell, Univ. Calif. Pub. Zool., 32, p. 55, 1928—San Felipe, Lower
California (April 2–11, 1926); Peters, Bds. World, 1, p. 34, 1931 (range);
Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 18, 1933—
Barrow, Alaska (breeding); Taverner, Ann. Carnegie Mus., 23, p. 12,
1934—Churchill (transient); Swarth, Pac. Coast Avifauna, 22, p. 17,

¹ About the type locality, cf. Laubmann, Verh. Orn. Ges. Bay., 15, p. 211, 1922.

² Not listed by Hartert (Nov. Zool., 25, pp. 4–63, 1918) among the types in
the Brehm Collection.

1934—Nunivak Island (nesting); Sutton, Wilson Bull., 55, p. 146, 1943 (wing molt); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 27, 1945—Gulf of California; Soper, Auk, 63, p. 15, 1946—Baffin Island (breeding).

Range.—Circumpolar. Breeds in America from the Arctic coasts and islands south to the Aleutian and Queen Charlotte Islands, Manitoba, southeastern Quebec, New Brunswick, and Newfoundland; also in Greenland; winters south to Florida and northern Lower California.

Field Museum Collection.—45: Alaska (Barrow, 7; King Island, 1; Nome, 1; St. Michaels, 1; Teller, 1; Bethel, 1; Stewart Island, 1); Washington (Port Townsend, 1); California (Hyperion, 2; Santa Monica, 1; Alamitos Bay, 1; Moss Landing, 1; Pacific Grove, 3; Monterey, 3); Colorado (Laramie County, 1); Indiana (Porter County, 1); Labrador (unspecified, 1; Jack Lane's Bay, 1; Cape Whittle, 1; Davis Inlet, 1; Kegaska, 2); Quebec (Magdalen Islands, 1); Massachusetts (Marshfield, 2; Cape Cod, 1; Cohasset, 1); Connecticut (West Haven, 1; Branford, 1; Stony Creek, 3; New Haven, 1); North Carolina (Pea Island, Dare County, 1).

Gavia arctica viridigularis Dwight.¹ GREEN-THROATED LOON.

Gavia viridigularis Dwight, Auk, 35, p. 198, April, 1918—Gichega, northeastern Siberia (type in the American Museum of Natural History, New York); Preble and McAtee, N. Amer. Fauna, 46, p. 17, 1923—St. George Island, Pribilof Islands (June 22, 1873) and St. Michael, Alaska (Aug. 24, 1877).

Gavia arctica (not *Colymbus arcticus* Linnaeus) Bent, Bull. U. S. Nat. Mus., 107, p. 65, 1919—St. Michael, Alaska.

Gavia arctica viridigularis Peters, Bds. World, 1, p. 34, 1931 (range); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 18, 1933—Cape Prince of Wales, Alaska.

Range.—Northeastern Siberia, from the Chatanga east to Kamchatka and Sakhalin; occasional in western Alaska (St. George Island, Pribilof Islands; St. Michael and Cape Prince of Wales).

**Gavia arctica pacifica* (Lawrence). PACIFIC LOON.

Colymbus pacificus Lawrence, in Baird, Rep. Expl. and Surv. R. R. Pacif., 9, p. 889, 1858—San Diego, California, and Puget Sound² (type lost; cf. Grinnell, Univ. Calif. Pub. Zool., 38, pp. 259–260, 1932).

¹*Gavia arctica viridigularis* Dwight: Differs from the western nominate race by having the dark areas of the throat, when viewed toward the light, with decided green instead of purplish reflections.

²Type locality restricted to San Diego, California, by Grinnell (Univ. Calif. Pub. Zool., 38, p. 260, 1932).

[*Colymbus arcticus*] subsp. *a. C. pacificus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 494, 1898 (monog.).

Gavia pacifica Bent, Bull. U. S. Nat. Mus., 107, p. 67, 1919 (life hist., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 55, 1928—Lower California.

Gavia arctica pacifica Peters, Bds. World, 1, p. 34, 1931 (range); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 18, 1933—Barrow, Alaska (nesting); Swarth, Pac. Coast Avifauna, 22, p. 17, 1934—Nunivak Island; Sutton, Wilson Bull., 55, p. 147, 1943 (wing molt); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 27, 1945—Gulf of California; Soper, Auk, 63, p. 14, 1946—Baffin Island (breeding).

Gavia arctica Taverner, Ann. Carnegie Mus., 23, p. 11, 1934—Churchill, Manitoba (breeding).

Range.—Breeds on the Arctic coasts of North America from Point Barrow to Southampton Island, south to the Alaska Peninsula, Lake Athabasca, and York Factory; winters on the Pacific coast from Puget Sound to Lower California and Guadalupe Island.¹

Field Museum Collection.—23: Alaska (Barrow, 3; Nome, 1; Bethel, 3; Yukon River, 1); Arctic America (Franklin Bay, 2); Washington (Port Townsend, 3); California (Hyperion, 1; Carmel River Lagoon, 1; La Patera Point, 1; San Francisco, 1; Pacific Grove, 4; Monterey, 1; Santa Cruz Island, 1).

**Gavia immer immer* (Brünnich). COMMON LOON.

Colymbus immer Brünnich, Orn. Bor., p. 38, 1764—Färoe Islands.

Colymbus torquatus Brünnich, Orn. Bor., p. 41, 1764—Iceland, Greenland, and Norway.

Colymbus glacialis Linnaeus, Syst. Nat., 12th ed., 1, p. 221, 1766—"in Mari arctico"; Winge, Medd. Grønl., 21, p. 134, 1898—Greenland; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 439, 1904—Lower California and Valley of Mexico.

Colymbus hyemalis Brehm, Lehrb. Naturg. Eur. Vögel, 2, p. 883, 1824—Greenland (type in Tring Collection [cf. Hartert, Nov. Zool., 25, p. 50, 1918], now in the American Museum of Natural History, New York).

Gavia immer Bent, Bull. U. S. Nat. Mus., 107, p. 47, 1919 (life hist., range in part); Grinnell, Univ. Calif. Pub. Zool., 32, p. 55, 1928—Lower California; (?)van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 27, 1945—Gulf of California.

Gavia immer immer Peters, Bds. World, 1, p. 35, 1931 (range); Porsild, Canad. Field Nat., 57, p. 20, 1943—Peel Branch, Mackenzie Delta (breeding); Gabrielson, Auk, 61, p. 109, 1944—Alaska Peninsula (nesting); Soper, Auk, 63, p. 14, 1946—Baffin Island (nesting).

¹ Extralimittally, the Pacific Loon breeds in the tundra region of northeastern Siberia from the Indigirca to the Anadyr and winters in the Japanese islands and on the coast of Korea.

Range.—Breeds in northern North America from the Arctic coasts to the northern United States, in Greenland, and extralimittally in Iceland and probably on Jan Mayen; winters from about its southern breeding limit to Lower California, Mexico, Florida, and extralimittally on the coasts of the British Isles and in other parts of Europe.

Field Museum Collection.—12: Greenland (Ikertak Fjord, 1; Tooveosuaq, 1); Labrador (Hopedale, 1; Frank's Brook, 1); Newfoundland (St. George Bay, 1; Lewis Mountain, 1); Massachusetts (Plymouth, 2); Connecticut (Greenwich, 1; New Haven, 1; Seymour, 1); North Carolina (Pea Island, Dare County, 1).

**Gavia immer elasson* Bishop.¹ WESTERN LOON.

Gavia immer elasson Bishop, Auk, 38, p. 367, July, 1921—Carpenter Lake, Rolette County, North Dakota (type in coll. of L. B. Bishop, now in Field Museum, examined); Peters, Bds. World, 1, p. 35, 1931 (range).

(?)*Gavia immer* Munro, Auk, 62, p. 38, pls. 4, 5, 1945—British Columbia (life hist.).

Range.—Supposed to breed in the Dakotas and probably in the adjacent regions from British Columbia to northern California; winter range not definitely established.

Field Museum Collection.—26: British Columbia (Vancouver Island, 1); Washington (Clallam River, 1; Port Townsend, 1); North Dakota (Ramsey County, 3; Towner County, 1; Rolette County, 3); Wisconsin (Beaver Dam, 4; Bear Lake, 1; Lake Koshkonong, 1); Illinois (Lake County, 1); Indiana (Bluffton, 2); California (Sunset Beach, 1; Monterey, 1; Pacific Grove, 3; Hyperion, 1; Santa Barbara, 1).

**Gavia adamsii* (G. R. Gray).² YELLOW-BILLED LOON.

Colymbus adamsii G. R. Gray, Proc. Zool. Soc. Lond., 27, p. 167, 1859—"Russian America"—Alaska (type in the British Museum); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 500, 1898 (monog.).

Urinator adamsii Nelson, Nat. Hist. Coll. Alaska, p. 36, 1887—St. Michael.

Gavia adamsii Brooks, Bull. Mus. Comp. Zool., 59, p. 368, 1915—Humphrey Point, Alaska (not breeding); Cooke, Condor, 17, p. 213, 1915 (disc. of migration route); Dixon, Auk, 33, p. 370, 1916 (disc. of migration route); Bent, Bull. U. S. Nat. Mus., 107, p. 60, 1919 (life hist., range); Preble and McAtee, N. Amer. Fauna, 46, p. 17, 1923—Pribilof Islands (transient);

¹*Gavia immer elasson* Bishop differs from the nominate race by smaller size. Wing, 342-361, (female) 331-360.

²Probably a geographical representative of *G. immer*.

Bailey, Condor, 27, p. 26, 1925—Cape Prince of Wales, Alaska (nesting; migration); Blanchet, Canad. Field Nat., 39, p. 52, 1925—barrens north-east of Great Slave Lake, 64° N., 106° to 112° W. (common breeder); Peters, Bds. World, 1, p. 35, 1931 (range); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, (2), p. 18, 1933—Barrow and Cape Prince of Wales, Alaska (nesting); Porsild, Canad. Field Nat., 57, p. 20, 1943—Mackenzie Delta (breeding); Bishop, Field Mus. Nat. Hist., Zool. Ser., 29, p. 182, 1944—Chipp River, Barrow, Alaska (breeding; descr. pullus).

Range.—Breeds from the Arctic coasts of Alaska and north-western Canada south to Cape Prince of Wales and the barren grounds northeast of Great Slave Lake (64° N., 106° to 112° W.) [extralimitally in northern Siberia west to Novaya Zemlya]; winters irregularly to southern Alaska and Great Slave Lake [extralimitally to Norway, northern Russia]; accidental in Greenland.

Field Museum Collection.—17: Alaska (Barrow, 12; Nome, 1; unspecified, 1; St. George Island, 1; Wrangell, 1); Arctic America (Franklin Bay, 1).

Order COLYMBIFORMES

Family COLYMBIDAE. Grebes

Genus COLYMBUS Linnaeus

Colymbus Linnaeus, Syst. Nat., 10th ed., 1, p. 135, 1758—type, by present desig.,¹ *Colymbus cristatus* Linnaeus.

Podiceps Latham, Suppl. Gen. Syn. Bds., p. 294, 1787—type, by subs. desig. (Gray, List Gen. Bds., p. 76, 1840), *Colymbus cristatus* Linnaeus.

Dytes Kaup, Skizz. Entw. Gesch. Eur. Thierw., p. 41, 1829—type, by subs. desig. (Gray, List Gen. Subgen. Bds., 2nd ed., App., p. 15, 1841), *Colymbus cornutus* Gmelin=*C. auritus* Linnaeus.

Pedetaithya Kaup, Skizz. Entw. Gesch. Eur. Thierw., p. 44, 1829—type, by monotypy, *Colymbus subcristatus* Jacquin=*C. griseigena* Boddaert.

Proctopus Kaup, Skizz. Entw. Gesch. Eur. Thierw., p. 49, 1829—type, by monotypy, *Colymbus auritus* Linnaeus.

¹No type appears to have been designated before for the genus *Colymbus*. Baird, Brewer, and Ridgway (Water Bds. N. Amer., 2, 1884, p. 425), who are generally credited with having done so, determined *Colymbus cristatus* as genotype by the method of elimination, an action that seems to be invalid under present rules; cf. Wetmore, Bull. U. S. Nat. Mus., 133, p. 45, 1926, and Laubmann, Wiss. Erg. Deuts. Gran-Chaco Exp., Vögel, p. 46 (note 4), 1930. Slater (Ibis, 1928, p. 819) claimed that Fitzinger (Sitzungsber. Akad. Wiss. Wien, Math.-Naturw. Kl., 51, p. 320, 1865) had designated *Colymbus arcticus*, but on turning to the Preface of his paper (l.c., 21, p. 280, 1856), where he explains its scope, we find that it is intended as "eine Aufzählung sämtlicher dahin gehörigen Gattungen und Untergattungen, unter Angabe einer ihrer typischen Arten" (one of its typical species), a statement which does not seem to comply with the requirements laid down at the Boston Congress of Zoology.

- Lophailithya* Kaup, Skizz. Entw. Gesch. Eur. Thierw., pp. 72, 195, 1829—type, by monotypy, *Colymbus cristatus* Linnaeus.
- Poliocephalus* Selby, Cat. Gen. Subgen. Typ. Av., p. 47, 1840—type, by monotypy and tautonymy, *Podiceps poliocephalus* Jardine and Selby.
- Sylbeocyclus* Macgillivray, Man. Brit. Orn., 2, p. 205, 1842—type, by monotypy, *Sylbeocyclus Europaeus* Macgillivray=*Colymbus minor* Gmelin=*Colymbus ruficollis* Pallas.
- Tachybaptus* Reichenbach, Av. Syst. Nat., "1852," p. iii, 1853—type, by monotypy, *Colymbus minor* Gmelin=*Colymbus ruficollis* Pallas.
- Rollandia* Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, p. 775, 1856—type, by virtual monotypy, *Rollandia leucotis* Bonaparte=*Podiceps Rolland Quoy* and Gaimard.
- Calipareus* "Bonaparte," G. R. Gray, Hand-List Gen. Spec. Bds., 3, p. 94, 1871—type, by tautonymy, *Podiceps Kalipareus* "Garnot"=*P. occipitalis* Garnot.
- Podicipes* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 502, 1898—emendation of *Podiceps* Latham.

***Colymbus dominicus bangsi* van Rossem and Hachisuka.¹
BANGS' GREBE.**

- Colymbus dominicus bangsi* van Rossem and Hachisuka, Trans. San Diego Soc. N. H., 8, p. 323, June 15, 1937—Santiago, Lower California (type in Museum of Comparative Zoology, Cambridge, Mass.); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 28, 1945—Agiabampo and Camoa, Sonora, Mexico.
- Tachybaptus dominicus* (not *Colymbus dominicus* Linnaeus) Belding, Proc. U. S. Nat. Mus., 6, p. 351, 1883—San José, Miraflores, and Santiago, Lower California.
- Colymbus dominicus* Bryant, Proc. Calif. Acad. Sci., (2), 2, p. 250, 1889—Belding's Lower California localities.
- Colymbus dominicus brachypterus* (not of Chapman) Brewster, Bull. Mus. Comp. Zool., 41, p. 13, 1902—Santiago, Lower California (crit.); Lamb, Condor, 29, p. 155, 1927—San José del Cabo; Grinnell, Univ. Calif. Pub. Zool., 32, p. 54, 1928—cape district of Lower California; Wetmore, Proc. U. S. Nat. Mus., 93, p. 231, 1943—part, northwestern Mexico.
- Poliocephalus dominicus brachypterus* Peters, Bds. World, 1, p. 37, 1931—part, Lower California.

Range.—Arid Tropical zone of southern Lower California (Cape district) and probably other portions of northwestern Mexico.

¹ *Colymbus dominicus bangsi* van Rossem and Hachisuka: "Resembles *C. d. brachypterus* of southern Texas and Central America, but, sex for sex, bill definitely smaller; upper parts (including pileum) slightly grayer and paler; breeding plumage darker below, with spotting more prominent." Wing, 85–88, (female) 83–88; bill, 20–21, (female) 16–19 (van Rossem and Hachisuka, l.c.).

The authors refer to this form, which we have not seen, a single example from Agiobampa, coast of southern Sonora (April 21), believed to be breeding.

**Colymbus dominicus brachypterus* Chapman.¹ MEXICAN GREBE.

Colymbus dominicus brachypterus Chapman, Bull. Amer. Mus. N. H., 12, p. 256, Dec. 23, 1899—Lomita Ranch, Texas (type in the American Museum of Natural History, New York); Carriker, Ann. Carnegie Mus., 6, p. 413, 1910—Costa Rica (Laguna de Cartago, San José, Pózo Azúl de Pirris, Tenorio, Cariblanco de Sarapiquí, Azahar de Cartago, Bonfla, Buenos Aires); Bent, Bull. U. S. Nat. Mus., 107, p. 35, 1919 (life hist.); Miller, Condor, 34, p. 8, 1932—Lake Olomega, El Salvador (nesting habits); Griscom, Bull. Amer. Mus. N. H., 64, p. 124, 1932—San Lucas and Hacienda California, Guatemala; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 63, 1938—Lakes Olomega, Ilopango, and Chanmico, and Colima, El Salvador (crit., habits); Wetmore, Proc. U. S. Nat. Mus., 89, p. 528, 1941—Lake Atitlan, Guatemala; idem, l.c., 93, p. 230, 1943—Laguna del Tular, Vera Cruz, Mexico (dist. chars.; range, in part).

Podiceps dominicus (not *Colymbus dominicus* Linnaeus) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 520, 1898—part, spec. e-p', Texas, Mexico (Presidio, Tepic, Coatepec, Buczotz, Cozumel), Guatemala (Retalhuleu, Coban, Dueñas), Costa Rica (San José), Veraguas (Castillo), and Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 442, 1904—part, Texas and Mexico to Panama.

Poliocephalus dominicus brachypterus Peters, Bds. World, 1, p. 37, 1931—part, Texas to Panama; Griscom, Bull. Mus. Comp. Zool., 78, p. 291, 1935—Panama (Almirante, Canal Zone).

Range.—Southeastern Texas and south through Mexico and Central America to Panama.

Field Museum Collection.—44: Texas (Corpus Christi, 1; Nueces County, 2; Brownsville, 24; Harlingen, 1); Guatemala (Lake Atitlan, 10); El Salvador (Sitio del Nino, 2; Lake Olomega, 2); Costa Rica (Ballina, Guanacaste, 2).

**Colymbus dominicus dominicus* Linnaeus. WEST INDIAN GREBE.

Colymbus dominicus Linnaeus, Syst. Nat., 12th ed., 1, p. 223, 1766—based on "La Grebe de rivière de S. Domingue" Brisson, Orn., 6, p. 64, pl. 5, fig. 2; San Domingo (type in Réaumur Collection).

Colymbus dominicensis d'Orbigny, in Sagra, Hist. Ile de Cuba, Orn., p. 229, 1839—substitute name for *C. dominicus* Linnaeus.

Podiceps dominicus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 520, 1898—part, spec. a-d, Haiti, Jamaica, and Cuba (San Cristóbal).

¹ *Colymbus dominicus brachypterus* Chapman differs from the nominate race by shorter wings and smaller bill. Wing (males), 83-93; bill, 21-25. While this form is generally recognizable by its smaller size and slenderer bill, certain Central American birds so closely approach those from the West Indies as to be hardly separable. (Cf. also Todd, Ann. Carnegie Mus., 7, p. 408, 1911.)

Colymbus dominicus dominicus Todd, Ann. Carnegie Mus., 7, p. 408, 1911—Great Inagua and Watling Islands, Bahamas (crit., meas.); idem, l.c., 10, p. 170, 1916—Caleta Grande, Isle of Pines (meas.); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 271, 1927—Puerto Rico; idem and Swales, Bull. U. S. Nat. Mus., 155, p. 57, 1931—Hispaniola; Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 25, 1943—St. Thomas, Virgin Islands (nesting); Wetmore, Proc. U. S. Nat. Mus., 93, p. 230, 1943 (dist. chars., range).

Polioccephalus dominicus dominicus Peters, Bds. World, 1, p. 37, 1931—Greater Antilles.

Range.—Bahamas, Greater Antilles (Jamaica, Cuba, Hispaniola, Puerto Rico), and Virgin Islands (St. Thomas).

Field Museum Collection.—5: Bahama Islands (Andros, 1; Eleuthera, 1); Cuba (Oriente, 1); Haiti (Port de Paix, 1); Jamaica (Priestman's River, 1).

**Colymbus dominicus speciosus* (Lynch Arribálzaga).¹ SHORT-BILLED GREBE.

Podiceps speciosus Lynch Arribálzaga, La Ley (Buenos Aires), July 2, 1877, p. 1—Isla de Baradero, Prov. Buenos Aires (repr. in Bull. U. S. Nat. Mus., 133, p. 44, 1926).

Podiceps dominicus Wied, Beitr. Naturg. Bras., 4, (2), p. 835, 1833—eastern Brazil; Burmeister, Syst. Uebers. Th. Bras., 3, p. 463, 1856—Lagõa Santa, Minas Geraes; idem, Journ. Orn., 8, p. 268, 1860—Mendoza; idem, Reise La Plata St., 2, p. 521, 1861—Mendoza; Léotaud, Ois. Trinidad, p. 528, 1866—Trinidad; Pelzeln, Orn. Bras., 3, p. 322, 1870—Rio de Janeiro (Ilha do Marambaya), São Paulo (Taubaté, Ypanemá), Matto Grosso (Caçara), Amazonas (Forte do Rio Branco), and Pará (Cajútuba), Brazil; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 17—Lagõa Santa and Lagõa dos Pitos, Minas Geraes; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 783—Laguna of Urao, south of Mérida, Venezuela; Taczanowski, l.c., 1882, p. 49—Rumucucha, Valley of Huayabamba, Peru (downy young and egg descr.); Ihering, Rev. Mus. Paul., 4, p. 164, 1900—Cantagallo, Rio de Janeiro; idem, Cat. Faun. Braz., 1, p. 34, 1907—São Paulo (Iguapé), Goyáz (Catalão, Ponte de Ipé Arcado), Espirito Santo (Rio Doce), Matto Grosso (Porto da Faya), and Venezuela (Mérida); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 199, 1910 (range in Argentina).

Colymbus dominicus (not of Linnaeus) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 765, 1849—coast and savanna; Allen, Bull. Amer. Mus. N. H., 5, p. 151, 1893—Chapada, Matto Grosso.

¹ *Colymbus dominicus speciosus* (Lynch Arribálzaga) differs from *C. d. brachypterus* principally by longer wings, proportionately smaller bill, and slightly darker under parts.

Birds from Brazil (*brachyrhynchus*) agree with others from Buenos Aires (*speciosus*), and a single Ecuadorian specimen.

- Tachybaptus dominicus* Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 39, 1857—Cayenne; Durnford, Ibis, 1876, p. 165—near Montevideo, Uruguay; Selater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 548—Antioquia, Colombia (eggs descr.); White, l.c., 1882, p. 629—Punta Lara, Buenos Aires; Ihering, Rev. Mus. Paul., 3, p. 454, 1899—São Paulo.
- Tachybaptus dominicus* Durnford, Ibis, 1877, p. 203—Prov. Buenos Aires; idem, Ibis, 1878, p. 405—Chubut, Sengel, and Sengelen, Patagonia; Withington, Ibis, 1888, p. 473—Lomas de Zamora, Buenos Aires; Holland, Ibis, 1890, p. 425, 1892, p. 214—Est. Espartillar, Buenos Aires; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 36, 1897—San Francisco (Tarija), Bolivia; Gibson, Ibis, 1920, p. 86—Cape San Antonio, Buenos Aires.
- Podiceps dominicus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 520, 1898—part, spec. s'-z', Colombia (Antioquia), British Guiana, Brazil (Bahia, Ypanemá, Chapada), and Peru; Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 49, 1900—Vinces, Ecuador; Arribáizaga, Anal. Mus. Nac. Buenos Aires, 8, p. 159, 1902—Lago General Paz, Chubut; Scott and Sharpe, Rep. Princet. Univ. Exped. Patag., 2, Orn., p. 59, 1904—Patagonia; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 97, 1910—Bahia (Lagõa de Carnahyba; Santa Rita, Rio Preto) and Piauhy (Canto Grande, Rio Parnahyba).
- Colymbus dominicus brachyrhynchus* Chapman, Bull. Amer. Mus. N. H., 12, p. 255, Dec. 23, 1899—Chapada, Matto Grosso, Brazil (type in the American Museum of Natural History, New York); Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 26, No. 2, p. 98, 1912—Cajútuba, Pará; Chapman, Bull. Amer. Mus. N. H., 36, p. 221, 1917—Cali and Popayán, Colombia (crit.); idem, l.c., 55, p. 180, 1926—Chone, Ecuador; Wetmore, Bull. U. S. Nat. Mus., 133, p. 43, 1926—near Riacho Pilaga, Formosa (crit.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 500, 1929—Canto Grande, Rio Parnahyba, Piauhy; Naumburg, Bull. Amer. Mus. N. H., 60, p. 75, 1930—Urucúm, Matto Grosso.
- Podiceps dominicus brachyrhynchus* Hellmayr, Nov. Zool., 15, p. 101, 1908—Faz. Esperança, Goyáz, Brazil; Tremoleras, El Hornero, 2, p. 12, 1920—Uruguay (Montevideo, Canelones, Maldonado).
- Podiceps brachyrhynchus* Snethlage, Bol. Mus. Goeldi, 8, p. 70, 1914—Pará and Monte Alegre, Pará, Brazil.
- Tachybaptus brachyrhynchus* Chubb, Bds. Brit. Guiana, 1, p. 83, 1916 (various localities).
- Podiceps brachyrhynchus* Chubb, Ibis, 1919, p. 256—Eten, Lambayeque, Peru.
- Poliiocephalus dominicus brachyrhynchus* Peters, Bds. World, 1, p. 37, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 576—Trinidad and Tobago (breeding).
- Poliiocephalus dominicus speciosus* Pinto, Rev. Mus. Paul., 22, p. 15, 1938—São Paulo (Iguapé), Matto Grosso (Porto Faya, Aquidauana), Minas Geraes (Pirapora), Goyáz (Catalão, Ponte Ipé Arcado), and Espirito Santo (Rio Doce).
- Colymbus dominicus speciosus* Wetmore, Proc. U. S. Nat. Mus., 87, p. 180, 1939—Independencia, Venezuela (crit.); idem, l.c., 93, p. 231, 1943 (dist. chars., range).

Range.—Locally in Colombia (Cali, Popayán, Antioquia), western Ecuador (Vinces, Chone), Peru (Valley of Huayabamba; Eten, Lambayeque), Venezuela (Mérida region; Aragua), on the islands of Trinidad and Tobago; more generally distributed in British Guiana, Brazil, Bolivia, Paraguay, Uruguay, and the lowlands of Argentina south to Chubut.

Field Museum Collection.—25: Colombia (San Juan de Cienaga, Magdalena, 6); Ecuador (Arenillas, Oro, 2; Santa Rosa, Oro, 1); Venezuela (Maracaibo, 4; Lake Valencia, 10); Brazil (Lagõa Grande, Goyaz, 1; Vaccaria, Matto Grosso, 1).

***Colymbus rolland rolland** (Quoy and Gaimard). ROLLAND'S GREBE.

Podiceps Rolland Quoy and Gaimard, in Freycinet, *Voy. Uranie et Physic.*, Zool., livr. 4, p. 133, pl. 36, Sept., 1824—Falkland Islands (cotypes in Paris Museum; cf. Berlioz, *Bull. Mus. Hist. Nat. Paris*, [2], 1, p. 61, 1929).

Podiceps rollandi(i) Darwin, *Zool. Beagle*, 3, Birds, p. 137, 1841—part, Falkland Islands; Sclater, *Proc. Zool. Soc. Lond.*, 28, p. 389, 1860—Berkeley Sound; Abbott, *Ibis*, 1861, p. 162—Port Louis (breeding); Schlegel, *Mus. Pays-Bas*, livr. 9, *Urinatores*, p. 42, 1867—Falkland Islands (crit.); Oustalet, *Miss. Sci. Cap Horn*, 6, p. B. 233, 1891—French Bay, Falkland Islands; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 199, 1910—Falkland Islands; Brooks, *Bull. Mus. Comp. Zool.*, 61, p. 135, 1917—Egg Harbour and San Carlos, East Falkland Island (downy young descr.); Wace, *El Hornero*, 2, p. 194, 1921—Falkland Islands; Paessler, *Journ. Orn.*, 70, p. 437, 1922—part, Port Stanley, Falkland Islands; Bennett, *Ibis*, 1926, p. 310—Falkland Islands.

Rollandia leucotis (Cuvier MS.) Bonaparte, *Compt. Rend. Acad. Sci. Paris*, 42, p. 775, 1856—substitute name for *Podiceps rolland* Quoy and Gaimard.

Podicipes rollandi Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 527, 1898—Falkland Islands; Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, *Orn.*, p. 68, 1904—Falkland Islands (crit.).

Podicipes dominicus (not *Colymbus dominicus* Linnaeus) Vallentin, *Mem. Proc. Manchester Lit. Phil. Soc.*, 48, No. 23, p. 24, 1904—East Falkland Island.

Colymbus rolland Peters, *Bds. World*, 1, p. 38, 1931 (range).

Range.—Falkland Islands.¹

Field Museum Collection.—1: Falkland Islands (San Carlos, East Falkland Island, 1).

***Colymbus rolland chilensis** (Lesson).² CHILEAN GREBE.

¹ Ten additional specimens examined.

² *Colymbus rolland chilensis* (Lesson), though differing from the Falkland Islands bird by much smaller size and duller as well as darker rufous under parts in nuptial plumage, is clearly its continental representative.

- Podiceps chilensis* (Garnot MS.) Lesson,¹ Man. d'Orn., 2, p. 358, June, 1828—Concepción, Chile (location of type unrecorded); Darwin, Zool. Beagle, 3, Birds, p. 137, 1841—near Buenos Aires and Tierra del Fuego; Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 464, 1847—Chile; Frauenfeld, Verh. Zool. Bot. Ges. Wien, 10, Abh., p. 633, 1860—Lake Aculeo, Santiago, Chile; Sclater, Proc. Zool. Soc. Lond., 1867, p. 340—Chile; Morrison, Ibis, 1939, p. 645—Lake Junín, Peru.
- Podiceps americanus* (Garnot MS.) Lesson,¹ Man. d'Orn., 2, p. 358, June, 1828—Concepción Bay, Chile; Garnot, Voy. Coquille, Zool., 1, (2), livr. 13, p. 599, Nov. 21, 1829—Concepción Bay, Chile, and Brazil (Rio Grande and "St. Paul"); Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 465, 1847—Concepción (ex Garnot); Boeck, Naumannia, 1855, p. 511—Valdivia, Chile; Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 42, 1867—part, spec. nos. 3–5, Chile (crit.); Philippi, Anal. Univ. Chile, 31, p. 284, 1868—southern provinces of Chile; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 235, 1891—Tierra del Fuego (Ushuaia, Bahía Orange, Packsaddle, Gable, and Gordon Islands); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1902, (2), p. 55—Ingapirca, Junín, Peru (crit., egg descr.); Ihering, Cat. Faun. Braz., 1, p. 34, 1907 (range); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 199, 1910 (range in Argentina); idem, l.c., 28, p. 190, pl. 4, 1916—Hac. Charles, Buenos Aires (descr. of eggs and downy young); Sanzin, El Hornero, 1, p. 148, 1918—Mendoza; Chubb, Ibis, 1919, p. 256—Pampa Aullagas, Oruro, Bolivia; Barros, Rev. Chil. Hist. Nat., 23, p. 17, 1919—Nilahue, Curico, Chile; Gibson, Ibis, 1920, p. 85—Cape San Antonio, Buenos Aires; Tremoleras, El Hornero, 2, p. 12, 1920—Uruguay (Montevideo, Canelones, Colonia); Daguerre, l.c., p. 261, 1922—Rosas, Buenos Aires; Paessler, Journ. Orn., 70, p. 437, 1922—Coronel, Chile (breeding habits); Housse, Rev. Chil. Hist. Nat., 29, p. 227, 1925—Isla la Mocha, Arauco, Chile; Jaffuel and Pirion, l.c., 31, p. 114, 1927—Marga-Marga, Chile; Barros, l.c., p. 264, 1927—Laguna de Torca, Curicó, Chile (food).
- Podiceps chiliensis* Garnot,¹ Voy. Coquille, Zool., 1, (2), livr. 14, p. 601, Jan. 9, 1830—Concepción Bay, Chile, and Rio Grande, Brazil.
- Podiceps albicollis* Lesson, Traité d'Orn., livr. 8, p. 594, 1831—no locality (descr. of immature; the cotypes in the Paris Museum are from Brazil [=Rio Grande do Sul], coll. A. de Saint-Hilaire; cf. Pucheran, Rev. Mag. Zool., [2], 3, p. 571, 1851, and Berlioz, Bull. Mus. Hist. Nat. Paris, [2], 1, p. 61, 1929).
- Podiceps rollandi*(i) (not *P. rolland* Quoy and Gaimard) Darwin, Zool. Beagle, 3, Birds, p. 137, 1841—part, near Straits of Magellan and coast of Chile; Fraser, Proc. Zool. Soc. Lond., 11, p. 119, 1843—coast of Chile; Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 463, 1847—Chile; Hartlaub, Naumannia, 1853, p. 218—Valdivia, Chile; Boeck, l.c., 1855, p. 511—Valdivia; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 140, 1865—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, p. 340—Chile; Philippi, Anal. Univ.

¹ These three names were evidently based on the very same specimens, some obtained during the voyage of the *Coquille* in Concepción Bay, Chile, and others sent to the Paris Museum by Auguste de Saint-Hilaire from Rio Grande do Sul, Brazil. The latter were subsequently again described by Lesson as *P. albicollis*. *P. chilensis* has priority over all the others.

- Chile, 31, p. 284, 1868—central provinces of Chile; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 146—Conchitas, Buenos Aires; *idem*, Ibis, 1868, p. 189—Sandy Point; *idem*, Ibis, 1869, p. 284—Halt Bay, Straits of Magellan; *idem*, Proc. Zool. Soc. Lond., 1869, p. 158—Laguna de Tungasuca, Cuzco, Peru; Sclater, *l.c.*, 1872, p. 549—Rio Negro; Allen, Bull. Mus. Comp. Zool., 3, p. 359, 1876—Carapata, Lake Titicaca, Peru; Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 17—Laguna de Tungasuca, Cuzco, Peru; Durnford, Ibis, 1877, p. 45—Chubut Valley; Reed, Anal. Univ. Chile, 49, p. 568, 1877—Cauquenes, Colchagua, Chile; Gibson, Ibis, 1880, p. 164—Cape San Antonio, Buenos Aires (breeding notes); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 57, 1881—Rio Sauce Chico, Rio Colorado, and Rio Negro; Sharpe, Proc. Zool. Soc. Lond., 1881, p. 17—Straits of Magellan (Portland Bay, Peckett Harbour, Picton Channel, Swallow Bay, Puerto Rio Frio) and Chile (Talcaguano); White, *l.c.*, 1882, p. 629—Alto Paraná, Misiones; *idem*, *l.c.*, 1883, p. 43—Cosquin, Córdoba; Salvin, *l.c.*, p. 432—Talcaguano, Chile; Barrows, Auk, 1, p. 317, 1884—Concepción del Uruguay, Entre Ríos; Allen, Bull. Amer. Mus. N. H., 2, p. 111, 1889—Lake Titicaca; Holland, Ibis, 1891, p. 16; *idem*, Ibis, 1892, p. 214—Est. Espartillar, Buenos Aires; Kerr, Ibis, 1892, p. 151—lower Pilcomayo; Aplin, Ibis, 1894, p. 212—Arroyo Grande, Uruguay; Lataste, Act. Soc. Scient. Chile, 3, p. cxv, 1894—Cauquenes, Colchagua, Chile; Waugh and Lataste, *l.c.*, 4, p. clxxiii, 1895—San Alfonso (Quillota), Valparaiso, Chile; Lataste, *l.c.*, 5, p. lxii, 1895—Llohué, Maule, Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 651, 1898—Valparaiso and Lago Llanquihue, Chile; Paessler, Journ. Orn., 70, p. 437, 1922—part, Straits of Magellan and Chile (Ancud, Corral); Bullock, Rev. Chil. Hist. Nat., 33, p. 208, 1929—Angol, Malleco, Chile.
- Podiceps leucotis* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 563—Junín, Peru.
- Podiceps rollandi* Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 24, 1895—Santa Rosa, Salta; Lane, Ibis, 1897, p. 313—Lago Llanquihue and Rio Bueno (Valdivia), Chile; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 152, 1899—coast of Rio Grande do Sul, Brazil.
- Podiceps americanus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 524, 1898—Peru to Magellan Straits (monog.); Salvadori; Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 633, 1900—Punta Arenas; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 214, 1902—Rio Salí and Lules, Tucumán; Lönnberg, Ibis, 1903, p. 459—Tatarenda, Tarija, Bolivia; Nicoll, Ibis, 1904, p. 48—Gray's Harbour, Smythe's Channel, Magellan Straits; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, p. 63, 1904—Cape Fairweather, Rio Gallegos, and Arroyo Eke; Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 223, 1909—Lake Titicaca, Bolivia; Grant, Ibis, 1911, p. 476—Los Yngleses, Ajó, Buenos Aires.
- Colymbus americanus* Hartert and Venturi, Nov. Zool., 16, p. 255, 1909—Argentina (La Soledad, Entre Ríos; Ignacio Correos and Barracas al Sud, Buenos Aires; Laguna de Malvinas, Tucumán).
- Colymbus chilensis* Peters, Bull. Mus. Comp. Zool., 65, p. 290, 1923—Huanuluan and Neluan, Rio Negro; Wetmore, Bull. U. S. Nat. Mus., 133, p. 45, 1926—Buenos Aires (Est. Los Yngleses, Carhué, Guaminí) and

Rio Negro (General Roca); idem, Univ. Calif. Pub. Zool., 24, p. 411, 1926—Arroyo Seco, Rio Negro, and Lago Rivadavia, Chubut; Peters, Bds. World, 1, p. 38, 1931 (range); Brodtkorb, Proc. Biol. Soc. Wash., 50, p. 33, 1937—west of Puerto Casado, Paraguay; Pinto, Rev. Mus. Paul., 22, p. 16, 1938 (range).

Colymbus rolland chilensis Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 46, 1930—Est. La Germania, Santa Fé; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 418, 1932—Chile (Lago Gualletué, Cautin; Riñihue, Valdivia; Lagrèze Canal, Guaitecas Islands).

Range.—From central Peru (Junín), Bolivia, Paraguay and extreme southern Brazil (Rio Grande do Sul) south through Uruguay, Argentina, and Chile to Tierra del Fuego.¹

Field Museum Collection.—25: Peru (Lake Junín, 5; Cailloma, Arequipa, 1; Puno, Puno, 2); Bolivia (Vacas, Cochabamba, 3); Paraguay, Chaco (V. Militar, 1; Laguna General Diaz, 110 km. west of Puerto Casado, 1); Chile (Riñihue, Valdivia, 1; Gualletué Lake, Cautin, 1; Lagrèze Canal, Guaitecas Islands, 1); Argentina (Concepción, Tucumán, 8; Rio Gallegos, Santa Cruz, 1).

***Colymbus taczanowskii* (Berlepsch and Stolzmann).² TACZANOWSKI'S GREBE.**

Podiceps taczanowskii Berlepsch and Stolzmann, Ibis, (6), 6, p. 109, pl. 4, Jan., 1894—Ingapirca, Lake Junín, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 98, 1927); iidem, Proc. Zool. Soc. Lond., 1902, (2), p. 55—Ingapirca and Maraynioc (eggs descr.); Morrison, Ibis, 1939, p. 645—Lake Junín, Peru.

Podiceps kalipareus (not of Lesson and Garnot) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 563—Junín (in part).

Podiceps kalipareus Taczanowski, Orn. Pér., 3, p. 493, 1886—Peru (Junín, in part).

Podiceps taczanowskii Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 538, 1898—Lake Junín.

Colymbus taczanowskii Peters, Bds. World, 1, p. 38, 1931—Lake Junín.

Range.—Puna zone of central Peru (Lake Junín, Maraynioc).

¹ Birds from Peru and Bolivia average slightly larger, but the divergency is insignificant.

² *Colymbus taczanowskii* (Berlepsch and Stolzmann): Nearest to *C. occipitalis*, but bill much longer, basally decidedly wider, and plumbeous violet tipped with white (not uniform black); tarsi and toes much longer, stouter, and olive grayish or brownish instead of black; auricular tufts much longer, silky ashy-brown; front part of the pileum darker, more grayish, and blending gradually into the black nuchal region, which extends down onto the upper back; cheeks and throat pure white like the remainder of the under parts as in *C. o. juninensis*, etc. Wing, (one female) 124; tarsus, 43; bill, 30.

**Colymbus occipitalis juninensis* (Berlepsch and Stolzmann).¹
JUNIN GREBE.

Podiceps caliparaeus juninensis Berlepsch and Stolzmann, *Ibis*, (6), 6, p. 112 (in text), Jan., 1894—Lake Junín, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, *Ann. Zool. Mus. Pol. Hist. Nat.*, 6, p. 98, 1927); Chapman, *Bull. U. S. Nat. Mus.*, 117, p. 49, 1921—La Raya, Urubamba, Peru.

Podiceps calipareus (not *P. kalipareus* Lesson and Garnot) Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1869, p. 158—Laguna de Tungasuca, Cuzco, Peru; *idem*, l.c., 1876, p. 17—Laguna de Tungasuca, Cuzco, Peru; Taczanowski, *Orn. Pér.*, 3, p. 493, 1886—Peru (in part); (?) Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 199, 1910—part, Cumbre de Calchaqufes, Tucumán; Lönnberg and Rendahl, *Ark. Zool.*, 14, No. 25, p. 20, 1922—Lake Mica, Antisana, Ecuador; Berlioz, *Bull. Mus. Hist. Nat. Paris*, 33, p. 354, 1927—Antisana, Ecuador (crit.).

Podiceps occipitalis (not of Garnot) Orton, *Amer. Natur.*, 4, p. 716, 1871—Lake Mica, Ecuador.

Podiceps kalipareus Taczanowski, *Proc. Zool. Soc. Lond.*, 1874, p. 563—Junín, Peru (in part).

Podiceps caliparaeus Allen, *Bull. Mus. Comp. Zool.*, 3, p. 359, 1876—Moho, Lake Titicaca; Sclater, *Proc. Zool. Soc. Lond.*, 1891, p. 137—Lake Huasco, Tarapacá, Chile.

Podiceps caliparius Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1879, p. 641—Potosí, Bolivia.

Podiceps callipareus Philippi, *Ornis*, 4, p. 160, 1888—Antofagasta, Chile.

Podicipes calipareus Lane, *Ibis*, 1897, p. 313—Huasco and Sacaya, Tarapacá, Chile; Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 536, 1898—part, spec. k, Lake Huasco, Tarapacá.

Podicipes calipareus subsp. *a* *P. juninensis* Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 538, 1898—Laguna de Tungasuca, Peru.

Podicipes juninensis Salvadori and Festa, *Boll. Mus. Zool. Torino*, 15, No. 368, p. 49, 1900—Lake Culebrillas (Azuay), Lake Yaguarcocha, and Valle-vicioso, Ecuador.

Podiceps caliparaeus juninensis Ménégau, *Bull. Soc. Phil. Paris*, (10), 1, p. 223, 1909—Lake Poopo, Oruro, Bolivia.

Podiceps juninensis Chubb, *Ibis*, 1919, p. 257—Potosí, Bolivia.

Colymbus calipareus juninensis Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 180, 1926—Lake Mica, Antisana, Ecuador.

Colymbus occipitalis juninensis Peters, *Bds. World*, 1, p. 38, 1931 (range); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 19, p. 418, 1932—Lake

¹*Colymbus occipitalis juninensis* (Berlepsch and Stolzmann): Similar to the nominate race, but differs by darker (sooty rather than drab gray) pileum, less extensive black nuchal patch, pure white (instead of drab gray), throat and subocular region, and whitish tip to the lower mandible, while the auricular tufts are drab instead of yellowish isabella color. Wing, 130–135; bill, 20–22.

Additional material examined.—Peru: Tungasuca, Cuzco, 1.—Bolivia: Potosí, 2.—Chile: Lake Huasco, Tarapacá, 1.

Huasco, Tarapacá, Chile (crit.); Zotta, El Hornero, 6, p. 105, 1935—Sierra del Cajón, Jujuy, and Salta, Argentina; Morrison, Ibis, 1939, pp. 463, 645—Talahuarra and Santa Inez, Huancavelica, and Lake Junín, Peru; Peters and Griswold, Bull. Mus. Comp. Zool., 92, p. 287, 1943—Maraynioc, Junín, Peru (disc., tax. chars.); de Schauensee, Not. Nat. Acad. Nat. Sci. Phila., 144, p. 2, 1944—Cumbal, Narino, Colombia (breeding).

Range.—Puna zone of Colombia (Purace, Cauca; Cumbal, Narino), Ecuador, Peru; northern Chile (Tarapacá and Antofagasta), and northwestern Argentina (Jujuy, Salta, and ?Tucumán).

Field Museum Collection.—23: Colombia (Purace, Cauca, 3); Ecuador (Cerro Antisana, Pichincha, 1; Cordillera Oriental, Pichincha, 8); Peru (Cailloma, Arequipa, 3); Bolivia (Vacas, Cochabamba, 8).

***Colymbus occipitalis occipitalis** (Garnot). CRESTED GREBE.

Podiceps occipitalis Garnot, Ann. Sci. Nat., 7, p. 50, 1826—Falkland Islands (location of type unrecorded and unknown); Lesson, Man. d'Orn., 2, p. 356, June, 1828—Rio Bougainville, Falkland Islands; Garnot, Voy. Coquille, Zool., 1, (2), livr. 12, p. 544, July 4, 1829—Falkland Islands; Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 41, 1867—Falkland Islands and Chile.

Podiceps kalipareus Lesson and Garnot, Voy. Coquille, Zool., 1, (2), livr. 5, pl. 45, Oct., 1827; Darwin, Zool. Beagle, 3, Birds, p. 136, 1841—Bahia Blanca (Buenos Aires) and Falkland Islands; Fraser, Proc. Zool. Soc. Lond., 11, p. 119, 1843—bay of Valparaiso, Chile; Yarrell, l.c., 15, p. 55, 1847—Chile (eggs descr.); Des Murs, in Gay, Hist. Fis. Pol. Chile, Zool., 1, p. 464, 1847—coast of Chile; Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 132, 1853—near Santiago; Philippi, Anal. Univ. Chile, 31, p. 284, 1868—Chile.

*Podiceps calipareus*¹ Lesson, Voy. Coquille, Zool., 1, (2), livr. 16, p. 727, May, 1830—Rio Bougainville, Soledad Bay, near Port Louis, Falkland Islands (orig. descr.; location of type unrecorded); Hartlaub, Naumannia, 1853, p. 218—Valdivia, Chile; Sclater, Proc. Zool. Soc. Lond., 28, p. 339, 1860—San Salvador Bay, Falkland Islands; Abbott, Ibis, 1861, p. 162—East Falkland Island; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 140, 1865—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, p. 340—Chile; Sclater and Salvin, Ibis, 1869, p. 284—Chiloé, Chile; Reed, Anal. Univ. Chile, 49, p. 569, 1877—Cauquenes, Colchagua, and Cordillera of Santiago, Chile; Durnford, Ibis, 1877, p. 45—north of Chubut, Patagonia; idem, Ibis, 1878, p. 405—Chubut Valley; (?) White, Proc. Zool. Soc. Lond., 1883, p. 43—Cosquin, Córdoba; Sclater and Hudson, Arg. Orn., 2, p. 204, 1889—Argentina; Reed, Anal. Univ. Chile, 93, p. 212, 1896—Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 651, 1898—Talcaguano and Valparaiso, Chile;

¹ By subsequent authors variously spelled *caliparius*, *caliparaeus*, and *caliparoeus*.

Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 70, 1904—Patagonia; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 199, 1910—Patagonia (Rio Negro, Chubut), (?)Tucumán (Cumbre de Calchaqués), (?)Córdoba, and Buenos Aires (Bahía Blanca); Gibson, Ibis, 1920, p. 84—Cape San Antonio, Buenos Aires; Paessler, Journ. Orn., 70, p. 438, 1922—Coronel and Talcaguano, Chile; Gigoux, Rev. Chil. Hist. Nat., 28, p. 84, 1924—Puerto Ingles, Atacama, Chile; Bennett, Ibis, 1926, p. 310—Falkland Islands (breeding); Barros, Rev. Chil. Hist. Nat., 30, p. 264, 1926—Riecillos, Aconcagua, Chile (food); Jaffuel and Pirion, l.c., 31, p. 114, 1927—Marga-Marga, Valparaiso, Chile; Bullock, l.c., 33, p. 203, 1929—Angol, Malleco; Barros, l.c., p. 356, 1929—Cordillera of Aconcagua; Bros, l.c., p. 381, 1929—Marga-Marga, Valparaiso, Chile.

Podiceps calipareus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 536, 1898—part, spec. a-i, l-w, Chile (Talcaguano), Straits of Magellan, Chubut, and Falkland Islands.

Podiceps calipareus calipareus Wace, El Hornero, 2, p. 194, 1921—Falkland Islands.

Colymbus calipareus Hartert and Venturi, Nov. Zool., 16, p. 256, 1909—Valle del Lago Blanco, Chubut, and Viedma, Rio Negro.

Colymbus calipareus calipareus Peters, Bull. Mus. Comp. Zool., 65, p. 290, 1923—Huanuluan, Neluan, and Lago Nahuel Huapi, Rio Negro.

Colymbus occipitalis occipitalis Wetmore, Bull. U. S. Nat. Mus., 133, p. 46, 1926—Lago Epiquen, Buenos Aires (wintering); idem, Univ. Calif. Pub. Zool., 24, p. 411, 1926—Bariloche, Rio Negro; Peters, Bds. World, 1, p. 38, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 417, 1932—Chile.

Range.—Chile, from Atacama south to the Straits of Magellan and Tierra del Fuego, and southern Argentina north to the Rio Negro, wintering north to Buenos Aires Province (Lago Epiquen, etc.);¹ Falkland Islands.²

Field Museum Collection.—1: Chile (Lake Malleco, Malleco, 1).

**Colymbus auritus* Linnaeus. HORNED GREBE.

Colymbus auritus Linnæus, Syst. Nat., 10th ed., 1, p. 135, 1758—based principally on Fauna Svec., No. 123, Sweden; Bent, Bull. U. S. Nat. Mus., 107, p. 20, 1919 (life hist., range); Peters, Bds. World, 1, p. 38, 1931 (range); Bradlee, Proc. Bost. Soc. N. H., 39, p. 285, 1931—Bermudas (winter visitor); Taverner, Ann. Carnegie Mus., 23, p. 13, 1934—Churchill, Manitoba (breeding); Dixon, Fauna Nat. Parks U. S., 3, p. 29, 1938—Mount

¹ The subspecific status of the birds found breeding by Budin in a lake of the Cumbre de Calchaqués (alt. 4,300 meters), Tucumán, remains in doubt. They are more likely to be *C. o. juninensis*, which has been ascertained to breed in the neighboring provinces of Salta and Jujuy. The same uncertainty surrounds the single male secured by White at Cosquin, Córdoba.

² Two poor Falkland specimens are slightly larger than the average of continental birds, but do not seem to be otherwise different. A good series is required to settle their relationship.

- McKinley, Alaska (breeding); Porsild, *Canad. Field Nat.*, 57, p. 21, 1943—Mackenzie Delta (breeding).
- Colymbus cornutus* Gmelin, *Syst. Nat.*, 1, (2), p. 591, 1789—based on “Eared Dobchick” Edwards (*Nat. Hist. Bds.*, 2, p. 96, pl. 96, left fig.) and “Horned Grebe” Pennant (*Arct. Zool.*, 2, p. 497) and Latham (*Gen. Syn. Bds.*, 3, (1), p. 287, pl. 91); “in America septentrionali”=Hudson Bay.
- Colymbus obscurus* Gmelin, *Syst. Nat.*, 1, (2), p. 592, 1789—based on “La petite Grèbe” Brisson (*Orn.*, 6, p. 56), “Black and White Dobchick” Edwards (*Nat. Hist. Bds.*, 2, p. 96, pl. 96, right fig.), “Dusky Grebe” Pennant (*Arct. Zool.*, 2, p. 498), etc.; England and New York.
- Colymbus comosus* Bonnaterre, *Tabl. Enc. Méth.*, *Orn.*, 1, livr. 47, p. 56, 1791—based on “Horned Grebe” Pennant (*Arct. Zool.*, 2, p. 497) and *Colymbus auritus* Forster (*Phil. Trans.*, 62, 1772, p. 420, no. 22); Hudson Bay.
- Podiceps ambiguus* Lesson, *Traité d’Orn.*, livr. 8, p. 595, 1831—locality unknown (type in Paris Museum; cf. Pucheran, *Rev. Mag. Zool.*, (2), 3, p. 571, 1851; crit.).
- Podiceps cornutus* Holböll, *Naturhist. Tidskr.*, 4, p. 371, 1843—Nanortalik, Greenland.
- Podiceps sclarus* Bonaparte, *Compt. Rend. Acad. Sci. Paris*, 42, p. 774, 1856—substitute name for *C. cornutus* auct., *obscurus* Gmelin, etc.
- Podicipes auritus* Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 527, 1898 (monog.); Winge, *Medd. Grøn.*, 21, p. 130, 1898—Greenland (several records); Hørring and Salomonsen, *l.c.*, 131, (5), p. 14, 1941—Greenland (four records).

Range.—Breeds in North America from the lower Yukon, northern Mackenzie, and southwestern Ungava south to the northern tier of the United States (also in northern and eastern Europe and northern Asia); winters south to southern California, the Gulf coast and Florida (the Mediterranean, and southern China); occasional in Greenland (several records) and Bermudas (several records).

Field Museum Collection.—59: Alaska (St. Michael, 1; St. George Island, 1); British Columbia (Vancouver Island, 1; Okanagan, 2); Saskatchewan (Prince Albert, 5; Lake Johnston, 1); Washington (Clallam Bay, 2; Port Townsend, 4); Oregon (Netarts, 1); California (Hyperion, 1; Tiburon, 1; Monterey, 1; Pacific Beach, 1); North Dakota (Nelson County, 4; Rolette County, 3; Towner County, 3); Wisconsin (Beaver Dam, 8; Lake Koshkonong, 1); Illinois (Chicago, 1; Highland Park, 1); Indiana (Bluffton, 1); Quebec (Magdalen Islands, 1; Grosse Isle, 1); Maine (Calais, 1); Massachusetts (Duxbury, 1; Cohasset, 1); Connecticut (Guilford, 1; Stony Creek, 1; West Haven, 2); New York (Hindsberg, 1); North Carolina, Dare County (Pea Island, 1; Manteo, 1); Florida (Amelia Island, 2; Santa Rosa Island, 1).

***Colymbus nigricollis californicus** (Heermann). AMERICAN EARED GREBE.

Podiceps californicus Heermann, Proc. Acad. Nat. Sci. Phila., 7, p. 179, "Oct., 1854" [=Apr. 12, 1855]—California=San Pedro, Los Angeles County (type in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 260, 1932); Sclater, Proc. Zool. Soc. Lond., 1864, p. 179—Valley of Mexico; Salvin, Ibis, 1866, p. 200—Lake of Dueñas, Guatemala.

Podiceps (Proctopus) californicus Coues, Proc. Acad. Nat. Sci. Phila., 1862, p. 231 (crit.).

Podiceps auritus var. *californicus* Lawrence, Mem. Bost. Soc. N. H., 2, p. 319, 1874—Guaymas, Sonora.

Colymbus nigricollis californicus Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 179, 1886—Laguna de Epatlan, Puebla, and Jalapa, Vera Cruz, Mexico; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 74, 1907—Lake Amatitlan and Lake Atitlan, Guatemala; Bent, Bull. U. S. Nat. Mus., 107, p. 27, 1919 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 54, 1928—Lower California (winter visitant); Peters, Bds. World, 1, p. 39, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 124, 1932—San Lucas, Guatemala; Wetmore, Proc. U. S. Nat. Mus., 89, p. 528, 1941—Lake Atitlan, Guatemala; van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 28, 1945—Gulf of California; Niceforo, Caudasia, 3, (14), p. 368, 1945—Colombia (Laguna La Herrera and Laguna Fuquene, eastern Andes).

Podiceps californicus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 535, 1898 (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 442, 1904—Mexico (Guaymas, Guanajuato, Guadalajara, Valley of Mexico, Laguna de Epatlan, Jalapa) and Guatemala (Atitlan, Lake of Dueñas, Cubulco).

Range.—Breeds from central British Columbia, Great Slave Lake, and Manitoba south to southern California, northern Arizona, and northern Iowa; winters from California to Lower California, Mexico, Guatemala and Colombia.

Field Museum Collection.—51: Alberta (Beaverhill Lake, 1); California (Eureka, 2; Wasco, 1; Redwood, 3; Carmel Bay, 1; Pacific Grove, 5; Monterey, 2; San Clemente Island, 1; Los Angeles County, 3; Pacific Beach, 1; San Diego, 2; La Patera Point, 1; Santa Barbara, 1); Nevada (Washoe, 1); Colorado (Loveland, 1); North Dakota (Nelson County, 1; Ramsey County, 6; Towner County, 10); Mexico (La Paz, Lower California, 2); Guatemala (Laguna, Amatitlan, 3; Lake Atitlan, Chimaltenango, 3).

***Colymbus grisegena holböllii** (Reinhardt). HOLBOELL'S GREBE.

Podiceps holböllii (i) Reinhardt, Vidensk. Medd. Naturhist. Foren., 1853, p. 76—Nanortalik, Julianehaab District, Greenland (type in Copenhagen Museum); idem, Ibis, 1861, p. 14—Greenland; idem, Vidensk. Medd. Naturhist. Foren., 1881, p. 187—Julianehaab District, Greenland.

- Podiceps rubricollis* (not of Latham, 1787) Holböll, Naturhist. Tidskr., 4, p. 371, 1843—Avertaminut, near Julianehaab, Greenland.
- Podiceps cooperi* Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacific, 9, p. 893 (in text), 1858—Shoalwater Bay, Washington (cotypes in U. S. National Museum;=young); Coues, Proc. Acad. Nat. Sci. Phila., 1862, p. 230 (crit.).
- Podiceps (Pedetaithya) holbölli* Coues, Proc. Acad. Nat. Sci. Phila., 1862, p. 231 (crit.).
- Podiceps affinis* Salvadori, Atti Soc. Ital. Sci. Nat., 8, p. 385, 1865—North America (type in Turin Museum;=young).
- Podicipes griseigena* subsp. *a* *P. holboelli* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 542, 1898 (monog.).
- Podicipes griseigena* var. *major* Winge, Medd. Grøn., 21, p. 130, 1898—Greenland.
- Colymbus holboelli* Bent, Bull. U. S. Nat. Mus., 107, p. 9, 1919 (life hist., range).
- Colymbus griseigena holbölli* Peters, Bds. World, 1, p. 40, 1931 (range); (?)Eaton, Proc. Bost. Soc. N. H., 39, p. 286, 1931—Bermuda Islands (sight record); Porsild, Canad. Field Nat., 57, p. 21, 1943—Mackenzie Delta (breeding); Speirs, North and Crosby, Wilson Bull., 56, p. 206, 1944—Burlington, Ontario (nesting).
- Podicipes griseigena holboellii*(?) Salomonsen, Medd. Grøn., 93, (6), p. 14, 1935—Julianehaab, Frederiksdal and Akuliarusad, Greenland (also all Greenland records); Hørring and Salomonsen, l.c., 131, (5), p. 15, 1941—Greenland (additional records).

Range.—Breeds in North America from the lower Yukon, northern Mackenzie, and northern Ungava south to northern Washington, southwestern Minnesota and Lake Ontario (and in northeastern Asia from Kamchatka to Ussuriland); winters south to southern California, the Ohio Valley, and North Carolina (also in China and Japan); occasional in Greenland.

Field Museum Collection.—27: Alaska (Fort Yukon, 1; St. Michael, 1; Tocatna, 3); British Columbia (Okanagan, 1); Washington (Port Townsend, 4); Montana (Three Forks, 1); North Dakota (Pierce County, 2; Ramsey County, 5; Rolette County, 4); Massachusetts (Duxbury, 1); Connecticut (Sherman, 1; East Hartford, 1; Danbury, 1; Stony Creek, 1).

***Colymbus griseigena griseigena* Boddaert. RED-NECKED GREBE.**

Colymbus griseigena Boddaert, Tabl. Pl. Enl., p. 55, 1783—based on Daubenton, Pl. Enl. 931; no locality=France. Designated by Hartert, 1912.

Podiceps griseigena griseigena Peters, Bds. World, 1, p. 40, 1931 (range); Wetmore and others, Auk, 62, p. 437, 1945—Sukkertoppen, Greenland (admitted to Amer. list).

Podiceps griseigena griseigena Salomonsen, Medd. Grønln., 93, (6), p. 15, 1935—Sukkertoppen, Greenland; Hørring and Salomonsen, Medd. Grønln., 131, (5), p. 14, 1941—Julianehaab, Greenland (Feb., 1934).

Range.—Breeds from Holland to western Siberia, in winter to Mediterranean and Turkestan. Accidental in Greenland (Sukkertoppen and Julianehaab).

Genus **AECHMOPHORUS** Coues

Aechmophorus Coues, Proc. Acad. Nat. Sci. Phila., 1862, p. 229—type, by orig. desig., *Podiceps occidentalis* Lawrence.

***Aechmophorus major** (Boddaert). GREAT GREBE.

Colymbus major Boddaert, Tabl. Pl. Enl., p. 24, 1783—based on “Grèbe de Cayenne” Daubenton, Pl. Enl., pl. 404, fig. 1; “Cayenne,” errore.

Colymbus cayennensis Gmelin, Syst. Nat., 1, (2), p. 593, 1790—based on “Grand Grèbe” Buffon, Hist. Nat. Ois., 8, p. 242, and Daubenton, Pl. Enl., pl. 404, fig. 1; “Cayenne.”

Podiceps cayanus Latham, Ind. Orn., 2, p. 781, 1790—based on the same references.

Colymbus bicornis Lichtenstein, Verz. Doubl. Zool. Mus. Berlin, p. 88, 1823—Montevideo, Uruguay (type in Berlin Museum).

Podiceps leucopterus King, Zool. Journ., 4, No. 13, p. 101, 1828—Straits of Magellan (type evidently lost); Jardine and Selby, Ill. Orn., Part 7, pl. 107, Dec., 1830—Port Desire, Straits of Magellan (fig. of type); Hartlaub, Naumannia, 1853, p. 218—Valdivia, Chile; Boeck, l.c., 1855, p. 511—Rio Valdivia and Laguna de “Clarquitue” [=Llanquihue], Chile; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 205, 1855—coast of Chile; Frauenfeld, Verh. Zool. Bot. Ges. Wien, 10, Abh., p. 639, 1860—Lake Aculeo, Santiago, Chile; Sclater, Proc. Zool. Soc. Lond., 1867, p. 340—Chile; Reed, Anal. Univ. Chile, 49, p. 568, 1877—Laguna de Cauquenes, Colchagua; Lataste, Extr. Proc.-Verb. Soc. Linn. Bordeaux, 1923, p. 172—Lake Aculeo, Chile; idem, Rev. Chil. Hist. Nat., 29, p. 135, 1925—Chile (nesting habits).

Podiceps longirostris (not *Colymbus longirostris* Bonnaterre, 1791) Bonaparte, Icon. Faun. Ital., 1, Introd. Uccelli, p. 1, 1841—“Sardinia,” errore (type in coll. of Sig. Durazzo, Genova).¹

Podiceps chilensis (not of Lesson) Fraser, Proc. Zool. Soc. Lond., 11, p. 119, 1843—coast of Chile; Yarrell, l.c., 15, p. 54, 1847—Chile (eggs descr.).

Podiceps bicornis Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 132, 1853—Valdivia and Algodon Bay, Chile; Burmeister, Journ. Orn., 8, p. 267, 1860—Rio Paraná, near Santa Fé; idem, Reise La Plata Staat., 2, p. 520, 1861—same locality.

Podiceps major Schlegel, Mus. Pays-Bas, livr. 9, Urinatores, p. 38, 1867—Paraguay and Chile (Valdivia); Sclater and Salvin, Ibis, 1870, p. 500—St. Nicholas Bay, Straits of Magellan; Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 244—Chimbote, Ancachs, Peru (Nov.); Gibson, Ibis,

¹ Cf. Salvadori, Faun. Ital., 2, p. 308, 1872.

1880, p. 164—Cape San Antonio, Buenos Aires (breeding notes); Salvin, Proc. Zool. Soc. Lond., 1883, p. 432—Coquimbo Bay, Chile; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 232, 1891—Patagonia (Puerto Deseado; Misioneros) and Tierra del Fuego (Gable Island; Lapataia); Chubb, Ibis, 1919, p. 257—Eten, Lambayeque, Peru (Oct. 14).

Aechmophorus major Durnford, Ibis, 1876, p. 165—Banda Oriental and near Buenos Aires; idem, l.c., 1877, p. 203—near Montevideo, Uruguay, and Baradero, Buenos Aires; Lane, l.c., 1877, p. 313—Laguna Llanquihue, Chile; Durnford, l.c., 1878, p. 405—Patagonia (Chubut Valley, Sengel, Sengelen, Lake Colguapé); White, Proc. Zool. Soc. Lond., 1883, p. 433—La Plata, Buenos Aires; Barrows, Auk, 1, p. 316, 1884—Concepción del Uruguay, Entre Ríos; Withington, Ibis, 1888, p. 473—Lomas de Zamora, Buenos Aires; Holland, l.c., 1890, p. 425; idem, l.c., 1892, p. 213—Est. Espartillar, Buenos Aires (breeding); Aplin, l.c., 1894, p. 211—Uruguay (near Castilla Rocks, Montevideo, etc.); Reed, Anal. Univ. Chile, 93, p. 212, 1896—Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 652, 1898—Chile (Villa Rica, Laguna Llanquihue; Punta Arenas and Susanne Cove, Straits of Magellan); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 549, 1898—"Brazil (Rio Negro),"¹ Chile (Coquimbo), Straits of Magellan, and Buenos Aires (Lomas de Zamora, Rio Paraná); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 152, 1899—Rio Grande do Sul, Brazil; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 73, 1904—Rio Mayer, Patagonia; Ihering, Cat. Faun. Braz., 1, p. 35, 1907 (range); Crawshay, Bds. Tierra del Fuego, p. 152, 1907—Useless Bay; Berlepsch, Nov. Zool., 15, p. 314, 1908—"Cayenne" (Buffon); Hartert and Venturi, l.c., 16, p. 255, 1909—Barracas al Sud, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 200, 1910 (range in Argentina); Grant, Ibis, 1911, p. 476—Los Ynglases, Ajó, Buenos Aires; Gibson, Ibis, 1920, p. 83—Cape San Antonio, Buenos Aires; Tremoleras, El Hornero, 2, p. 12, 1920—Uruguay (Montevideo, Canelones, Maldonado); Daguerre, l.c., p. 261, 1922—Rosas, Buenos Aires; Paessler, Journ. Orn., 70, p. 439, 1922—Coronel, Chile; Peters, Bull. Mus. Comp. Zool., 65, p. 290, 1923—San Antonio Oeste, Rio Negro; Reed, Rev. Chil. Hist. Nat., 29, p. 189, 1925—Laguna de Curacaví, Chile (food); Barros, l.c., 30, p. 264, 1926—Laguna de Vichuquen, Curicó, Chile (food); Wetmore, Bull. U. S. Nat. Mus., 133, p. 48, 1926—Buenos Aires (Rio Paraná, Lavalle, Cape San Antonio), Rio Negro (General Roca), and Uruguay (Arroyo Carrasco, Lazcano); idem, Univ. Calif. Pub. Zool., 24, p. 411, 1926—San Antonio Oeste, Bariloche, and Lago Nahuel Huapi, Rio Negro; Friedmann, Bull. Mus. Comp. Zool., 68, p. 143, 1927—La Plata River; Jaffuel and Pirion, Rev. Chil. Hist. Nat., 31, p. 114, 1927—Marga-Marga, Valparaiso, Chile; Bros, l.c., 33, p. 381, 1928—Marga-Marga; Peters, Bds. World, 1, p. 40, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 416, 1932—Chile (Coquimbo to Straits of Magellan); Pinto, Rev. Mus. Paul., 22, p. 16, 1938 (range); Morrison, Ibis, 1940, p. 256—Mauillin River, Laguna de Llanquihue, and Lago Todos los Santos, Chile.

Colymbus salvadorii Stejneger, Bull. U. S. Nat. Mus., 29, p. 13, 1885—new name for *Podiceps longirostris* Bonaparte, preoccupied.

¹ No doubt by confusion with the Rio Negro, Patagonia.

Range.—Chile; north central Argentina (Córdoba, Chaco, Entre Rios), Paraguay and extreme southern Brazil (Rio Grande do Sul) south to Tierra del Fuego; accidental on the coast of Peru (Chimbote, Ancachs; Eten, Lambayeque).¹

Field Museum Collection.—1: Chile (Lake Gualletue, Cautin, 1).

***Aechmophorus occidentalis** (Lawrence). WESTERN GREBE.

Podiceps occidentalis Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacif., 9, pp. 892, 894, 1858—Pacific coast from Washington Territory to California (type, from Fort Steilacoom, Washington, in U. S. National Museum).

Podiceps clarkii Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacif., 9, pp. 892, 895, 1858—California and New Mexico (type, from San Pablo Bay, California, in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 261, 1932).

Aechmophorus occidentalis Coues, Proc. Acad. Nat. Sci. Phila., 1862, p. 229 (crit.); Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 179, 1886—Laguna de Epatlan, Puebla, Mexico; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 551, 1898 (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 441, 1904—western North America and Mexico (Chihuahua; Valley of Mexico; Chapala, Jalisco; Laguna de Epatlan, Puebla); Bent, Bull. U. S. Nat. Mus., 107, p. 1, 1919 (life hist.); Gregory, Auk, 40, p. 526, 1923—Putnam County, Illinois; Grinnell, Univ. Calif. Pub. Zool., 32, p. 54, 1928—Lower California (winter visitor); Peters, Bds. World, 1, p. 40, 1931 (range); Bailey and Brandenburg, Condor, 43, p. 73, 1941—Saguache County, Colorado (nesting); Bellrose and Low, Auk, 61, p. 468, 1944—Fulton County, Illinois; van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 29, 1945—Colorado River delta.

Aechmophorus clarkii Coues, Proc. Acad. Nat. Sci. Phila., 1862, pp. 229, 404 (crit.; nupt. plumage).

Range.—Breeds from British Columbia, southern Saskatchewan, and southern Manitoba to northern California, Utah, Colorado, and northern North Dakota; winters from southern British Columbia south through California to Mexico (Jalisco, Mexico, Puebla).

Field Museum Collection.—41: British Columbia (Vancouver, 1; Okanagan, 1); Saskatchewan (Maple Creek, 3); Washington (Port Townsend, 4); North Dakota (Nelson County, 1; Ramsey County, 11; Towner County, 1); Utah (Brigham, 1); California (Eureka, 1; Hyperion, 2; Monterey, 2; Carmel Bay, 1; Moss Landing, 2; Pacific Grove, 7; Pacific Beach, 1; Orange County, 2).

Genus **CENTROPELMA** Sclater and Salvin

Centropelma Sclater and Salvin, Exot. Orn., p. 189, 1869—type, by monotypy,

Podiceps micropterus Gould.

¹Buffon's record from "Cayenne" is evidently erroneous, and the locality "Rio Negro, Brazil," doubtless due to confusion with the Patagonian river of that name.

***Centropelma micropterum** (Gould). SHORT-WINGED GREBE.

Podiceps micropterus Gould, Proc. Zool. Soc. Lond., 1868, p. 220—Lake Titicaca, Bolivia (type in the British Museum); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 538, 1898—Lake Titicaca; Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 222, 1909—Lake Titicaca.

Centropelma micropterum Sclater and Salvin, Exot. Orn., p. 189, pl. 95, 1869—Lake Titicaca; Allen, Bull. Mus. Comp. Zool., 3, p. 359, 1876—Lake Titicaca (habits, food); idem, Bull. Amer. Mus. N. H., 2, p. 112, 1889—Lake Titicaca; Berlepsch and Stolzmann, Ornith., 13, p. 133, 1906—Puno, Peru; Peters, Bds. World, 1, p. 40, 1931 (range); Bond and de Schauensee, Proc. Acad. Nat. Sci. Phila., 95, p. 171, 1943 (range and nesting).

Range.—Lake Titicaca, on the confines of Peru and Bolivia.

Field Museum Collection.—2: Peru (Lake Titicaca, 2).

Genus **PODILYMBUS** Lesson

Podilymbus Lesson, Traité d'Orn., livr. 8, p. 595, 1831—type, by monotypy, *Podiceps carolinensis* Latham=*Colymbus podiceps* Linnaeus.

Hydroka Nuttall, Man. Orn. U. S. and Canada, Water Birds, p. 259, 1834—type, by monotypy, *Podiceps carolinensis* Latham=*Colymbus podiceps* Linnaeus.

Nexiteles Gloger, Gem. Hand- u. Hilfsb. Naturg., livr. 7, p. 473, 1842—substitute name for *Podilymbus* Lesson, same type.

***Podilymbus podiceps podiceps** (Linnaeus). PIED-BILLED GREBE.

Colymbus podiceps Linnaeus, Syst. Nat., 10th ed., 1, p. 136, 1758—based on "The Pied-billed Dopechick" Catesby, Nat. Hist. Carolina, 1, p. 91, pl. 91; Carolina.

Colymbus ludovicianus Boddaert, Tabl. Pl. Enl., p. 56, Dec., 1783—based on "Grèbe de la Louisiane" Daubenton, Pl. Enl., pl. 943, Louisiana.

Podiceps carolinensis Latham, Ind. Orn., 2, p. 785, 1790—substitute name for *Colymbus podiceps* Linnaeus.

Podiceps anisodactylus Reichenbach, Vollst. Naturg. Schwimmvögel, Pygopodes, Colymbinae, pl. 13 [Suppl. 3, pl. 8], fig. 760, circa 1848—no locality stated (type in Dresden Museum).

Podilymbus lineatus Heermann, Proc. Acad. Nat. Sci. Phila., 7, "October," 1854, p. 179, pub. Apr. 12, 1855—California (type in collection of Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 22, and Grinnell, Univ. Calif. Pub. Zool., 38, p. 261, 1932).

Podilymbus podicipes Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 553, 1898—part, spec. a-o' (United States), (?)p'-t' (Dueñas, Guatemala), y', z' (Castillo, Veraguas), a"-c" (Bermuda Islands); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 444, 1904 (in part).

Podilymbus podicipes [sic] Carriker, Ann. Carnegie Mus., 6, p. 414, 1910—Bonilla, Costa Rica.

Podilymbus podiceps Bent, Bull. U. S. Nat. Mus., 107, p. 39, 1919 (life hist.); Murphy and Chapin, Amer. Mus. Nov., 384, p. 3, 1929—Terceira, Azores (Oct. 24, 1927); Taverner, Ann. Carnegie Mus., 23, p. 13, 1934—Churchill, Manitoba; Soper, Auk, 63, p. 15, 1946—Baffin Island (first record).

Podilymbus podiceps podiceps Peters, Bds. World, 1, p. 41, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 291, 1935—Veraguas (Lagunas de Castillo), Almirante, and Canal Zone, Panama (winter visitant); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 29, 1945—Opodepe, Sonora, Mexico (April).

Range.—Breeds from British Columbia, southern Mackenzie, Quebec, and New Brunswick south locally to northeastern Mexico; winters south to Cuba and Panama; accidental in the Azores (Terceira, Oct. 24, 1927) and Baffin Island.

Field Museum Collection.—72: British Columbia (Okanagan, 1); Alberta (Powder Lake, 1); California (Trinidad, 1; Dos Palos, 1; Palmdale, 1); Idaho (Coeur d'Alene, 2); Colorado (unspecified, 1; Loveland, 1); Texas (Brownsville, 7); North Dakota (Nelson County, 2; Ramsey County, 3; Towner County, 4); Iowa (Cedar Rapids, 1); Wisconsin (Beaver Dam, 10); Illinois (Libertyville, 1; Fox Lake, 3; Diamond Lake, 1; Glenview, 1; Chicago, 1; Worth, 1); Mississippi (Vanceleave, 1); Massachusetts (Easton, 1); Connecticut (Stamford, 1; East Hartford, 2; New Haven County, 16); New York (Orleans County, 1); Georgia (Roswell, 1); Florida (Amelia Island, 2); Mexico (Tampico, 1); Guatemala (Lake Amatitlan, 1); Cuba (Artemisa, 1).

****Podilymbus podiceps antillarum* Bangs.¹ ANTILLEAN PIED-BILLED GREBE.**

(?)*Colymbus thomensis* Gmelin, Syst. Nat., 1, (2), p. 592, 1790—based on "La Grèbe de l'Isle St. Thomas" Brisson, Orn., 6, p. 58, 1760, which, in its turn, rests upon "Espèce de Plongeon ou Mergus major leucophaeus" Feuillee, Journ. Observ. Phys., éd. 1725, p. 391; St. Thomas.²

Podilymbus podiceps antillarum Bangs, Proc. New Engl. Zool. Cl., 4, p. 89, March 31, 1913—Bueycito, Cuba (type in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 171, 1930); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 272,

¹ *Podilymbus podiceps antillarum* Bangs: Similar in coloration to the nominate race, but with generally shorter wings (120–128 in males, 112–118 in females). This is rather an ill-defined race, whose claims to recognition need substantiation by a good series of properly sexed breeding birds. Certain presumably breeding individuals from Mexico and Central America agree in size with those from the West Indies, but others are quite as large as North American birds.

² *Colymbus thomensis* Gmelin may be an earlier name, but there are discrepancies in Feuillee's description, which cannot be reconciled with the characters of *P. p. antillarum*.

1927—Puerto Rico (crit.); idem and Swales, Bull. U. S. Nat. Mus., 155, p. 59, 1931—Hispaniola (crit.); Peters, Bds. World, 1, p. 41, 1931 (range); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 65, 1938—Lake Olomega and Lake Ilapongo, El Salvador (crit.); Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 25, 1943—Virgin Islands (St. Thomas, St. John and Water Islands; nesting).

Podilymbus podicipes Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 553, 1898—part, spec. dⁿ-kⁿ, Cuba, Jamaica, Montserrat, Grenada, Barbados.

Podilymbus podiceps (not *Colymbus podiceps* Linnaeus) Todd, Ann. Carnegie Mus., 10, p. 170, 1916—Isle of Pines, Cuba (crit.).

Range.—Breeds in the Greater and Lesser Antilles, the Virgin Islands, and probably in parts of Mexico and Central America.

Field Museum Collection.—5: Hispaniola (Santo Domingo, Dominican Republic, 1; Port au Prince, Haiti, 1; Port de Paix, Haiti, 1); Virgin Islands (St. Croix, 1); Lesser Antilles (Anguilla, 1).

****Podilymbus podiceps antarcticus* (Lesson).¹ SOUTHERN PIED-BILLED GREBE.**

Podiceps antarcticus Lesson, Rev. Zool., 5, p. 209, 1842—Valparaiso, Chile (type in coll. of R. P. Lesson, its present location unknown); idem, Echo du Monde Sav., 9, 2nd sér., No. 11, col. 253, Aug., 1842—Valparaiso.

Podiceps ludovicianus (not *Colymbus ludovicianus* Boddaert) Wied, Beitr. Naturg. Bras., 4, (2), p. 830, 1833—Villa Belmonte, Bahia, Brazil (breeding); Burmeister, Syst. Uebers. Th. Bras., 3, p. 463, 1856—Brazil (Belmonte) and La Plata.

Podilymbus brevirostris Gray and Mitchell, Gen. Birds, 3, [p. 633], pl. 172, 1846—no locality given (cotypes, from Chile, collected by T. Bridges, in British Museum, examined).

Podilymbus antarcticus Hartlaub, Naumannia, 1853, pp. 213, 218—Valdivia, Chile (crit.); Sclater, Proc. Zool. Soc. Lond., 1867, pp. 337, 340—Chile; Sclater and Salvin, l.c., 1868, p. 177—Tambo Valley, Arequipa, Peru; Lane, Ibis, 1897, p. 314—Laguna Llanquihue and Rio Bueno, Valdivia, Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 650, 1898—Laguna Llanquihue, Chile; Paessler, Journ. Orn., 70, p. 438, 1922—Coronel, Chile (breeding); Bullock, Rev. Chil. Hist. Nat., 33, p. 210, 1929—Angol, Malleco, Chile (breeding).

Podilymbus carolinensis (not *Podiceps carolinensis* Latham) Pelzeln, Reise Novara, Zool., 1, Vögel, p. 140, 1865—Chile; Léotaud, Ois. Trinidad, p. 529, 1866—Trinidad.

Podilymbus podiceps (not *Colymbus podiceps* Linnaeus) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 252—Lake Valencia, Venezuela; iidem,

¹ *Podilymbus podiceps antarcticus* (Lesson): Very similar to the nominate race, but dorsal surface slightly more grayish, under parts more variegated with dusky, and bill somewhat deeper as well as more robust; the wings are frequently, though not constantly, slightly longer. Birds from Chile, Argentina, and various parts of Brazil agree fairly well.

Ibis, 1869, p. 284—Chiloé, Chile; *idem*, l.c., 1870, p. 500—Compañía, Coquimbo, Chile; Pelzeln, Orn. Bras., 3, p. 322, 1870—Rio Tieté and Ypanemá, São Paulo, Brazil; Withington, Ibis, 1888, p. 473—Lomas de Zamora, Buenos Aires (breeding); Kerr, l.c., 1892, p. 151—near Fortín Nueve, lower Pilcomayo; Holland, l.c., p. 214—Est. Espartillar, Buenos Aires; Hartert, Nov. Zool., 5, p. 502, 1898—Lake Yaguarcocha, Ecuador; Ihering, Rev. Mus. Paul., 3, p. 455, 1899—São Paulo; Kerr, Ibis, 1901, p. 236—Paraguayan Chaco; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 214, 1902—Lules, Tucumán; Ihering, Cat. Faun. Braz., 1, p. 35, 1907—São Paulo (Iguapé), Minas Geraes (Vargem Alegre), and Rio Grande do Sul (São Lourenço, Piratiny); Hartert and Venturi, Nov. Zool., 16, p. 256, 1909—Barracas al Sud, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 200, 1910—Tucumán, Córdoba, and Buenos Aires (Barracas al Sud); Grant, Ibis, 1911, p. 477—Los Ynglases, Ajó, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 28, p. 191, pls. 4, 5, 1916—Est. Charles, Buenos Aires (descr. of nest, eggs, and downy young); Chapman, Bull. Amer. Mus. N. H., 36, p. 221, 1917—Cali (Cauca) and La Herrera (Bogotá Savanna), Colombia; Sanzin, El Hornero, 1, p. 148, 1918—Mendoza; Chubb, Ibis, 1919, p. 257—Trujillo, Peru (Jan. 5); Barros, Rev. Chil. Hist. Nat., 23, p. 17, 1919—Ñilahue, Curicó, Chile (breeding); Gibson, Ibis, 1920, p. 86—Cape San Antonio, Buenos Aires; Tremoleras, El Hornero, 2, p. 12, 1920—Montevideo, Uruguay; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 21, 1922—La Carolina, Ecuador.

Podilymbus podiceps Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 553, 1898—part, spec. l'—a''', Peru (Tambo Valley), Chile (Rio Bueno, Laguna Llanquihue), Argentina (Lomas de Zamora, Quilmes), and Brazil (Pelotas, São Paulo, Bahia, "Pará"); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 79, 1904—Buenos Aires (crit.).

Podilymbus podiceps antarcticus Wetmore, Bull. U. S. Nat. Mus., 133, p. 49, 1926—Chile (Concon), Uruguay (Lazcano), and Argentina (crit.); *idem*, Univ. Calif. Pub. Zool., 24, p. 411, 1926—Lago Menendez, Chubut; Chapman, Bull. Amer. Mus. N. H., 55, p. 181, 1926—Chone (Dec. 17) and Lago San Pablo (March 20), Ecuador; Peters, Bds. World, 1, p. 41, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 420, 1932—Chile (Coquimbo to Llanquihue) (crit.); Belcher and Smooker, Ibis, 1934, p. 577—Trinidad and Tobago (breeding); Bullock, Rev. Chil. Hist. Nat., 39, p. 251, 1935—Isla la Mocha, Chile; Van Tyne, Auk, 54, p. 379, 1937—Barro Colorado, Panama (breeding; crit.); Pinto, Rev. Mus. Paul., 22, p. 17, 1938—Maranhão (Bõa Vista), Goyáz (Inhúmas), Minas Geraes (Vargem Alegre), São Paulo (Iguapé), and Rio Grande do Sul (Piratiny, São Lourenço).

Podilymbus podiceps podiceps Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 500, 1929—Ceará (Varzea Formosa; Juá, near Iguatú; Quixada).

Range.—Breeds in Panama (Canal Zone) and locally in Colombia, Venezuela, Trinidad, Tobago, Ecuador, coast of Peru, Brazil (from Ceará to Rio Grande do Sul), Uruguay, Chile, and northern Argentina (south to Mendoza, Córdoba, and Buenos Aires).

Field Museum Collection.—17: Venezuela (Maracaibo, 2); Ecuador (Arenillas, Oro, 1; Lago San Pablo, 1); British Guiana (Georgetown, 1; Buxton, 1); Brazil, Ceará (Quixada, 1; Iguatú, 1; Varzea Formosa, 1); Paraguay, Chaco (Laguna General Diaz, 110 km. west of Puerto Casado, 2); Chile (Rio Petorca, Aconcagua, 1; Batuco, Santiago, 1; Rio Neuquen, Cautin, 2; Calsero, 1); Argentina (Papin, near Bonifacio, 1).

**Podilymbus gigas* Griscom.¹ GIANT PIED-BILLED GREBE.

Podilymbus gigas Griscom, Amer. Mus. Nov., 379, p. 5, Oct. 17, 1929—Panajachel, Lake Atitlán, Guatemala (type in Dwight Collection, in the American Museum of Natural History, New York); Peters, Bds. World, 1, p. 41, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 125, 1932—Lake Atitlán (habits); Wetmore, Proc. U. S. Nat. Mus., 89, p. 528, 1941—Lake Atitlán (crit., meas.).

Podilymbus sp. Salvin, Ibis, 1866, p. 200—Lake Atitlán.

Podilymbus podiceps (not *Colymbus podiceps* Linnaeus) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 553, 1898—part, spec. u'-x', Lake Atitlán (spec. examined); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 444, 1904—part, Lake Atitlán, Guatemala.

Range.—Confined to Lake Atitlán, Guatemala.²

Field Museum Collection.—2: Guatemala (Lake Atitlán, 2).

Order PROCELLARIIFORMES

Family DIOMEDEIDAE. Albatrosses

Genus DIOMEDEA Linnaeus

Diomedea Linnaeus, Syst. Nat., 10th ed., 1, p. 132, 1758—type, by subs. desig. (G. R. Gray, List Gen. Bds., p. 78, 1840), *Diomedea exulans* Linnaeus.

¹ *Podilymbus gigas* Griscom: Differs from *P. p. podiceps* by larger, particularly deeper bill; heavier feet with longer, stouter toes; darker, blackish rather than deep mouse gray, upper part of the head and hind neck; much more extensive black gular area, with the white lateral border, so conspicuous in *podiceps*, merely suggested by fringes; darker, mouse gray rather than drab-gray, sides of the head; and darker under parts caused by the dusky basal parts of the feathers showing through more distinctly. The wings are on average slightly longer. Three of four specimens—all in nuptial plumage with deep black throat—have the foreneck and sides of neck between light-drab and drab, while in the remaining individual these parts are just as buffy as in *podiceps*. Wing, (females) 125, 126, (males) 136, 136; bill, (females) 21, 22, (males) 23, 23; depth of bill, 15, 16, 16, 17.

Probably a local race of *P. podiceps*.

Four additional specimens from Lake Atitlán examined.

² Dr. Hellmayr unfortunately did not investigate the subspecific status of the specimens from Lake Dueñas, where Salvin found breeding colonies of the Pied-billed Grebe.—B.C.

Albatrus Brisson, Orn., 1, p. 54; 6, p. 126, 1760—type, by monotypy, “*Albatrus*” Brisson=*Diomedea exulans* Linnaeus.

Phoebastria Reichenbach, Av. Syst. Nat., p. v, “1852” (=1853)—type, by monotypy, *Diomedea brachyura* Temminck=*Diomedea albatrus* Pallas.

Thalassarche Reichenbach, Av. Syst. Nat., p. v, “1852” (=1853)—type, by monotypy, *Diomedea melanophris* Temminck.

Thalassogeron Ridgway, in Baird, Brewer, and Ridgway, Mem. Mus. Comp. Zool., 13, pp. 345, 357, 1884—type, by orig. desig., *Diomedea culminata* Gould.

Nealbatrus Mathews, Bds. Austr., 2, p. 274, Sept. 20, 1912—type, by orig. desig., *Diomedea chlororhynchos* Gmelin.

Diomedella Mathews, Bds. Austr., 2, p. 275, Sept. 20, 1912—type, by orig. desig., *Diomedea cauta* Gould.

Rhotionia Murphy, Bull. Amer. Mus. N. H., 37, p. 861, Dec. 10, 1917—type, by orig. desig., *Diomedea (Rhotionia) sanfordi* Murphy=*Diomedea epomophora* Lesson.

****Diomedea exulans exulans* Linnaeus. WANDERING ALBATROSS.**

Diomedea exulans Linnaeus, Syst. Nat., 10th ed., 1, p. 132, 1758—primarily based upon “The Albatross” Edwards, Nat. Hist. Uncom. Bds., 1, p. 88, pl. 88; “intra tropicos Pelagi et ad Cap. b. Spei”=Cape of Good Hope (ex Edwards); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 157, 1891—Bahía Orange, Tierra del Fuego; Salvin, Cat. Bds. Brit. Mus., 25, p. 441, 1896 (in part, excl. of Australian and New Zealand waters); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 73, 1906—Bay of Islets, South Georgia; Wilkins, Ibis, 1923, p. 489—South Georgia (breeding); Mathews, Discovery Rep., 1, p. 563, pls. 48, 49, and 50 (fig. 1), 1929—South Georgia (nesting, life hist.); Lowe and Kinneear, Brit. Antar. (Terra Nova) Exp., 4, p. 162, 1930 (plumages); Peters, Bds. World, 1, p. 42, 1931 (in part).

Diomedea spadicea Gmelin, Syst. Nat., 1, (2), p. 568, 1789—based on “Chocolate Albatross” Latham, Gen. Syn. Bds., 3, (1), p. 308; South Seas, lat. 37° S., long. 50° W.=off Montevideo (cf. Mathews, Ibis, 1933, p. 544).

Diomedea adusta Tschudi, Journ. Orn., 4, pp. 157, 161, 1856—lat. 33° 21' S., long. 89° W.=west of Juan Fernández Islands, off Chile (no type extant).

Diomedea exulans exulans Dabbene, El Hornero, 3, p. 333, 1926—South Georgia (monog.); Mathews, Ibis, 1934, p. 815 (synon.); idem, Nov. Zool., 39, p. 152, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 1, p. 538, 1936 (monog.); Philippi, El Hornero, 6, p. 238, 1936; idem, Bol. Mus. Nac. Santiago, 16, p. 63, 1938—coast off Arica, Tacna, Chile.

Diomedea exulans georgia Mathews, Bull. Brit. Orn. Cl., 53, p. 214, May 27, 1933—South Georgia (type in National Museum, Buenos Aires); idem, Ibis, 1934, p. 816—South Atlantic; idem, Nov. Zool., 39, p. 153, 1934—South Georgia.

Range.—Breeds on northerly antarctic islands, such as South Georgia (the Prince Edward and Crozet Islands, Kerguelen, etc.) and visits the waters of both coasts of southern South America.

Field Museum Collection.—1: Chile (Cape Horn, Magallanes, 1).

Diomedea exulans dabbenena Mathews.¹ TRISTAN WANDERING ALBATROSS.

Diomedea chionopectera alexanderi (not *Thalassogeron chrysostoma alexanderi* Mathews, 1916) Dabbene, El Hornero, 3, p. 338, Aug., 1926—100 miles off coast of Buenos Aires Province, lat. 38° 30' S., long. 56° W. (type in National Museum, Buenos Aires).

Diomedea dabbenena Mathews, Bull. Brit. Orn. Cl., 50, p. 11, Oct. 31, 1929—new name for *Diomedea chionopectera alexanderi* Dabbene, preoccupied.

Diomedea exulans dabbenena Murphy, Ocean. Bds. S. Amer., 1, p. 571, 1936 (monog.).

Range.—Breeds on Gough Island and Tristan d'Acunha, and ranges widely to near the Atlantic coast of South America.

Diomedea epomophora² *epomophora* Lesson. ROYAL ALBATROSS.

Diomedea epomophora Lesson, Ann. Sci. Nat., 6, p. 95, 1825—no locality indicated, but probably Australian waters;³ Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 166, 1930 (crit.); Peters, Bds. World, 1, p. 42, 1931 (in part); Murphy, Ocean. Bds. S. Amer., 1, p. 575, 1936 (monog.; in part); Philippi, El Hornero, 8, p. 17, 1941—Bay of San Vicente, Talcaguano, Chile.

Diomedea epomophora Tschudi, Journ. Orn., 4, pp. 156, 161, 1856—lat. 33° 21' S., long. 89° W.=west of Juan Fernández Islands, off Chile.

Diomedea regia Buller, Trans. N. Zeal. Inst., 23, "1890," p. 234, May, 1891—Otago and Campbell Island, New Zealand (in part); Salvin, Cat. Bds. Brit. Mus., 25, p. 443, 1896—New Zealand seas.

Diomedea (Rhothonia) sanfordi Murphy, Bull. Amer. Mus. N. H., 37, p. 861, Dec. 10, 1917—forty miles off Corral, Chile (type in Brewster-Sanford Collection, American Museum of Natural History, New York).

Diomedea epomophora epomophora Mathews, Nov. Zool., 39, p. 153, 1934 (synon., range).

¹ *Diomedea exulans dabbenena* Mathews: Differs from the nominate race in smaller size, notably in much shorter bill. Wing, 607–616; tail, 171–188; bill, 144–150.

² *Diomedea epomophora* Lesson, in spite of general likeness, appears to be specifically distinct from *D. exulans*. Its principal characters are the rounded naricornes, the much more prominent nasal tubes, the shape of the nostrils (circular in outline and directed forward instead of obliquely upward), the posteriorly somewhat pointed culminicorn, the white (not brownish gray) downy plumage, and the suppression of all juvenile or immature stages of plumage (cf. Lowe and Kinnear, Brit. Antar. [Terra Nova] Exp., Zool., 4, pp. 165, 166, 1930).

³ Lesson's description was evidently based on field observation, no type being in existence. The species does not figure in the catalogue of the birds collected by Lesson during the voyage of *La Coquille* (cf. Voy. Coquille, Zool., 1, pp. 633–785). Mathews suggests Campbell Island as type locality. However, this island had not been visited by the *Coquille*. Lesson's description is none too good and misses the salient character of the nostrils, but as the author was well acquainted with the allied *D. exulans*, it probably refers to the Royal Albatross.

Range.—Breeds in New Zealand (Campbell Island, Forty-four Islands, Adams Island) and flies east to within Chilean waters (once taken forty miles west of Corral).

Diomedea epomophora longirostris Mathews.¹ LONG-BILLED ROYAL ALBATROSS.

Diomedea epomophora longirostris Mathews, Bull. Brit. Orn. Cl., **54**, p. 112, March 7, 1934—South Atlantic Ocean (location of type not stated); idem, Nov. Zool., **39**, p. 153, 1934—Atlantic Ocean (Tropic of Capricorn to Cape Horn); Pinto, Rev. Mus. Paul., **22**, p. 18, 1938—near Ilha dos Alcatrazes, São Paulo.

Diomedea regia (not of Buller) Berg, Commun. Mus. Nac. Buenos Aires, **1**, p. 284, 1901—Mar del Plata, Buenos Aires (March, 1900).

Diomedea epomophora subsp. Dabbene, El Hornero, **3**, p. 340, 1926—coast of Buenos Aires Province, Mar del Plata, and Cape Horn (descr., crit.).

Diomedea epomophora (not of Lesson) Murphy, Ocean. Bds. S. Amer., **1**, p. 575, 1936—part, South Atlantic and Fuegian region.

Range.—Atlantic Ocean, from the coast of Brazil (Ilha dos Alcatrazes, São Paulo) to Cape Horn; breeds probably in the interior of Tierra del Fuego.

***Diomedea irrorata** Salvin. GALAPAGOS ALBATROSS.

Diomedea irrorata Salvin, Proc. Zool. Soc. Lond., 1883, p. 430—Callao Bay, Peru (type in coll. of British Museum); idem, Cat. Bds. Brit. Mus., **25**, p. 445, pl. 8, 1896—Callao Bay; Rothschild and Hartert, Nov. Zool., **6**, p. 192, 1899—Hood Island, Galápagos (breeding; descr.; eggs); idem, l.c., **9**, p. 414, 1902—Hood Island; Snodgrass and Heller, Proc. Wash. Acad. Sci., **5**, p. 240, 1904—Hood Island (eggs descr.); Godman, Monog. Petrels, p. 330, pl. 93, 1910 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), **2**, p. 75, pls. 6–12, 1918—Hood Island (distr., habits, meas., eggs); Chapman, Bull. Amer. Mus. N. H., **55**, p. 184, 1916—La Plata Island, Ecuador, and off Talara, Peru; Loomis, Auk, **36**, p. 370, pls. 14–16, 1919 (variation); Fisher and Wetmore, Proc. U. S. Nat. Mus., **79**, art. 10, p. 26, 1931—Hood Island; Swarth, Occ. Pap. Calif. Acad. Sci., **18**, p. 33, 1931—Hood Island; Peters, Bds. World, **1**, p. 43, 1931 (range); Murphy, Ocean. Bds. S. Amer., **1**, p. 530, 1936 (monog.).

Phoebastria irrorata Mathews, Nov. Zool., **39**, p. 154, 1934 (range).

¹ *Diomedea epomophora longirostris* Mathews is stated to differ from the nominate race by its longer bill (178–182 mm., according to the describer). However, the bill varies a good deal in typical birds from New Zealand waters, Lowe and Kinnear (Brit. Antar. [Terra Nova] Exp., Zool., **4**, p. 167, 1930) giving its length for a breeding adult from Campbell Island as 183, while in one from New Zealand it measures even 185 mm. On the other hand, the type of *D. sanfordi*, from off the Chilean coast, has a bill-measurement of only 150 mm. It would thus appear that the variation is individual rather than geographical. This conclusion is also supported by Murphy's figures (Ocean. Bds. S. Amer., **1**, p. 583) for good series from both the South Atlantic and the New Zealand regions.

Range.—Breeds on Hood Island in the Galápagos Archipelago and ranges to the coasts of Ecuador and Peru.

Field Museum Collection.—2: Galápagos Islands (Hood Island, 1); Peru (Talara, 1).

****Diomedea albatrus* Pallas. SHORT-TAILED ALBATROSS.**

Diomedea albatrus Pallas, Spic. Zool., 1, fasc. 5, p. 28, 1769—off Kamchatka, Bering Sea (type in Leningrad Museum); Salvin, Cat. Bds. Brit. Mus., 25, p. 444, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 74, 1918—coasts of California, Lower California, and Alaska (Atka); Peters, Bds. World, 1, p. 43, 1931 (range).

Diomedea chinensis Temminck, Man. d'Orn., 2nd ed., 1, p. cx, 1820—based on Daubenton, Pl. Enl., pl. 963; China Sea.

Diomedea brachiura Temminck, Nouv. Rec. Pl. Col., livr. 75, Genus *Diomedea*, p. [11], 1827—based on "Albatros de la Chine" Daubenton, Pl. Enl., pl. 963.

Phoebastria albatrus Bent, Bull. U. S. Nat. Mus., 121, p. 6, 1922 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 64, 1928—waters around Lower California; Mathews, Nov. Zool., 39, p. 153, 1934 (syn., range).

Range.—North Pacific Ocean and Bering Sea, east to the coast of North America from Alaska (Norton Sound) to Lower California (breeding on Sulphur Island, Bonin Group, and [?]Wake Island).

Field Museum Collection.—2: Mexico (San Martin, Lower California, 2).

***Diomedea immutabilis* Rothschild. LAYSAN ALBATROSS.**

Diomedea immutabilis Rothschild, Bull. Brit. Orn. Cl., 1, p. xlvi, June 1, 1893—Laysan Island (type in Tring Collection [cf. Hartert, Nov. Zool., 33, p. 346, 1926], now in the American Museum of Natural History, New York); idem, Avif. Laysan, p. 57, pls., 1893—Laysan; Salvin, Cat. Bds. Brit. Mus., 25, p. 446, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 83, 1918—high seas off southern California; Grinnell, Univ. Calif. Pub. Zool., 32, p. 64, 1928—between San Gerónimo and Guadalupe Islands, off Lower California (Mar. 19, 1897); Peters, Bds. World, 1, p. 43, 1931 (range); idem, Condor, 40, p. 90, 1938—San Nicolas Island, California.

Phoebastria immutabilis Bent, Bull. U. S. Nat. Mus., 121, p. 9, 1922 (life hist.); Mathews, Nov. Zool., 39, p. 154, 1934 (range).

Range.—Central North Pacific east to the coast of California (San Nicolas Island) and Lower California (breeding on Laysan and Midway Islands).

***Diomedea nigripes** Audubon. BLACK-FOOTED ALBATROSS.

Diomedea nigripes Audubon, Orn. Biog., 5, p. 327, 1839—Pacific Ocean, lat. 30° 44' N., long. 146° W. (type apparently lost);¹ Streets, Bull. U. S. Nat. Mus., 7, p. 31, 1877 (crit., plumages); Salvin, Cat. Bds. Brit. Mus., 25, p. 445, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 71, 1918 (disc. plumages); Grinnell, Univ. Calif. Pub. Zool., 32, p. 64, 1928—off coast of Lower California; Miller, Condor, 42, p. 229, 1940 (plumages, food, terr.).

Diomedea gibbosa Gould, Ann. Mag. Nat. Hist., 13, p. 361, 1844—North Pacific (type in coll. of Zoological Society of London;=adult).

Phoebastria nigripes Bent, Bull. U. S. Nat. Mus., 121, p. 1, 1922 (life hist.); Mathews, Nov. Zool., 39, p. 154, 1934 (syn., range).

Range.—North Pacific Ocean, mainly north of the Tropic of Cancer, east to the coast of North America, from the Alaska Peninsula to Lower California (breeding on the outer Hawaiian Islands).

Field Museum Collection.—5: Washington (Clallam County, 1); California (Cortez Banks, 1; Monterey County, 1); Mexico, Lower California (Guadalupe Island, 1; unspecified, 1).

Diomedea melanophrys Temminck. BLACK-BROWED MOLLYMAWK.

*Diomedea melanophrys*² Temminck, Nouv. Rec. Pl. Col., livr. 77, pl. 456, Apr. 23, 1828—"Cap, Nouvelle Hollande, et mers antarctiques" (type, from "mer de l'hémisphère australe," in Leyden Museum; cf. Schlegel, Mus. Pays-Bas, livr. 4, p. 34, 1863); Murphy, Ocean. Bds. S. Amer., 1, p. 505, 1936 (monog.).

Diomedea melanophrys Pelzeln, Reise Novara, Zool., 1, Vögel, p. 148, 1865—Chile; Sharpe, Proc. Zool. Soc. Lond., 1881, p. 12—Valparaiso, Chile; Salvin, l.c., 1883, p. 430—Talcaguano, Chile; Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 24, 1885—South Georgia; Salvin, Cat. Bds. Brit. Mus., 25, p. 447, 1896—Chile (Valparaiso, Corral, Tarapacá, Talcaguano), etc. (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 655, 1898—Cavanca and Talcaguano, Chile; Brooks, Bull. Mus. Comp. Zool., 61, p. 146, 1917—western Falkland Islands (breeding); Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, p. 16, 1921—Mas A Tierra Island; Mathews, Discovery Rep., 1, p. 568, pl. 45, figs. 1–2, pl. 50, figs. 2–4, 1929—South Georgia (nesting); Hørring and Salomonsen, Medd. Grønl., 131, (5), p. 59, 1941—off Sukkertoppen, Greenland (Aug.).

Diomedea gilliana Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 181—locality unknown (type in coll. of Academy of Natural Sciences, Philadelphia; cf. Stone, l.c., 1899, p. 24); Mathews, Bull. Brit. Orn. Cl., 57, p. 144, 1937 (crit.;=*D. melanophrys*, immature).

¹ Cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 17 (note 17).

² Corrected to *melanophrys* in Tabl. Méth., livr. 102, p. 103, Jan. 29, 1839.

- Thalassarche melanophris richmondi* Mathews, Bds. Austr., 2, p. 272, Sept. 20, 1912—"west coast of South America" (no type specified); idem, Nov. Zool., 39, p. 155, 1934—Ildefonso Island, Chile (breeding); Philippi, El Hornero, 6, p. 238, 1936—Arica to Valparaiso, Chile.
- Thalassarche melanophris* Wilkins, Ibis, 1923, p. 489—South Georgia (breeding); Bennett, l.c., 1926, p. 317—Falkland Islands (breeding); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 167, 1930 (crit., meas.); Reynolds, Ibis, 1932, p. 35—near Snipe and Woodcock Islands, Beagle Channel, Magellan Straits; idem, l.c., 1935, p. 91—Cape Horn region (said to breed on Evout Island).
- Thalassarche melanophrys melanophrys* Dabbene, El Hornero, 3, p. 330, 1926—coasts of Buenos Aires and Patagonia, breeding in South Georgia and Falkland Islands (full synonym., descr.).
- Diomedea melanophris melanophris* Peters, Bds. World, 1, p. 43, 1931 (range).
- Diomedea melanophris richmondi* Peters, Bds. World, 1, p. 43, 1931 (range).
- Thalassarche melanophris melanophris* Mathews, Nov. Zool., 39, p. 154, 1934 (range); Pinto, Rev. Mus. Paul., 22, p. 18, 1938—Santos, São Paulo.
- Diomedea melanophrys* Bullock, Rev. Chil. Hist. Nat., 39, p. 249, 1935—Isla la Mocha, Chile.

Range.—Southern oceans from the Tropic of Capricorn to about 60° or 65° S. lat. (common on the coast of Argentina from Buenos Aires Province southward); in South America breeding in South Georgia, the Falkland Islands, Staten Island and on the San Ildefonso and Diego Ramirez Islets, near Cape Horn, southern Chile.¹

Diomedea bulleri Rothschild. SNARES ISLAND MOLLYMAWK.

- Diomedea bulleri* Rothschild, Bull. Brit. Orn. Cl., 1, p. lviii, July 4, 1893—New Zealand (type in Tring Collection [cf. Hartert, Nov. Zool., 33, p. 346, 1926], now in the American Museum of Natural History, New York); Salvin, Cat. Bds. Brit. Mus., 25, p. 448, 1896—New Zealand seas; Schalow, Zool. Jahrb., Suppl., 4, p. 655, 1898—Cavanha, Chile; Peters, Bds. World, 1, p. 44, 1931 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 524, 1936 (monog.).
- Diomedea platei* Reichenow, Orn. Monatschr., 6, p. 190, 1898—Cavanha, Tarapacá, Chile (type in Berlin Museum;=immature).
- Thalassarche bulleri* Murphy, Amer. Mus. Nov., 419, p. 6, 1930—Canete, Peru, and Valparaiso, Chile (crit.); Mathews, Nov. Zool., 39, p. 155, 1934 (range); idem, Ibis, 1934, p. 811 (char., crit.).

Range.—South Pacific Ocean east to the coast of Peru (off Canete, June 26) and Chile (Cavanha, near Iquique, Tarapacá; off Val-

¹ There is considerable individual variation in the length of the bill. While South Georgian birds have the longest bills, those from the Falklands, on this score, are hardly distinguishable from specimens taken off the coasts of Chile and Peru (Lobos de Tierra). On the basis of the measurements given by Lowe and Kinnear for a large number of skins, there is no possibility of maintaining any of the races proposed by Mathews.

paraiso, March 9; breeding on Snares and Chatham Islands, New Zealand).

Diomedea cauta salvini (Rothschild). SALVIN'S WHITE-CAPPED MOLLYMAWK.

Thalassogeron salvini Rothschild, Bull. Brit. Orn. Cl., 1, p. lviii, July 4, 1893—New Zealand (type in Tring Collection [cf. Hartert, Nov. Zool., 33, p. 346, 1926], now in the American Museum of Natural History, New York).

Thalassogeron layardi Salvin, Cat. Bds. Brit. Mus., 25, p. 450, 1896—Cape Seas (type in British Museum).

Diomedella cauta platei (not *Diomedea platei* Reichenow) Dabbene, El Hornero, 3, p. 324, 1926—South Atlantic Ocean, lat. 35° 44' S., long. 53° W. (descr.).

Thalassarche cauta salvini Murphy, Amer. Mus. Nov., 419, pp. 2, 3, 1930—Peru (west of Canete; Ballestas Islands; Lobos de Tierra Island) and Valparaiso, Chile (char.).

Diomedella cauta peruvia Mathews, Bull. Brit. Orn. Cl., 53, p. 185, May 5, 1933—"Western Peru" (type in the British Museum).

Diomedella cauta atlantica Mathews, Bull. Brit. Orn. Cl., 53, p. 218, May 27, 1933—South Atlantic Ocean, lat. 35° 44' S., long. 53° W., about 120 miles off coast of Buenos Aires Province (type in National Museum, Buenos Aires); idem, Nov. Zool., 39, p. 157, 1934 (range).

Diomedella cauta salvini Mathews, Nov. Zool., 39, p. 157, 1934 (range).

Diomedea cauta salvini Peters, Bds. World, 1, p. 44, 1931 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 526, 1936 (monog.).

Range.—Breeds on the Bounty Islands, New Zealand; wanders eastward across the Pacific to the coast of South America (Peru, Chile) and westward across the Indian Ocean to the South Atlantic (off Buenos Aires Province).

Diomedea chlororhynchos Gmelin. PINK-FOOTED ALBATROSS.

Diomedea chlororhynchos Gmelin, Syst. Nat., 1, (2), p. 568, 1789—based on "Yellow-nosed Albatross" Latham, Gen. Syn. Bds., 3, (1), p. 309, pl. 94; Cape of Good Hope and southern oceans outside the tropics; Peters, Bds. World, 1, p. 44, 1931 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 518, 1936 (monog.).

Thalassogeron eximius Verrill, Trans. Conn. Acad. Sci., 9, p. 440, pl. 8, 1895—Gough Island (type in coll. of G. E. Verrill); Dabbene, El Hornero, 2, p. 272, pl. 5, 1922—Angel Etcheverry, Buenos Aires Province (descr., crit.); idem, l.c., 3, p. 328, 1926 (descr.).

Thalassogeron chlororhynchus Salvin, Cat. Bds. Brit. Mus., 25, p. 451, 1895 (monog.); Bent, Bull. U. S. Nat. Mus., 121, p. 19, 1922—off Machias Bay, Seal Island, Maine (Aug. 1, 1913) (life hist.); Bennett, Ibis, 1926, p. 318—Falkland Island seas.

Thalassarche chlororhynchos Murphy, Auk, 39, p. 58, 1922—off the coast of Maine; Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 177, 1930 (disc., meas.).

Nealbatrus chlororhynchos Mathews, Ibis, 1934, p. 810 (disc., char.).

Nealbatrus chlororhynchos chlororhynchos Mathews, Nov. Zool., 39, p. 156, 1934 (full synon., range).

Range.—South Atlantic, Indian and Australian seas, breeding on Tristan d'Acunha and Gough Islands, probably also upon St. Paul Island;¹ accidental on the coast of Buenos Aires Province, Argentina (October, 1921), near the Bay of Fundy, New Brunswick (Aug. 1, 1913), and off the coast of Maine (near Seal Island, off Machias Bay, Aug. 1, 1913).²

Diomedea chrysostoma I. R. Forster. YELLOW-NOSED ALBATROSS.

Diomedea chrysostoma Forster, Mém. Math. Phys. Acad. Sci. Paris, 10, p. 571, pl. 14, 1785—"dans toutes les mers du Sud, l'Océan Atlantique, celui des Indes, et le Pacifique, cependant . . . très peu dans le voisinage du cercle polaire antarctique et dans l'Océan Pacifique";³ Peters, Bds. World, 1, p. 45, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 291, 1935—off coast of Chiriquí, Panama (one record); Murphy, Ocean. Bds. S. Amer., 1, p. 514, 1936 (monog.).

Diomedea culminata Gould, Proc. Zool. Soc. Lond., 11, p. 107, Dec., 1843—southern Indian and southern Pacific oceans (type, from "Australian Seas," in coll. of Academy of Natural Sciences, Philadelphia; cf. Mathews and Stone, Austr. Av. Rec., 1, p. 138, 1913).

Thalassogeron culminatus Salvin, Cat. Bds. Brit. Mus., 25, p. 451, 1896 (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 439, 1904—Bay of Panama; Wace, El Hornero, 2, p. 196, 1921—seas around Falkland Islands; Mathews, Discovery Rep., 1, p. 570, pl. 45, fig. 3, pl. 51, figs. 1-2, 1929—South Georgia (nesting).

Thalassogeron desolationis Salvadori, Boll. Mus. Zool. Torino, 26, No. 638, p. 2, March 15, 1911—Desolation Island, Straits of Magellan (type in Turin Museum); Peters, Bds. World, 1, p. 44, 1931 (ex Salvadori).

Thalassarche culminata Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 84, 1918 (disc., American records).

¹ Vallentin (Mém. Proc. Manchester Lit. Phil. Soc., 48, No. 23, p. 31, 1904) lists *D. chlororhyncha* as breeding in the Falkland Islands (Keppel, West Point, New Island, the Beauchenes), a record that has not since been confirmed. The author evidently had only eggs, and they probably pertained to *D. m. melanophrys*, known to breed in the Falklands but not mentioned by Vallentin.

² No races are distinguishable. Cf. Hartert, Nov. Zool., 33, pp. 345-346, 1926.

³ Mathews (Ibis, 1937, p. 871) suggests as type locality Staten Island, where Forster (Descr. Anim., ed. Lichtenstein, p. 313, 1844) met with it on January 4, 1775.

Thalassogeron chrysostomus culminatus Bent, Bull. U. S. Nat. Mus., 121, p. 16, 1922 (life hist., American records).

Thalassarche chrysostoma Wilkins, Ibis, 1923, p. 488—South Georgia (nest, eggs, and downy young descr.); Dabbene, El Hornero, 3, p. 198 (fig.), 1922—South Georgia (nesting); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 173, 1930 (disc., meas.).

Thalassogeron culminatus chrysostoma Bennett, Ibis, 1926, p. 318—West Point Island, Falkland Islands (visitor), and South Georgia (breeding).

Thalassogeron chrysostoma chrysostoma Dabbene, El Hornero, 3, p. 326, 1926—South Georgia (descr., synonym.); Mathews, Nov. Zool., 39, p. 155, 1934 (range).

Thalassarche chrysostoma desolationis Mathews, Ibis, 1933, p. 543 (disc. of type, char.); idem, Nov. Zool., 39, p. 156, 1934 (range).

Range.—Breeds on South Georgia (Kerguelen, Marion Island, the Crozets, Campbell Island) and the Diego Ramirez Islands south of Cape Horn;¹ ranges over the southern oceans; accidental in Canada (mouth of Moisie River, Aug. 20, 1885) and Panama (Bay of Chiriquí).²

Genus PHOEBETRIA Reichenbach

Phoebetria Reichenbach, Av. Syst. Nat., p. v, 1852 (=1853)—type, by orig. desig., *Diomedea fuliginosa* Gmelin=*Diomedea palpebrata* I. R. Forster.

Phoebetria palpebrata palpebrata (I. R. Forster). LIGHT-MANTLED SOOTY ALBATROSS.

Diomedea palpebrata Forster, Mém. Math. Phys. Acad. Sci. Paris, 10, p. 571, pl. 15, 1785—"depuis le degré quarante-septième de latitude australe jusqu'au soixante-onzième et dix minutes"—south of Prince Edward and Marion Islands.

Diomedea fuliginosa Gmelin, Syst. Nat., 1, (2), p. 568, 1789—"in maris australis latitudine 47° et omni circulo antarctico" (ex Forster); Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 23, 1885—South Georgia (eggs and downy young descr.).

Phoebetria fuliginosa Salvin, Cat. Bds. Brit. Mus., 25, p. 453, 1896 (monog.).

Phoebetria palpebrata cornicoides Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 71, 1906—South Georgia.

¹ We cannot but agree with Messrs. Lowe and Kinnear that none of the five or six races admitted by Mathews can be maintained. Even the separation of the South Georgian birds, which, as a rule, have deeper bills, seems impracticable, since similarly large-billed individuals occasionally occur in other regions. The whiter color of forehead, cheeks, and neck all around, given by Mathews for the type of *T. desolationis*, has no significance in view of the head varying from white to gray in specimens from other localities. That character evidently depends largely on age.

² The records from Oregon (mouth of Columbia River) and California (Golden Gate) are uncertain.

Phoebetria palpebrata antarctica (Solander MS.) Mathews, Birds Austr., 2, p. 302, Sept. 20, 1912—South Georgia; Clarke, Ibis, 1906, p. 177—Falkland Islands to within sixty miles of the South Orkneys; Wace, El Hornero, 2, p. 197, 1921—Falkland Seas and (breeding) South Georgia; Wilkins, Ibis, 1926, p. 488—South Georgia (breeding); Bennett, l.c., 1926, p. 318—Falkland Islands, South Georgia, and Graham Land.

Phoebetria palpebrata murphyi Mathews and Iredale, Man. Bds. Austr., p. 50 (in text), March 9, 1921—new name for *P. p. antarctica* Mathews, believed to be preoccupied; Dabbene, El Hornero, 3, p. 321, 1926 (descr., synonym.); Mathews, Ibis, 1932, p. 523—South Georgia (soft parts); idem, Nov. Zool., 39, p. 158, 1934—South Georgia.

Phoebetria palpebrata Mathews, Discovery Rep., 1, p. 570, pl. 51, figs. 3-4, 1929—South Georgia (nesting).

Phoebetria palpebrata Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 180, 1930 (disc.); Murphy, Ocean. Bds. S. Amer., 1, p. 497, 1936 (monog.).

Phoebetria palpebrata palpebrata Peters, Bds. World, 1, p. 45, 1931 (range).

Range.—Breeds on South Georgia¹ (and Kerguelen Island); ranges over the South Atlantic Ocean to the Falkland Islands.²

Family PROCELLARIIDAE. Fulmars, Shearwaters, and Petrels

Subfamily FULMARINAE. Fulmars

Genus MACRONECTES Richmond

Ossifraga (not of Wood, 1835) Hombron and Jacquinot, Compt. Rend. Acad. Sci. Paris, 18, p. 356, March, 1844—type, by monotypy, *Procellaria gigantea* Gmelin.

Macronectes Richmond, Proc. Biol. Soc. Wash., 18, p. 76, 1905—new name for *Ossifraga* Hombron and Jacquinot, preoccupied.

Macronectes giganteus (Gmelin). GIANT FULMAR.

Procellaria gigantea Gmelin, Syst. Nat., 1, (2), p. 563, 1789—based on "Giant Petrel" Latham, Gen. Syn. Bds., 3, (2), p. 396, pl. 100, etc.; "in oceano,

¹ Birds from South Georgia (*antarctica*=*murphyi*) do not seem to be certainly separable from those of Kerguelen Island.

² The admittance to the American fauna of *P. palpebrata auduboni* Nichols and Murphy (Auk, 31, p. 531, 1914—new name for *Diomedea fusca* [not of Hilsenberg, 1822] Audubon, Orn. Biog., 4, p. 116, 1838) rests exclusively on the specimen said to have been obtained by J. K. Townsend "at the mouth of the Columbia River," Oregon, and now preserved in the U. S. National Museum (cf. Loomis, Proc. Calif. Acad. Sci., [4], 2, p. 86, 1918). However, no reliance can be placed upon Townsend's Tubinares records, as has been shown by Stone (Auk, 51, pp. 225-226, 1934), and the specimen is far more likely to have originated in the South Pacific, since it proved to be referable to *P. p. huttoni* Mathews, the breeding form of the subantarctic islands of New Zealand.

The occurrence of *P. p. fusca* (Hilsenberg) within our region remains to be proved, although Bennett (Ibis, 1926, p. 318) believes it is "seen" in the waters about the Falkland Islands.

potissimum australi, circa Staatenland, Terra del Fuego, insulam desolationis etc."=Staten Island (as designated by Mathews, Bds. Austr., 2, p. 186, 1912); Abbott, Ibis, 1861, p. 164—East Falkland Island.

Procellaria ossifraga J. R. Forster, Descr. Anim. (ed. Lichtenstein), p. 343, 1844—"in terra del Fuego et australi parte maris pacifici ac atlantici."

Ossifraga gigantea Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 19, 1885—South Georgia (disc. color phases, eggs descr.); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 158, 1891—Tierra del Fuego (Bahía Orange, Port Maxwell, New Year Sound); Salvin, Cat. Bds. Brit. Mus., 25, p. 422, 1896—Falkland Islands, Magellan Straits (Tom Bay), and Chile (Valparaiso, Coquimbo) (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 654, 1898—Coquimbo and Tumbes, Chile; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, pp. 70, 78, 1906—South Georgia (nest and eggs); Clarke, Ibis, 1906, p. 172, pl. 11, fig. 2—South Orkney Islands (breeding, habits); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 147, 1910—Patagonia (descr.); Bullock, Rev. Chil. Hist. Nat., 39, p. 251, 1935—Isla la Mocha, Chile.

Macronectes giganteus solanderi Mathews, Birds Austr., 2, p. 187, July 31, 1912—Falkland Islands (no type specified); Brooks, Bull. Mus. Comp. Zool., 61, p. 145, 1917—Port Stephens, Falkland Islands; Dabbene, El Hornero, 3, p. 141, 1923—Falkland Islands, etc. (char., synon.); Bennett, Ibis, 1926, p. 316—Falkland Islands (breeding).

Macronectes giganteus forsteri Mathews, Birds Austr., 2, p. 189, July 31, 1912—Valparaiso Bay, Chile (type probably in British Museum).

Macronectes giganteus Wilkins, Ibis, 1923, p. 488—South Georgia (breeding); Wetmore, Condor, 25, p. 171, 1923—Arica Bay, Tacna, Chile (Aug. 20); Mathews, Discovery Rep., 1, p. 571, pl. 45, fig. 4, pl. 52, figs. 1–3, 1929—South Georgia (nesting; monog.); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 147, 1930 (disc. color phases, meas.); Peters, Bds. World, 1, p. 46, 1931 (range); Reynolds, Ibis, 1932, p. 35—near Snipe and Woodcock Islands, Beagle Channel; idem, l.c., 1935, p. 93—Cape Horn region (not breeding); Murphy, Ocean. Bds. S. Amer., 1, p. 584, 1936 (monog.); Ardley, Discovery Rep., 12, p. 358, 1936—South Orkneys (color phases); Philippi, Bol. Mus. Nac. Santiago, 16, p. 62, 1938—Arica Bay, Tacna, Chile (Jan.); Serventy, Emu, 42, p. 167, 1943 (ratio of white and dark phases); Eklund, Proc. Amer. Phil. Soc., 89, p. 300, 1945—Palmer Peninsula (breeding 65° S.; white phase discussed).

Macronectes giganteus giganteus Dabbene, El Hornero, 3, p. 138, 1923—Antarctic Continent to the South Shetland, South Orkney, and South Georgia Islands (synon., descr.); Bennett, Ibis, 1926, p. 315—South Shetland and South Orkney Islands (crit.); Mathews, Nov. Zool., 39, p. 158, 1934 (range); Philippi, El Hornero, 6, p. 238, 1936—coast of Aconcagua, Chile.

Range.—Breeds in the Falkland Islands (locally), South Georgia, South Orkney, and South Shetland Islands (and extralimittally on Graham Land, Gough Island, Kerguelen, etc.);¹ ranges all over the

¹Said to have bred formerly on the Atlantic coast of Patagonia (Sea Lion Islet in the estuary of the Rio Santa Cruz). Its nesting on Guamblin Island, south of Chiloé, remains to be proved.

southern oceans and into the tropics on the coast of Peru (off Payta, July).¹

Genus DAPTION Stephens

Daption Stephens, in Shaw, Gen. Zool., 13, (1), p. 239, 1826—type, by orig. desig., *Procellaria capensis* Linnaeus.

Calopetes Sundevall, Meth. Nat. Av. Disp. Tent., p. 142, 1873—substitute name for *Daption* Stephens.

Petrella Mathews,² Auk, 31, p. 91, 1914—type, by monotypy, *Procellaria capensis* Linnaeus.

**Daption capensis* (Linnaeus).³ CAPE PIGEON.

Procellaria capensis Linnaeus, Syst. Nat., 10th ed., 1, p. 132, 1758—based primarily on "The white and black Spotted Peteril" Edwards, Nat. Hist. Bds., 2, p. 90, pl. 90 (right figure), Cape of Good Hope; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 6, p. 6, 1853—coast of California (opposite Monterey); Pelzeln, Orn. Bras., 3, p. 323, 1870—off Ilha do São Sebastião, São Paulo, Brazil (Aug. 11).

Procellaria pardela Oken, Lehrb. Naturg., 3, Zool., p. 533, 1816—Cape Seas.

Daption capense(is) Salvin, Ibis, 1875, pp. 372, 377—Juan Fernández and Mas Afuera, Chile; Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 22, 1885—South Georgia; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 159, 1891—Tierra del Fuego (Lemaire Channel) and coast of Patagonia; Salvin, Cat. Bds. Brit. Mus., 25, p. 428, 1896—South Atlantic (off Cape Corrientes), Straits of Magellan, Chile (off Tres Montes, Juan Fernández Islands, Valparaiso, off San Ambrose Island), Peru (off Payta), etc. (monog.); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 77, 1906—South Georgia (crit.); Clarke, Ibis, 1906, p. 174—South Orkney Islands (nest, eggs, downy young, plumages, habits); Ihering, Cat. Faun. Braz., 1, p. 37, 1907—Brazil (Rio Grande do Sul; Iguapé and Ilha São Sebastião, São Paulo) and Patagonia (Santa Cruz); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 205, 1910 (range in Argentina); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 150, 1910—coast of Patagonia (descr.); Bent, Bull. U. S. Nat. Mus., 121, p. 49, 1922 (life hist., range); Wilkins, Ibis, 1923, p. 487—South Georgia; Bennett, Ibis, 1926, p. 316—Falkland Islands (visitor); Mathews, Discovery Rep., 1, p. 575, pl. 52, fig. 4, pl. 53, fig. 1, 1929—South Georgia (not found nesting); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 159, 1930

¹ As clearly set forth by Lowe and Kinnear (Brit. Antar. [Terra Nova] Exp., Zool., 4, pp. 148-159), there is no means of maintaining, either on size or on the basis of color characters, any of the various races into which the Giant Fulmar has been split by Mathews. Its occurrence off the coast of Oregon (Audubon's record ex Townsend) is almost certainly due to confusion of localities.

² Ex Zimmermann, in Bartram, Trav. Carolina, German ed., p. 293, 1793 (not binomial).

³ The alleged New Zealand race, *D. capensis australis* Mathews, is not maintainable.

(crit.); Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp.*, Vögel, p. 51, 1930—between Santos and Montevideo; Peters, *Bds. World*, 1, p. 47, 1931 (range); Reynolds, *Ibis*, 1935, p. 94—Deceit Island, Beagle Channel; Philippi, *Bol. Mus. Nac. Santiago*, 16, p. 62, 1935—Arica Bay, Tacna, Chile (July); idem, *El Hornero*, 6, p. 238, 1936—coast of Chile north to Arica; Murphy, *Ocean. Bds. S. Amer.*, 1, p. 601, 1936 (monog.); Ardley, *Discovery Rep.*, 12, p. 361, 1936—South Orkney Islands (nesting); Pinto, *Rev. Mus. Paul.*, 22, p. 22, 1938—Iguapé, São Paulo, and Santa Cruz, Patagonia.

Petrella capensis Loomis, *Proc. Calif. Acad. Sci.*, (4), 2, p. 91, 1918—off Monterey, California.

Daption capensis capensis Dabbene, *El Hornero*, 3, p. 147, 1923 (descr., range); Mathews, *Nov. Zool.*, 39, p. 159, 1934 (range).

Range.—Breeds on South Georgia, South Orkney, and South Shetland Islands (Graham Land, and Kerguelen Island); ranges over the southern oceans north to the Tropic of Capricorn (coasts of Rio de Janeiro and São Paulo, Brazil, and on the west coast north to Payta, Peru; accidental on the coasts of California (Monterey) and Maine (Harpwell, Casco Bay, Sept., 1876).

Field Museum Collection.—2: Chile (Cape Horn, 2).

Genus FULMAREL Stephens

Fulmarus Stephens, in Shaw, *Gen. Zool.*, 13, (1), p. 233, 1826—type, by subs. desig. (Gray, *Cat. Gen. Subgen. Bds.*, p. 129, 1855), *Procellaria glacialis* Linnaeus.

Halohippus Billberg, *Syn. Faun. Scand.*, 1, (2), p. 192, 1828—type, by monotypy, *Procellaria glacialis* Linnaeus (cf. *Austr. Av. Rec.*, 2, pp. 42, 48, 1913).

Rhantistes Kaup, *Skizz. Entw. Gesch. Nat. Syst. Europ. Thierw.*, p. 105, April, 1829—type, by monotypy, *Procellaria glacialis* Linnaeus.

Wagellus G. R. Gray, *List Gen. Bds.*, p. 78, 1840—type, by orig. desig., *Procellaria glacialis* Linnaeus.

**Fulmarus glacialis glacialis* (Linnaeus). ATLANTIC FULMAR.

Procellaria glacialis Linnaeus, *Fauna Svec.*, ed. altera, p. 51, 1761—founded primarily on "Malle-mucka" Martens, Spitzberg. oder Groenländ. Reise, p. 68, pl. N, fig. c, 1675; "in mari septentrionali intra circulum arcticum" = Spitsbergen (ex Martens); Holböll, *Naturhist. Tidsskr.*, 4, p. 429, 1843—Greenland.

Procellaria grønlandica Gunnerus, in Leem, *Beskr. Finnmarkens Lapper*, p. 273 (note 121), 1767—based upon "Hav-hesten" Gunnerus, *Trondh. Selsk. Skrifter*, 1, pp. 182–202, pl. 1, 1761; Greenland.

Procellaria hyemalis Brehm, *Ornis*, 1, p. 20, 1824—Greenland (no type extant).

Procellaria minor Kjärböiling, Orn. Dan., Suppl., 2, pl. 7, fig. 2, 1854; idem, Journ. Orn., 2, 1855, Erinnerungsschr. 8th Jahresvers., p. lix, 1855—Greenland.¹

Fulmarus glacialis a. auduboni Bonaparte, Consp. Gen. Av., 2, p. 187, 1857—"Terra Nova"—Newfoundland (location of type not stated).

Fulmarus glacialis Salvin, Cat. Bds. Brit. Mus., 25, p. 425, 1896 (monog.); Winge, Medd. Grønl., 21, p. 141, 1898—Greenland; Mathews, Ibis, 1934, p. 173 (synon.).

Fulmarus glacialis glacialis Bent, Bull. U. S. Nat. Mus., 121, p. 31, 1922 (life hist., range); Peters, Bds. World, 1, p. 47, 1931 (range); Mathews, Nov. Zool., 39, p. 160, 1934 (synon., range); Roberts, Ibis, 1934, p. 258—Iceland (color phases); Bertram, Lack, and Roberts, l.c., 1934, p. 820—Greenland (color phases); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 270, 1935 (distrib. in North Atlantic); Bird and Bird, Ibis, 1935, p. 846—Jan Mayen (breeding); Gross, Auk, 54, p. 15, 1937—Labrador (color phases); Pedersen, Medd. Grønl., 128, (2), p. 72, map, 1942—northeast Greenland (breeding places); Soper, Auk, 63, p. 15, 1946—east coast, Baffin Island (breeding).

Range.—Breeds from eastern Baffin Land (Cumberland Sound) to Greenland (extralimitally in Iceland, Norway, Färoes, British Isles, Jan Mayen, Spitzbergen, Franz Josef Land, and Novaya Zemlya); winters on the Atlantic coast to Massachusetts, Connecticut, and New Jersey.

Field Museum Collection.—17: Franklin Territory (Resolution Island, Baffin Land, 4); Greenland (Denmark Strait, 1; lat. 64° long. 39°, 3; Cape Farewell, 1; between lat. 62° and 63°, 2; lat. 62° 46' long. 39°–30', 3; Holstenborg, 1; unspecified, 1); Labrador (Rama, 1).

****Fulmarus glacialis rogersii* Cassin. PACIFIC FULMAR.**

Procellaria pacifica (not of Gmelin, 1789) Audubon, Orn. Biog., 5, p. 331, 1839—North Pacific (cotypes lost; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 17).²

Fulmarus rogersii(?) Cassin, Proc. Acad. Nat. Sci. Phila., 1862, p. 326, Oct. 28, 1862—"Indian Ocean," errore,=North Pacific (type in U. S. National Museum); Coues, l.c., 1866, p. 29 (monog. of type spec., locality corrected); Salvin, Cat. Bds. Brit. Mus., 25, p. 427, 1896—St. George's, Alaska (monog.); Bent, Bull. U. S. Nat. Mus., 121, p. 43, 1922 (life hist.).

¹ The author speaks only of the smaller size and different shape of the eggs, without characterizing birds from Greenland. The type of the plate probably was in the author's private collection.

² Audubon's two original types were once in the collection of S. F. Baird (cf. Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacific, 9, p. 826, 1858). As Loomis (Proc. Calif. Acad. Sci., (4), 2, p. 90, 1908) claims to have examined, several years previous to his writing, Audubon's "type" in the U. S. National Museum, one of these specimens would seem to have been preserved after all.

- Fulmarus glacialis glupischa* Stejneger, Auk, 1, p. 234, 1884—new name for *Procellaria pacifica* Audubon preoccupied; idem, Bull. U. S. Nat. Mus., 25, p. 91, pl. 6, figs. 1, 2, 1885—Bering and Copper Islands (variation, dichromatism); Bent, l.c., 121, p. 38, 1922 (life hist., range).
- Fulmarus glacialis columba* Anthony, Auk, 12, p. 105, 1895—off San Diego, California (cotypes now in Carnegie Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 262, 1932;=female).
- Fulmarus glupischa* Salvin, Cat. Bds. Brit. Mus., 25, p. 427, 1896—San Diego, California, etc. (monog.).
- Fulmarus glacialis* (not *Procellaria glacialis* Linnaeus) Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 87, 1918—Point Pinos, California, and off Lower California (crit., color phases, meas.).
- Fulmarus glacialis rogersii*(?) Hartert, Nov. Zool., 27, p. 135, 1920—Bering and Copper Islands (breeding); Preble and McAtee, N. Amer. Fauna, 46, p. 38, 1923—Pribilof Islands (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 64, 1928—Lower California; Peters, Bds. World, 1, p. 47, 1931 (range); Mathews, Nov. Zool., 39, p. 160, 1934 (synon., range); Gabrielson, Auk, 61, p. 111, 1944—Semidi Islands, Alaska (nesting colony).

Range.—Breeds on Wrangel and Herald Islands, islands in the Bering Sea, Commander Islands, Semidi Islands, Alaska, coasts of Kamchatka, and Kurile Islands; winters from the Aleutian Islands south to northern Lower California and Japan.

Field Museum Collection.—54: Alaska (Bering Strait, 1; Morzhovoi Bay, 1; St. George's Island, Bering Sea, 1); Washington (Pacific coast, 2; Gray's Harbor, 3); California (Pacific coast, 1; Monterey Bay, 4; Pacific Grove, 23; Carmel Bay, 4; Cypress Point, 1; San Francisco, 1; Hyperion, 2; El Secundo, 2; Pacific Beach, 7; Santa Barbara, 1).

Genus PACHYPTILA Illiger¹

Pachyptila Illiger, Prodr. Syst. Mamm. Av., p. 274, 1811—type, by subs. desig. (Selby, Cat. Gen. Subgen. Types Birds, p. 49, 1840), *Procellaria forsteri* Latham=*Procellaria vittata* Forster.

Prion (not of Lacépède)² Lesson, Man. d'Orn., 2, p. 399, 1828—type, by orig. desig., "Le pétrel bleu"=*Procellaria vittata* Forster.

¹ This genus is involved in great confusion. Mathews (Birds Austr., 2, pp. 199, 233, 1912) attempted to disentangle the nomenclature and geographical variation of the several species, assigning each to a separate genus, and has since described a number of additional races. The results of his studies are, however, far from satisfactory, and until good series of properly sexed specimens in different stages become available from the various breeding colonies, it will be impossible to get a clear insight into the significance of the observable variation. Three forms come within the limits of our region, but their taxonomic status is altogether uncertain. Murphy (Ocean. Bds. S. Amer., 1, pp. 612-615, 1936) recently gave an excellent account of the distribution and characters of the four recognizable species; cf. also Falla, Emu, 40, p. 218, 1940, and Fleming, l.c., 41, p. 134, 1941.

² *Prion* Lacépède (Tabl. Méth. Ois., p. 14, 1799), is clearly indeterminable; cf. Iredale, Austr. Av. Rec., 2, pp. 25-27, 1913.

- Pseudoprion* Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 164—type, by orig. desig., "*Prion turtur* Gould" = *Procellaria turtur* Kuhl.
- Fulmariprion* Mathews, Birds Austr., 2, p. 215, July 31, 1912—type, by orig. desig., *Pseudoprion turtur crassirostris* Mathews.
- Heteroprion* Mathews, Birds Austr., 2, p. 222, July 31, 1912—type, by orig. desig., *Heteroprion belcheri* Mathews.
- Attaprion* Mathews, Bull. Brit. Orn. Cl., 54, p. 25, Oct. 31, 1933—type, by orig. desig., *Procellaria desolata* Gmelin.

***Pachyptila desolata georgia* (Mathews).¹ SOUTH GEORGIAN DOVE PRION.**

- Heteroprion desolatus georgia* Mathews, Bull. Brit. Orn. Cl., 52, p. 147, June 28, 1932—Stromness Bay, South Georgia (type in British Museum).
- Pachyptila vittata georgicus* Mathews, Bull. Brit. Orn. Cl., 53, p. 214, May 27, 1933—Stromness Bay, South Georgia (type in British Museum).
- Prion turtur* (not *Procellaria turtur* Kuhl) Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 23, 1895—South Georgia (breeding; soft parts, crit.).
- Prion banksi* (not *Pachyptila banksi* Smith) Clarke, Ibis, 1906, p. 177—Coronation Island, South Orkney Islands; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 75, 1906—South Georgia (breeding; crit.; young and egg descr.); Ihering, Cat. Faun. Braz., 1, p. 38, 1907—Santos, São Paulo; Mathews, Discovery Rep., 1, p. 579, pl. 53, fig. 2, 1929—South Georgia (nesting).
- Pachyptila vittata keyteli* (not *Prion vittatus keyteli* Mathews) Bennett, El Hornero, 2, p. 30, 1920—South Orkney Islands (breeding); Dabbene, El Hornero, 3, p. 133, 1923—South Georgia (synon., descr.); Bennett, Ibis, 1926, p. 316—Pembroke Lighthouse, Falkland Islands (Aug., 1912).
- Pachyptila forsteri keyteli* Peters, Bds. World, 1, p. 49, 1931—part, South Georgia.
- Pachyptila desolata banksi* Peters, Bds. World, 1, p. 50, 1931 (range); Ardley, Discovery Rep., 12, p. 366, 1936—Signy Island, South Orkney Islands (nesting); Pinto, Rev. Mus. Paul., 22, p. 20, 1938—Santos, São Paulo, Brazil.
- Attaprion desolatus georgia* Mathews, Nov. Zool., 39, p. 173, 1934 (range).
- Pachyptila desolata* (not *Procellaria desolata* Gmelin) Murphy, Ocean. Bds. S. Amer., 1, p. 620, 1936 (monog., in part).

¹ *Pachyptila desolata georgia* (Mathews) is very doubtfully separable from *P. d. desolata* (Gmelin), of Kerguelen Island, and its distinctive characters have never been indicated. Mathews, within a year's time, based two different names on the very same specimen in the British Museum. At first it was separated, on account of its wider bill, from *H. d. crozeti*, of the Crozet Islands, which he subsequently synonymized with *P. vittata salvini*, while in the second place *P. vittata georgicus* is compared to *P. v. keyteli*, of Tristan d'Acunha. According to the width of the bill at the base (14–16 mm.), as given by Mathews (Bull. Brit. Orn. Cl., 53, p. 214, 1933), and Lönnberg's remarks on a number of breeding specimens, the South Georgian Dove Prion clearly pertains to the *desolatus* complex, but in what particulars it differs from the nominate form remains to be determined by comparison of adequate series. Murphy (Ocean. Bds. S. Amer., 1, p. 621, 1936) states that birds from South Georgia and Heard Island *may possibly* have slightly larger bills than those from Kerguelen (typical).

Range.—Breeds in South Georgia, South Orkney and (?) South Shetland Islands, and ranges north to the Tropic of Capricorn (Santos, coast of São Paulo, Brazil).¹

**Pachyptila belcheri falklandica* (Mathews).² FALKLAND THIN-BILLED PRION.

Heteroprion belcheri falklandicus Mathews, Bull. Brit. Orn. Cl., 59, p. 104, Mar. 15, 1939—Falkland Islands (type in British Museum).

Prion desolatus (not *Procellaria desolata* Gmelin) Oustalet, Miss. Sci. Cap Horn, 6, p. B. 164, 1891—Bahía Orange, Tierra del Fuego (May).

Prion ariel (not of Schlegel) Ihering, Rév. Mus. Paul., 6, p. 362, 1905—Iguapé, São Paulo; idem, Cat. Faun. Braz., 1, p. 38, 1907—Iguapé, São Paulo, Brazil.

Heteroprion desolatus banksi (not *Pachyptila banksi* Smith) Tremoleras, El Hornero, 2, p. 12, 1920—coast of Montevideo, Uruguay.

Heteroprion belcheri subsp. Dabbene, El Hornero, 3, p. 135, 1923—Falkland Islands and Atlantic coast of South America from Tierra del Fuego to Montevideo (descr.).

Pseudoprion turtur brevirostris (not *Prion brevirostris* Gould) Bennett, Ibis, 1926, p. 317—near Stanley, Falkland Islands (March 11, 1917).

Pachyptila belcheri (not *Heteroprion belcheri* Mathews) Peters, Bds. World, 1, p. 50, 1931—part, east coast of South America and Falkland Islands; Murphy, Ocean. Bds. S. Amer., 1, p. 629, 1936 (monog.).

Heteroprion belcheri Bennett, Ibis, 1931, p. 12—Falkland Islands (breeding); Mathews, Ibis, 1931, p. 571—New Island, Falkland Islands (nest and eggs descr.); Mathews, Nov. Zool., 39, p. 174, 1934—part, east coast of South America and Falkland Islands.

Pachyptila belcheri solanderi (not *Pseudoprion turtur solanderi* Mathews) Pinto, Rev. Mus. Paul., 22, p. 20, 1938—Iguapé and Ilha Santo Amaro (Santos), São Paulo.

Range.—Breeds in the Falkland Islands,³ and ranges on the Atlantic coast of South America from Tierra del Fuego north to São Paulo, Brazil, and on the Pacific coast probably to central Chile.

Field Museum Collection.—1: Argentina (Buenos Aires, 1).

¹ We do not know where to place *Prion vittatus* Ihering (Cat. Faun. Braz., 1, p. 38, 1907), said to have occurred at Porto Seguro, Bahia, Brazil. Murphy (Ocean. Bds. S. Amer., 1, p. 617, 1936) suggests it might be *P. forsteri* (Latham), known to breed upon Tristan d'Acunha and Gough Island.

² *Pachyptila belcheri falklandica* (Mathews): Nearest to "*P. b. solanderi* (Mathews)," but larger in all its dimensions. Wing (average of seven skins), 188; tail, 94–95; tarsus, 32½; bill, 25½; its width at base, 11 mm. (Mathews, l.c.). Murphy unhesitatingly unites this alleged race to *P. belcheri* Mathews, originally based on birds from Victoria, Australia, and does not admit any subspecies at all.

³ It is possible that *Prion vittatus* (not *Procellaria vittata* Forster) Darwin (Zool. Beagle, 3, Birds, p. 141, 1841), said to breed on Landfall Island, west coast of Tierra del Fuego, was intended for this species, but as no specimens were procured, its identity is an open question.

Pachyptila turtur solanderi (Mathews).¹ SOLANDER'S THIN-BILLED PRION.

Pseudopriion turtur solanderi Mathews, Birds Austr., 2, p. 220, July 31, 1912—"west coast of South America" (type, from "the extreme south of Chile"; cf. Mathews, Nov. Zool., 39, p. 253, 1935); idem, Nov. Zool., 39, p. 175, 1934—eastern Pacific.

Prion ariel (not of Schlegel) Salvin, Cat. Bds. Brit. Mus., 25, p. 436, 1896—part, spec. o, "W. coast of S. America."

Pachyptila turtur solanderi Peters, Bds. World, 1, p. 50, 1931 (listed).

Range.—"West coast of South America (extreme south of Chile)."

Subfamily PUFFININAE

Genus **PRIOCELLA** Hombron and Jacquinot

Priocella Hombron and Jacquinot, Compt. Rend. Acad. Sci. Paris, 18, p. 357, March, 1844 (generic characters only, the only species mentioned, *Pr. garnotti*, being a nomen nudum); Jacquinot and Pucheran, Voy. Pôle Sud, Zool., Atlas, Part 1, pl. 32, figs. 43-56, April, 1844—type, by monotypy, *Priocella garnotii* Jacquinot (and Pucheran)²=*Fulmarus antarcticus* Stephens.

***Priocella antarctica** (Stephens). SLENDER-BILLED FULMAR.

Fulmarus antarcticus Stephens, in Shaw, Gen. Zool., 13, (1), p. 236, Feb. 18, 1826—based on *Procellaria glacialis*, var. β . Latham, Ind. Orn., 2, p. 823, 1790; "Antarctic Ocean pretty far to the south."

Procellaria tenuirostris (not of Temminck, 1835) Audubon, Orn. Biogr., 5, p. 333, 1839—"mouth of the Columbia River," Oregon, errore=South Pacific Ocean (type in U. S. National Museum; cf. Richmond, in Loomis, Proc. Calif. Acad. Sci., [4], 2, p. 91, 1918).

Procellaria glacialoides Smith, Ill. Zool. S. Africa, Part 11, pl. 51, July, 1840—"neighbourhood of the South African coast" (type in British Museum).

*Priocella garnotii*³ Jacquinot (and Pucheran), Voy. Pôle Sud, Zool., Atlas, Part 1, pl. 32, figs. 43-56, April, 1844.

Thalassoica glacialoides a. *polaris* Bonaparte, Consp. Gen. Av., 2, p. 192, 1857—Louis Philippe Land (type in Paris Museum).

¹ *Pachyptila turtur solanderi* (Mathews): "About the same size as *P. turtur turtur* (Kuhl), of Australia, but with a longer bill." Measurements of the type, whose location is not stated, are given by Mathews as follows: wing, 184; tail, 87; tarsus, 29½; bill, 23 by 10 mm.

The status of this form is obscure. There is a specimen (probably the type) said to be from the "west coast of South America" in the British Museum. The locality is perhaps incorrect, and the species (cf. Murphy, Ocean. Bds. S. Amer., 1, pp. 613, 631, 1936) may not deserve a place in the American fauna.

² The species is identifiable by the drawing of the bill.

³ *Priocella garnotti* (sic) Hombron and Jacquinot (Compt. Rend. Acad. Sci. Paris, 18, p. 357, March, 1844) is a nomen nudum.

Procellaria smithi Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 22, 1863—substitute name for *Procellaria glacialis* Smith; Cape Horn and coast of Chile.

Fulmarus glacialis Sclater and Salvin, Ibis, 1868, p. 189—Straits of Magellan.

Thalassoeca tenuirostris Oustalet, Miss. Sci. Cap Horn, 6, p. B. 162, 1891—Tierra del Fuego (Bahía Orange, Bahía Buen Suceso, Ushuaia).

Priocella glacialis Salvin, Cat. Bds. Brit. Mus., 25, p. 393, 1896—Straits of Magellan, Chile (Valparaiso Bay, Coquimbo), Peru (off Lobos de Tierra), and Mexico (Mazatlan); Schalow, Zool. Jahrb., Suppl., 4, p. 654, 1898—Cavanche, Chile; Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 628, 1900—north of Rio Gallegos, Patagonia; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 83, 1906—South Georgia and off coast of Brazil (breeding on Louis Philippe Land); Clarke, Ibis, 1906, p. 170—Laurie Island, South Orkney Islands (not breeding); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 139, 1910 (descr., range in South America); Mathews, Discovery Rep., 1, p. 574, pl. 45, figs. 7–8, 1929—South Georgia (rare, not nesting); Philippi, Bol. Mus. Nac. Santiago, 16, p. 63, 1938—Arica Bay, Chile.

Priocella antarctica Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, p. 12, 1921—Santa Clara Island; Bent, Bull. U. S. Nat. Mus., 121, p. 46, 1922 (life hist., range); Wilkins, Ibis, 1923, p. 487—South Georgia; Wetmore, Condor, 25, p. 171, 1923—Arica Bay, Tacna, Chile (Aug. 22); Peters, Bds. World, 1, p. 51, 1931 (range); Reynolds, Ibis, 1932, p. 35—near Snipe and Woodcock Islands, Beagle Channel; Mathews, Nov. Zool., 39, p. 160, 1934 (synon., range); Ardley, Discovery Rep., 12, p. 364, 1936—South Orkney Islands (breeding); Murphy, Ocean. Bds. S. Amer., 1, p. 596, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 19, 1938—coast of Brazil.

Priocella antarctica antarctica Dabbene, El Hornero, 3, p. 142, 1923 (descr., range); Philippi, l.c., 6, p. 238, 1936—coast off Arica, Chile.

Priocella antarctica glacialis Bennett, Ibis, 1926, p. 314—Falkland Islands (migratory visitor).

Range.—Breeds on Queen Mary Land, Adelie Land, Louis Philippe Land, South Orkney Islands, Heard Island, the Balleny Islands, and other outlying antarctic islands; ranges north in the Atlantic Ocean to Cape São Roque, Brazil, and in the Pacific to northern Peru; accidental off Mazatlan, Mexico.

Field Museum Collection.—1: Chile (Punta Arenas, 1).

Genus THALASSOICA Reichenbach

Thalassoica Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Procellaria antarctica* Gmelin.

Aeipetes Forbes, Rep. Voy. Challenger, Zool., 4, pt. 11, p. 59, 1882—type, by orig. desig., *Procellaria antarctica* Gmelin.

Thalassoica antarctica (Gmelin). ANTARCTIC PETREL.

Procellaria antarctica Gmelin, Syst. Nat., 1, (2), p. 565, 1789—based on "Le Pétrel Antarctique ou Damier brun" Buffon, Hist. Nat. Ois., 9, p. 311 (ex "Antarctic Peteril" Cook and Forster); Antarctic Circle between 31°–61° S. lat.; Forster, Descr. Anim. (ed. Lichtenstein), pp. 60, 202, 1844 (descr.).

Thalassoeca antarctica Salvin, Cat. Bds. Brit. Mus., 25, p. 392, 1896—"Cape Horn" (monog.); Clarke, Ibis, 1906, p. 169—South Orkney Islands; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 82, 1906—South Georgia (August); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 132, 1930.

Thalassoica antarctica Dabbene, El Hornero, 3, p. 145, 1923 (descr., range); Peters, Bds. World, 1, p. 51, 1931 (range); Mathews, Nov. Zool., 39, p. 161, 1934 (range); Murphy, Ocean. Bds. S. Amer., 1, p. 639, 1936 (monog.).

Thalassoeca antarctica antarctica Bennett, Ibis, 1926, p. 314—Falkland Islands (visitant).

Range.—Breeds on the Antarctic continent and ranges north to South Georgia, the Falkland Islands, and Cape Horn.

Genus **ADAMASTOR** Bonaparte

Adamastor Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 594, Sept., 1856—type, by orig. desig., "*Procellaria haesitata* des anciens auteurs" (=Forster)=*Procellaria cinerea* Gmelin (cf. Bonaparte, l.c., p. 995, Nov., 1856, and idem, Consp. Gen. Av., 2, p. 189, 1857).

Adamastor cinerea (Gmelin). BLACK-TAILED SHEARWATER.

Procellaria cinerea Gmelin, Syst. Nat., 1, (2), p. 563, 1789—based on "Cinereous Fulmar" Latham, Gen. Syn. Bds., 3, (2), p. 405; "within the Antarctic Circle"—seas south of New Zealand.

Procellaria gelida Gmelin, Syst. Nat., 1, (2), p. 564, 1789—based on "Glacial Petrel" Latham, Gen. Syn. Bds., 3, (2), p. 399; within the Antarctic Circle.

Procellaria melanura Bonnaterre, Tabl. Enc. Méth., Orn., livr. 47, p. 79, 1791—based on "Cinereous Fulmar" Latham, Gen. Syn. Bds., 3, (2), p. 405; "within the Antarctic Circle"—seas south of New Zealand.

Procellaria haesitata (not *P. hasitata* Kuhl, 1820) Forster, Descr. Anim. (ed. Lichtenstein), p. 208, 1844—"in lat. 48° Oceani pacifici antarctici"—seas south of New Zealand.

Puffinus —? Lawrence, Ann. Lyc. Nat. Hist. N. Y., 6, p. 5, 1853—off the coast of California, near Monterey (descr.).

Adamastor typus Bonaparte, Consp. Gen. Av., 2, p. 187, 1857—Antarctic seas (cotypes in Leyden and Paris museums).

Puffinus cinereus Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacific, 9, p. 835, 1858—California coast (descr.).

Procellaria adamastor Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 23, 1863—substitute name for *Adamastor typus* Bonaparte.

Priofinus cinereus Salvin, Cat. Bds. Brit. Mus., 25, p. 390, 1896—Chile (Valparaiso) and off Cape Horn (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 108, 1918—California, off Monterey (note on specimen in the American Museum of Natural History); Bent, Bull. U. S. Nat. Mus., 121, p. 103, 1922—off Monterey, California (life hist.).

Priofinus cinereus cinereus Dabbene, El Hornero, 3, p. 7, 1923 (monog.); Bennett, Ibis, 1926, p. 314 (no record from the Falkland Islands).

Adamastor cinerea Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 131, 1930; Peters, Bds. World, 1, p. 51, 1931 (range); Mathews, Nov. Zool., 39, p. 176, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 2, p. 649, 1936 (monog.).

Range.—Breeds on Gough Island, Tristan d'Acunha, Kerguelen Island and Macquarie Island; ranges over the southern oceans between 25° and 55° S. lat., north to the Peruvian and Brazilian coasts; accidental on the coast of California (off Monterey).

Genus PROCELLARIA Linnaeus

Procellaria Linnaeus, Syst. Nat., 10th ed., 1, p. 131, 1758—type, by subs. desig. (G. R. Gray, List Gen. Subgen. Bds., p. 78, 1840), *Procellaria aequinoctialis* Linnaeus.

Priofinus Hombron and Jacquinot, Compt. Rend. Acad. Sci. Paris, 18, p. 355, March, 1844—type, by subs. desig. (Mathews and Iredale, Austr. Av. Rec., 4, p. 111, 1920), *Procellaria aequinoctialis* Linnaeus.

Majaqueus Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Procellaria aequinoctialis* Linnaeus.

Cymatobolus Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 363, 1890—substitute name for *Majaqueus* Reichenbach.

Procellaria aequinoctialis aequinoctialis Linnaeus. CAPE HEN.

Procellaria aequinoctialis Linnaeus, Syst. Nat., 10th ed., 1, p. 132, 1758—based upon "The Great Peteril" Edwards, Nat. Hist. Birds, 2, p. 89, pl. 89;¹ believed to be "from the seas about the Cape of Good Hope"; Wilkins, Ibis, 1923, p. 487—South Georgia; Wetmore, Condor, 25, p. 171, 1923—off Atico, Peru.

Procellaria nigra (not of Pallas, 1769) Forster, Descr. Anim. (ed. Lichtenstein), p. 26, 1844—substitute name for *Procellaria aequinoctialis* Linnaeus.

Majaqueus aequinoctialis Sharpe, Proc. Zool. Soc. Lond., 1881, p. 12—Valparaiso (Aug.); Salvin, l.c., 1883, p. 431—Coquimbo (June); Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 22, 1885—South Georgia (breeding);

¹ Edwards' plate represents an abnormal specimen without white on the chin, but the length of the bill (three inches "from the corner of the mouth to the point") plainly excludes *P. parkinsoni*. About its variation, cf. Hartert, Nov. Zool., 23, p. 355, 1926.

Salvin, Cat. Bds. Brit. Mus., 25, p. 395, 1896—Chile (Valparaiso, Coquimbo) (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 654, 1898—Cavanha and Coquimbo, Chile; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 81, 1906—South Georgia (eggs descr.); Ihering, Cat. Faun. Braz., 1, p. 37, 1907—Iguapé, São Paulo; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 142, 1910—Patagonia (descr.); Mathews, Discovery Rep., 1, p. 573, pl. 45, figs. 5-6, 1929—South Georgia (nesting).

Procellaria (Majaqueus) aequinoctialis Oustalet, Miss. Sci. Cap Horn, 6, p. B. 161, 1891—Ponsonby Bay, Tierra del Fuego.

Procellaria aequinoctialis brabournei Mathews, Birds Austr., 2, p. 113, May 30, 1912—"West coast of South America" (location of type not stated).

Procellaria aequinoctialis aequinoctialis Dabbene, El Hornero, 3, p. 5, 1923 (descr., range); Bennett, Ibis, 1926, p. 314—Falkland Islands (breeding, Nov., 1922); Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 52, 1930—between Santos and Montevideo; Peters, Bds. World, 1, p. 52, 1931 (range); Mathews, Nov. Zool., 39, p. 175, 1934 (synon., range); Philippi, El Hornero, 6, p. 237, 1936—Arica Bay, Tacna, Chile; Murphy, Ocean. Bds. S. Amer., 2, p. 641, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 19, 1938—Iguapé, São Paulo.

Range.—Breeds in the Falkland Islands, South Georgia (Crozet Islands and Kerguelen), and ranges north over the southern oceans to the coasts of Peru and Brazil (Cabo Frio, Rio de Janeiro).

Procellaria parkinsoni G. R. Gray.¹ BLACK PETREL.

Procellaria parkinsoni G. R. Gray, Ibis, 4, p. 245, 1862—New Zealand (type in British Museum); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 108, 1918—near Chatham and Charles Islands, Galápagos (May 4, June 18, and Oct. 14); Peters, Bds. World, 1, p. 52, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 647, 1936 (monog.).

Range.—Breeds on North Island, New Zealand; ranges over the South Pacific to the Galápagos Islands.

Genus PUFFINUS Brisson

Puffinus Brisson, Orn., 1, p. 56; 6, p. 130, 1760—type, by tautonymy, "*Puffinus*" = *Procellaria puffinus* Brünnich.

Nectris Kuhl, Beitr. Zool. Vergl. Anat., p. 146, 1820—type, by subs. desig. (Mathews, Birds Austr., 2, p. 46, 1912), *Procellaria puffinus* Brünnich.

Thyellas Gloger, in Froriep's Notiz. Geb. Natur- und Heilkunde, 16, p. 279, 1827—new name for *Puffinus* Brisson.

Rhipornis Billberg, Syn. Faun. Scand., 1, (2), tab. A, 1828—new name for *Puffinus* Brisson.

¹ Probably conspecific with *P. aequinoctialis*.

- Ardenna* Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Puffinus major* Reichenbach (not of Faber)=*Procellaria gravis* O'Reilly.
- Thyelodroma* Stejneger, Proc. U. S. Nat. Mus., 11, p. 93 (note), 1888—type, by orig. desig., *Puffinus sphenurus* Gould=*Puffinus chlororhynchus* Lesson.
- Paranectris* Iredale, Austr. Zool., 6, p. 115, Jan. 14, 1913—type, by orig. desig., *Procellaria grisea* Gmelin.
- Neonectris* Mathews, Austr. Av. Rec., 2, p. 12, Aug. 2, 1913—type, by orig. desig., *Puffinus brevicaudus* Gould=*Procellaria tenuirostris* Temminck.
- Hemipuffinus* Iredale, Austr. Av. Rec., 2, p. 20, Aug. 2, 1913—type, by orig. desig., *Puffinus carneipes* Gould.
- Alphapuffinus* Mathews, Austr. Av. Rec., 2, p. 110, Sept. 24, 1914—type, by orig. desig., *Puffinus assimilis* Gould.
- Calonectris* Mathews and Iredale, Ibis, (10), 3, p. 592, 1915—type, by orig. desig., *Puffinus leucomelas* Temminck.
- Microzalias* Mathews and Iredale, Ibis, (10), 3, p. 597, 1915—type, by orig. desig., *Puffinus nativitatis* Streets.

***Puffinus kuhlii*¹ *kuhlii* (Boie).² MEDITERRANEAN SHEARWATER.**

Procellaria kuhlii Boie, Isis, 1835, col. 257—Corsica.

Calonectris kuhlii kuhlii Murphy, Auk, 39, p. 58, 1922—off Long Island, New York; idem and Chapin, Amer. Mus. Nov., 384, p. 4, 1929 (size characters).

Puffinus diomedea diomedea (not *Procellaria diomedea* Scopoli)³ Peters, Bds. World, 1, p. 54, 1931 (range).

Ardenna kuhli kuhli Mathews, Nov. Zool., 39, p. 177, 1934 (range).

Range.—Breeds on islands in the Mediterranean and ranges across the Atlantic Ocean to the coast of the United States (off Long Island).

****Puffinus kuhlii borealis* Cory. CORY'S SHEARWATER.**

Puffinus borealis Cory, Bull. Nutt. Orn. Cl., 6, p. 84, April, 1881—off Chatham Island, Massachusetts (type in Field Museum of Natural History, examined).

¹ According to Mayaud (*Alauda*, 4, p. 63, 1932, and *Ibis*, 1938, p. 343), *P. kuhlii* has a differently shaped pelvis, and could be generically separated from the group comprising *P. assimilis*, *P. puffinus*, *P. griseus*, and *P. gravis*.

² *Puffinus kuhlii kuhlii* (Boie) is on average smaller (wing, 332–342, female, 317–332; bill, 49–55, female, 45–50) than *P. k. borealis*, and differs, furthermore, by the conspicuous whitish edges to the feathers of the forehead and the presence of a large white field on the inner webs of the primaries (Murphy, *Auk*, 39, p. 58, 1922).

³ We agree with Hartert (*Vög. Pal. Fauna, Nachtr.*, 1, p. 77, 1923) that *Procellaria diomedea* Scopoli (*Ann. I. Hist. Nat.*, p. 74, 1769), named from a single specimen of unknown origin in the collection of Count Thurn-Valsassina at Passau, is indeterminate.

Salvin, Cat. Bds. Brit. Mus., 25, p. 395, 1896—Chile (Valparaiso, Coquimbo) (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 654, 1898—Cavancha and Coquimbo, Chile; Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 81, 1906—South Georgia (eggs descr.); Ihering, Cat. Faun. Braz., 1, p. 37, 1907—Iguapé, São Paulo; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 142, 1910—Patagonia (descr.); Mathews, Discovery Rep., 1, p. 573, pl. 45, figs. 5-6, 1929—South Georgia (nesting).

Procellaria (Majaqueus) aequinoctialis Oustalet, Miss. Sci. Cap Horn, 6, p. B. 161, 1891—Ponsonby Bay, Tierra del Fuego.

Procellaria aequinoctialis brabournei Mathews, Birds Austr., 2, p. 113, May 30, 1912—"West coast of South America" (location of type not stated).

Procellaria aequinoctialis aequinoctialis Dabbene, El Hornero, 3, p. 5, 1923 (descr., range); Bennett, Ibis, 1926, p. 314—Falkland Islands (breeding, Nov., 1922); Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vogel, p. 52, 1930—between Santos and Montevideo; Peters, Bds. World, 1, p. 52, 1931 (range); Mathews, Nov. Zool., 39, p. 175, 1934 (synon., range); Philippi, El Hornero, 6, p. 237, 1936—Arica Bay, Tacna, Chile; Murphy, Ocean. Bds. S. Amer., 2, p. 641, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 19, 1938—Iguapé, São Paulo.

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Nectris Kuhl, Beitr. Zool. Vergl. Anat., p. 146, 1820—type, by subs. desig. (Mathews, Birds Austr., 2, p. 46, 1912), *Procellaria puffinus* Brünnich.

Thyellas Gloger, in Froriep's Notiz. Geb. Natur- und Heilkunde, 16, p. 279, 1827—new name for *Puffinus* Brisson.

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¹ Probably conspecific with *P. aequinoctialis*.

- Ardenna* Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Puffinus major* Reichenbach (not of Faber)=*Procellaria gravis* O'Reilly.
- Thyellodroma* Stejneger, Proc. U. S. Nat. Mus., 11, p. 93 (note), 1888—type, by orig. desig., *Puffinus sphenurus* Gould=*Puffinus chlororhynchus* Lesson.
- Paranectris* Iredale, Austr. Zool., 6, p. 115, Jan. 14, 1913—type, by orig. desig., *Procellaria grisea* Gmelin.
- Neonectris* Mathews, Austr. Av. Rec., 2, p. 12, Aug. 2, 1913—type, by orig. desig., *Puffinus brevicaudus* Gould=*Procellaria tenuirostris* Temminck.
- Hemipuffinus* Iredale, Austr. Av. Rec., 2, p. 20, Aug. 2, 1913—type, by orig. desig., *Puffinus carneipes* Gould.
- Alphapuffinus* Mathews, Austr. Av. Rec., 2, p. 110, Sept. 24, 1914—type, by orig. desig., *Puffinus assimilis* Gould.
- Calonectris* Mathews and Iredale, Ibis, (10), 3, p. 592, 1915—type, by orig. desig., *Puffinus leucomelas* Temminck.
- Microzalias* Mathews and Iredale, Ibis, (10), 3, p. 597, 1915—type, by orig. desig., *Puffinus nativitatis* Streets.

***Puffinus kuhlii*¹ *kuhlii* (Boie).² MEDITERRANEAN SHEARWATER.**

Procellaria kuhlii Boie, Isis, 1835, col. 257—Corsica.

Calonectris kuhlii kuhlii Murphy, Auk, 39, p. 58, 1922—off Long Island, New York; idem and Chapin, Amer. Mus. Nov., 384, p. 4, 1929 (size characters).

Puffinus diomedea diomedea (not *Procellaria diomedea* Scopoli)² Peters, Bds. World, 1, p. 54, 1931 (range).

Ardenna kuhli kuhli Mathews, Nov. Zool., 39, p. 177, 1934 (range).

Range.—Breeds on islands in the Mediterranean and ranges across the Atlantic Ocean to the coast of the United States (off Long Island).

****Puffinus kuhlii borealis* Cory. CORY'S SHEARWATER.**

Puffinus borealis Cory, Bull. Nutt. Orn. Cl., 6, p. 84, April, 1881—off Chatham Island, Massachusetts (type in Field Museum of Natural History, examined).

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² *Puffinus kuhlii kuhlii* (Boie) is on average smaller (wing, 332–342, female, 317–332; bill, 49–55, female, 45–50) than *P. k. borealis*, and differs, furthermore, by the conspicuous whitish edges to the feathers of the forehead and the presence of a large white field on the inner webs of the primaries (Murphy, *Auk*, 39, p. 58, 1922).

³ We agree with Hartert (*Vög. Pal. Fauna, Nachtr.*, 1, p. 77, 1923) that *Procellaria diomedea* Scopoli (*Ann. I. Hist. Nat.*, p. 74, 1769), named from a single specimen of unknown origin in the collection of Count Thurn-Valsassina at Passau, is indeterminate.

Univ. Exped. Patagonia, 2, Orn., p. 128, 1910 (descr.); Wilkins, Ibis, 1923, p. 499—Nightingale and Inaccessible Islands (breeding); Bennett, l.c., 1926, p. 314—Falkland Islands (one spec.); Peters, Bds. World, 1, p. 55, 1931 (range); Mayaud, Alauda, 4, p. 61, 1932 (osteol.); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 247, 1935 (field chars., distrib.); Murphy, Ocean. Bds. S. Amer., 2, p. 660, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 21, 1938—South Trinidad; Hørring, Medd. Grønland, 108, p. 11, 1939—East Greenland.

Ardenna gravis Bent, Bull. U. S. Nat. Mus., 121, p. 65, 1922 (life hist.); Dabbene, El Hornero, 3, p. 12, 1923—Tierra del Fuego and Falkland Islands (descr.); Mathews, Nov. Zool., 38, p. 27, 1932—Tristan d'Acunha (breeding, eggs descr.); idem, l.c., 39, p. 177, 1934 (range).

Range.—Breeds on Nightingale and Inaccessible Islands, Tristan d'Acunha group; winters in the North Atlantic Ocean to the Grand Banks, British Isles, and the Arctic Circle; accidental in South Trinidad, Falkland Islands, and Tierra del Fuego.

Field Museum Collection.—30: Baffin Land (Resolution Island, 1); Labrador (unspecified, 1); Newfoundland (Grand Banks, 1); Nova Scotia (Dover, 11); Massachusetts (Chatham Island, 1; Crab Ledge, Monomoy Island, 15).

***Puffinus pacificus*¹ *chlororhynchus* Lesson. WEDGE-TAILED SHEARWATER.**

Puffinus chlororhynchus Lesson, *Traité d'Orn.*, livr. 8, p. 613, June, 1831—no locality given (type, from Shark's Bay, West Australia, in Paris Museum; cf. Pucheran, *Rev. Mag. Zool.*, (2), 2, p. 633, 1850, and Berlioz, *Bull. Mus. Hist. Nat. Paris*, (2), 1, p. 62, 1929); Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 372, 1896 (monog.); Loomis, *Proc. Calif. Acad. Sci.*, (4), 2, p. 141, 1918—San Benedicto Island, Revillagigedo group (nesting habits, plumages, var., meas.).

Puffinus sphenurus Gould, *Ann. Mag. Nat. Hist.*, 13, p. 365, May 1, 1844—Houtmann's Abrolhos, West Australia (type now in the Academy of Natural Sciences, Philadelphia; cf. Stone and Mathews, *Austr. Av. Rec.*, 1, p. 137, 1913).

Puffinus cuneatus (not of Salvin) Anthony, *Auk*, 15, pp. 39, 316, 1898—off Cape San Lucas, Lower California, and San Benedicto Island, Revillagigedo group; Nelson, *N. Amer. Fauna*, 14, p. 27, 1899—Maria Madre Island, Tres Marias (descr.); Anthony, *Auk*, 17, p. 250, pl. 8, 1900—San Benedicto Island (breeding); Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 432, 1904—off Cape San Lucas, San Benedicto, Socorro, and

¹ *Procellaria pacifica* Gmelin (*Syst. Nat.*, 1, (2), p. 560, 1789—based on "Pacific Petrel" Latham, *Gen. Syn. Bds.*, 3, (2), p. 416) was described from "circa insulam Europa aliasque maris pacifici." Mathews (*Birds Austr.*, 2, p. 80, 1912) designated as type locality Kermadec Islands, although it is pretty certain that the bird described by Latham did not originate in these islands (cf. also Hartert, *Nov. Zool.*, 33, pp. 350–351, 1926). This form, for which we reluctantly maintain the designation *P. pacificus pacificus*, seems to be separable by its more powerful bill, longer wings and tail, etc.

Maria Madre Islands; McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 286, 1926—San Benedicto Island (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 66, 1928—off Cape San Lucas, Lower California.

Puffinus pacificus alleni Mathews, Birds Austr., 2, p. 83, May 30, 1912—San Benedicto Island, Revillagigedo group (type in Tring Collection [cf. Hartert, Nov. Zool., 33, p. 351, 1926], now in the American Museum of Natural History, New York).

Thyellodroma pacifica (not *Procellaria pacifica* Gmelin) Bent, Bull. U. S. Nat. Mus., 121, p. 97, 1922 (life hist.).

Puffinus pacificus chlororhynchus Peters, Bds. World, 1, p. 55, 1931 (range).

Thyellodroma pacifica alleni Mathews, Nov. Zool., 39, p. 186, 1934—Revillagigedo Islands.

Range.—Breeds on the Revillagigedo group (San Benedicto Island),¹ islands off Australia, Lord Howe and Norfolk Islands, and many other islands in the Pacific; ranges through the warmer parts of the Indian and Pacific oceans.

****Puffinus bulleri* Salvin. NEW ZEALAND SHEARWATER.**

Puffinus bulleri Salvin, Ibis, (5), 6, p. 354, 1888—New Zealand (cotype in British Museum);² idem, Cat. Bds. Brit. Mus., 25, p. 371, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 146, 1918—Point Pinos, California (descr., meas.); Hartert, Nov. Zool., 33, p. 352, 1926 (crit.); Peters, Bds. World, 1, p. 56, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 664, 1936 (monog.).

Thyellodroma bulleri Bent, Bull. U. S. Nat. Mus., 121, p. 101, 1922—Chile (Valparaiso, Feb. 24 to March 9) and California (Point Pinos) (life hist.; egg descr.); Murphy, Amer. Mus. Nov., 419, p. 14, 1930—Chile (crit.).

Thyellodroma pacifica bulleri Mathews, Nov. Zool., 39, p. 186, 1934 (range).

Range.—Breeds on small islands off North Island, New Zealand; migrates to the coast of California (Point Pinos) and south to Chile (Valparaiso).

Field Museum Collection.—1: Peru (Talara, 1).

****Puffinus griseus* (Gmelin). SOOTY SHEARWATER.**

Procellaria grisea Gmelin, Syst. Nat., 1, (2), p. 564, 1789—southern hemisphere between 35° and 50°=New Zealand.

Nectris fuliginosus a. chilensis Bonaparte,³ Consp. Gen. Av., 2, p. 202, 1857—Chile (type in Berlin Museum).⁴

¹ The breeding race of these islands is evidently inseparable from the Australian birds.

² Another cotype is in the Tring Collection (cf. Hartert, Nov. Zool., 33, p. 352, 1926).

³ Examination of an adequate number of breeding birds from South America shows this form to be inseparable.

⁴ *Nectris gama* Bonaparte (Consp. Gen. Av., 2, p. 202, 1857); described from a Verreaux specimen, presumably of South African origin, in the Paris Museum,

- Puffinus cinereus* (not *Procellaria cinerea* Linnaeus) Darwin, Zool. Beagle, 3, Birds, p. 137, 1841—Tierra del Fuego, Chile (Chiloé Island), mouth of the La Plata, and Callao Bay, Peru (habits).
- Nectris amaurosoma* Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 124, pub. June 30, 1864—Cape San Lucas, Lower California (type in U. S. National Museum); Sclater and Salvin, Ibis, 1870, p. 500—Coquimbo, Chile (crit.).
- Puffinus stricklandi* Ridgway, in Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 390, 1884—"North Pacific Ocean" (type probably in U. S. National Museum).
- Puffinus (Nectris) fuliginosus* var. *chilensis* Oustalet, Miss. Sci. Cap Horn, 6, p. B. 162, 1891—Orange Bay, Tierra del Fuego (November).
- Puffinus griseus* Salvin, Cat. Bds. Brit. Mus., 25, p. 386, 1896—Peru (Callao Bay), Chile (Corral, Coquimbo), and Straits of Magellan (monog.); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 384, 1902—Harberton Harbour, Beagle Channel, Tierra del Fuego; Nicoll, Ibis, 1904, p. 51—Valparaiso Bay, Chile; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 131, 1910 (descr.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 132, 1918—off California (var., molt, meas.); Bent, Bull. U. S. Nat. Mus., 121, p. 85, 1922 (life hist.); (?) Stresemann, Orn. Monatsber., 32, p. 63, 1924—Colupito, coast Cordillera of Antofagasta, Chile; Grinnell, Univ. Calif. Pub. Zool., 32, p. 65, 1928—peninsula of Lower California; Murphy, Amer. Mus. Nov., 419, p. 7, 1930 (crit.); Peters, Bds. World, 1, p. 56, 1931 (range in part); Mayaud, Alauda, 6, p. 89, 1934 (osteol. affinities); Bullock, Rev. Chil. Hist. Nat., 39, p. 251, 1935—Isla la Mocha, Chile (nesting); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 260, 1935 (winter range in the North Atlantic); Murphy, Ocean. Bds. S. Amer., 2, p. 666, 1936 (monog.); Aguayo and Moreno, Mem. Soc. Cub. Hist. Nat., 13, p. 315, 1939—Cuba; van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 29, 1945—Gulf of California.
- Puffinus griseus chilensis* Dabbene, El Hornero, 3, p. 9, 1923 (descr., range); Bennett, Ibis, 1926, p. 314—Falkland Islands (breeding); Reynolds, l.c., 1935, p. 92—Wollaston Island, Beagle Channel, Straits of Magellan (breeding; eggs descr.); Philippi, El Hornero, 6, p. 238, 1936—Arica to Valparaiso, Chile.
- Puffinus griseus griseus* Chapman, Bull. Amer. Mus. N. H., 55, p. 183, 1926—Gulf of Jambeli, Ecuador (July 16).
- Paranectris griseus chilensis* Mathews, Nov. Zool., 39, p. 185, 1933—Chile to the Kurile Islands.
- Paranectris griseus stricklandi* Mathews, Nov. Zool., 39, p. 185, 1933—Falkland Islands "to the coast of Africa."

Range.—Breeds on South Island and Stewart Island, New Zealand, the Chatham, Auckland and Snares Islands, the Falkland Islands, in the Straits of Magellan (Wollaston and Deceit Islands), and supposedly also in the Cordillera of Antofagasta, Chile; migrates

does not seem to belong here at all. We are at a loss to understand Mathews' entry of the name in Nov. Zool., 39, p. 185, 1933. The type unfortunately is lost. Cf. Berlioz, Bull. Mus. Nat. Hist. Paris, (2), 1, p. 63, 1929.

into the North Pacific and North Atlantic to Kamchatka, Alaska, Labrador, Greenland, and the F aroes.

Field Museum Collection.—58: Alaska (St. George Island, Bering Sea, 1); Newfoundland (Grand Banks, 1); Nova Scotia (Dover, 4); California (Carmel Bay, 2; Pacific Grove, 6; Monterey, 9; Moss Landing, 8; Carmel, 2; Carmel River mouth, 1; Westport, 1; Redondo Beach, 1; Hyperion, 1; Pacific Beach, 2); Massachusetts (Chatham Island, 5; Monomoy Island, 10); Peru (Talara, 3; Homi, Arequipa, 1).

***Puffinus tenuirostris** (Temminck). SLENDER-BILLED SHEARWATER.

Procellaria tenuirostris Temminck, *Nouv. Rec. Pl. Col.*, livr. 99, text to pl. 587, 1835—Japan (cotypes in Leyden Museum; cf. Schlegel, *Mus. Pays-Bas*, livr. 4, *Procellariae*, p. 26, 1863).

Puffinus tenuirostris Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 388, 1896 (monog.); Loomis, *Proc. Calif. Acad. Sci.*, (4), 2, p. 138, 1918—off Point Pinos, California (plumages, affinities, meas.); Bent, *Bull. U. S. Nat. Mus.*, 121, p. 90, 1922 (life hist., distr.); Murphy, *Amer. Mus. Nov.*, 419, p. 9, 1930 (crit.); idem, *Ocean. Bds. S. Amer.*, 2, p. 673, 1936 (monog.); Kenyon, *Condor*, 44, p. 232, 1942—off San Diego County, California.

Puffinus tenuirostris tenuirostris Hartert, *Nov. Zool.*, 27, p. 135, 1920—Bering and Copper Islands; Peters, *Bds. World*, 1, p. 56, 1931 (range); Griscom, *Bull. Mus. Comp. Zool.*, 78, p. 292, 1935—off Naos Island, Bay of Panama (one record).

Neonectris tenuirostris Mathews, *Nov. Zool.*, 39, p. 184, 1934 (synon., range).

Range.—Breeds on islands off the Australian coast and on the Bounty Islands, migrates north through the Pacific Ocean to Point Barrow, Alaska, and east to the shores of the American continent from Alaska to California; accidental in the Bay of Panama (one record from Naos Island).

Field Museum Collection.—8: Alaska (Barrow, 5; Unimak Pass, Aleutian Islands, 2); Washington (Pacific coast, 1).

Puffinus nativitatis Streets. CHRISTMAS ISLAND SHEARWATER.

Puffinus (Nectris) nativitatis Streets, *Bull. U. S. Nat. Mus.*, 7, p. 29, 1877—Christmas Island, Pacific Ocean (type in U. S. National Museum); Rothschild and Hartert, *Nov. Zool.*, 9, p. 414, 1902—at sea, 12° 5' N. lat., 107° W. long.; Peters, *Bds. World*, 1, p. 57, 1931 (range).

Microzalias nativitatis Mathews, *Nov. Zool.*, 39, p. 185, 1934 (range).

Range.—Breeds on islands in the tropical Pacific (Laysan, Wake, Christmas, Phoenix, Marquesas, etc.); one record from the waters around Clipperton Island.

***Puffinus puffinus puffinus** (Brünnich). MANX SHEARWATER.

- Procellaria puffinus* Brünnich, Orn. Bor., p. 29, 1764—Färoes and Norway.
- Procellaria anglorum* Temminck, Man. Orn., 2d ed., 2, p. 806, 1820—new name for *Procellaria puffinus* Brünnich.
- Puffinus major* Faber, Prodr. Isl. Orn., p. 56, 1822—new name for *Procellaria puffinus* Brünnich.
- Puffinus anglorum* Salvin, Cat. Bds. Brit. Mus., 25, p. 377, 1896 (monog.); Winge, Medd. Grøn., 21, p. 139, 1898—South Greenland (one record).
- Nectris puffinus* Ihering, Cat. Faun. Braz., 1, p. 37, 1907—Iguapé, São Paulo.
- Puffinus puffinus bermudae* Nichols and Mowbray, Auk, 33, p. 195, April, 1916—Gurnet Head Rock, Bermuda (type in the American Museum of Natural History, New York); Dwight, l.c., 44, p. 243, 1927 (crit., meas.= *P. p. puffinus*).
- Puffinus bermudae* Brooks, Auk, 34, p. 206, 1917—Maine or New Brunswick.
- Puffinus puffinus puffinus* Bent, Bull. U. S. Nat. Mus., 121, p. 71, 1922 (life hist.); Peters, Bds. World, 1, p. 57, 1931 (range); Mayaud, Alauda, 4, pp. 43, 57, 1932 (morph., osteol.); idem, l.c., 6, p. 87, 1934 (osteol.); Mathews, Nov. Zool., 39, p. 178, 1934; idem, Ibis, 1935, pp. 579, 581 (synon., range, char.); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 267, 1935 (distrib. in North Atlantic); Murphy, Ocean. Bds. S. Amer., 2, p. 677, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 21, 1938—Iguapé (Sept.) and Ilha de São Sebastião (Oct.), São Paulo, Brazil.
- Puffinus puffinus* Nichols, Proc. Bost. Soc. N. H., 39, p. 294, 1931—Bermuda Islands (three records).

Range.—Breeds in Iceland (Vestmann's Islands), on the Färoes, the British Isles, on islets off the coast of Brittany, on the Azores, Madeira, and the Salvages, and occasionally in the Bermuda Islands; extends its migrations to the coasts of Brazil (São Paulo), Uruguay, and even Argentina (Mar del Plata, Oct. 5-9, 1914); accidental in Greenland and New Brunswick.

Field Museum Collection.—1: New Brunswick (St. John, 1).

***Puffinus puffinus opisthomelas** Coues.¹ BLACK-VENTED SHEARWATER.

- Puffinus opisthomelas* Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 139, pub. June 30, 1864—Cape San Lucas, Lower California (type in U. S. National Museum); Salvin, Cat. Bds. Brit. Mus., 25, p. 380, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 114, pls. 14-16, 1918 (plumages, molt, char.); Bent, Bull. U. S. Nat. Mus., 121, p. 79, 1922 (life hist.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 285, 1926—Guadalupe Island; Grinnell, Univ. Calif. Pub. Zool., 32, p. 65, 1928—Lower California (breeding on Natividad, Guadalupe, and San Benito Islands); Peters, Bds. World,

¹ We agree with Murphy and Mathews that this and the next form are races of the Manx Shearwater.

1, p. 58, 1931 (range); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 30, 1945—Gulf of California (may breed).

Puffinus optatus (Hartlaub and Finsch, MS.) Schmeltz,¹ Mus. Godeffroy, Cat., 5, p. 15, Feb., 1874—new name for *P. opisthomelas* Coues.

Puffinus couesi Mathews, Birds Austr., 2, p. 67, 1912—based on *P. opisthomelas* Godman, Monog. Petrels, pt. 2, p. 109, 1908, ex Santa Cruz Island, California (type in Salvin-Godman Collection, British Museum).

Puffinus puffinus opisthomelas Mathews, Nov. Zool., 39, p. 179, 1934 (range, synonym.); idem, Ibis, 1935, pp. 580, 582 (synonym., range, char.).

Range.—Breeds on San Benito, Natividad, and Guadalupe Islands, on the west coast of Lower California, and perhaps in Gulf of California; ranges north to the coast of British Columbia (off Albert Head).

Field Museum Collection.—17: California (Pacific Grove, 3; Monterey Bay, 3; off Carmel Bay, 3; off San Diego, 1; Santa Cruz, 1); Mexico (Natividad Island, Lower California, 6).

****Puffinus puffinus auricularis* Townsend. TOWNSEND'S SHEAR-WATER.**

Puffinus auricularis Townsend, Proc. U. S. Nat. Mus., 13, p. 133, Sept. 9, 1890—Clarion Island, off Lower California (type in U. S. National Museum); Salvin, Cat. Bds. Brit. Mus., 25, p. 380, 1896 (monog.); Anthony, Auk, 15, pp. 313, 316, 317, 1898—San Benedicto, Clarion, and Socorro Islands; idem, l.c., 17, p. 249, 1900—Revillagigedo Islands (breeding habits); Rothschild and Hartert, Nov. Zool., 9, p. 414, 1902—Clarion Island; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 434, 1904—Revillagigedo Islands and Cape San Lucas, Lower California; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 120, 1918—Revillagigedo Islands and vicinity of Clipperton Island (disc., var., downy plumage, meas.); Bent, Bull. U. S. Nat. Mus., 121, p. 84, 1922 (life hist.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 285, 1926—Clarion and Socorro Islands (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 65, 1928—vicinity of Cape San Lucas, Lower California; Peters, Bds. World, 1, p. 58, 1931 (range).

Puffinus puffinus auricularis Mathews, Nov. Zool., 39, p. 179, 1934 (range); idem, Ibis, 1935, pp. 580, 582 (range, chars.).

Range.—Breeds on the Revillagigedo group (Clarion, San Benedicto, and Socorro Islands); wanders to Cape San Lucas and south to Clipperton Island.

Field Museum Collection.—3: Mexico, Revillagigedo Islands (Clarion Island, 2; Socorro Island, 1).

¹ Although ostensibly intended for a bird of the Pelew Islands, presumably *P. assimilis assimilis* Gould, the name, published without any description, stands as a substitute for *P. opisthomelas* Coues.

Puffinus assimilis baroli Bonaparte. ATLANTIC ALLIED SHEAR-WATER.

Puffinus baroli (Bonelli MS.) Bonaparte,¹ *Consp. Gen. Av.*, 2, p. 204, Oct. 1, 1857—Mediterranean, Desertas near Madeira, and Canary Islands; Desertas designated as type locality by Bannerman, *Ibis*, 1914, p. 477.²

Puffinus obscurus atlanticus Rothschild and Hartert, *Bull. Brit. Orn. Cl.*, 27, p. 43, Jan. 23, 1911—"North Atlantic Isles" (type, from Porto Santo, near Madeira, in Tring Collection [cf. Hartert, *Nov. Zool.*, 33, p. 347, 1926], now in the American Museum of Natural History, New York).

Puffinus assimilis godmani Bent, *Bull. U. S. Nat. Mus.*, 121, p. 77, 1922—Sable Island, Nova Scotia (Sept. 1, 1896); Murphy, *Amer. Mus. Nov.*, 276, p. 5, 1927—Madeira, Desertas, Dugio Island, and Sable Island, Nova Scotia (char.).

Puffinus assimilis baroli Peters, *Bds. World*, 1, p. 59, 1931 (range); Mayaud, *Alauda*, 4, p. 60, 1932 (osteol.).

Alphapuffinus assimilis baroli Mathews, *Nov. Zool.*, 39, p. 181, 1934 (synon., range).

Puffinus godmani Allen, *Auk*, 25, p. 339, July, 1938—based on *P. bailloni* (not of Bonaparte) Godman (*Monog. Petrels*, p. 138, 1908) from the Island of Madeira.

Range.—Breeds in Madeira, the Desertas, the Salvage and Canary Islands; accidental on Sable Island, Nova Scotia (Sept. 1, 1896).

***Puffinus assimilis lherminieri** Lesson.³ AUDUBON'S SHEAR-WATER.

Puffinus (sic) *Lherminieri* Lesson, *Rev. Zool.*, 2, p. 102, 1839—"ad ripas Antillarum"—Guadeloupe, Lesser Antilles (type in Rochefort Museum).

Puffinus auduboni Finsch, in Hartlaub and Finsch, *Proc. Zool. Soc. Lond.*, 1872, p. 111, pub. June 1, 1872—Cape Florida (type in Berlin Museum); Feilden, *Ibis*, 1889, pp. 60, 503—Barbados (breeding); Bonhote, *l.c.*, 1903, p. 315—Washerwoman Cays, Andros, Bahama Islands (breeding); Salvin and Godman, *Biol. Centr.-Amer.*, *Aves*, 3, p. 435, 1904—Bahama Islands, Gulf of Mexico, Montserrat.

Puffinus obscurus (not *Procellaria obscura* Gmelin) Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 382, 1896—part, spec. p, Montserrat.

¹ *Puffinus barolii* (Bonelli MS.) Bonaparte (*Compt. Rend. Acad. Sci. Paris*, 42, p. 769, 1856) is a nomen nudum.

² Bonaparte had evidently seen three specimens: (1) Turin Museum, No. 3202, from the "Mediterranean" (ex Bonelli, 1820); (2) one from Desertas (near Madeira) in L. A. F. Baillon's collection at Abbéville; (3) one from the Canary Islands (ex Berthelot) in the Paris Museum. Although Bonelli, Curator of the Turin Museum at one time, clearly employed the term *baroli* on a Museum label, whence it was adopted by Bonaparte, there is no way of telling which of the three specimens actually served as basis of the diagnosis in the *Conspectus* and we may therefore accept Bannerman's action as final.

³ *P. lherminieri* appears to us conspecific with *P. assimilis*.

Puffinus obscurus auduboni Rothschild and Hartert, Nov. Zool., 6, p. 195, 1899 (char., range).

Puffinus lherminieri Clark, Proc. Bost. Soc. N. H., 32, p. 229, 1905—Barbados (Bird Rock), Grenadines (small islets about Carriacou), and Grenada ("Mouchoir Quarré," Labaye Rocks) (breeding; egg descr.); Smyth, Wilson Bull., 50, p. 203, 1938—Mona Island, Puerto Rico (nesting).

Puffinus lherminieri lherminieri Bent, Bull. U. S. Nat. Mus., 121, p. 74, 1922 (life hist.); Murphy, Amer. Mus. Nov., 276, p. 6, 1927 (char.); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 275, 1927—Little Saba Island, near St. Thomas (breeding); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 61, 1931—Hispaniola (no breeding record); Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 293, 1931—Bermuda (rare breeder); Peters, Bds. World, 1, p. 59, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 577—*islets off Tobago (breeding)*; Murphy, Ocean. Bds. S. Amer., 2, p. 684, 1936 (monog.); Richardson, Auk, 55, p. 119, 1938—Chilmark, Martha's Vineyard, Massachusetts (Aug. 13, 1937).

Alphapuffinus lherminieri lherminieri Mathews, Nov. Zool., 39, p. 181, 1934 (range).

Range.—Breeds in the Bermuda, Bahama, and Virgin Islands (Little Saba), Puerto Rico (Mona), Lesser Antilles (St. Martins, Saba, St. Eustatius, Guadeloupe, Barbados, Grenadines), and islets off Tobago; ranges over the Gulf of Mexico to the coast of Florida and casually to the Atlantic coast of the United States north to Massachusetts (Martha's Vineyard);¹ accidental off the coast of British Guiana (Dec. 2, 1931).

Field Museum Collection.—24: Bahama Islands (unspecified, 1; Cay Verde, 2; Cay Sal, 2; Bimini, 3; Exuma Sound, 1; Old Providence Island, 10); Virgin Islands (St. Thomas, 3); Lesser Antilles (Saba Bank, 2).

****Puffinus assimilis subalaris* Ridgway. GALÁPAGOS SHEAR-WATER.**

Puffinus subalaris (Townsend MS.) Ridgway, Proc. U. S. Nat. Mus., 19, p. 650, Mar. 15, 1897—Dalrymple Rock, Chatham Island (type in U. S. National Museum); Wetmore, Condor, 25, p. 171, 1923—180 miles south of Balboa, Panama.

Puffinus obscurus (not *Procellaria obscura* Gmelin) Salvin, Proc. Zool. Soc. Lond., 1883, p. 431—Charles Island; idem, Cat. Bds. Brit. Mus., 25, p. 382, 1896—part, spec. o, Charles Island; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 122, 1918—Galápagos Islands (var., molt).

Puffinus tenebrosus (not of Pelzeln, 1873) Townsend, Proc. U. S. Nat. Mus., 13, p. 142, 1890—Chatham Island; idem, Bull. Mus. Comp. Zool., 27, p. 126, 1895—off Chatham and Wenman Islands.

¹ The North American records have been reviewed by Palmer (Auk, 48, pp. 198–208, 1931).

Puffinus obscurus subalaris Rothschild and Hartert, Nov. Zool., 6, pp. 194, 195, 1899—Culpepper, Wenman, Albemarle, Narborough, Jervis Islands, and Kicker Rock, near Chatham Island (chars.); iidem, l.c., 9, p. 414, 1902—Bindloe, Seymour, and Wenman Islands (descr. of downy young); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 241, 1904—Wenman Islands (breeding; eggs descr.); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 34, 1931—Galápagos Islands.

Puffinus lherminieri becki Mathews, Birds Austr., 2, p. 70, May 30, 1912—“Culpepper and Wenman Islands, Galápagos group” (type, from Culpepper Island, in the Tring Collection [cf. Hartert, Nov. Zool., 33, p. 350, 1926]; now in the American Museum of Natural History, New York).

Puffinus lherminieri subalaris Murphy, Amer. Mus. Nov., 276, p. 7, 1927 (char.); Peters, Bds. World, 1, p. 59, 1931 (range); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 26, 1931—Tower, Daphne and Hood Islands; Murphy, Ocean. Bds. S. Amer., 2, p. 687, 1936 (monog.).

Alphapuffinus lherminieri subalaris Mathews, Nov. Zool., 39, p. 182, 1934 (range).

Range.—Breeds in the Galápagos Archipelago.

Field Museum Collection.—10: Galápagos Islands (Tower Island, 2; Hood Island, 2; Champion Island, near Charles, 1; Tagus Cove, Albemarle Island, 5).

Genus PTERODROMA Bonaparte

Rhantistes (not of Kaup, 1829) Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Procellaria cookii* Gray.

Pterodroma Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, No. 17, p. 768, May, 1856—type, by subs. desig. (Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 137), *Procellaria macroptera* Smith.

Aestrelata Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, No. 17, p. 768, May, 1856—type, by subs. desig., *Procellaria hasitata* “Temminck” (=Kuhl).

Cookilaria Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 994, Nov., 1856—new name for *Rhantistes* Reichenbach.

Oestrelata Newton, Ibis, 1870, p. 277—emendation of *Aestrelata* Bonaparte.

Oestrelatella Bianchi, Faune Russie, Aves, 1, (2), pp. 521, 719, 1913—type, by orig. desig., *Oestrelata hypoleuca* Salvin.

Pterodroma brevirostris brevirostris (Lesson).¹ GRAY-FACED PETREL.

Procellaria brevirostris Lesson, Traité d'Orn., livr. 8, p. 611, June 11, 1831—no locality given (type from the seas around the Cape of Good Hope, in

¹ As pointed out long ago by Pucheran, *P. brevirostris* is an earlier name for *P. macroptera*, the types of both having been obtained in the Cape Seas. Mathews (Ibis, 1935, p. 885) proposed to transfer Lesson's name to the form of the Mascarene

Paris Museum; cf. Pucheran, *Rev. Mag. Zool.*, (2), 2, p. 633, 1858, and Berlioz, *Bull. Mus. Hist. Nat. Paris*, (2), 1, p. 63, 1929).

Procellaria macroptera Smith, *Illust. Zool. S. Afr.*, Part 11, pl. 52, July, 1840—Cape Seas (location of type unknown).

Procellaria atlantica (not of Bonaparte, 1824) Gould, *Ann. Mag. Nat. Hist.*, 13, p. 362, May 1, 1844—"Atlantic between our shores and the Cape of Good Hope" (cotypes, from the South Atlantic, 31° 45' S. lat., 5° 41' W. long., and 35° 19' S. lat., 10° 32' E. long., respectively, in the British Museum).

Oestrelata macroptera Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 399, 1896 (monog.).

Pterodroma macroptera macroptera Dabbene, *El Hornero*, 3, p. 20, 1923 (descr.); Peters, *Bds. World*, 1, p. 61, 1931 (range); Mathews, *Nov. Zool.*, 38, p. 32, 1932—Tristan d'Acunha (breeding); idem, *l.c.*, 39, p. 163, 1934 (range); Pinto, *Rev. Mus. Paul.*, 22, p. 21, 1938—Guarujá, Santos, São Paulo, Brazil (Aug., 1925).

Range.—Breeds on Tristan d'Acunha and the Crozet Islands; ranges over the South Atlantic Ocean to the coast of South America (definitely recorded from Guarujá, off Santos, São Paulo, Brazil).

Pterodroma lessonii lessonii (Garnot). LESSON'S PETREL.

Procellaria Lessonii Garnot, *Ann. Sci. Nat.*, 7, p. 54, pl. 4, 1826—"dans les parages du Cap Horn et de la mer Pacifique par 52° de lat. sept. [= austr.] et 85° de longit."¹ (type, from at sea off the Pacific coast of Patagonia, in the Paris Museum; cf. Berlioz, *Bull. Mus. Hist. Nat.*, Paris, (2), 1, p. 62, 1929); idem, in Duperrey, *Voy. Coquille, Zool.*, 1, livr. 12, p. 548, July 4, 1829—same locality, lat. corrected to 52° S.

Puffinus sericeus Lesson, *Man. Orn.*, 2, p. 402, June, 1828—Pacific Ocean, 52° S. lat., 85° W. long., off the west coast of Patagonia (same specimen as type of *P. Lessonii* Garnot; cf. Berlioz, *l.c.*, p. 62).

Oestrelata lessonii Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 401, 1896 (monog.); Bennett, *Ibis*, 1926, p. 315—Falkland Islands (errore); idem, *l.c.*, 1931, p. 12—East Falkland Islands (Aug. 23, 1925; three specimens).

Pterodroma Lessoni Lessoni Dabbene, *El Hornero*, 3, p. 16, 1923 (descr.); Peters, *Bds. World*, 1, p. 61, 1931 (range); Mathews, *Nov. Zool.*, 39, p. 163, 1934 (range).

Range.—Breeds on Kerguelen Island and ranges over the southern oceans;² within our limits recorded from the west coast of Chilean Patagonia ("Coquille," 1825) and the Falkland Islands (East Falkland Island, Aug. 23, 1925).

Islands, *P. b. aterrima* Bonaparte, but this identity is altogether unlikely and should be substantiated by a critical comparison of the types in the Paris Museum.

¹ Mathews (*List Bds. Austr.*, p. 37, 1913; *Nov. Zool.*, 39, p. 163, 1934) wrongly quotes "Falkland Islands Seas" as type locality.

² A very questionable race, *P. lessonii australis* (Mathews), breeds on the Bounty, Auckland, and Antipodes Islands, off New Zealand.

Pterodroma incerta (Schlegel).¹ TRISTAN PETREL.

Procellaria incerta Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 9, 1863—"Mers australes, côtes de la Nouvelle Zélande, et Mers de l'Australie" (cotypes in Leyden Museum).²

Oestrelata incerta Salvin, Cat. Bds. Brit. Mus., 25, p. 405, 1896 (monog.).

Pterodroma incerta Dabbene, El Hornero, 3, p. 18, 1923 (descr., range); Peters, Bds. World, 1, p. 62, 1931 (range); Mathews, Nov. Zool., 38, p. 33, 1932—Tristan d'Acunha (breeding); idem, l.c., 39, p. 164, 1934 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 702, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 22, 1938—South Atlantic Ocean.

Range.—Breeds on Tristan d'Acunha and ranges through the South Atlantic Ocean to the seas off the coast of Argentina and southern Brazil.³

***Pterodroma hasitata** (Kuhl). BLACK-CAPPED PETREL.

Procellaria hasitata Kuhl, Beitr. Zool., Vergl. Anat., 1, p. 142, 1820—"Mer de l'Inde" (type in coll. of J. C. Temminck, now in Leyden Museum; cf. Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 13, 1863); Temminck, Nouv. Rec. Pl. Col., livr. 70, pl. 416, Dec. 27, 1826—"des mers de l'Inde" (descr. and fig. of type); Bent, Bull. U. S. Nat. Mus., 121, p. 106, 1922 (life hist.); Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 307, 1929—Moca, Dominican Republic; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 62, 1931—Hispaniola; Peters, Bds. World, 1, p. 61, 1931 (range); Wetmore, Auk, 49, p. 107, 1932—Moca, Hispaniola (May 14–15, 1928); idem, l.c., p. 456, 1932—Roseau, Dominica (May 2, 1932).

Procellaria harlic Voigt, Cuvier's Thierreich, 1, p. 931, 1831—new name for *Procellaria hasitata* Kuhl.

Procellaria diabolica (L'Herminier MS.) Lafresnaye, Rev. Zool., 7, p. 168, 1844—based on "Les diables ou diabolotin" Labat, Nouv. Voy. Amér., 2, p. 408; Guadeloupe and San Domingo.⁴

¹ *Pterodroma incerta* (Schlegel), unknown to the authors, is regarded by certain writers as the juvenile plumage or a color phase of the preceding species.

² Mathews (Nov. Zool., 39, p. 164, 1934) erroneously quotes Cape of Good Hope as type locality.

³ *Procellaria sandaliata* (Solander MS.) Mathews (Birds Austr., 2, p. 151, 1912—37° S. lat. by 49° W. long.) and *Pterodroma satalandia* Mathews (Bull. Brit. Orn. Cl., 54, p. 25, 1933—substitute name for *P. sandaliata*) may possibly refer to the above species.

Another species may, for the sake of completeness, be mentioned. This is *Oestrelata wortheni* Rothschild (Bull. Brit. Orn. Cl., 12, p. 62, April 28, 1902), the type having been secured at sea in 3° S. lat., 118° 45' W. long., thus on the boundaries of our area. Known from the unique type, Mathews (Nov. Zool., 39, p. 165, 1934) claims it to be the same as *Pterodroma alba* (Gmelin), of the tropical Pacific.

⁴ Lafresnaye does not give any description, and the only way of identifying his *P. diabolica* is through his reference to Labat's "Diabolotin." The specimens

Procellaria meridionalis Lawrence, Ann. Lyc. Nat. Hist. N. Y., 4, p. 475, pl. 15, 1848—Florida=Indian River (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); idem, in Baird, Rep. Expl. Surv. R. R. Pacific, 9, p. 827, 1858 (descr.).

Procellaria rubritarsi (Gould MS.) Newton, Zoologist, 1852, p. 3692—Swaffham, Norfolk (type in Newcome Collection).

Procellaria haesitata (not of Forster, 1844) Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 13, 1863—"Océan" (descr. of type).

Oestrelata haesitata Salvin, Cat. Bds. Brit. Mus., 25, p. 402, 1896—Haiti (monog.); Godman, Monog. Petrels, p. 186, pl. 49, 1908—Haiti; Grieve, Proc. Roy. Phys. Soc. Edinb., 21, p. 20, 1925—Dominica (hist.).

Aestrelata haesitata Noble, Bull. Mus. Comp. Zool., 60, p. 369, 1916—Guadeloupe.

Aestrelata diabolica Noble, Bull. Mus. Comp. Zool., 60, p. 370, 1916—Guadeloupe (crit., meas.).

Pterodroma hasitata hasitata Mathews, Nov. Zool., 39, p. 164, 1934 (synon., range).

Pterodroma hasitata Murphy, Ocean. Bds. S. Amer., 2, p. 692, 1936 (monog.); Wetmore, Auk, 56, p. 73, 1939—Port-au-Prince, Haiti; Bond, l.c., 58, p. 365, 1941—Dominica (nesting).

Range.—Bred formerly in Guadeloupe and Dominica, still breeding apparently in mountains of Dominica and Hispaniola, Greater Antilles; ranges to the coasts of Florida (also various island records from the United States and [fide Peters] eastern Brazil); accidental in England (Swaffham, Norfolk).

Field Museum Collection.—1: Lesser Antilles (somewhere at sea, 1).

Pterodroma caribbaea Carte.¹ JAMAICAN PETREL.

Pterodroma caribbaea Carte, Proc. Zool. Soc. Lond., 1866, p. 93, pl. 10—Blue Mountains, Jamaica (cotypes in the Natural History Museum of the Royal Dublin Society); Peters, Bds. World, 1, p. 62, 1931 (range); Mathews, Nov. Zool., 39, p. 165, 1934 (range).

Oestrelata jamaicensis Salvin,² Cat. Bds. Brit. Mus., 25, p. 403, 1896—Jamaica (monog.); Godman, Monog. Petrels, pl. 50, 1908 (monog.).

Range.—Extinct. Bred formerly on the island of Jamaica, Greater Antilles.

listed by Bangs (Bull. Mus. Comp. Zool., 70, p. 173, 1930), therefore, have no claims to be "cotypes."

¹ *Pterodroma caribbaea* Carte, as has been pointed out by Murphy (Ocean. Bds. S. Amer., 2, p. 696, 1936), might have been merely a dark phase of *P. hasitata*.

² *Procellaria jamaicensis* Bancroft (Zool. Journ., 5, p. 81, 1829) is a nomen nudum.

Pterodroma cahow (Nichols and Mowbray).¹ CAHOW.

Aestrelata cahow Nichols and Mowbray, Auk, 33, p. 194, April, 1916—south-east side of Castle Island, Bermuda (type in coll. of Bermuda Natural History Society).

Aestralata gularis (not *Procellaria gularis* Peale) Bradlee, Auk, 33, p. 217, 1906—Castle Island, Bermuda.

Aestrelata vociferans Shufeldt, Ibis, (10), 4, p. 633, Oct., 1916—Crystal Cave, Bermuda Islands (based on subfossil bones).

Pterodroma cahow Bent, Bull. U. S. Nat. Mus., 121, p. 112, 1922 (life hist.); Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 295, 1931—Bermuda Islands; Peters, Bds. World, 1, p. 62, 1931 (listed); Beebe, Bull. N. Y. Zool. Soc., 38, p. 187, 1935—Bermuda Islands (probably still breeding).

Pterodroma hasitata cahow Mathews, Nov. Zool., 39, p. 164, 1934 (range).

Range.—Breeds on Bermuda Islands.

***Pterodroma phaeopygia phaeopygia** (Salvin). DARK-RUMPED PETREL.

Oestrelata phaeopygia Salvin, Trans. Zool. Soc. Lond., 9, p. 507, pl. 88, figs. 1, 2, May, 1876—Chatham Island, Galápagos (cotypes in British Museum); idem, Cat. Bds. Brit. Mus., 25, p. 407, 1896—part, spec. a, b, Chatham Island; Godman, Monog. Petrels, p. 207, pl. 56, 1908 (monog.).

Aestrelata phaeopygia Ridgway, Proc. U. S. Nat. Mus., 19, p. 648, 1897—between James and Indefatigable Islands (descr., crit.); Rothschild and Hartert, Nov. Zool., 6, p. 198, 1899—Albemarle, Wenman, Indefatigable, and Barrington Islands; idem, l.c., 9, p. 414, 1902—Narborough Island; Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 242, 1904—off Iguana Cove, Albemarle Island.

Pterodroma phaeopygia Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 97, 1918—Galápagos Islands and from vicinity of Clipperton Island to the coast of Ecuador (habits, plumages, meas.); Wetmore, Condor, 25, p. 171, 1923—off Cape Santa Elena, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 184, 1926—near Cape San Lorenzo and off Gulf of Guayaquil, Ecuador; Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 34, 1931—Galápagos Islands; Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 27, 1931—Indefatigable Island (crit.).

¹ *Pterodroma cahow* (Nichols and Mowbray): "Upper surfaces dark sooty, darkest on the primaries, grayish on the back and nape; tail coverts (partly lost) dark gray, with white bases; rectrices grayish black with white bases, inner web of the two outer feathers white almost to the tip; sides of breast sooty gray; primaries dark beneath; under wing coverts white, with a peculiar oval dark spot just inside the exposed primaries, as in *hasitata*; tail cuneate; forehead, lores, and under parts white, center of forehead and white region above the eye finely speckled with dark; the dark color from the side of the neck extends narrowly forward under the eye. Bill dark; legs, basal third of foot, and inner toe pale, remainder of foot dark. Wing, 10¼ in.; tail, 6½; culmen, 1⅓/16; tarsus, 1⅓; middle toe with claw, 1¾." (Nichols and Mowbray, Auk, 33, p. 194, 1916.)

Pterodroma phaeopygia phaeopygia Peters, Bds. World, 1, p. 65, 1931 (range); Mathews, Nov. Zool., 39, p. 168, 1934 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 697, 1936 (monog.).

Range.—Breeds on the Galápagos Islands; ranges from the vicinity of Clipperton Island to the coast of Ecuador and Peru.¹

Field Museum Collection.—1: Galápagos Islands (North Albe-marle, 1).

***Pterodroma externa externa* (Salvin). JUAN FERNANDEZ PETREL.**

Oestrelata externa Salvin, Ibis, (3), 5, p. 373, July, 1875—Mas Afuera, Juan Fernández Islands, off Chile (type in British Museum); idem, Cat. Bds. Brit. Mus., 25, p. 411, 1896—Mas Afuera (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 735, 1898—Mas A Tierra (breeding; descr.); Godman, Monog. Petrels, pl. 62, 1908 (monog.).

Pterodroma externa Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 95, 1918—twenty miles northwest of Clipperton Island (molt, char., meas.).

Pterodroma (Aestrelata) externa Lönningberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, (1), p. 13, 1921—Mas A Tierra and Mas Afuera (breeding, nest and chicks descr.).

Pterodroma externa externa Peters, Bds. World, 1, p. 65, 1931 (range); Mathews, Nov. Zool., 39, p. 169, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 700, 1936 (monog.).

Range.—Breeds in the Juan Fernández group (Mas Afuera Island) and ranges to the vicinity of Clipperton Island.

***Pterodroma inexpectata* (I. R. Forster). PEALE'S PETREL.**

Procellaria inexpectata I. R. Forster, Descr. Anim. (ed. Lichtenstein), p. 204, 1844—Antarctic Ocean.

Procellaria gularis Peale, U. S. Expl. Exp., 8, p. 299, 1848—68° S. lat., 95° W. long. (type in U. S. National Museum).

Aestrelata fisheri Ridgway, Proc. U. S. Nat. Mus., 5, "1882," p. 656, pub. June 26, 1883—St. Paul, Kodiak Island, Alaska (type in U. S. National Museum).

Aestrelata scalaris Brewster, Auk, 3, p. 390, July, 1886—Livingstone County, New York (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 173, 1930).

Oestrelata gularis Salvin, Cat. Bds. Brit. Mus., 25, p. 414, 1896 (monog.); Godman, Monog. Petrels, p. 236, pl. 68, 1908 (monog.).

Procellaria lugens (Solander MS.) Mathews, Bds. Austr., 2, p. 159, 1912—Antarctic Ocean "to southern Tierra del Fuego."

Pterodroma inexpectata Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 104, 1918—Kiska Island, Alaska (crit., var., meas.); Bent, Bull. U. S. Nat. Mus.,

¹ Replaced in the Hawaiian Islands by a nearly allied form of smaller size, *P. phaeopygia sandwichensis* (Ridgway).

121, p. 117, 1922 (life hist.); Peters, Bds. World, 1, p. 63, 1931 (range); Mathews, Nov. Zool., 39, p. 166, 1934 (range).

Pterodroma gularis Bent, Auk, 35, p. 221, 1918—Sitka, Alaska.

Range.—Breeds on islands off South Island, New Zealand, the Snares, Chatham, and Bounty Islands; ranges through the Pacific to Alaska (Sitka, Kodiak Island, etc.) and the Aleutian Islands (Kiska Island); accidental in New York (Mount Morris, Livingstone County, April, 1880).¹

***Pterodroma neglecta juana* Mathews.² MAS A TIERRA PETREL.**

Pterodroma neglecta juana Mathews, Bull. Brit. Orn. Cl., 56, p. 59, Jan. 6, 1936—Mas A Tierra, Juan Fernández Islands, off Chile (type in Stockholm Museum); idem, Ibis, 1936, p. 377 (chars.).

Oestrelata neglecta (not *Procellaria neglecta* Schlegel) Salvin, Proc. Zool. Soc. Lond., 1883, p. 431—Juan Fernández (crit.); idem, Cat. Bds. Brit. Mus., 25, p. 412, 1896—part, spec. g, h, Juan Fernández; Schalow, Zool. Jahrb., Suppl., 4, p. 734, 1898—Mas A Tierra (plumage var.; habits).

Pterodroma (Aestrelata) neglecta Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, (1), p. 12, 1921—Mas A Tierra (breeding; crit.).

Pterodroma phillipii (not *Procellaria phillipii* G. R. Gray) Peters, Bds. World, 1, p. 63, 1931—part, Juan Fernández.

Pterodroma neglecta Mathews, Nov. Zool., 39, p. 168, 1934—part, Juan Fernández Islands; Murphy, Ocean. Bds. S. Amer., 2, p. 704, 1936—part, Chile (monog.).

Range.—Breeds on Mas A Tierra and Santa Clara Islands in the Juan Fernández group, and on San Ambrosio Island, off Chile.

***Pterodroma neglecta paschae* Lönnberg.³ EASTER ISLAND PETREL.**

Pterodroma (Aestrelata) heraldica paschae Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, (1), p. 23, 1921—Motu Nui, Easter Island (type in Stockholm Museum).

¹ *Pterodroma kidderi* (Coues) has been admitted by Dabbene (El Hornero, 3, p. 19, 1923) to the American fauna on the basis of the record of *Aestrelata brevis* by Paessler (Orn. Monatsber., 23, p. 59, 1915) from the Patagonian coast at 43° S. lat., 60° W. long. As no other naturalist ever met with the species in South American waters, the record requires confirmation by specimens. About the nomenclature of the species, cf. Mathews, Ibis, 1935, pp. 884–885.

² *Pterodroma neglecta juana* Mathews is stated to differ from *P. n. neglecta* (Schlegel), of the Kermadec Islands, by slightly larger size (wing of males, 295–303 mm.) and darker, more sooty blackish coloration, nearly uniform above and below. The white-bellied variety, described by Schalow, appears to be rather rare. About the adoption of the specific name *neglecta* in place of *phillipii*, cf. Mathews, Ibis, 1932, pp. 524–525.

³ *Pterodroma neglecta paschae* Lönnberg: Like *P. n. heraldica* (Salvin), of the western Pacific Ocean, with dark shafts to the primaries, but differs by having

Pterodroma heraldica paschae Peters, Bds. World, 1, p. 63, 1931 (range); Mathews, Nov. Zool., 39, p. 168, 1934—Easter Island.

Pterodroma neglecta paschae Mathews, Ibis, 1936, p. 377 (char.).

(?) *Aestrelata neglecta* (?) Rothschild and Hartert, Nov. Zool., 9, p. 415, 1902—eastern Pacific Ocean (13° N., 103° 50' W.) (crit.).

Range.—Breeds on Easter Island, eastern Pacific Ocean.

***Pterodroma neglecta arminjoniana* (Giglioli and Salvadori).¹**
SOUTH TRINIDAD PETREL.

Aestrelata arminjoniana Giglioli and Salvadori, Ibis, (n.s.), 5, p. 62, Jan., 1869—near South Trinidad Island (type in Turin Museum); iidem, Atti Soc. Ital. Sci. Nat., 11, "1868," p. 452, pub. early in 1869—South Trinidad Island.

Aestrelata trinitatis Giglioli and Salvadori, Ibis, (n.s.), 5, p. 65, Jan., 1869—near South Trinidad (cotypes in Turin Museum;=dark phase).²

Oestrelata arminjoniana Salvin, in Rowley's Orn. Misc., 1, pp. 234, 252, pl. 31, 1876 (crit., fig. of type); idem, Cat. Bds. Brit. Mus., 25, p. 413, 1896 (monog.); Sharpe, Ibis, 1904, p. 215—South Trinidad; Nicoll, l.c., 1906, p. 671 (crit.).

Oestrelata trinitatis Salvin, in Rowley's Orn. Misc., 1, p. 253, pl. 32, 1876 (crit.); idem, Cat. Bds. Brit. Mus., 25, p. 413, 1896; Sharpe, Ibis, 1904, p. 215—South Trinidad (crit.); Nicoll, l.c., 1906, p. 672 (var.).

Oestrelata wilsoni Sharpe, Bull. Brit. Orn. Cl., 12, p. 49, Feb. 28, 1902—South Trinidad (type in British Museum); idem, Ibis, 1904, p. 216 (crit.); Nicoll, l.c., 1906, p. 671 (var.; breeding).

Aestrelata chionophara Murphy, Auk, 31, p. 13, pl. 2, 1914—Trinidad Islet (type in the American Museum of Natural History, New York).

Aestrellata trinitatis and *A. arminjoniana* Miranda, Arch. Mus. Nac. Rio de Janeiro, 22, pp. 179, 180, 1919—South Trinidad (meas.).

Pterodroma arminjoniana Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 137, 1930—South Trinidad (var., color phases, meas.); Peters, Bds. World, 1, p. 64, 1931 (listed); Mathews, Nov. Zool., 39, p. 168,

dark slate gray under tail coverts, with only the bases and fringes white (instead of nearly wholly white) (G. M. Mathews, Ibis, 1936, p. 377).

A key to the races of this group of petrels is given by Mathews, Ibis, 1936, pp. 376-377.

¹ *Pterodroma neglecta arminjoniana* (Giglioli and Salvadori) differs from *P. n. juana* by lesser dimensions, smaller bill, and white under tail coverts. As seems now well-established, this form is dichromatic, the various "species" described from South Georgia being mere color phases.

² In the account by Giglioli and Salvadori (Atti Soc. Ital. Sci. Nat., 11, pp. 454-457), *A. defilippiana* and *A. trinitatis*, through a typographical blunder, are combined under the heading of *A. trinitatis*. It thus results that *A. defilippiana* (p. 453) appears as a nomen nudum, while the Latin diagnosis and general explanation relating to this species are placed immediately under the head-line *A. trinitatis*, which finds itself accompanied by two different descriptions! This confusion was afterwards corrected (Ibis, 1869, pp. 63-66).

1934 (synon., range); Allen, Univ. State New York, Bull. to Schools, 20, No. 13, p. 134, 1934—Ithaca, New York (Aug. 24, 1933); Murphy, Ocean. Bds. S. Amer., 2, p. 708, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 21, 1938—South Trinidad; Wetmore and others, Auk, 62, p. 437, 1945 (admitted to North American list).

Pterodroma neglecta arminjoniana Mathews, Ibis, 1936, p. 377 (chars.).

Range.—Breeds on South Trinidad Island and the neighboring Martin Vas Rocks; accidental in New York (Ithaca, Aug. 24, 1933).

***Pterodroma mollis mollis* (Gould). SOFT-PLUMAGED PETREL.**

Procellaria mollis Gould, Ann. Mag. Nat. Hist., 13, p. 363, 1844—South Atlantic from 20° to 40° S. lat. (cotypes in British Museum).

Oestrelata mollis Salvin, Cat. Bds. Brit. Mus., 25, p. 406, 1896 (monog.).

Pterodroma mollis mollis Dabbene, El Hornero, 3, p. 16, 1923 (descr., range); Peters, Bds. World, 1, p. 64, 1931 (range); Mathews, Nov. Zool., 39, p. 167, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 2, p. 711, 1936 (monog.).

Pterodroma mollis Hamilton, Ibis, 1945, p. 569—Falkland Islands.

Range.—Breeds on Tristan d'Acunha, Gough, and St. Paul Islands, and ranges through the South Atlantic to the seas off the east coast of Argentina, Uruguay, and the Falkland Islands.

***Pterodroma cookii defilippiana* (Giglioli and Salvadori).**

FILIPPI'S PETREL.

Aestrelata defilippiana Giglioli and Salvadori, Ibis, (n.s.), 5, p. 63, Jan., 1869—off coast between Callao, Peru, and Valparaiso, Chile (type in Turin Museum).

Oestrelata defilippiana Salvin, in Rowley's Orn. Misc., 1, p. 255, pl. 33, 1876 (crit.); Sharpe, Proc. Zool. Soc. Lond., 1881, p. 11—San Ambrosio Island, off Chile (July); Salvin, l.c., 1883, p. 431—coast of Chile; idem, Cat. Bds. Brit. Mus., 25, p. 417, 1896—San Ambrosio, coast of Chile (monog.); Godman, Monog. Petrels, p. 245, pl. 70, 1908 (monog.).

Pterodroma (Aestrelata) cookii defilippiana Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, (1), p. 14, 1921—Santa Clara Island, Juan Fernández group (breeding; egg descr.).

Pterodroma cookii defilippiana Murphy, Amer. Mus. Nov., 370, p. 7, 1929—Mas A Tierra (breeding), 100 miles west of Valparaiso, and offshore Peru (200 miles west of Callao; 80 miles west of Ancon); Peters, Bds. World, 1, p. 65, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 717, 1936 (monog.).

Cookilaria cookii defilippiana Mathews, Nov. Zool., 39, p. 171, 1931 (range).

Range.—Breeds on Mas A Tierra and Santa Clara Islet, Juan Fernández group, and at San Ambrosio and San Felix Islands; ranges to the waters off Chile and Peru.

***Pterodroma cookii orientalis** Murphy.¹ MURPHY'S PETREL.

Pterodroma cookii orientalis Murphy, Amer. Mus. Nov., 370, p. 5, Sept. 6, 1929—200 miles west of Callao, Peru (type in the American Museum of Natural History, New York); Peters, Bds. World, 1, p. 65, 1931 (range); Anthony, Auk, 51, p. 77, 1934—vicinity of Adak Island, Alaska (Aug., 1933); Murphy, Ocean. Bds. S. Amer., 2, p. 714, 1936—Adak Island, Aleutian Islands, and Lower California (monog.); Wetmore and others, Auk, 62, p. 438, 1945 (admitted to North American list).

Pterodroma cooki defilippiana (not *Aestrelata defilippiana* Giglioli and Salvadori) Wetmore, Condor, 25, p. 171, 1923—35 miles north of Lobos de Tierra Island, Peru.

Cookilaria cookii orientalis Mathews, Nov. Zool., 39, p. 171, 1934 (range).

Range.—Occurs between 40 and 400 miles off the west coast of South America, and between 5° and 34° S. lat. (breeding grounds unknown); accidental in Alaska (Adak Island, August, 1933).

Field Museum Collection.—2: Alaska (off Adak Island, 1); (?)Peru (50 miles west of Ancon, Lima, 1).

***Pterodroma leucoptera masafuerae** Lönnberg.² MAS AFUERA PETREL.

Pterodroma (Aestrelata) cooki masafuerae Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, (1), p. 14, 1921—Mas Afuera, Juan Fernández group, off Chile (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 105, 1927).

Pterodroma longirostris (not *Aestrelata longirostris* Stejneger) Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 92, 1918—eastern Pacific (33° 6' N.—134° W.; 35° 40' N.—133° 10' and 14' W.).

Pterodroma leucoptera masafuerae Murphy, Amer. Mus. Nov., 370, p. 11, 1929—Juan Fernández Islands (crit.); Peters, Bds. World, 1, p. 66, 1931—Mas Afuera Island; Murphy, Ocean. Bds. S. Amer., 2, p. 719, 1936 (monog.); Moffitt, Auk, 55, p. 255, 1938—eastern Pacific (about 685 statute miles west of Piedras Blancas, San Luis Obispo County, California).

Cookilaria leucoptera masafuerae Mathews, Nov. Zool., 39, p. 170, 1934—Mas Afuera Island.

¹ *Pterodroma cookii orientalis* Murphy: Very similar to *P. cookii cookii* (Gray), of the New Zealand region, but on average larger and with a more pronounced appearance of scalation on the dorsal surface, due to broader and more general white emargination of the feathers. Wing, 234–250; tail, 85–97; bill, 27½–30.

From *P. c. defilippiana* this recently separated race is easily distinguished by its slender and smooth black bill, whereas the Juan Fernández form has a remarkably deep, heavy bill, in which the plates of the latericorn and unguis have a strong tendency to be rugose and even to develop a laminated aspect, being thus more or less marked with fine, horny lines (Murphy, Amer. Mus. Nov., 370, p. 5, 1929).

² *Pterodroma leucoptera masafuerae* Lönnberg: Differs from the nominate form of Australia by somewhat longer tail; much greater width (23 against 12–14 mm.) of the white forehead and correspondingly more restricted extent of the less blackish crown; grayish black instead of flesh-colored tarsi. Wing, 216–230; tail, 97–105 (against 89–93 in *P. l. leucoptera*); bill, 24–26.

Range.—Breeds on Mas Afuera Island, Juan Fernández group, off Chile, and ranges to the eastern Pacific (33° 6'–35° 40' N. lat., 133° to 134° W. long.).

Field Museum Collection.—1: Chile (Mas A Tierra Island, Juan Fernández Islands, 1).

Pterodroma leucoptera brevipes (Peale). SHORT-FOOTED PETREL.

Procellaria brevipes Peale, U. S. Expl. Exp., 8, p. 294, 1848—68° S. lat., 95° W. long., Antarctic Circle (type in U. S. National Museum).

Pterodroma brevipes Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 93, 1918—4° 20' S. lat., 93° 30' W. long. (=vicinity of Galápagos Islands) (crit., meas.).

Pterodroma leucoptera brevipes Murphy, Amer. Mus. Nov., 370, p. 13, 1929 (crit.); Peters, Bds. World, 1, p. 66, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 722, 1936 (monog.).

Cookilaria leucoptera brevipes Mathews, Nov. Zool., 39, p. 169, 1934 (range).

Range.—Breeds on the New Hebrides (Aneiteum Island) and in the Fiji Islands; ranges east to the vicinity of the Galápagos Islands and south to the Antarctic Circle.

Genus **HALOBAENA** Bonaparte¹

Halobaena Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, p. 768, 1856—type, by monotypy, *Procellaria caerulea* Gmelin.

Zaprium Coues, Bull. U. S. Nat. Mus., 2, p. 34, 1875—type, by monotypy, *Procellaria caerulea* Gmelin.

Halobaena caerulea (Gmelin). BLUE PETREL.

Procellaria caerulea Gmelin, Syst. Nat., 1, (2), p. 560, 1789—based on "Blue Petrel" Forster, Voy. round World, 1, p. 91; "in oceano australi"—Antarctic Ocean, 58° S. lat.

Procellaria similis I. R. Forster, Descr. Anim. (ed. Lichtenstein), p. 59, 1844—Antarctic Ocean, 58° S. lat.

Halobaena caerulea Salvin, Cat. Bds. Brit. Mus., 25, p. 431, 1896—Pacific Ocean near Cape Horn (monog.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 154, 1910—off Cape Horn (monog.); Peters, Bds. World, 1, p. 48, 1931 (range); Mathews, Nov. Zool., 39, p. 171, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 2, p. 123, 1936 (monog.).

Halobaena murphyi Brooks, Bull. Mus. Comp. Zool., 61, p. 146, June, 1917—"Stromness Bay, South Georgia" (type in Museum of Comparative Zoology, Cambridge, Mass.).

Halobaena caerulea murphyi Dabbene, El Hornero, 3, p. 126, 1923 (descr., range); Bennett, Ibis, 1926, p. 316—Falkland Islands (breeding).

¹ Although commonly grouped with *Pachyptila*, this genus is considered by Murphy with good grounds to be nearly related to *Pterodroma*, from which it is, however, easily distinguished by its squarish tail.

Range.—Breeds in the Falkland Islands (and on Kerguelen Island) and ranges throughout the southern oceans.

Genus PAGODROMA Bonaparte

Pagodroma Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, No. 17, p. 768, May, 1856—type, by monotypy, *Procellaria nivea* Forster.

Pagodroma nivea (Forster). SNOWY PETREL.

Procellaria nivea Forster, Voy. round World, 1, pp. 96, 98, 1777—52° S. lat., 20° E. long.

Pagodroma nivea minor Schlegel,¹ Mus. Pays-Bas, livr. 4, Procellariae, p. 16, 1863—"Glaces du Pôle Sud" et "Mers antarctiques" (cotypes in Leyden Museum); Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 21, pl. fig. 4, 1885—South Georgia (sexual diff., eggs descr.).

[*Pagodroma*] *novegeorgica* Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 21 (in text), 1885—South Georgia (cotypes in Hamburg Museum).²

Pagodroma nivea Salvin, Cat. Bds. Brit. Mus., 25, p. 419, 1896—Falkland Islands (July 22, 1850) and Antarctic region (monog.); Clarke, Ibis, 1906, p. 170, pl. 3, fig. 1 (chick), and pl. 11—Lauri and Saddle Islands, South Orkney Islands (breeding; downy young descr.); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 80, 1906—South Georgia (crit.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 145, 1910—Falkland Islands (descr.); Bennett, El Hornero, 2, p. 28, 1920—South Shetland and South Orkney Islands (breeding); Mathews, Discovery Rep., 1, p. 575, pl. 45, figs. 9–10, 1929—South Georgia (not found breeding); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 142, 1930 (crit., meas.); Peters, Bds. World, 1, p. 67, 1931 (range); Mathews, Nov. Zool., 39, p. 161, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 1, p. 633, 1936 (monog.); Ardley, Discovery Rep., 12, p. 363, 1936—South Orkney Islands (nesting); Siple and Lindsey, Auk, 54, p. 149, 1937—Mary Byrd Land, Antarctic (breeding); Eklund, Proc. Amer. Phil. Soc., 89, (1), p. 300, 1945—Palmer Land (breeding south to 72° 2' S. lat.—68° 55' W. long.; life hist.).

Pagodroma nivea novaageorgica Dabbene, El Hornero, 3, p. 13, 1923—South Orkney, South Georgia, and Falkland Islands (descr.).

Pagodroma nivea novageorgica Bennett, Ibis, 1926, p. 315—Falklands (occas. visitor).

Pagodroma nivea falklandica Mathews, Bull. Brit. Orn. Cl., 46, p. 76, Feb. 25, 1926—"new name for *P. n. novegeorgica* Mathews, Bds. Austr., 2, p. 177, 1912;" Falkland Islands.

¹ *Pagodroma nivea* b. *minor* Bonaparte (Consp. Gen. Av., 2, p. 192, 1857) is a nomen nudum, and so is his other variety, a. *major*.

² Pagenstecher, after stating that the South Georgian specimens, while closely approaching Schlegel's measurements of *P. n. minor*, differ from Gmelin's description by white instead of black shafts to the remiges, suggests *novegeorgica* as an eventual appropriate specific term.

Range.—Breeds in the Antarctic region, on the South Orkney and South Shetland Islands, and in South Georgia;¹ occasional visitor in the Falkland Islands.

Genus BULWERIA Bonaparte

Bulweria Bonaparte, Nuovi Ann. Sci. Nat. Bologna, 8, Dec. 22, 1842, p. 426, pub. Jan. 14, 1843—type, by monotypy, *Procellaria bulwerii* Jardine and Selby.

***Bulweria bulwerii* (Jardine and Selby). BULWER'S PETREL.**

Procellaria bulwerii Jardine and Selby, *Illust. Orn.*, 2, (4), pl. 65, Nov., 1828—"Madeira or the small islands adjacent" (type now in the British Museum).

Procellaria anjinho Heineken, in Brewster's *Edinb. Journ. Sci.*, 1, No. 9, p. 231, Oct., 1829—Madeira.

Procellaria bulweri Schlegel, *Mus. Pays-Bas*, livr. 4, *Procellariae*, p. 9, 1863—Greenland (one spec.).

Bulweria bulweri Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 420, 1896 (monog.); Bent, *Bull. U. S. Nat. Mus.*, 121, p. 120, 1922 (life hist.).

Bulweria bulwerii Peters, *Bds. World*, 1, p. 68, 1931 (range).

Bulweria bulwerii bulwerii Mathews, *Nov. Zool.*, 39, p. 162, 1934 (range).

Range.—Breeds in Madeira, the Salvages, Canary, Azores, and Cape Verde Islands, also on islands off the coast of China, the Bonin and Volcan Islands, the western Hawaiian and Marquesas Islands;² accidental in Greenland (one record) and England.

Family HYDROBATIDAE. Long-legged Storm Petrels

Genus OCEANITES Keyserling and Blasius

Oceanites Keyserling and Blasius, *Wirbelth. Eur.*, 1, pp. xciii, 131, 238, 1840—type, by monotypy,³ "*Thalassidroma*" (= *Procellaria*) *wilsonii* Bonaparte = *Procellaria oceanica* Kuhl.

¹ About the alleged second species, *P. confusa* Mathews, cf. Hartert (*Nov. Zool.*, 33, p. 354, 1926) and also Lowe and Kinnear (*Brit. Antar. [Terra Nova] Exp.*, *Zool.*, 4, pp. 146–147, 1930).

² The alleged Pacific race, *B. b. pacifica* Mathews, is inseparable.

³ The new genus *Oceanites* was created for *Thalassidroma wilsonii* Bonaparte. On p. xciii, the authors state, "ferner gehören dazu *Procellaria grallaria* Licht. und *P. marina* Latham."

**Oceanites oceanicus oceanicus* (Kuhl). WILSON'S PETREL.

Procellaria oceanica Kuhl, Beitr. Zool. Vergl. Anat., 1, p. 136, pl. 10, fig. 1, 1820—no locality¹=South Atlantic Ocean, off mouth of La Plata River (ex Solander MS.; cf. Mathews, Bds. Austr., 2, p. 13, 1912).²

Procellaria wilsonii Bonaparte, Journ. Acad. Nat. Sci. Phila., 3, (2), p. 231, pl. 9, low fig., pub. Jan., 1824—"on the coast of North America . . . , less abundant east of the Banks of Newfoundland" (type, ex coll. of R. T. Peale, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 172, 1930).

Thalassidroma oceanica Darwin, Zool. Beagle, 3, p. 141, 1841—Maldonado, Uruguay, and Bahia Blanca, Buenos Aires (Sept.); Pelzeln, Orn. Bras., 3, p. 322, 1870—coast of Rio de Janeiro between Barra da Guaratiba and Tejucas Islands (May).

Thalassidroma —? Abbott, Ibis, 1861, p. 164—Long Island, Berkeley Sound, Falkland Islands (said to breed).

Oceanites oceanicus(a) Oustalet, Miss. Sci. Cap Horn, 6, p. B. 165, 1891—Gable Island, Beagle Channel (March), and Straits of Magellan; Salvin, Cat. Bds. Brit. Mus., 25, p. 358, 1896 (monog., in part); Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 629, 1900—north of Rio Gallegos, Patagonia (Apr. 7); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 383, 1902—Ponsonby Sound, Tierra del Fuego; Clarke, Ibis, 1906, p. 166, pl. 10, fig. 2—Lauri Island, South Orkney Islands (breeding habits, nest and eggs); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 83, 1906—South Georgia (probably breeding); Ihering, Cat. Faun. Braz., 1, p. 36, 1917—Santos, São Paulo; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 180, 1918—Monterey, California; Tremoleras, El Hornero, 2, p. 12, 1920—coast of Uruguay; Bennett, l.c., 2, p. 27, 1920—South Orkney Islands (breeding); Bent, Bull. U. S. Nat. Mus., 121, p. 165, 1922 (life hist., range); Wilkins, Ibis, 1923, p. 487—South Georgia (said to breed); Mathews, Discovery Rep., 1, p. 577, 1929—South Georgia (nesting); Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 124, 1930; Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 285, 1935 (distr. in North Atlantic); Ardley, Discovery Rep., 12, p. 368, 1936—South Orkney Islands (nesting); Roberts, Sci. Rep. Brit. Graham Land Exped., 1, (2), p. 141, pls. 1-7, 1940 (life hist.); Eklund, Proc. Amer. Phil. Soc., 89, no. 1, p. 302, 1945—south to 72° 5' S. lat.—70° W. long., in Palmer Land.

Oceanites oceanicus oceanicus Murphy, Bull. Amer. Mus. N. H., 38, p. 118, pls. 1-3, 1918—off Bahia (Brazil), South Georgia, etc. (plumages, molts, meas., migration, habits, food); Dabbene, El Hornero, 2, p. 243, 1922 (descr., range); Bennett, Ibis, 1926, p. 312—Falkland Islands and dependencies; idem, l.c., 1931, p. 12—Deception Island, South Shetland Islands (breeding in Jan.); Peters, Bds. World, 1, p. 68, 1931 (range); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 63, 1931—off coast

¹ The type specimen, "in Museo Ridelliano, nunc in Temminckiano," seems to be lost.

² Murphy (Bull. Amer. Mus. N. H., 38, p. 128, 1918) did not suggest a type locality, but merely stated that "South Georgia may be positively designated as a nesting station."

of Dominican Republic, Hispaniola; Mathews, *Nov. Zool.*, **39**, p. 191, 1934 (range); Murphy, *Ocean. Bds. S. Amer.*, **2**, p. 748, 1936 (monog.); Pinto, *Rev. Mus. Paul.*, **22**, p. 23, 1938—Santos, São Paulo, Brazil; Zotta, *El Hornero*, **8**, p. 481, 1944—Las Cuevas, Mendoza, Argentina (immature captured in Andes).

Oceanites oceanicus subsp. Reynolds, *Ibis*, 1932, p. 94—Herschel Island, Beagle Channel (crit., meas.).

Oceanites oceanicus chilensis Murphy,¹ *Ocean. Bds. S. Amer.*, **2**, p. 754, 1936—Wollaston Island, Fuegia, Chile (type in the American Museum of Natural History, New York); Sheard, *Emu*, **42**, p. 177, 1943 (status of name).

Oceanites oceanicus (?*chilensis*) Hamilton, *Ibis*, 1939, p. 139—Grand Jason Island, Falkland Islands (nesting).

Oceanites oceanicus magellanicus Roberts, *Sci. Rep. Brit. Graham Land Exped.*, **1**, p. 153, 1940 (new name for *O. o. chilensis* Murphy, a nomen nudum).

Range.—Breeds on islets about Cape Horn (Herschel and Deceit Islands), on the Falkland Islands, South Shetlands, South Orkneys, and South Georgia;² wintering in the North Atlantic to Labrador, the Grand Banks, and British Isles; accidental to the coasts of Ecuador and even California (Monterey, August 24, 1910).

Field Museum Collection.—17: Nova Scotia (Grand Banks, 3; Dover, 1); Massachusetts (Crab Ledge, Monomoy Island, 1; Springhill, 2; Chatham Island, 1; No Man's Land, Dukes County, 2; Pigeon Cove, Essex County, 1); New York (Montauk Point, 1); Bahama Islands (Highborn Cay, 1); Peru (Callao, Lima, 1); Chile (Santiago, 1); Antarctic Archipelago (Graham Land, 1; Deception Island, 1).

**Oceanites gracilis gracilis* (Elliot). GRACEFUL STORM PETREL.

Thalassidroma gracilis Elliot, *Ibis*, **1**, p. 391, 1859—"West coast of America"—coast of Chile (location of type not stated).

Oceanites gracilis Coues, *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 85—coast of Chile (monog.); Salvin, *Cat. Bds. Brit. Mus.*, **25**, p. 361, 1896—Iquique, Tarapacá, Chile (June 19); Ridgway, *Proc. U. S. Nat. Mus.*, **19**, p. 658, 1897—part, Chile (descr.).

Oceanites gracilis gracilis Chapman, *Bull. Amer. Mus. N. H.*, **55**, p. 182, 1926—off Santa Elena, Ecuador (Feb. 11), off Talara, Peru, and south to Valparaiso, Chile; Peters, *Bds. World*, **1**, p. 68, 1931 (listed); Mathews,

¹ *Oceanites oceanicus chilensis* Alexander (*Birds Ocean*, p. 86, 1928), given as "breeding on islets off Cape Horn," is a nomen nudum.

² Breeding birds from Cape Horn and the Falkland Islands (*O. o. chilensis*) are somewhat smaller than those from the South Shetland Islands, South Georgia, etc. (wing of males, 138–139, against 140–145; of females, 134–137, against 152–159) (Reynolds, *Ibis*, 1932, p. 94).

Races have been separated from Antarctica (*O. o. exasperatus* Mathews) and Kerguelen Island (*O. o. parvus* Falla).

Nov. Zool., 39, p. 192, 1934—coast of Chile; Murphy, Ocean. Bds. S. Amer., 2, p. 757, 1936 (monog.); Friedmann, Proc. Amer. Phil. Soc., 89, (1), p. 314, 1945—4° 39' S. lat.—81° 19' W. long.

Range.—Occurs on the Pacific coast of South America, from southern Ecuador (Santa Elena) to Chile (Valparaiso); breeding grounds unknown.¹

Field Museum Collection.—2: Peru (Talara, 1; Mollendo, Arequipa, 1).

***Oceanites gracilis galapagoensis** Lowe.² GALAPAGOS STORM PETREL.

Oceanites gracilis galapagoensis Lowe, Bull. Brit. Orn. Cl., 41, p. 140, July 5, 1921—Charles Island, Galápagos (type in British Museum); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 36, 1931—Galápagos; Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 29, 1931—Indefatigable, Charles, and Narborough Islands (crit.); Peters, Bds. World, 1, p. 69, 1931 (range); Mathews, Nov. Zool., 39, p. 192, 1934—Galápagos; Murphy, Ocean. Bds. S. Amer., 2, p. 759, 1936 (monog.).

Oceanites gracilis (not *Thalassidroma gracilis* Elliot) Ridgway, Proc. U. S. Nat. Mus., 19, p. 658, 1897—part, Albemarle and James Islands (crit.); Rothschild and Hartert, Nov. Zool., 6, p. 198, 1899—Albemarle, Narborough, Chatham, James, Charles, Abingdon, and Bindloe Islands; *idem*, l.c., 9, p. 416, 1902—off Abingdon, Albemarle, Chatham, Bindloe, and Narborough Islands; Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 243, 1904—Albemarle Island; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 180, 1918—Galápagos (molt, meas.).

Range.—Galápagos Archipelago (undoubtedly breeding, but nesting places not yet discovered).

Field Museum Collection.—9: Galápagos Islands (Tagus Cove, Albemarle Island, 8; Seymour Island, 1).

Genus **PELAGODROMA** Reichenbach

Pelagodroma Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Procellaria marina* Latham.

Pelagodroma marina marina (Latham). WHITE-FACED STORM PETREL.

¹ Elliot (Ibis, 1859, p. 392) describes egg and chick, without stating where and by whom they have been collected! He appears to have seen a number of specimens, since he adds that the one "described was taken in May, and is a male."

²*Oceanites gracilis galapagoensis* Lowe: Similar to the nominate race, but slightly larger and decidedly paler, more grayish, especially below, with the white abdominal patch more extensive. Wing, 135–143, (females) 136–145.

Eight additional specimens examined.

Procellaria marina Latham, Ind. Orn., 2, p. 826, 1790—based on "Frigate Petrel" Latham, Gen. Syn. Bds., 3, (2), p. 410; off the mouth of the Rio de La Plata, 35° S. lat. (cf. Mathews, Bds. Austr., 2, pp. 23-25, 1912).

Pelagodroma marina Aplin, Ibis, 1894, p. 213—one hundred thirteen knots off the coast of Uruguay (field observation); Paessler, Orn. Monatsber., 23, p. 59, 1915—South Atlantic, 46° 8' S. lat., 63° W. long. (May); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 182, 1918—2° 40' S. lat., 91° 20' W. long.= south of Galápagos Islands; Tremoleras, El Hornero, 2, p. 12, 1920—off the coast of Uruguay (ex Aplin); Wetmore, Condor, 25, p. 171, 1923—off Santa Elena, Ecuador.

Pelagodroma marina marina Dabbene, El Hornero, 2, p. 246, 1922 (descr., range); Peters, Bds. World, 1, p. 69, 1931 (range); Mathews, Nov. Zool., 38, p. 23, 1932—Nightingale Island (breeding); idem, l.c., 39, p. 192, 1934 (range).

Pelagodroma marina subsp. Murphy, Ocean. Bds. S. Amer., 2, p. 770, 1936—seas around the Galápagos Islands and Point Santa Elena, Ecuador; Friedmann, Proc. Amer. Phil. Soc., 89, (1), p. 314, 1945—off coast of Chile (April).

Range.—Breeds on Tristan d'Acunha and Nightingale Island¹ and strays to the waters of South America (off the mouth of the Rio de La Plata; coast of Patagonia; south of Galápagos Islands; off Cape Santa Elena, Ecuador).

***Pelagodroma marina hypoleuca* (Moquin-Tandon). NORTH ATLANTIC WHITE-FACED STORM PETREL.**

Thalassidroma hypoleuca Moquin-Tandon, in Webb, Berthelot, and Moquin-Tandon, Hist. Nat. Iles Canar., 2, Orn., p. 45, 1841—Tenerife, Canary Islands (location of type not stated).

Pelagodroma marina (not *Procellaria marina* Latham) Ridgway, Auk, 2, p. 386, 1885—off coast of Massachusetts, 40° 34' 18" N. lat., 66° 09' W. long. (Sept. 2, 1885).

Pelagodroma marina hypoleuca Bent, Bull. U. S. Nat. Mus., 121, p. 176, 1922 (life hist.); Peters, Bds. World, 1, p. 69, 1931 (range); Mathews, Nov. Zool., 39, p. 192, 1934 (range).

Range.—Breeds on the Salvage and Cape Verde Islands; accidental off the coast of Massachusetts (40° 34' N. lat., 66° 9' W. long., Sept. 2, 1885).

Genus FREGETTA Bonaparte

Fregetta Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, No. 26 (séance du 24 Déc. 1855), p. 1113, Jan., 1856—type, by orig. desig., *Thalassidroma leucogaster* Gould.²

¹ Hartert (Vög. Palae. Fauna, 2, p. 1419, 1920) claims the Australian breeding form, *P. m. dulciae* Mathews, to be inseparable.

² Mathews (Bull. Brit. Orn. Cl., 58, pp. 11-12, Nov. 5, 1937) attempts to show that *Fregetta* Bonaparte was merely a lapsus calami or typographical error

Cymodroma Ridgway, in Baird, Brewer, and Ridgway, *Water Birds N. Amer.*, 2, p. 418, 1884—substitute name for *Fregetta* Bonaparte.

Fregettornis Mathews, *Birds Austr.*, 2, p. 31, May 30, 1912—type, by orig. desig., *Procellaria grallaria* Vieillot.

Fregodroma Mathews, *Bull. Brit. Orn. Cl.*, 57, p. 145, June 30, 1937—type, by orig. desig., *Thalassidroma tropica* Gould.

Fregolla Mathews, *Emu*, 37, p. 142, 1937—type, by orig. desig., *Fregetta melano-leuca* Salvadori.

Fregandria Mathews, *Bull. Brit. Orn. Cl.*, 59, p. 10, 1938—new name for *Fregolla* Mathews (not *Fregella* Walker, 1854).

***Fregetta grallaria*¹ *segethi* (Philippi and Landbeck).² WHITE-FRINGED STORM PETREL.**

Thalassidroma Segethi Philippi and Landbeck, *Arch. Naturg.*, 26, (1), p. 282, 1860—coast of Chile; *idem*, *Anal. Univ. Chile*, 18, p. 27, 1861—coast of Chile (type in National Museum, Santiago de Chile; cf. Gigoux and Looser, *Bol. Mus. Nac. Santiago*, 13, p. 31, 1930); Sclater, *Proc. Zool. Soc. Lond.*, 1867, p. 336—Chile (crit.); Philippi, *Anal. Univ. Chile*, 31, p. 286, 1868—"Valdivia," Chile.

Cymodroma grallaria (not *Procellaria grallaria* Vieillot) Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 366, 1896—part, spec. k, off San Ambrosio Island, Chile (July 20); Schalow, *Zool. Jahrb., Suppl.*, 4, p. 737, 1898—Santa Clara Island.

Thalassidroma (Oceanites) segethi Philippi, *Anal. Mus. Nac. Chile*, 15, p. 92, pl. 44, 1902—Chile (monog.).

for *Fregata* Lacépède. However, his argumentation is fallacious. This clearly results from Bonaparte's own words: "Parmi les genres et sous-genres . . . il en est un que j'ai nommé *Fregetta* dans la partie de mon *Conspectus* non encore publiée." It will be noticed that Bonaparte nowhere credits it to Lacépède, and the generic name, consequently, must be regarded as an intentional creation of his own. He was, moreover, well aware of the existence of that other term, since in an earlier paper (*Ann. Lyc. Nat. Hist. N. Y.*, 4, p. 404, 1828) he quotes "*Fregata* Lacép., Cuv. Duméril" in the synonymy of *Tachypetes [aquilus* L.].

Whatever the specimen might have been (cf. Mathews, *Bull. Brit. Orn. Cl.*, 58, p. 11, 1937), and even if the diagnosis is faulty, the genotype, as designated by the author, stands under the Rules.

¹ *Procellaria grallaria* Vieillot (*Nouv. Dict. Hist. Nat., nouv. éd.*, 25, p. 418, "1817" [=Dec., 1818]—"Nouvelle Hollande"), was brought back by the Expedition of the *Naturaliste* under Captain Baudin, and the type is still preserved in the Paris Museum (cf. Berlioz, *Bull. Mus. Hist. Nat. Paris*, (2), 1, p. 61, 1929). Murphy (*Amer. Mus. Nov.*, 124, p. 11, 1924) restricted the name to the breeding form of the Juan Fernández Islands, and has been followed by subsequent authors in this application. While not provided with any exact locality, the type, however, certainly did not come from the Juan Fernández Islands, which were not visited by the *Naturaliste*, but, like the other material secured on that expedition, undoubtedly originated in the Australian waters. Its subspecific status requires critical study.

At all events, *T. Segethi* Philippi and Landbeck appears to be the earliest name of unquestionable pertinence for the form of the White-fringed Storm Petrel occurring off the Pacific coast of South America.

² *Fregetta grallaria segethi* (Philippi and Landbeck) differs from *F. g. insularis* (Mathews), breeding on Lord Howe Island, which may prove to be typical *grallaria*, by smaller size (wing, 151–162; tail, 72–75).

Fregetta grallaria Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 124, 1910—San Ambrosio Island (descr.); Lönnberg, in Skottsberg, Nat. Hist. Juan Fernández, 3, p. 10, 1921—Santa Clara Island, Juan Fernández group.

Fregetta grallaria segethi Mathews, Bds. Austr., 2, p. 41, 1912—waters of the west coast of South America (crit.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 415, 1932—off San Ambrosio Island, Chile (crit.).

(?) *Fregetta grallaria* Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 182, 1918—south of the Galápagos Islands (4° 20' S. lat., 93° 30' W. long.).¹

Fregetta leucogaster (not *Thalassidroma leucogaster* Gould) Bent, Bull. U. S. Nat. Mus., 121, p. 173, 1922—part, Santa Clara or Goat Island (eggs and chicks descr.).

Fregetta grallaria grallaria Peters, Bds. World, 1, p. 70, 1931—Mas A Tierra Island; Murphy, Ocean. Bds. S. Amer., 2, p. 760, 1936 (monog.).

Fregettornis grallaria grallaria Mathews, Nov. Zool., 39, p. 44, 1933—Juan Fernández group (crit.); idem, l.c., p. 195, 1934 (range).

Fregetta leucogaster leucogaster Philippi, El Hornero, 6, p. 239, 1936—off Arica Bay, Tacna, Chile.

Fregettornis grallaria Mathews, Bull. Brit. Orn. Cl., 58, p. 96, 1938 (nomencl. and tax.).

Range.—Breeds on Santa Clara or Goat Island, Juan Fernández group, and apparently at San Felix and San Ambrosio Islets, off Chile; strays to the coast of Chile and (?) the Galápagos Islands.²

Fregetta tropica (Gould).³ BLACK-BELLIED STORM PETREL.

Thalassidroma tropica Gould, Ann. Mag. Nat. Hist., 13, p. 366, 1844—6° 33' N. lat., 18° 6' W. long., Atlantic Ocean (type in British Museum of Natural History).

¹ According to Mathews (Nov. Zool., 39, p. 45, 1933), this specimen approaches the Rapa Island race, *F. g. titan* Murphy, in length of wing (178 mm.).

² Lawrence (Ann. Lyc. Nat. Hist. N.Y., 5, p. 117, 1852) described s. n. "*Thalassidroma fregetta* (Sol.) Khul" (sic) a bird taken in the harbor of St. Marks, Florida. Bonaparte (Compt. Rend. Acad. Sci. Paris, 42, p. 769, 1856) renamed it *Fregetta lawrencii* (misspelt *laurencii* in Consp. Gen. Av., 2, p. 198, 1857). As the specimen, which Lawrence presented to the Academy of Natural Sciences of Philadelphia, has been lost (cf. Lawrence, in Baird, Rep. Expl. Surv. R. R. Pacific, 9, p. 832, 1858, and Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 87), its proper identification will forever remain a puzzle. Bent (Bull. U. S. Nat. Mus., 121, p. 173, 1922) refers it to "*F. leucogastris*," a designation which is open to doubt.

Records of *Fregetta leucogaster* from the South Atlantic (cf. Dabbene, El Hornero, 2, p. 248, 1922) are hard to allocate, and may be referable to *F. grallaria tristanensis* Mathews, of Tristan d'Acunha, which, according to Mathews (Bull. Brit. Orn. Cl., 57, p. 144, 1937), is the same as *Thalassidroma leucogaster* Gould (Ann. Mag. Nat. Hist., 13, p. 367, 1844; type, from 36° S. lat., 6° 47' E. long., in the Academy of Natural Sciences of Philadelphia; cf. Stone and Mathews, Austr. Av. Rec., 1, p. 136, 1913).

³ According to Murphy (Ocean. Bds. S. Amer., 2, p. 764, 1936), the race *melanogaster* Gould cannot be maintained, and the proper name of the Black-bellied Storm Petrel should be *Fregetta tropica* (Gould).

Thalassidroma melanogaster Gould, Ann. Mag. Nat. Hist., 13, p. 367, 1844—South Pacific and Indian Oceans, particularly off the islands of St. Paul's and Amsterdam (probable type in coll. of the Academy of Natural Sciences of Philadelphia; cf. Stone and Mathews, Austr. Av. Rec., 1, p. 136, 1913).

Oceanites melanogastra Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 18, 1885—South Georgia (crit.).

Cymodroma melanogaster Salvin, Cat. Bds. Brit. Mus., 25, p. 364, 1896 (in part).

Fregetta melanogaster Clarke, Ibis, 1906, p. 168—Laurie Island, South Orkney Islands (breeding; egg descr.); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 85, 1906—South Georgia; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 123, 1910—Falkland Islands (breeding ?); Wace, El Hornero, 2, p. 195, 1921 (one egg from the Falklands attributed to the species).

Fregetta tropica australis Mathews, Austr. Av. Rec., 2, p. 86, Sept. 24, 1914—New Zealand (type in coll. of G. M. Mathews, subsequently in the Tring Collection [cf. Hartert, Nov. Zool., 33, p. 357, 1926], now in the American Museum of Natural History, New York); idem, Nov. Zool., 39, p. 194, 1934 (range).

Fregetta tropica melanogaster Dabbene, El Hornero, 2, p. 247, 1922 (descr., range); Bennett, Ibis, 1926, p. 313—South Orkney and South Shetland Islands (breeding), South Georgia, and Falkland Islands; Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 136, 1930 (crit.); Bennett, Ibis, 1931, p. 12—Deception Island, South Shetland Islands (breeding, Jan. 13, 1927); Peters, Bds. World, 1, p. 70, 1931 (range); Mathews, Nov. Zool., 39, p. 194, 1934 (range); Ardley, Discovery Rep., 12, p. 369, 1936—Laurie Island, South Orkney Islands (nesting).

Fregetta tropica Murphy, Ocean. Bds. S. Amer., 2, p. 764, 1936 (monog.).

Range.—Breeds on Kerguelen Island, the Crozet Islands, South Georgia, South Orkney and South Shetland Islands (Deception Island)¹ and on islands in the New Zealand seas; ranges over the southern oceans to the coast of Peru (near Canete) and Patagonia.

Genus GARRODIA Forbes

Garrodia Forbes, Coll. Sci. Papers of Garrod, p. 521 (footnote), 1881—type, by orig. desig., *Thalassidroma nereis* Gould.

Garrodia nereis (Gould). GRAY-BACKED STORM PETREL.

Thalassidroma nereis Gould, Proc. Zool. Soc. Lond., 8, "1840," p. 178, pub. July, 1841—Bass Strait, Australia (type in the Academy of Natural Sciences of Philadelphia; cf. Stone and Mathews, Austr. Av. Rec., 1, p. 136, 1913); idem, l.c., 27, p. 98, 1859—Falkland Islands; Sclater, l.c., 28, p. 390, 1860—Falkland Islands (one spec., March, 1858); Abbott, Ibis, 1861, p. 164—Falkland Islands (one spec., March, 1858).

¹ The breeding on the Falkland Islands (a single egg, attributed to the species, in the British Museum) requires confirmation.

Procellaria nereis Coues, Bull. U. S. Nat. Mus., 2, p. 31, 1875—Kerguelen Island (crit., meas., eggs descr.); Kidder, l.c., 3, p. 16, 1876—Kerguelen Island (nest and egg descr.); Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 18, 1885—South Georgia (egg descr.).

Garrodia nereis Salvin, Cat. Bds. Brit. Mus., 25, p. 361, 1896—Falkland Islands, etc. (monog.); Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 84, 1906—South Georgia (breeding); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 118, 1910 (descr.); Peters, Bds. World, 1, p. 71, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 746, 1936 (monog.).

Oceanites nereis chubbi Mathews, Birds Austr., 2, p. 18, May 30, 1912—Falkland Islands (location of type not stated); Wace, El Hornero, 2, p. 195, 1921—Falkland Islands; Dabbene, l.c., p. 245, 1922 (descr., range); Bennett, Ibis, 1926, p. 313—outer islets of the Falkland Islands and South Georgia (breeding); Mathews, Nov. Zool., 39, p. 193, 1934 (range).

Oceanites nereis couesi Mathews, Birds Austr., 2, p. 18, May 30, 1912—Kerguelen Island (location of type not stated); idem, Nov. Zool., 34, p. 193, 1934—Kerguelen Island.

Range.—Breeds on islands off New Zealand, South Georgia, the Falkland Islands, Gough Island and Kerguelen.

Genus HYDROBATES Boie¹

Hydrobates Boie, Isis, 1822, Heft 5, col. 562, May, 1822—type, by subs. desig. (Baird, Brewer, and Ridgway, Water Birds N. Amer., 2, p. 403, 1884), *Procellaria pelagica* Linnaeus.

Thalassidroma Vigors, Zool. Journ., 2, No. 7, p. 405, Oct., 1825—type, by orig. desig., *Procellaria pelagica* Linnaeus.

Zalochelidon Billberg, Syn. Faun. Scand., 1, (2), p. 192, 1828—type, by monotypy, *Procellaria pelagica* Linnaeus.

Hydrobates pelagicus pelagicus (Linnaeus). STORM PETREL.

Procellaria pelagica Linnaeus, Syst. Nat., 10th ed., 1, p. 131, 1758—based primarily on Fauna Svec., No. 249, pl. 2, fig. 249, "in albo [sic] Oceano"—coast of Sweden; Salvin, Cat. Bds. Brit. Mus., 25, p. 343, 1896 (monog.).

Hydrobates pelagicus Bent, Bull. U. S. Nat. Mus., 121, p. 125, 1922 (life hist., range); Peters, Bds. World, 1, p. 72, 1931 (range); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 283, 1935 (distr. in the North Atlantic).

Thalassidroma pelagica pelagica Mathews, Nov. Zool., 39, p. 187, 1934 (range).

Range.—Breeds on Iceland (Vestman's Islands), Färoes, small islands off the British Isles and west coast of France;² extends across the North Atlantic Ocean to southern Greenland, Labrador, Newfoundland, and Nova Scotia.

¹*Hydrobates* Boie is by no means preoccupied by *Hydrobata* Vieillot, 1816.

²An allied race, *H. p. melitensis* (Schembri), breeds in the western Mediterranean.

Genus OCEANODROMA Reichenbach

- Oceanodroma* Reichenbach, Av. Syst. Nat., p. iv, 1852 (1853)—type, by orig. desig., *Procellaria furcata* Gmelin.
- Cymochorea* Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 75—type, by orig. desig., *Procellaria leucorhoa* Vieillot.
- Pacificodroma* Bianchi, Faune de la Russie, Ois., 1, (2), pp. 516, 559, Jan., 1913—type, by orig. desig., *Thalassidroma monorhis* Swinhoe.
- Bannermania* Mathews and Iredale, Ibis, (10), 3, p. 578, July, 1915—type, by orig. desig., *Thalassidroma hornbyi* Gray.
- Tethysia* Mathews, Bull. Brit. Orn. Cl., 53, p. 154, March 25, 1933—type, by orig. desig., *Procellaria tethys* Bonaparte.
- Loomelania* Mathews, Bull. Brit. Orn. Cl., 54, p. 119, March 29, 1934—type, by orig. desig., *Procellaria melania* Bonaparte.

**Oceanodroma tethys tethys* (Bonaparte). GALAPAGOS WHITE-RUMPED STORM PETREL.

Thalassidroma tethys Bonaparte, Tagebl. der 29. Versaml. Deuts. Naturf. Aerzte, Wiesbaden, Beilage, p. 89, Sept. 25, 1852—Galápagos Islands (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 61, 1929); idem, Journ. Orn., 1, p. 47, 1853 (reprint of orig. descr.).

Procellaria tethys Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 662, 1854—Galápagos Islands (char.); Salvin, Trans. Zool. Soc. Lond., 9, p. 507, pl. 88, fig. 2, 1876—Galápagos Islands (crit.); Townsend, Bull. Mus. Comp. Zool., 27, p. 126, 1895—off Chatham Island; Salvin, Cat. Bds. Brit. Mus., 25, p. 346, 1896—part, Galápagos Islands; Ridgway, Proc. U. S. Nat. Mus., 19, p. 656, 1897—Wenman Island (descr.); Rothschild and Hartert, Nov. Zool., 6, p. 199, 1899—off Wenman, Culpepper, Albemarle, and Tower Islands; iidem, l.c., 9, p. 416, 1902—waters near Bindloe, Albemarle, and Wenman Islands, and at sea 1° N. lat., 89° W. long.; Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 242, 1904—Albemarle (Iguana Cove) and Narborough (Mangrove Point) Islands; Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 35, 1931—Galápagos Islands.

Procellaria pelagica b. *tethys* Bonaparte, Consp. Gen. Av., 2, p. 197, 1857—Galápagos Islands.

Oceanodroma tethys Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 151, 1918—Galápagos Islands (nesting on Tower Island; descr. of egg; var.; meas.).

Oceanodroma tethys tethys Peters, Bds. World, 1, p. 72, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 729, 1936 (monog.).

Tethysia tethys tethys Mathews, Nov. Zool., 39, p. 187, 1931 (range).

Range.—Seas about the Galápagos Archipelago (breeding on Tower Island).

Field Museum Collection.—1: Galápagos Islands (Tower Island, 1).

****Oceanodroma tethys kelsalli* (Lowe).¹ KELSALL'S WHITE-RUMPED STORM PETREL.**

Thalassidroma tethys kelsalli Lowe, Bull. Brit. Orn. Cl., 46, p. 6, Nov. 4, 1925—Ancon, Peru (type in British Museum of Natural History).

Procellaria tethys (not *Thalassidroma tethys* Bonaparte) Salvin, Cat. Bds. Brit. Mus., 25, p. 346, 1896—part, west coast of Central America; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 427, 1904—part, west coast of Central America.

Hydrobates tethys Wetmore, Condor, 25, p. 170, 1923—ninety miles south of Iquique, Chile (Nov. 27, 1922).

Hydrobates tethys kelsalli Chapman, Bull. Amer. Mus. N. H., 55, p. 182, 1926—1° S. lat., off shore, Ecuador (Sept. 13).

Oceanodroma tethys kelsalli Peters, Bds. World, 1, p. 72, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 731, 1936 (monog.); Moffitt, Auk, 55, p. 256, 1938—off coast west-southwest of Acapulco, Mexico, and 175 land miles west of Lower California (crit., meas.); Friedmann, Proc. Amer. Phil. Soc., 89, (1), p. 314, 1945—4° 38' S. lat., 81° 19' W. long.

Tethysia tethys kelsalli Mathews, Nov. Zool., 39, p. 187, 1934 (range).

Range.—Breeds on islands off the coast of Peru (San Gallán and Pescadores Islands); extends north through the North Pacific to the waters of Mexico and Lower California, and south to the coast of Chile.

Field Museum Collection.—2: Peru (Pisco, Lima, 1; Mollendo, Arequipa, 1).

***Oceanodroma castro castro* (Harcourt). MADEIRAN FORK-TAIL PETREL.**

Thalassidroma castro Harcourt, Sketch of Madeira, p. 123, 1851—Desertas, near Madeira (location of type unrecorded).

Thalassidroma jabe-jabe Bocage, Journ. Sci. Math., Phys. Nat. Lisboa, 5, p. 120, 1875—Raza Island, Cape Verdes (type in Lisbon Museum).

Oceanodroma cryptoleucura (not *Cymochorea cryptoleucura* Ridgway) Salvin, Cat. Bds. Brit. Mus., 25, p. 350, 1896—part, spec. b-i, Porto Santo, Great Salvage, Funchal, and Desertas (monog.).

Oceanodroma castro Snethlage, Bol. Mus. Goeldi, 8, p. 77, 1914—vicinity of Pará, Brazil; Bent, Bull. U. S. Nat. Mus., 121, p. 153, 1922—part, Atlantic Ocean, accidental in Indiana and District of Columbia (life hist.); Taverner, Auk, 51, p. 77, 1934—Rideau River, Ottawa, Canada (Aug. 28, 1933).

Oceanodroma castro castro Peters, Bds. World, 1, p. 73, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 732, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 23, 1938—Angra do Reis, Rio de Janeiro (1932).

Cymochorea castro castro Mathews, Nov. Zool., 39, p. 191, 1934 (range).

¹*Oceanodroma tethys kelsalli* (Lowe) differs from the nominate race by distinctly smaller size, particularly shorter wings (119–126, against 130–143).

Range.—Breeds on the Desertas and Porto Santo (near Madeira), the Salvage, Azores (Rombos), and Cape Verde Islands (Raza), and ranges across the Atlantic to the coast of Brazil (Pará; Angra do Reis, Rio de Janeiro); accidental in Indiana (Martinsville, June 15, 1902), District of Columbia (Washington, Aug. 28, 1893), and Ontario (Rideau River, Ottawa, Aug. 28, 1933).¹

****Oceanodroma castro bangsi* Nichols.**² GALAPAGOS FORK-TAILED PETREL.

Oceanodroma castro bangsi Nichols, Auk, 31, p. 389, July, 1914—1° N. lat., 93° W. long. (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 172, 1930); Peters, Bds. World, 1, p. 73, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 734, 1936 (monog.).

Oceanodroma cryptoleucura (not *Cymochorea cryptoleucura* Ridgway) Townsend, Bull. Mus. Comp. Zool., 27, p. 125, 1895—Wenman Island; Ridgway, Proc. U. S. Nat. Mus., 19, p. 654, 1897—part, Wenman and Albemarle Islands (descr., meas.); Rothschild and Hartert, Nov. Zool., 6, p. 198, 1899—Galápagos Islands; Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 243, 1904—Wenman (ex Townsend).

Oceanodroma castro (not *Thalassidroma castro* Harcourt) Rothschild and Hartert, Nov. Zool., 9, p. 415, 1902—near Bindloe, Barrington, and Abingdon Islands (crit.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 156, 1918—Albemarle, Cowley (breeding), Charles, Chatham, Hood, James, Seymour, and Wenman Islands (nestling descr., meas.); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 35, 1931—Galápagos Islands.

Oceanodroma castro cryptoleucura Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 28, 1931—Hood Island (crit.).

Cymochorea castro bangsi Mathews, Nov. Zool., 39, p. 191, 1934 (range).

Range.—Breeds on the Galápagos Islands and possibly on Cocos Island.

Field Museum Collection.—4: Galápagos Islands (Tower Island, 4).

****Oceanodroma leucorhoa beali* Emerson.**³ BEAL'S PETREL.

Oceanodroma beali Emerson, Condor, 8, p. 54, March 20, 1906—Sitka Bay, Alaska (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley, Calif.).

¹ Replaced on St. Helena by *O. castro helena* (Mathews), 1925.

² *Oceanodroma castro bangsi* Nichols: Differs from *O. c. castro* by darker, more sooty coloration and slightly smaller size with stouter bill; from *O. c. cryptoleucura* (Ridgway), of the Hawaiian Islands, by heavier, more strongly hooked bill and less deeply forked tail.

³ *Oceanodroma leucorhoa beali* Emerson: Similar to the nominate race, but decidedly smaller. Wing, 138–152, (female) 143–156.

As pointed out by Oberholser, *O. beldingi* is not properly separable from Alaskan birds.

Oceanodroma beldingi Emerson, Condor, 8, p. 54, March 20, 1906—Netarts Bay, coast of Oregon (type in coll. of H. T. Bohlman).

Oceanodroma leucorhoa beali Oberholser, Proc. U. S. Nat. Mus., 54, p. 168, 1917—coast region from Alaska to Oregon (monog., meas., range); Grinnell, Condor, 20, p. 46, 1918—San Mateo and Humboldt counties, California (breeding, crit., meas.); Bent, Bull. U. S. Nat. Mus., 121, p. 147, 1922 (life hist., range); Peters, Bds. World, 1, p. 73, 1931 (range); van Rossem, Proc. Biol. Soc. Wash., 55, p. 10, 1942 (range).

Oceanodroma leucorhoa (not *Procellaria leucorhoa* Vieillot) Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 160, 1918—part, Alaska (Sitka), Oregon, and California (crit., meas.).

Cymochorea leucorhoa beali Mathews, Nov. Zool., 39, p. 189, 1934 (range).

Range.—Breeds on Pacific coast islands from extreme southern Alaska along the coasts of British Columbia, Washington, Oregon, and California, at least to San Mateo County and probably on the Farallones.

Field Museum Collection.—17: Alaska (Dall Island, 3; Forrester Island, 3; St. Lazaria Island, 1; Laz, 1); Washington (Moclips, 3; Jefferson County, 2); Oregon (Pacific City, 2); California (Castle Island, 2).

****Oceanodroma leucorhoa kaedingi* Anthony.¹ KAEDING'S PETREL.**

Oceanodroma kaedingi Anthony, Auk, 15, p. 37, Jan., 1898—at sea near Guadalupe Island, Lower California (type in coll. of A. W. Anthony, now in Carnegie Museum); idem, l.c., 15, pp. 314, 316, 317, 1898—San Benedicte, Socorro, and Clarion Islands; Rothschild and Hartert, Nov. Zool., 9, p. 415, 1902—at sea 13° N. lat., 103° W. long.; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 429, 1904—Revillagigedo Islands.

Oceanodroma leucorhoa kaedingi Oberholser, Proc. U. S. Nat. Mus., 54, p. 171, 1917 (monog., char., meas.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 66, 1918—Lower California; Bent, Bull. U. S. Nat. Mus., 121, p. 146, 1922 (range); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 286, 1926—near Guadalupe Island; Huey, Condor, 32, p. 68, 1930—near Guadalupe Island (downy birds, var.); Peters, Bds. World, 1, p. 73, 1931 (range).

Oceanodroma leucorhoa (not *Procellaria leucorhoa* Vieillot) Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 160, 1918—part, vicinity of Guadalupe Island (meas.).

Cymochorea leucorhoa kaedingi Mathews, Nov. Zool., 39, p. 189, 1934 (range).

Oceanodroma leucorhoa socorroensis (not *Oceanodroma socorroensis* Townsend) van Rossem, Proc. Biol. Soc. Wash., 55, p. 11, 1942—Guadalupe Island, off Lower California.

¹*Oceanodroma leucorhoa kaedingi* Anthony: Similar to *O. l. beali*, but even smaller with decidedly shorter tail, the latter being less deeply forked, and the pileum generally more plumbeous. Wing, 137–145, (female) 138–145; tail, 67–72, (female) 69–77.

Range.—Breeds on Guadalupe Island, Lower California; occurs off Lower California south to Clarion and Socorro Islands. Casual off the coast of southern California.

Field Museum Collection.—16: California (Trinidad, 5; Eureka, 1); Mexico (Guadalupe Island, Lower California, 10).

**Oceanodroma leucorhoa leucorhoa* (Vieillot). LEACH'S PETREL.

Procellaria leucorhoa Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 25, p. 422, "1817" (=Dec., 1818)—"bordes maritimes de la Picardie, se tient sur l'Océan, jusqu'au Brésil" (type, from shores of Picardy, France, in coll. of L. A. F. Baillon, Abbeville); Winge, *Medd. Grønland*, 21, p. 138, 1898—Greenland.

Procellaria leachii Temminck, *Man. Orn.*, 2nd ed., 2, p. 812, Oct., 1820—St. Kilda (type in British Museum);¹ Bonaparte, *Journ. Acad. Nat. Sci. Phila.*, 3, (2), p. 229, pl. 9, upp. fig., 1824—"on this [viz., American] side of the Bank of Newfoundland" (descr.).

Procellaria atlantica Bonaparte, *Journ. Acad. Nat. Sci. Phila.*, 3, (2), p. 230 (in text), Jan., 1824 (alternative name for *Procellaria leachii* Temminck).

Procellaria Bullockii Fleming, *Hist. Brit. Anim.*, p. 136, 1828—St. Kilda (substitute name for *P. leachii* Temminck).

Thalassidroma leachii Holböll, *Naturhist. Tidsskr.*, 4, p. 430, 1843—Greenland.

Procellaria leucorrhoea Schlegel, *Mus. Pays-Bas*, livr. 4, *Procellariae*, p. 3, 1863—Normandy, Mediterranean, and Newfoundland (descr.); Reinhardt, *Vidensk. Medd. Naturh. Foren.*, 1881, p. 187—Hundeejland, Greenland (69° N. lat.).

Cymochorea leucorrhoea Coues, *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 76 (nomencl.).

Oceanodroma leucorrhoea Stejneger, *Bull. U. S. Nat. Mus.*, 29, p. 97, 1885—Copper Island (breeding); Salvin, *Cat. Bds. Brit. Mus.*, 25, p. 348, 1896 (monog.).

Oceanodroma leucorhoa Murphy, *Auk*, 32, p. 170, 1915 (range; migr.); Loomis, *Proc. Calif. Acad. Sci.*, (4), 2, p. 160, 1918—part, spec. from Gulf of St. Lawrence and off Cape Verde Islands only.

Cymochorea leucorhoa Chubb, *Bds. Brit. Guiana*, 1, p. 86, 1916—Warima River (Essequibo) and Surinam.

Oceanodroma leucorhoa leucorhoa Oberholser, *Proc. U. S. Nat. Mus.*, 54, p. 165, 1917 (monog.); Hartert, *Nov. Zool.*, 27, p. 135, 1920—Copper Island (breeding); Bent, *Bull. U. S. Nat. Mus.*, 121, p. 137, 1922 (life hist., distr.); Wetmore, *Condor*, 25, p. 170, 1923—between Colon, Panama, and Cape Maysi, Cuba (June 19, 1922); Peters, *Bds. World*, 1, p. 73, 1931 (range); Wetmore and Swales, *Bull. U. S. Nat. Mus.*, 155, p. 63,

¹ Although not indicated as such, spec. c, of the British Museum, from St. Kilda (Old Collection), is without much doubt the type of *P. leachii* Temminck and also of *P. Bullockii* Fleming, the latter name being based upon the very same individual.

1931—Samaná Bay, Hispaniola; Bradlee and Mowbray, Proc. Bost. Soc. N. H., 39, p. 296, 1931—Bermuda Islands (Tucker's Town, May 1, 1884); Belcher and Smooker, Ibis, 1934, p. 577—Trinidad (Guayaguaré, Jan., 1932, and San Fernando); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 279, 1935 (distr. in North Atlantic); Danforth, Auk, 52, p. 74, 1935—off Cayo Francés, Cuba; Allen, l.c., p. 179, 1935—Pekinese Island, Massachusetts (probably breeding); Gross, l.c., p. 382, pls. 18–21, 1935—Bay of Fundy (life hist.); Murphy, Ocean. Bds. S. Amer., 2, p. 734, 1936 (monog.).

Cymochorea leucorhoa leucorhoa Mathews, Nov. Zool., 39, p. 139, 1934 (range in part).

Range.—Breeds on Kurile, Commander, and Aleutian Islands, coasts of Alaska (south to Forrester Island), Maine, Nova Scotia, Newfoundland, southern Greenland, Vestman's Islands, Iceland, and islands off the British Isles; ranges through the Pacific and Atlantic oceans south to California (San Clemente Island), the vicinity of the Galápagos Islands (13° 20' S. lat.), Trinidad, the Guianas, and even to St. Paul's Rocks and the waters off Bahia, Brazil (fide Nicoll, Ibis, 1906, p. 667).

Field Museum Collection.—31: Alaska (St. Lazaria Island, 1); British Columbia (Vancouver Island, 1); Quebec (Magdalen Island, 2); New Brunswick (Grand Manan Island, 4; Seal Island, 2; Dover, 15); Maine (Bangor, 1); Massachusetts (Springhill, 2; Great Island, 1); Connecticut (Lakeville, 1); British Guiana (Buxton, Demarara, 1).

****Oceanodroma monorhis socorroensis* C. H. Townsend.**

SOCORRO PETREL.

Oceanodroma socorroensis C. H. Townsend, Proc. U. S. Nat. Mus., 13, p. 134, Sept. 9, 1890—Socorro Island, Revillagigedo group (type in U. S. National Museum); Anthony, Auk, 15, p. 140, 1898—Los Coronados Islands (breeding); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 431, 1904 (monog., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 66, 1928—Los Coronados and San Benito Islands (breeding); van Rossem, Bull. Mus. Comp. Zool., 77, p. 387, 1934—145 miles northwest of San José, Guatemala.

Oceanodroma monorhis chapmani Berlepsch, Auk, 23, p. 185, April, 1906—San Benito Islands (type in coll. of H. von Berlepsch, now in Frankfurt Museum).

Oceanodroma leucorhoa (not *Procellaria leucorhoa* Vieillot) Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 160, 1918—part, Los Coronados and San Benito Islands (eggs descr.).

Oceanodroma monorhis socorroensis Bent, Bull. U. S. Nat. Mus., 121, p. 162, 1922 (life hist.); Peters, Bds. World, 1, p. 74, 1931 (range); Friedmann, Proc. Amer. Phil. Soc., 89, p. 314, 1945—4° 40' N. lat.—80° 8' W. long.

Oceanodroma macrodactyla (not of Bryant) Townsend, Bull. Amer. Mus. N. H., 48, p. 6, 1923—Guadalupe Island.

Cymochorea leucorhoa socorroensis Mathews, Nov. Zool., 39, p. 189, 1934 (range).

Oceanodroma (sic) *leucorhoa willetti* van Rossem,¹ Proc. Biol. Soc. Wash., 55, p. 10, 1942—Little Middle Island, Los Coronados Islands, Lower California (type in Dickey Collection, University of California, Los Angeles).

Oceanodroma leucorhoa chapmani van Rossem, Proc. Biol. Soc. Wash., 55, p. 10, 1942—San Benito Islands, Lower California.

Range.—Breeds on islands off Lower California (Los Coronados and San Benito Islands) and west coast of Mexico; ranges north to southern California and south to the waters around the Galápagos Islands.

Field Museum Collection.—23: Mexico, Lower California (San Benito Islands, 3; Guadalupe Island, 2; Los Coronados Islands, 18).

Oceanodroma macrodactyla W. E. Bryant. GUADALUPE PETREL.

Oceanodroma leucorhoa macrodactyla W. E. Bryant, Bull. Calif. Acad. Sci., 2, p. 450, July 25, 1887—Guadalupe Island, Lower California (cotypes in California Academy of Sciences; cf. Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 155, 1918).

Oceanodroma macrodactyla Salvin, Cat. Bds. Brit. Mus., 25, p. 351, 1896 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 155, 1918—Guadalupe Island (downy young descr.); Bent, Bull. U. S. Nat. Mus., 121, p. 151, 1922 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 68, 1928—Guadalupe Island; McLellan Davidson, Condor, 30, p. 355, 1928 (present status); Peters, Bds. World, 1, p. 73, 1931 (listed).

Cymochorea macrodactyla Mathews, Nov. Zool., 39, p. 190, 1934 (listed).

Range.—Formerly bred on Guadalupe Island, off Lower California. Now probably extinct.

Oceanodroma markhami (Salvin). MARKHAM'S PETREL.

Cymochorea markhami Salvin, Proc. Zool. Soc. Lond., 1883, p. 430—coast of Peru, 19° 41' S. lat., 75° W. long. (type in the British Museum); Mathews, Nov. Zool., 39, p. 190, 1934—Peru to Chile.

Oceanodroma markhami Salvin, Cat. Bds. Brit. Mus., 25, p. 354, 1896—coast of Peru (monog.); Godman, Monog. Petrels, p. 27, pl. 7, 1907 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 174, 1918—13° 28' N. lat., 108° 52' W. long., and thirty miles south of Cocos Island 5° N. lat., 87° W. long.

¹This name has been proposed by van Rossem for the birds breeding on the Los Coronados Islands, Lower California. It is said to be like *O. m. socorroensis*, but with paler and more plumbeous (less blackish) body coloration and larger dimensions. Our series from Los Coronados Islands show little if any difference in coloration, and their dimensions are smaller than the specimens from the San Benito and Guadalupe Islands.

(meas.); Wetmore, Condor, 24, p. 28, 1922—off the coast of Peru thirty-five miles north of Callao; idem, l.c., 25, p. 170, 1923—Peru (opposite Lagarto Head; fifteen miles off Coles Point) and Chile (ninety miles south of Iquique, Tarapacá); Chapman, Bull. Amer. Mus. N. H., 55, p. 182, 1926—1° S. lat., offshore Ecuador; Murphy, Ocean. Bds. S. Amer., 2, p. 739, 1936 (monog.).

Oceanodroma markhami markhami Peters, Bds. World, 1, p. 73, 1931 (range).

Range.—Occurs off the Pacific coast of South America, from the vicinity of Cocos Island and Ecuador south to northern Chile (breeding ground unknown).¹

****Oceanodroma melania melania* (Bonaparte). BLACK PETREL.**

Procellaria melania Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, No. 14, p. 662, April, 1854—California² (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 61, 1929, and Grinnell, Univ. Calif. Pub. Zool., 38, p. 262, 1932); idem, Not. Orn. Coll. Delattre, p. 92, 1854 (reprint of orig. descr.).

Thalassidroma melania Bonaparte, Consp. Gen. Av., 2, p. 196, 1857—"ex Pacific. Mexican. a Delattre, 1853" (descr. spec. typ. in Mus. Paris).

Cymochorea melania Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 76—Cape San Lucas, Lower California (monog.).

Oceanodroma townsendi Ridgway, Proc. U. S. Nat. Mus., 16, p. 687, Nov. 24, 1893—Cape San Lucas, Lower California (type in U. S. National Museum).

Oceanodroma melania Townsend, Bull. Mus. Comp. Zool., 27, p. 126, 1895—off Guaymas, Sonora (March 28, Apr. 21), and off Acapulco, Guerrero (Apr. 12), Mexico; Salvin, Cat. Bds. Brit. Mus., 25, p. 353, 1896 (monog.); Nelson, N. Amer. Fauna, 14, p. 28, 1899—between Isabel and Tres Marias Islands, Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 430, 1904—Lower California (Cape San Lucas, San Benito Islands) and coast of western Mexico (Acapulco; off San Blas to the Tres Marias Islands); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 174, 1918—west of Point Pinos (California), and San Benito Islands (molt, meas.); Bent, Bull. U. S. Nat. Mus., 121, p. 156, 1922 (life hist.); Wetmore, Condor, 25, p. 170, 1923—off western Peru (near Lobos de Afuera, Sept. 22; five miles off Lobos de Tierra, Nov. 24); Grinnell, Univ. Calif. Pub. Zool., 32, p. 68, 1928—Lower California (breeding stations, etc.).

Oceanodroma melania melania Peters, Bds. World, 1, p. 74, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 292, 1935—Bay of Panama.

Cymochorea melania melania Mathews, Nov. Zool., 39, p. 190, 1934 (range).

Loomelania melania Murphy, Ocean. Bds. S. Amer., 2, p. 743, 1936 (monog.); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 30, 1945—Gulf of California (summer resident).

¹*Oceanodroma owstoni* (Mathews and Iredale) is probably conspecific.

²Vicinity of San Francisco may be regarded as type locality (cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 262, 1932).

Range.—Breeds on islands off Lower California (Consag Rock, San Lu s Islands, Partida Island, San Benito and Los Coronados Islands) and ranges north to the coast of California and south to the waters off the Peruvian coast (Lobos de Afuera, Lobos de Tierra).¹

Field Museum Collection.—14: California (off San Pedro, 2); Mexico, Lower California (Los Coronados Islands, 6; San Benito Islands, 3); Peru (Talara, 3).

****Oceanodroma homochroa* (Coues). ASHY PETREL.**

Cymochorea homochroa Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 77—Farallon Islands, California (type in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 262, 1932).

Oceanodroma homochroa Salvin, Cat. Bds. Brit. Mus., 25, p. 365, 1896—San Miguel Island, California (monog.); Godman, Monog. Petrels, p. 29, pl. 8, 1907 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 171, 1918—Southeast Farallon Island (range, molt, meas., eggs); Bent, Bull. U. S. Nat. Mus., 121, p. 159, 1922 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 68, 1928—Lower California (three records); Peters, Bds. World, 1, p. 74, 1931 (range); Orr, Condor, 46, p. 125, 1944 (nesting season).

Cymochorea (monorhis) homochroa Mathews, Nov. Zool., 39, p. 190, 1934 (range).

Range.—Breeds on the Farallon Islands and some of the Santa Barbara Islands (San Miguel and Santa Cruz), California, and on Los Coronados Islands, Lower California; extends north to Point Reyes, south to Guadalupe and San Benito Islands.

Field Museum Collection.—5: California (Farallon Islands, 3; Monterey County, 1; Santa Cruz Islands, 1).

****Oceanodroma hornbyi* (G. R. Gray). HORNBY'S PETREL.**

Thalassidroma hornbyi G. R. Gray, Proc. Zool. Soc. Lond., 21, "1853," p. 62, pub. July 25, 1854—"Northwest coast of America" (type in British Museum).

Oceanodroma hornbyi Bonaparte, Consp. Gen. Av., 2, p. 195, 1857—"Pacif. Am. s. occ." (diag. spec. typ.); Salvin, Cat. Bds. Brit. Mus., 25, p. 356, pl. 3, 1896 (descr. and fig. of type); Godman, Monog. Petrels, p. 36, pl. 10, 1907; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 179, 1918 (listed); Murphy, Auk, 39, p. 60, 1922—coasts of Peru and Chile (crit.); Bent, Bull. U. S. Nat. Mus., 121, p. 129, 1922 (life hist.); Wetmore, Condor, 25, p. 170, 1923—off Lobos de Tierra and Lobos de Afuera Islands, Peru; Stresemann, Orn. Monatsber., 32, p. 61, 1924—Santa Lu sa, Antofagasta, Chile; Chapman, Bull. Amer. Mus. N. H., 55, p. 183, 1926—Gulf of Guayaquil (Jan. 16) and offshore, 1  S. lat. (Sept. 13), Ecuador; Strese-

¹A supposedly larger form, *O. melania matsudariae* Kuroda, breeds on the Volcan Islands, Japan.

mann, Orn. Monatsber., 37, p. 80, 1929—Pampa del Toco, near Tocopilla, Antofagasta, Chile; Peters, Bds. World, 1, p. 74, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 414, 1932—Quilimarí, Valparaiso, to Iquique, Tarapacá, Chile; Philippi, El Hornero, 6, p. 239, 1936—Arica Bay, Tacna, Chile; Murphy, Ocean. Bds. S. Amer., 2, p. 741, 1936 (monog.); Friedmann, Proc. Amer. Phil. Soc., 89, (1), p. 314, 1945—off the coast of Ecuador and northern Peru.

Procellaria (Oceanites) collaris Philippi, Verh. Deuts. Wiss. Ver. Santiago, 3, Nos. 1-2, p. 11, pl., 1895—east of Taltal, Antofagasta, Chile (type in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, 13, p. 31, 1930); idem, Anal. Mus. Nac. Chile, 15, p. 90, pl. 42, fig. 3, 1902—east of Taltal, Antofagasta.

Oceanites collaris Paessler, Journ. Orn., 61, p. 43, 1913—coast of Chile 32° S. lat., 72° W. long. (=off Quilimarí, Valparaiso).

Oceanites hornbyi Paessler, Journ. Orn., 62, pp. 273, 274, 1914—off Coquimbo and Iquique, Chile.

Bannermania hornbyi Mathews, Nov. Zool., 39, p. 188, 1934 (range).

Range.—Breeds in the North Chilean Andes (Antofagasta) and occurs in the warm-water area of the Pacific coast of South America from Valparaiso, Chile, north to the Gulf of Guayaquil, Ecuador.¹

Field Museum Collection.—6: Peru (Callao, Ancachs, 3; Mollendo, Arequipa, 3).

Oceanodroma furcata furcata (Gmelin). NORTHERN FORK-TAILED PETREL.

Procellaria furcata Gmelin, Syst. Nat., 1, (2), p. 561, 1789—based on "Fork-tail Petrel" Pennant, Arct. Zool., 2, p. 535, and Latham, Gen. Syn. Bds., 3, (2), p. 410; "in glacie maris, Americam et Asiam interfluentis"= Bering Sea.

Procellaria orientalis Pallas, Zoogr. Rosso-Asiat., 2, p. 315, 1811—Kurile Islands and Unalaska (cotypes in Leningrad Museum).

Oceanodroma furcata Stejneger, Bull. U. S. Nat. Mus., 29, p. 98, 1885—Copper and Bering Islands (breeding; eggs descr.); Salvin, Cat. Bds. Brit. Mus., 25, p. 357, 1896—part, St. Michaels, Kurile and Aleutian Islands; Godman, Monog. Petrels, p. 38, pl. 11, 1907 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 177, 1918—part, western Alaska (meas.); Hartert, Nov. Zool., 27, p. 135, 1920—Copper Island (breeding); Bent, Bull. U. S. Nat. Mus., 121, p. 132, 1922 (life hist.); Preble and McAtee, N. Amer. Fauna, 46, p. 40, 1923—Pribilof Islands; Peters, Bds. World, 1, p. 75, 1931—part, Kurile, Commander and Aleutian Islands; Mathews, Nov. Zool., 39, p. 188, 1934 (range).

Range.—Breeds on the Kurile, Commander, and Aleutian Islands. Winters in North Pacific Ocean.

¹The original locality is most probably erroneous. Sight records from north-western North America need substantiation by specimens.

**Oceanodroma furcata plumbea* (Peale).¹ SOUTHERN FORK-TAILED PETREL.

Thalassidroma plumbea Peale, U. S. Expl. Exped., 8, Mamm. Orn., p. 292, 1848—"coast of Oregon"—close off Cape Flattery, Washington (cotypes in U. S. National Museum).

Oceanodroma furcata Bonaparte, Consp. Gen. Av., 2, p. 194, 1857—Sitka (descr.); Salvin, Cat. Bds. Brit. Mus., 25, p. 357, 1896—part, Sitka and Vancouver Island; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 177, 1918—part, California (breeding on Whaler Island and Sugar Loaf Rock); Peters, Bds. World, 1, p. 75, 1931—part, islands off coast of southern Alaska, Washington and northern California.

Oceanodroma furcata plumbea Grinnell and Test, Condor, 41, p. 170, 1939 (name revived; dist. chars.; range).

Range.—Breeds on the islands off the coast of southern Alaska, Washington, Oregon and northern California (Whaler Island, Del Norte County and Sugar Loaf Rock, off Trinidad, Humboldt County).

Field Museum Collection.—15: Alaska (Laz, 1; unspecified, 1; Dall Island, 5; Forrester Island, 2); British Columbia (Queen Charlotte Islands, 2); Washington (Jefferson County, 1); Oregon (Pacific City, 1); California (Pacific Grove, 2).

Genus HALOCYPTENA Coues

Halocyptena Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 78—type, by monotypy, *Halocyptena microsoma* Coues.

**Halocyptena microsoma* Coues. LEAST PETREL.

Halocyptena microsoma Coues, Proc. Acad. Nat. Sci. Phila., 1864, p. 79—San José del Cabo, Lower California (type in U. S. National Museum); Townsend, Proc. U. S. Nat. Mus., 13, p. 141, 1890—Panama Bay (March); idem, Bull. Mus. Comp. Zool., 27, p. 126, 1895—off Acapulco, Guerrero (Apr. 12); Salvin, Cat. Bds. Brit. Mus., 25, p. 346, 1896—Mazatlan, Sinaloa; Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 48, 1900—off coast of Ecuador, 1° 30' N. lat. (Febr.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 428, 1904—Lower California (San Benito Islands, San José del Cabo), Sinaloa (Mazatlan), and Panama Bay; Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 150, 1918 (meas.); Bent, Bull. U. S. Nat. Mus., 121, p. 123, 1922 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 66, 1928—Lower California; Peters, Bds. World, 1, p. 75, 1931 (range); Mathews, Nov. Zool., 39, p. 118, 1934 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 292, 1935—Panama Bay (winter); Murphy, Ocean. Bds. S.

¹*Oceanodroma furcata plumbea* (Peale): Similar to the typical race, but smaller, especially in length of wing and tail; general coloration darker (more plumbeous, less ashy); throat, lower abdomen and crissum contrasting less with middle region of under parts by being wholly or in part grayer than in *O. f. furcata*. Wing 141–155, as against 155–165 mm. (Grinnell and Test, Condor, 41, p. 171, 1939).

Amer., 2, p. 729, 1936 (monog.); van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 31, 1945—Gulf of California (breeding).

Range.—Breeds on the San Benito Islands and on islands in the Gulf of California, and winters on the Pacific coast of America from Lower California to Ecuador.

Field Museum Collection.—3: Mexico (San Benito Islands, Lower California, 3).

Family PELECANOIDIDAE. Diving Petrels

Genus PELECANOIDES Lacépède

Pelecanoides Lacépède, Tabl. Méth. Ois., p. 13, 1799—type, by monotypy, *Procellaria urinatrix* Gmelin.

Halodroma Illiger, Prodr. Syst. Mamm. Ois., p. 274, 1811—type, by monotypy, *Procellaria urinatrix* Gmelin.

Onocralus Rafinesque, Anal. Nat., p. 72, 1815—new name for *Pelecanoides* Lacépède.

Puffinuria Lesson, Man. Orn., 2, p. 392, 1828—type, by monotypy, *Puffinuria garnotii* Lesson.

Porthmornis (subgen.) Murphy and Harper, Bull. Amer. Mus. N. H., 44, pp. 502 (fig. 2b), 503, 513, Dec. 23, 1921—type, by monotypy, *Puffinuria garnotii magellani* Mathews.

Pelagodiptes (subgen.) Murphy and Harper, Bull. Amer. Mus. N. H., 44, pp. 502 (fig. 2c), 503, 519, Dec. 23, 1921—type, by monotypy, *Pelecanoides georgicus* Murphy and Harper.

**Pelecanoides garnotii* (Lesson). PERUVIAN DIVING PETREL.

Puffinuria garnotii Lesson,¹ Man. Orn., 2, p. 394, June, 1828—coast of Peru= between San Gallán Island and Lima² (cotypes in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 63, 1929); idem, Voy. Coquille, Zool., Atlas, Ois., pl. 46, Nov. 29, 1828; idem, l.c., Zool., 1, (2), livr. 16, p. 730, May 1, 1830—coasts of Peru (descr.); Mathews, Nov. Zool., 39, p. 197, 1934 (range).

Pelecanoides garnoti(i) Darwin, Zool. Beagle, 3, Birds, p. 139, 1841—Iquique, Tarapacá, Chile; Des Murs, in Gay, Hist. Ffs. Pol. Chile, Zool., 1, p. 472, 1847—coasts of Peru and Chile; Salvin, Proc. Zool. Soc. Lond., 1883, p. 432—Coquimbo Bay, Chile; idem, Cat. Bds. Brit. Mus., 25, p. 439, 1896—Chile (Valparaiso, Coquimbo Bay) and Peru (Callao); Schalow, Zool. Jahrb., Suppl., 4, p. 653, 1898—part, Iquique and Isla de Pájaros (off Coquimbo), Chile; Godman, Monog. Petrels, p. 307, pl. 88, 1910 (monog.); Loomis, Proc. Calif. Acad. Sci., (4), 2, p. 67, 1918—Chile (Valparaiso) and Peru (Callao, San Gallán Island, Independencia Bay,

¹ *Puffinuria garnotii* Lesson (Voy. Coquille, Zool., 1, livr. 6, p. 254, March 22, 1828) is a nomen nudum.

² Cf. Garnot, Voy. Coquille, Zool., 1, livr. 14, p. 611, Jan. 9, 1830.

North Ballestas Island) (meas.); Coker, Proc. U. S. Nat. Mus., 56, p. 462, 1919—North Ballestas and San Gallán Islands, Peru (breeding habits; chick descr.); Murphy and Harper, Bull. Amer. Mus. N. H., 44, p. 505, pl. 21, fig. 1, pl. 22, fig. 1, pl. 24, fig. 1, 1921—Lobos de Tierra, Peru, to Valparaiso, Chile (descr. of plumages and eggs, meas., molt, habits); Paessler, Journ. Orn., 70, p. 440, 1922—part, Peru (Callao, Islay), Antofagasta (Taltal), and Arauco Bay (Santa María Island, Coronel), Chile; Stresemann, Orn. Monatsber., 30, p. 130, 1922—Coronel, Arauco Bay, Chile; Peters, Bds. World, 1, p. 75, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 773, 1936 (monog.); Philippi, El Hornero, 6, p. 238, 1936—Arica and Mejillones, Chile; idem, Bol. Mus. Nac. Santiago, 16, p. 62, 1938—Arica Bay, Chile (Oct.).

Halodroma garnoti Schlegel, Mus. Pays-Bas, livr. 4, Procellariae, p. 37, 1863—part, No. 1, coast of Peru (diag.); Sclater, Proc. Zool. Soc. Lond., 1867, p. 336—Chile.

Puffinuria garnotii lessoni Mathews, Bds. Austr., 2, p. 239, Sept. 20, 1912—coast of Chile (location of type not indicated).

Range.—Coastal waters of South America, from Lobos de Tierra, Peru, to Arauco Bay, Chile; breeds on islands off the Peruvian coast (Pescadores, North Ballestas, San Gallán Islands).

Field Museum Collection.—1: Peru (Mollendo, Arequipa, 1).

***Pelecanoides magellani* (Mathews).¹ MAGELLANIC DIVING PETREL.**

Puffinuria garnotii magellani Mathews, Bds. Austr., 2, p. 239, Sept. 20, 1912—Straits of Magellan (type not designated, probably in the British Museum).

Pelecanoides berardi (not *Procellaria berard* Gaimard) Darwin, Zool. Beagle, 3, Birds, p. 138, 1841—part, Port Famine, Tierra del Fuego (habits).

Pelecanoides garnoti (not *Puffinuria garnotii* Lesson) Sclater and Salvin, Ibis, 1870, p. 500—Wood's Bay, Straits of Magellan (April); Schalow, Zool. Jahrb., Suppl., 4, p. 653, 1898—part, Ancud (Chiloé) and Calbuco Island, Llanquihue, Chile.

Pelecanoides urinatrix (not *Procellaria urinatrix* Gmelin) Sharpe, Proc. Zool. Soc. Lond., 1881, p. 12—part, San Antonio Island, Trinidad Channel; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 167, 1891—part, Orange Bay, Tierra del Fuego; Salvin, Cat. Bds. Brit. Mus., 25, p. 437, 1896—part, spec. f, i, j, "Straits of Magellan," Wood's Bay, and San Antonio Island; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 389, 1902—Beagle Channel (Febr.); Nicoll, Ibis, 1904, p. 47—Molyneux Sound, Straits of Magellan (Jan.); Crawshay, Bds. Tierra del Fuego, p. 143, 1907—Useless Bay

¹ *Pelecanoides magellani* (Mathews), which resembles *P. garnotii* in shape of bill, differs from the other members of the genus by the possession of white tips to the feathers of back, upper rump, and wing coverts, and a conspicuous falcate whitish area extending from the side of the neck to the occiput, while the upper breast is pure white, not crossed by a mottled collar (Murphy and Harper, Bull. Amer. Mus. N. H., 44, p. 514).

Four specimens examined.

(Sept.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 160, 1910 (in part).

Pelecanoides magellani Murphy and Harper, Bull. Amer. Mus. N. H., 44, p. 513, pls. 20, 21, fig. 2, pl. 22, fig. 1, 1921—Chile and Argentina (descr., molt, habits); Stresemann, Orn. Monatsber., 30, p. 130, 1922—Ancud, Chiloé, and Calbuco, Chile; idem, Journ. Orn., 70, p. 441 (note 3), 1922—coast of Patagonia 49° S. lat., 65° 3' W. long.; Peters, Bds. World, 1, p. 76, 1931 (range); Reynolds, Ibis, 1932, p. 95—Navarin Island, Beagle Channel (breeding; soft parts); idem, El Hornero, 5, p. 353, 1934—Isla de los Conejos, Tierra del Fuego; Murphy, Ocean. Bds. S. Amer., 2, p. 779, 1936 (monog.).

Pelecanoides (Porthmornis) magellani Dabbene, El Hornero, 3, p. 231, 1924 (descr., range).

Porthmornis magellani Mathews, Nov. Zool., 39, p. 198, 1934 (range).

Range.—Southern Chile, from Chiloé Island southward to Cape Horn, and on the Atlantic coast of Patagonia north to Santa Cruz; breeding on islands in the Straits of Magellan (Navarin Island, Beagle Channel).

****Pelecanoides georgicus* Murphy and Harper.¹ SOUTH GEORGIAN DIVING PETREL.**

Pelecanoides georgica(us) Murphy and Harper, Bull. Amer. Mus. N. H., 35, p. 66, April 1, 1916—Cumberland Bay, South Georgia (type in the American Museum of Natural History, New York); iidem, l.c., 44, p. 519, pl. 22, figs. 1, 2, pl. 23, figs. 1, 2, 1921—South Georgia and Macquarie Islands (monog.); Mathews, Discovery Rep., 1, p. 579, pl. 47, figs. 1, 2, pl. 53, fig. 3, 1929—South Georgia (nesting); Peters, Bds. World, 1, p. 76, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 783, 1936 (monog.).

Pelecanoides urinatrix var. *Berardi* (not *Procellaria berardi* Gaimard) Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 17, 1885—South Georgia (crit., meas., egg descr.).

Pelecanoides urinatrix (not *Procellaria urinatrix* Gmelin) Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 73, 1906—South Georgia (burrow and egg descr.); Murphy, Auk, 31, pp. 450, 456, 1914—South Georgia; Wilkins, Ibis, 1923, pp. 479, 485—South Georgia.

Pelecanoides exsul (not of Salvin) Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 74, 1906—Cumberland Bay, South Georgia.

¹ *Pelecanoides georgicus* Murphy and Harper is characterized as being of small size, approximating certain races of *P. urinatrix*, notably *P. u. chathamensis*, with the bill proportionately wider at the base and more sharply tapering than in the other members of the genus, and the mottling of the jugulum exceedingly variable in extent. Wing, 104–122; tail, 34–43; bill, 14–16; width of bill, 8–10; depth of bill, 5–6.

The variation in the amount of mottling on the foreneck has given rise to the record from South Georgia of *P. exsul*, of Kerguelen Island.

Pelecanoides (Pelagodyptes) georgicus Dabbene, El Hornero, 3, p. 234, 1924—South Georgia (descr.).

Pelecanoides urinatrix georgica Bennett, Ibis, 1926, p. 317—South Georgia.

Pelagodyptes georgicus Mathews, Nov. Zool., 39, p. 198, 1934 (range).

Range.—Breeds on South Georgia and Macquarie Islands.

Field Museum Collection.—3: South Georgia (Cumberland Bay, 3).

Pelecanoides urinatrix berard (Gaimard).¹ FALKLAND DIVING PETREL.

Procellaria Berard Gaimard, Bull. Gén. Univ. Ann. Nouv. Sci., 3, No. 7, p. 53, June, 1823—near the Falkland Islands (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 63, 1929); Quoy and Gaimard, in Freycinet, Voy. Uranie et Physicienne, Zool., livr. 4, p. 135, pl. 37, Sept., 1824—Falkland Islands.

Procellarius falklandius (Commerson MS.) Quoy and Gaimard, in Freycinet, Voy. Uranie et Physicienne, Zool., livr. 4, p. 136 (in text), Sept., 1824.

Halodroma berardi Temminck, Nouv. Rec. Pl. Col., livr. 87, pl. 517, Jan., 1831—vicinity of Falkland Islands (descr. and fig. of type in Paris Museum).

Pelecanoides berardi Darwin, Zool. Beagle, 3, Birds, p. 138, 1841—part, Falkland Islands; Gould, Proc. Zool. Soc. Lond., 27, p. 98, 1859—Falkland Islands; Sclater, l.c., 28, p. 390, 1860—Falkland Islands; Abbott, Ibis, 1861, p. 164—Berkeley Sound, Falkland Islands.

Pelecanoides urinatrix (not *Procellaria urinatrix* Gmelin) Salvin, Cat. Bds. Brit. Mus., 25, p. 437, 1896—part, spec. a-e, Falkland Islands; Paessler, Journ. Orn., 70, p. 441, 1922—Falkland Islands (breeding).

Pelecanoides urinatrix berard Murphy and Harper, Bull. Amer. Mus. N. H., 44, p. 538, pl. 22, fig. 2, pl. 24, fig. 2, 1921—Falkland Islands north to the coast of Buenos Aires Province (monog.); Dabbene, El Hornero, 3, p. 236, 1924 (descr., range); Bennett, Ibis, 1926, p. 317—part, Falkland Islands; Peters, Bds. World, 1, p. 76, 1931 (range); Mathews, Nov. Zool., 39, p. 197, 1934 (synon., range); Murphy, Ocean. Bds. S. Amer., 2, p. 788, 1936 (monog.).

Pelecanoides urinatrix berardi Wace, El Hornero, 2, p. 196, 1921—Falkland Islands.

Range.—Breeds on the Falkland Islands; occurs off the coast of Buenos Aires Province north to the latitude of Necochea.²

¹ *Pelecanoides urinatrix berard* (Gaimard): Nearest to *P. u. urinatrix* (Gmelin), of Australia and New Zealand, but with generally smaller bill, longer tail, and longer middle toe and claw, while the mottling of the jugulum is more pronounced, though not so extensive as in *P. exsul*. Wing, 117–125; tail, 40–46; bill, 15–16. Eight specimens examined.

² A very nearly allied race, *P. u. dacunhae* Nicoll, breeds on Tristan d'Acunha and Gough Islands. It is separable by smaller size (wing, 108–113; tail, 36–37) and by having the cheeks, sides of neck, and jugulum conspicuously streaked with dusky.

Pelecanoides urinatrix coppingeri Mathews.¹ COPPINGER'S DIVING PETREL.

Pelecanoides urinatrix coppingeri Mathews, Birds Austr., 2, p. 238, Sept. 20, 1912—Straits of Magellan (type, from Cockle Cove, Pilot Island, Trinidad Channel, in British Museum examined); Murphy and Harper, Bull. Amer. Mus. N. H., 44, p. 543, 1921 (monog.); Stresemann, Journ. Orn., 70, p. 441 (note 3), 1922—30 km. off Cape Tres Montes, Taytao Peninsula, Chile (Oct. 11); Peters, Bds. World, 1, p. 76, 1931 (range); Mathews, Nov. Zool., 39, p. 197, 1934 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 791, 1936 (monog.).

Pelecanoides berardi (not *Procellaria berard* Gaimard) Darwin, Zool. Beagle, 3, Birds, p. 138, 1841—part, west coast of Patagonia north to the Chonos Archipelago.

Pelecanoides garnoti (not *Puffinuria garnotii* Lesson) Salvin, Proc. Zool. Soc. Lond., 1878, p. 739—Cove Harbour, Messier Channel.

Pelecanoides urinatrix (not *Procellaria urinatrix* Gmelin) Sharpe, Proc. Zool. Soc. Lond., 1881, p. 12—part, Cockle Cove; Salvin, Cat. Bds. Brit. Mus., 25, p. 437, 1896—part, spec. h, k, l, Cockle Cove, Trinidad Channel, and Cove Harbour, Messier Channel.

Pelecanoides urinatrix berard Bennett, Ibis, 1926, p. 317—part, Magellan region.

Range.—Southern Chile from Magallanes (Trinidad and Messier Channels) north to the Chonos Archipelago, Province of Chiloé; breeding grounds unknown.

Order PELECANIFORMES

Suborder PHAETHONTES

Family PHAETHONTIDAE. Tropic-Birds

Genus PHAETHON Linnaeus

Phaëthon Linnaeus, Syst. Nat., 10th ed., 1, p. 134, 1758—type, by subs. desig. (Gray, List Gen. Bds., p. 80, 1840), *Phaëthon aethereus* Linnaeus.

Phaëton Linnaeus, Syst. Nat., 12th ed., 1, p. 219, 1766 (emendation).

Lepturus Brisson, Orn., 1, p. 60; 6, p. 479, 1760—type, by tautonymy, "*Lepturus*" Moehring=*Phaëthon aethereus* Linnaeus.

¹ *Pelecanoides urinatrix coppingeri* Mathews: Exceedingly similar to *P. u. berard*, but smaller. Wing, 107 (female) to 116 (male); tail, 36–38 (female), 41 (male); bill, 15–16.

A very doubtfully separable race. The three available specimens resemble *P. u. berard* in coloration, but have somewhat shorter wings. It is to be noticed, however, that the wing length (122 mm.), given by Stresemann for a female from off the Taytao Peninsula, Chiloé, falls well within the measurements of the Falkland form. Until more material from breeding colonies comes to hand, the status of *P. u. coppingeri* must be left in abeyance.

One specimen from Cockle Cove and two from Cove Harbour examined.

- Tropicophilus* (Leach MS.) Stephens, in Shaw, Gen. Zool., 13, (1), p. 124, 1826—substitute name for *Phaëton* Linnaeus (cited in synonymy).
Scaeophaethon Mathews, Austr. Av. Rec., 2, p. 56, Oct. 23, 1913—type, by orig. desig., *Phaethon rubricauda westralis* Mathews.
Leptophaethon Mathews, Austr. Av. Rec., 2, p. 56, Oct. 23, 1913—type, by orig. desig., *Phaethon lepturus dorothae* Mathews.

**Phaëthon aethereus* Linnaeus. RED-BILLED TROPIC-BIRD.

- Phaëthon aethereus* Linnaeus, Syst. Nat., 10th ed., 1, p. 134, 1758—"in Pelago inter tropicos"—Ascension Island (ex Osbeck, Dogbok Ostind. Resa, p. 291); Tschudi, Unters. Faun. Peru., Orn., p. 314, 1846—San Lorenzo Island, off Callao, Peru (breeding); Philippi, Reise Wüste Atacama, p. 165, 1860—Bay of "Tartal" (= Taltal), Antofagasta, Chile; Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 651—part, Ascension Island; Penrose, Ibis, 1879, p. 276—Boatswain Island, Ascension (breeding); Cory, l.c., 1886, p. 474—La Desirada; Ridgway, Proc. U. S. Nat. Mus., 12, p. 130, 1890—Abrolhos Islands, off Bahia, Brazil; Sharpe, Journ. Linn. Soc., Zool., 20, p. 480, 1890—Fernando Noronha; Sclater, Proc. Zool. Soc. Lond., 1892, p. 500—Anguilla (nesting); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 457, 1898—El Salvador (Acajutla), Costa Rica (Gulf of Nicoya), Anguilla, Redonda, Guadeloupe, Santa Lucia, Brazil (Maranhão, Fernando Noronha), and Ascension Island; Nelson, N. Amer. Fauna, 14, p. 28, 1899—Isabel and Tres Marias Islands, and islets near San Blas, Nayarit, Mexico (breeding); Rothschild and Hartert, Nov. Zool., 6, p. 180, 1899—Tower, Hood (breeding), Culpepper, and Daphne Islands, Galápagos; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 138, 1901—Mexico (Revillagigedo Islands; Tres Marias; rocky islets off San Blas), Salvador (Acajutla), and Costa Rica (Gulf of Nicoya); Rothschild and Hartert, Nov. Zool., 9, p. 409, 1902—Wenman, Hood, and Daphne Islands (breeding), Galápagos; Clark, Proc. Bost. Soc. N. H., 32, p. 230, 1905—Barbados (Chancery Lane, 1877), St. Vincent, Bequia, Battowia, and Balliceaux Islands, and some islets between Carriacou and Grenada (breeding); Ihering, Cat. Faun. Braz., 1, p. 81, 1907—Maranhão and Fernando Noronha; Lowe, Ibis, 1909, p. 327—Los Hermanos Islands, off Venezuela (breeding); Carriker, Ann. Carnegie Mus., 6, p. 440, 1910—Gulf of Nicoya, Costa Rica; Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 104, 1913—Daphne, Hood, Tower, and Onslow Islands, Galápagos (breeding, soft parts); Murphy, Auk, 32, p. 47, 1915—Fernando Noronha; Bent, Bull. U. S. Nat. Mus., 121, p. 187, 1922 (life hist., range); Chapman, Bull. Amer. Mus. N. H., 55, p. 215, 1926—La Plata Island (breeding) and Gulf of Guayaquil, Ecuador; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 279, 1927 (no authentic record from Puerto Rico); Grinnell, Univ. Calif. Pub. Zool., 32, p. 69, 1928—Gulf and Cape district, Lower California; Griscom, Amer. Mus. Nov., 293, p. 1, 1928—Swan Key, Almirante Bay, Panama (breeding); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 36, 1931—Galápagos Islands; Bradlee and Eaton, Proc. Bost. Soc. N. H., 39, p. 361, 1931 (no authentic record from Bermuda Islands); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 295, 1932—Taltal, Antofagasta, Chile.
Phaëthon flavirostris (not of Brandt) Salvin, Ibis, 1870, p. 116—Gulf of Nicoya, Costa Rica.

(?) *Phaëthon aethereus mesonauta* Peters, Occ. Pap. Bost. Soc. N. H., 5, p. 261, Apr. 15, 1930—Swan Key, Almirante Bay, Panama (type in Museum of Comparative Zoology, Cambridge, Mass.); idem, Bds. World, 1, p. 77, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 292, 1935—Swan Key, Bocas del Toro, Panama; Murphy, Ocean. Bds. S. Amer., 2, p. 798, 1936 (monog., life hist.); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 65, 1938—Acajutla, El Salvador; Bond, Not. Nat. Acad. Nat. Sci. Phila., 13, p. 1, 1939—Saba Island; Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 25, 1943—Cockroach Cay, Water Island, Virgin Islands (nesting); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 31, 1945—Gulf of California (breeding).

(?) *Phaëthon aethereus limatus* Peters, Occ. Pap. Bost. Soc. N. H., 5, p. 261, Apr. 15, 1930—Tower Island, Galápagos (type in Museum of Comparative Zoology, Cambridge, Mass.); idem, Bds. World, 1, p. 77, 1931 (range).

Phaëthon aethereus aethereus Peters, Bds. World, 1, p. 77, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 797, 1936—Ascension, St. Helena, and Fernando Noronha (monog.); Pinto, Rev. Mus. Paul., 22, p. 24, 1938—Fernando Noronha and Maranhão, Brazil.

Range.—Breeds within our limits on Fernando Noronha; locally in the Virgin Islands (Cockroach Cay, Water Island), Lesser Antilles (St. Vincent, Becquia, Battowia, Balliceaux, and some islets between Carriacou and Grenada); on Los Hermanos Islands off Venezuela; on Swan Key (Almirante Bay), Panama; on the Tres Marias Islands, on San Pedro Mártir Island, and in the Gulf of California, Mexico; in the Galápagos Islands; and on certain islands on the coast of Ecuador (La Plata Island) and Peru (San Lorenzo); accidental in California (San Pedro Channel, Aug., 1916), on the Newfoundland Banks (August, 1876), in Jamaica, off the Brazilian coast (Maranhão), and in Chile (Taltal, Antofagasta).¹

Field Museum Collection.—18: Mexico, Lower California (Georges Island, 5; Cape San Luis Island, 1); Galápagos Archipelago (Cham-

¹ While we have not attempted to subdivide the Red-billed Tropic-Bird, we do not mean to deny the propriety of separating the birds of the North Atlantic Ocean and the eastern tropical Pacific from those inhabiting the South Atlantic islands (Ascension, St. Helena, Fernando Noronha), to which Peters restricted typical *P. aethereus*. The northern form, *P. a. mesonauta* Peters, seems to differ by slightly smaller size and by having the dark areas, including the transverse bars, black rather than gray, with the deep black greater primary coverts sometimes slightly tipped, but never edged, with white. However, material from the assigned range of *P. aethereus* is scarce in collections and might have undergone some post-mortem change through age, so that its proper characters are hard to define. The second Galápagos race, *P. a. limatus* Peters, supposedly with slenderer, yellowish-horn bill, said to be restricted to Tower Island—those from Daphne Island are supposed to be *mesonauta*—would seem to be the bird of the year (cf. Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 104, 1913). Murphy (Ocean. Bds. S. Amer., 2, p. 798) mentions a specimen with long, yellow bill from Hood Island. The existence of two races on the Galápagos Islands thus appears to be problematical.—C.E.H.

pion Island, 4; Tower Island, 2);¹ Virgin Islands (St. Thomas, 2); Lesser Antilles (Desirade, 1; St. Eustatius, 2); Venezuela (between Trinidad and Guaira, 1).

Phaëthon rubricauda rothschildi (Mathews). ROTHSCHILD'S RED-TAILED TROPIC-BIRD.

Scaeophaëthon rubricauda rothschildi Mathews, Birds Austr., 4, p. 303, 1915—Laysan and Niihau Islands (type, from Laysan, in Tring Collection, now in the American Museum of Natural History, New York; cf. Hartert, Nov. Zool., 32, p. 276, 1925).

Phaëthon rubricaudus (not *Phaëthon rubricauda* Boddaert) Anthony, Auk, 15, p. 38, 1898—Guadalupe Island, Lower California (July 23, 1897).

Phaëthon rubricauda Rothschild and Hartert, Nov. Zool., 9, p. 410, 1902—600 miles west of Clipperton and north of Clarion Island.

Scaeophaëthon rubricaudus Bent, Bull. U. S. Nat. Mus., 121, p. 190, 1922 (life hist.).

Phaëthon rubricaudus rothschildi Grinnell, Univ. Calif. Pub. Zool., 32, p. 69, 1928—Guadalupe Island; Peters, Bds. World, 1, p. 78, 1931 (range).

Range.—Breeds on the Bonin and Hawaiian Islands; on migration in the waters around Clipperton and Clarion Islands; accidental on the coast of Lower California (one record from Guadalupe Island, July 23, 1897).

***Phaëthon lepturus catesbyi** Brandt. YELLOW-BILLED TROPIC-BIRD.

Phaëthon Catesbyi Brandt, Bull. Sci. Acad. Imp. St. Pétersb., 4, No. 7, col. 98, May 10, 1838; idem, Mém. Acad. Imp. Sci. St. Pétersb., (6), Sci. Nat., 3, livr. 2, p. 270, 1840—based exclusively on "The Tropic Bird" Catesby, Nat. Hist. Carolina, 2, App., p. 14, pl. 14; Bermuda Islands (breeding) and some little islands at the east end of Puerto Rico (type locality, as restricted by Mathews, Auk, 32, p. 196, 1915, Bermuda Islands).²

Phaëthon Edwardsii Brandt, Bull. Sci. Acad. Imp. St. Pétersb., 4, No. 7, col. 98, May 10, 1838; idem, Mém. Acad. Imp. Sci. St. Pétersb., (6), Sci. Nat., 3, livr. 2, p. 271, 1840—based on "The Tropic Bird" Edwards, Nat. Hist. Bds., 3, p. 149, pl. 149; no locality stated.³

¹ These Tower Island birds have red bills, perhaps slenderer than those of Lesser Antilles ones, but not more slender than those of specimens from Champion Island or Lower California.—B.C.

² It is with some reluctance that we accept Brandt's term for the Yellow-billed Tropic-Bird of the American shores. Catesby's description and figure indicate a bird with red bill and curved black lines across the back, characters that do not fit it at all. On the other hand, the outer primaries distinctly show the white ends, and as it has been established that the Yellow-billed Tropic-Bird is the only species nesting in the Bermuda Islands, where Catesby "shot them at the time of their breeding," the name may be retained.

³ There is little doubt that Edwards' bird, the basis of *P. Edwardsii* Brandt, refers to the species separated by Ogilvie-Grant as *P. americanus*. The figure

Phaët(h)on flavirostris (not of Brandt) Bryant, Proc. Bost. Soc. N. H., 7, p. 128, 1859—Long Rock (near Exuma), Water Bay Kay, and Kay Verde, Bahama Islands (breeding); Gundlach, Journ. Orn., 23, p. 403, 1875—Punta Inglez, Cuba (breeding); idem, l.c., 26, p. 191, 1878—Puerto Rico (breeding habits); Scott, Auk, 8, pp. 249, 253, 1891—Jamaica (breeding); Verrill, Trans. Conn. Acad., 8, p. 320, 1892—Dominica (breeding).

Phaëthon americanus Ogilvie-Grant, Bull. Brit. Orn. Cl., No. 49, p. xxiii, Dec. 29, 1897—"East and south-east coast of North America, from Bermuda to the West Indies" (cotypes, from Bermuda Islands, in British Museum); idem, Cat. Bds. Brit. Mus., 26, p. 456, 1898—Bermuda Islands, Dominica, and St. Vincent (Feb. 3, 1890); Dalmas, Mém. Soc. Zool. France, 13, p. 144, 1900—Tobago; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 137, 1901 (descr., range); Clark, Proc. Bost. Soc. N. H., 32, p. 230, 1905—St. Vincent; Gross, Auk, 29, pp. 49–71, pls. 3–11, 1912—Bermuda Islands (life hist.).

Phaëthon lepturus catesbyi Oberholser, Auk, 36, p. 556, 1919 (crit.); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 277, 1927—Puerto Rico, Mona, Culebra (Louis Peña), and Congo Cay (near St. Thomas); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 489, 1928—north coast of Tortuga, Hispaniola; Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 297, 1931—Bermuda Islands; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 64, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 79, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 577—Islets (Giles Rocks), off Tobago (breeding); Marble, Auk, 56, p. 176, 1939—Woodstock, Vermont; Wetmore, Proc. U. S. Nat. Mus., 89, p. 530, 1941—Puerto Barrios, Guatemala.

Leptophaëthon lepturus catesbyi Bent, Bull. U. S. Nat. Mus., 121, p. 181, 1922 (life hist.).

Phaëthon lepturus (not of Daudin) Murphy, Ocean. Bds. S. Amer., 2, p. 802, 1936—part, Bermuda and Bahama Islands, and Antilles (life hist.).

Phaëton lepturus americanus McAtee, Auk, 62, p. 139, 1945 (should be name used for white-backed bird; also cf. Bond, Auk, 62, p. 660, 1945).

Range.—Breeds in the Bermuda and Bahama Islands, and locally in the Greater Antilles (Cuba, Jamaica, Hispaniola, Puerto Rico and adjacent islets), Lesser Antilles (Martinique, Dominica, and probably other islands), and on islets (Giles Rocks), off Tobago; occasional in Florida (Dry Tortugas, 1832; Merritt's Island, April 21, 1886); accidental in New York (Knowlesville, Sept. 1876), Nova Scotia (off the coast, Sept. 4, 1870) and Vermont (Woodstock, after a hurricane).

Field Museum Collection.—46: Bahama Islands (Highborn Cay, 1; Samona Cay, 4; Inagua, 3; Atwood Cay, 1; Eruna Cay, 1; French Kay, 2); Virgin Islands (St. Thomas, 1); Jamaica (Priestman's

shows a plain white back and black blotches on the scapulars, and, while the bill is painted red, Edwards states that "the legs and bill appear yellowish in the dried bird, but I am informed they are red in the living bird."

River, 2); Dominican Republic (Santo Domingo, 3); Puerto Rico (Mona Island, 17); Bermuda (Castle Island, 2; Coney Island, 2; Harrington Sound, 6; Bailey Bay, 1).

Phaëthon lepturus ascensionis (Mathews).¹ ASCENSION ISLAND
YELLOW-BILLED TROPIC-BIRD.

Leptophaëthon lepturus ascensionis Mathews, Bds. Austr., 4, p. 311, 1915—Ascension Island (type in the British Museum).

Phaëthon flavirostris (not of Brandt) Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 651—Fernando Noronha and Ascension Island; Penrose, Ibis, 1879, p. 277—Boatswain Island, Ascension (breeding; eggs descr.).

Phaëthon lepturus (not of Daudin, 1802) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 453, 1898—part, spec. a-i, Fernando Noronha, Ascension Island, São Tomé, and Ilha dos Cabres; Nicoll, Ibis, 1904, p. 39—Fernando Noronha; Ihering, Cat. Faun. Braz., 1, p. 80, 1907—Fernando Noronha; Murphy, Auk, 32, p. 46, 1915—Fernando Noronha (nesting); idem, Ocean. Bds. S. Amer., 2, p. 802, 1936—part, Ascension and Fernando Noronha.

Phaëthon lepturus ascensionis Peters, Bds. World, 1, p. 79, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 24, 1938—Fernando Noronha.

Range.—Breeds on Ascension and Fernando Noronha Islands, off Brazil, and also on the Ilha dos Cabres, Gulf of Guinea.

Suborder PELECANI

Superfamily PELECANOIDEA

Family PELECANIDAE. Pelicans

Genus PELECANUS Linnaeus

Pelecanus Linnaeus, Syst. Nat., 10th ed., 1, p. 132, 1758—type, by tautonymy, "*Onocrotalus* s. *Pelecanus*" = *Pelecanus onocrotalus* Linnaeus.

Onocrotalus Brisson, Orn., 1, p. 60; 6, p. 519, 1760—type, by tautonymy, "*Onocrotalus*" = *Pelecanus onocrotalus* Linnaeus.

Cyrtopelicanus Reichenbach, Av. Syst. Nat., p. vii, "1852" (=1853)—type, by orig. desig., *Pelecanus trachyrhynchus* Latham = *Pelecanus erythrorhynchus* Gmelin.

Leptopelicanus Reichenbach, Av. Syst. Nat., p. vii, "1852" (=1853)—type, by orig. desig., *Pelecanus fuscus* Gmelin = *Pelecanus occidentalis* Linnaeus.

****Pelecanus erythrorhynchus*** Gmelin. AMERICAN WHITE PELICAN.

Pelecanus erythrorhynchus Gmelin, Syst. Nat., 1, (2), p. 571, 1789—based on "Rough-billed Pelican" Latham, Gen. Syn. Bds., 3, (2), p. 586, Hudson

¹ *Phaëthon lepturus ascensionis* (Mathews): Similar in coloration to *P. l. lepturus* Daudin, of the Indian Ocean, but smaller. Wing, 256–267; bill, 47–51. Birds from Fernando Noronha appear to be inseparable from those of Ascension Island.

Bay and New York; Bent, Bull. U. S. Nat. Mus., 121, p. 282, 1922 (life hist.); Peters, Bds. World, 1, p. 81, 1931 (range); Moreno, Mem. Soc. Cub. Hist. Nat., 14, p. 95, 1940—Cuba; Behle, Condor, 46, p. 198, 1944—Great Salt Lake, Utah (breeding colony); Ball, Auk, 61, p. 471, 1944—Connecticut (records); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 32, 1945—Sonora (Colorado delta to Guaymas in winter).

Pelecanus trachyrhynchus Latham, Ind. Orn., 2, p. 884, 1790—based on "Rough-billed Pelican" Latham, Gen. Syn. Bds., 3, (2), p. 586, Hudson Bay and New York; Frantzius, Journ. Orn., 17, p. 379, 1869—Mazatenango, Guatemala; Sclater, Proc. Zool. Soc. Lond., 1883, p. 463, pl. 46 (breeding plumage)—Mexico.

Onocrotalus Hernandezii Wagler, Isis, 1832, col. 1233—based on "Atototl Alcatraz, *Onocrotalus mexicanus dentatus*" Hernandez, Nov. Hisp. Thes., p. 672 (fig.); Mexico.

Pelecanus americanus Audubon, Orn. Biog., 4, p. 88, 1838—Grande Terre, Louisiana (type not extant).

Pelecanus erythrorhynchus Salvin, Ibis, 1865, p. 197—Huamachal, Pacific Guatemala.

Pelecanus erythrorhynchus Lawrence, Mem. Bost. Soc. N. H., 2, p. 316, 1874—Rio Mazatlan, Sinaloa; idem, Bull. U. S. Nat. Mus., 4, p. 50, 1876—San Mateo, Tehuantepec, Oaxaca; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 481, 1898—North America and Guatemala (Huamachal); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 143, 1901—Mexico (Rio Mazatlan, Guanajuato, Guadalajara, Valley of Mexico, San Mateo, Orizaba) and Guatemala (Mazatenango, Huamachal); Grinnell, Univ. Calif. Pub. Zool., 32, p. 71, 1928—Lower California (winter visitant); Griscom, Bull. Amer. Mus. N. H., 64, p. 148, 1932—Guatemala.

Pelecanus occipitalis Ridgway, Amer. Sportsman, 4, p. 297, 1874—Pyramid Lake, Nevada (type in U. S. National Museum).

Pelecanus brachyrhynchus (lapsu) Cabanis, Journ. Orn., 32, p. 442, 1884—based on *P. trachyrhynchus* Sclater, Proc. Zool. Soc. Lond., 1883, p. 463, pl. 46.

Range.—Breeds from central British Columbia and Great Slave Lake to central Manitoba, south to southern California and Texas; winters from California to Florida, Mexico, and Guatemala (Huamachal, Mazatenango); accidental in Cuba (one record).¹

Field Museum Collection.—15: Saskatchewan (Quill Lake, 8; Big Steele Lake, 1); Manitoba (Lake Winnipeg, 1); North Dakota (Sweetwater Lake, 1); California (Carmel, 1); Texas (Corpus Christi, 1); Florida (Banana River, 1; Cedar Keys, 1).

¹ More or less questionable records of the White Pelican exist from Isle of Pines and Antigua (field identification). The bird is not known to occur in Trinidad or anywhere south of Guatemala, though both Bent and Peters give its winter range as extending to Panama.

****Pelecanus occidentalis occidentalis* Linnaeus. WEST INDIAN BROWN PELICAN.**

Pelecanus Onocrot[alus] β . occidentalis Linnaeus, Syst. Nat., 12th ed., 1, p. 215, 1766—based chiefly on "The Pelican of America" Edwards, Nat. Hist. Bds., 2, p. 93, pl. 93 (West Indies); "*Onocrotalus s. Pelecanus fuscus*" Sloane, Voy. Jamaica, 2, p. 322; *Pelecanus* No. 1, Browne, Civ. Nat. Hist. Jamaica, p. 480, etc. (Jamaica accepted as type locality).¹

Pelecanus fuscus Gmelin, Syst. Nat., 1, (2), p. 570, 1789—part, West Indian references; Gosse, Bds. Jamaica, p. 409, 1847—Jamaica (breeding); Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 764, 1849—coast region (visitant); Bryant, Proc. Bost. Soc. N. H., 7, p. 122, 1859—Bimini and Bahama Islands (breeding); Gundlach, Journ. Orn., 23, p. 397, 1875—Cuba (breeding); Hartert, Ibis, 1893, pp. 308, 326, 336—Aruba, Curaçao, and Bonaire; Robinson and Richmond, Proc. U. S. Nat. Mus., 18, p. 654, 1895—Margarita Island, Venezuela; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 475, 1898—part, spec. n-d', Honduras, British Honduras (Glover's Reef), Cozumel Island, Jamaica, St. Vincent, Union Island, Grenada, and British Guiana; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 142, 1901—part, Mexico (Ventosa Bay, Tehuantepec; Santa Ana, Vera Cruz; Progreso, Yucatan), Guatemala (Chiapám), Honduras (Fonseca Bay), Nicaragua (Greytown, Bluefields, San Juan del Sur), Costa Rica (La Palma de Nicoya), Panama, British Guiana, and West Indies; Hartert, Nov. Zool., 9, p. 307, 1902—Aruba, Curaçao, and Bonaire; Lowe, Ibis, 1909, p. 322—Laguna del Obispo, Gulf of Paria, Venezuela (breeding); Carriker, Ann. Carnegie Mus., 6, p. 441, 1910—mouth of Matina River, Costa Rica; Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 107, 1913—Galápagos Islands (breeding).

Pelecanus californicus (not of Ridgway) Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 49, 1900—Bay of Santa Elena, Ecuador (crit.); Carriker, Ann. Carnegie Mus., 6, p. 441, 1910—Pacific coast of Costa Rica.

Pelecanus occidentalis Clark, Proc. Bost. Soc. N. H., 32, p. 232, 1905—Barbados, St. Vincent, and Grenadines (visitant); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 195, 203, 209, 215, 220, 229, 235, 1909—Aruba, Bonaire, Curaçao, Los Roques, Tortuga, Blanquilla, and Margarita Islands; Chubb, Bds. Brit. Guiana, 1, p. 204, 1916—seacoast; Todd, Ann. Carnegie Mus., 10, p. 173, 1916—Caleta Grande, Isle of Pines (plumages disc.); idem and Carriker, l.c., 14, p. 132, 1922—Buritaca, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 215, 1926—Santa Elena, Jambeli, and Santa Clara Island (breeding), Ecuador, and Punta Talara, Piura, Peru; Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 36, 1931—Galápagos Archipelago (crit.); Darlington, Bull. Mus. Comp. Zool., 71, p. 361, 1931—coast and Ciénaga Grande, Magdalena, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 147, 1932—Guatemala; Murphy, Ocean. Bds. S. Amer., 2, p. 810, 1936 (life hist.); Wetmore, Proc. U. S. Nat. Mus., 87, p. 180, 1939—La Guaira and Ensenada de Ocumare, Aragua, Venezuela.

¹ While "Le Pelican brun" of Brisson (Orn., 6, p. 524, 1760), described from an "American" specimen in the Réaumur Collection, may be *P. o. carolinensis*, most of Linnaeus' other references pertain to the Antillean form.

Pelecanus relictus G. H. Thayer, The Sentry (Kingstown, St. Vincent), Jan. 9, 1925—Kingstown Harbor, St. Vincent.

Pelecanus occidentalis occidentalis Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 280, 1927—Puerto Rico (breeding); Bradlee and Mowbray, Proc. Bost. Soc. N. H., 38, p. 299, 1931—Bermuda Islands (accidental); Peters, Bds. World, 1, p. 81, 1931—Greater and Lesser Antilles; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 65, 1931—Hispaniola (breeding on Pelican Keys and Catalinita Island); Belcher and Smooker, Ibis, 1934, p. 578—Trinidad and Tobago (breeding; egg descr.); Griscom, Bull. Mus. Comp. Zool., 78, p. 292, 1935—Caribbean coast of Panama; Murphy, Ocean. Bds. S. Amer., 2, p. 808, 1936—Antilles (crit.); (?)Pinto, Rev. Mus. Paul., 22, p. 25, 1938—Rio Uraricuera, Brazil (ex Shattuck);¹ Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 66, 1938—Puerto del Triunfo, El Salvador (crit.); Wetmore, Auk, 62, p. 578, 1945 (dist. chars., range).

Pelecanus occidentalis californicus Peters, Bds. World, 1, p. 81, 1931 (range in part); Griscom, Bull. Mus. Comp. Zool., 78, p. 292, 1935—Pacific coast of Panama.

Range.—Breeds locally in the Bahamas, Greater and Lesser Antilles, Tobago, Trinidad, Dutch West Indies, along the coasts of Central America, Venezuela (Laguna del Obispo, Gulf of Paria), and Colombia (Magdalena), off western Ecuador (Santa Clara Island), and in the Galápagos Archipelago; on migration to British Guiana and northwestern Peru (Punta Talara, Piura).²

Field Museum Collection.—17: Bahama Islands (Inagua, 1; Andros, 1); Cuba (Cayos de la Lena, Pinar del Rio, 2); Lesser Antilles (Antigua, 1); Dutch West Indies (Aruba, 1); Mexico (Contoy Island, Quintana Roo, 5); Guatemala (San José, Escuintla, 1); Panama (Brija Point, Canal Zone, 1); Ecuador, Province de los Rios (Rio San Antonio, 1; Isla Silva Sur, 3).

****Pelecanus occidentalis carolinensis* Gmelin.³ BROWN PELICAN.**

¹ The record, evidently based upon a field observation, of this coastal bird from an inland locality such as Rio Uraricuera, Brazil, should be substantiated by specimens.

² Birds from Pacific coast localities between Costa Rica and northwestern Peru are considered by Murphy (Ocean. Bds. S. Amer., 2, pp. 808–810, 1936) to pertain to *P. o. carolinensis*.—C.E.H.

It is now established that neither birds from Central America nor those from the Galápagos Islands are *californicus*, to which they had been referred by various authors. The first-named are either *occidentalis* or *carolinensis*, whereas those from the Galápagos, being larger than *occidentalis* but smaller than *californicus*, represent a separable race, *Pelecanus occidentalis urinator* Wetmore (Auk, 62, p. 582, Oct. 19, 1945—Hood Island, Galápagos Islands [type in U. S. National Museum]).—B.C.

³ *Pelecanus occidentalis carolinensis* Gmelin differs from the nominate race by reason of larger size. The southward extension of its breeding range remains to be determined. Murphy (Ocean. Bds. S. Amer., 2, pp. 808, 809, 1936) indeed

Pelecanus carolinensis Gmelin, Syst. Nat., 1, (2), p. 571, 1789—based on "Charlestown Pelican" Pennant, Arct. Zool., 2, p. 580, 1785, and Latham, Gen. Syn. Bds., 3, (2), p. 585, 1785; Charleston Harbor, South Carolina.

Pelecanus albicollis Maynard, Amer. Sportsman, 3, p. 379, 1874—Cedar Keys, Florida (type formerly in coll. of C. F. Maynard, now probably lost).

Pelecanus fuscus (not of Gmelin) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 475, 1898—part, spec. a-m, Florida (Tarpon Springs) and Texas (Corpus Christi).

Pelecanus occidentalis occidentalis (not *P. occidentalis* Linnaeus) Bent, Bull. U. S. Nat. Mus., 121, p. 294, 1922 (life hist.; range in part).

Pelecanus occidentalis carolinensis Peters, Bds. World, 1, p. 81, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 808, 1936 (crit.); Oberholser, Bull. Dept. Conserv. State Louisiana, 28, p. 33, 1938—Louisiana (crit.); Bruner, Mem. Soc. Cub. Hist. Nat., 17, p. 19, 1943—Cuba (specimens banded in central Florida taken later in Cuba); Wetmore, Auk, 62, p. 579, 1945 (dist. chars., range).

Pelecanus occidentalis Schorger, Auk, 61, p. 305, 1944—Wisconsin (two records); Longstreet, Proc. Florida Acad. Sci., 7, p. 185, 1944—Florida (movements on east coast).

Range.—Breeds locally on the Atlantic and Gulf coasts of the southern United States from North Carolina to Texas; accidental in Wisconsin. In migration to Cuba.

Field Museum Collection.—5: Louisiana (Buras, Plaquemines County, 1); Florida (Eau Gallie, 2; Sebastian River, 1; Nassau County, 1).

****Pelecanus occidentalis californicus* Ridgway.¹ CALIFORNIAN BROWN PELICAN.**

Pelecanus (fuscus?) californicus Ridgway, in Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 143, 1884—La Paz, Lower California (type

advances good reasons for referring birds from the Pacific coast of Central America, and as far south as northwestern Peru (Talara, Piura) to *P. o. carolinensis* rather than *P. o. occidentalis*. According to his figures, specimens from these countries agree in dimensions with others from the Gulf coast of Florida and Texas, whereas birds from Jamaica, Puerto Rico, and St. Thomas are decidedly smaller (wing of males, 465–490 against 503–531; of females, 447–466 against 476–499). However, certain exceptions to this rule require further study.—C.E.H.

Recently, the brown Pelicans from the Pacific coast of Colombia, Ecuador and northwestern Peru (Talara) have been separated from the Central American populations as *Pelecanus occidentalis murphyi* Wetmore (Auk, 62, p. 583, Oct. 19, 1945—Pelado Island, Santa Elena Bay, Ecuador [type in the American Museum of Natural History, New York]). The size is similar to *carolinensis* but the color is darker above and more extensively streaked with lighter below (Wetmore, l.c.).—B.C.

¹ *Pelecanus occidentalis californicus* Ridgway, in breeding plumage, may be distinguished by the dark brown to blackish (instead of reddish) nape and the flesh-colored basal portion of the pouch; its dimensions, sex for sex, are decidedly larger.

in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 315, 1932).

Pelecanus californicus Anthony, Proc. Calif. Acad. Sci., (2), 2, p. 83, 1889—Todos Santos and San Martín Islands (habits, nest and eggs descr.); Bryant, l.c., p. 257, 1889—Cape region (habits); Nelson, N. Amer. Fauna, 14, p. 32, 1899—Isabel Island, Tres Marias (breeding); Brewster, Bull. Mus. Comp. Zool., 41, p. 38, 1902—Lower California (crit.); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 290, 1926—San Martín and Tres Marias Islands (Maria Madre, Maria Magdalena, Isabel Island).

[*Pelecanus fuscus*] subsp. a. *P. californicus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 478, 1898—part, spec. a-n, California (San Diego, Monterey) and Lower California (Mulegé).

Pelecanus fuscus (not of Gmelin) Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 142, 1901—part, Pacific coast of North America, Revillagigedo Islands, and northwestern Mexico (Guaymas, Mazatlan).

Pelecanus occidentalis californicus Bent, Bull. U. S. Nat. Mus., 121, p. 301, 1922 (life hist.; range in part); Grinnell, Univ. Calif. Pub. Zool., 32, p. 71, 1928—Lower California; Peters, Bds. World, 1, p. 81, 1931 (range in part); Murphy, Ocean. Bds. S. Amer., 2, p. 808, 1936—California and Lower California (crit., meas.); Wetmore, Auk, 62, p. 581, 1945 (dist. chars., range); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 32, 1945—Gulf of California (common resident).

Range.—Pacific coast of North America from southern British Columbia to northwestern Mexico (Lower California, Sonora, Sinaloa, Tres Marias Islands); breeding on islands from the Santa Barbara Islands to the Tres Marias.

Field Museum Collection.—21: California (Hyperion, 11; Moss Landing, 3; Monterey, 3; San Diego, 3; San Francisco, 1).

****Pelecanus occidentalis thagus* Molina.¹ MOLINA'S PELICAN.**

Pelecanus thagus Molina, Sagg. Stor. Nat. Chile, pp. 240, 344, 1782—Chile; Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 494, 1847—Chile (ex Molina); Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 206, 1855—Chile; Selater, Proc. Zool. Soc. Lond., 1867, pp. 336, 340—Chile (crit.); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 480, pl. 5b, 1898—Peru (Payta) and Chile (Iquique, Valparaiso, Coronel); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 396, 1902—Ushuaia, Tierra del Fuego (Feb.); Nicoll, Ibis, 1904, p. 52—Valparaiso Bay; Paessler, Orn. Monatsber., 17, p. 103, 1909—Chile (from Coquimbo northwards, in winter at Corral); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 228, 1910—Isla Picton (Tierra del Fuego) and "Barracas al Sud (Buenos Aires);" Forbes, Ibis, 1914, p. 403, pl. 13—Lobos de Tierra, Ancon, and Chinchu Islands, Peru (plumages, habits);

¹ *Pelecanus occidentalis thagus* Molina, though distinguished by larger size, stronger as well as longer bill, and white-striped under parts, is clearly a geographical representative of the Brown Pelican. Its variation and sequence of plumages have been described at length by the late H. O. Forbes (Ibis, 1914, pp. 403-420, pl. 13).

Coker, Proc. U. S. Nat. Mus., 50, p. 486, 1919—"Tumbez" to Mollendo, Peru (plumages, habits); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 294, 1932—Chile; Philippi, El Hornero, 6, p. 233, 1936—coast of Arica, Chile.

Pelecanus thagus Tschudi, Unters. Faun. Per., Orn., p. 312, 1846—islets off the Peruvian coast.

Pelecanus fuscus (not of Gmelin) Des Murs, in Gay, Hist. Ffs. Pol. Chile, Zool., 1, p. 494, 1847—Chile; Boeck, Naumannia, 1855, p. 513—Valdivia, Chile; Philippi, Reise Wüste Atacama, p. 165, 1860—coast of Atacama, Chile; Salvin, Proc. Zool. Soc. Lond., 1883, p. 427—part, Payta, Peru; Philippi, Ornith., 4, p. 160, 1888—Atacama; Albert, Anal. Univ. Chile, 103, p. 228, 1899—central provinces of Chile.

Onocrotalus thagus Bonaparte, Consp. Gen. Av., 2, p. 164, 1857—"Chile, Bolivia, Ins. Gallapag."¹; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 553—Chorillos, Lima, Peru.

*Pelecanus molinae*² Sclater, Proc. Zool. Soc. Lond., 1868, p. 269—based on *Onocrotalus thagus* Bonaparte, Consp. Gen. Av., 2, p. 164, 1857—Chile; Elliot, l.c., 1869, p. 588, pl. 44 (monog.); Berlepsch and Stolzmann, l.c., 1892, p. 399—Callao and Ancon, Peru; Reed, Anal. Univ. Chile, 93, p. 206, 1896—Bay of Valparaiso; Lane, Ibis, 1897, p. 185—Coronel and Corral, Valdivia, Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 690, 1898—Iquique, Tarapacá, Chile; Albert, Anal. Univ. Chile, 103, p. 224, 1899—Chile (monog.).

Pelecanus thygus Philippi, Anal. Univ. Chile, 31, p. 291, 1868—coast of Chile and Peru.

Pelecanus barbieri Oustalet, Bull. Soc. Phil. Paris, (7), 2, p. 211, 1878—Ancon, Peru (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 66, 1929); Salvin, Ibis, 1879, p. 98—Iquique, Chile (crit.;=adult).

Pelecanus fuscus var. *molinae* Dubois, Bull. Mus. Roy. Belg., 2, p. 11, 1883 (crit.).

Pelecanis molinae Meyer, Journ. Orn., 38, p. 165, 1890— island near Callao, Peru (crit.).

Pelecanus nigricollis (Philippi MS.) Albert,³ Anal. Univ. Chile, 103, p. 226, 1899—Chile (type in Museo Nacional, Santiago de Chile;=young).

Pelecanus landbecki F. Philippi,³ Bol. Mus. Nac. Chile, 1, No. 3, p. 63, 1909—Chile (type in Museo Nacional, Santiago de Chile;=young); Housse, Rev. Chil. Hist. Nat., 28, p. 53, 1924—Isla La Mocha, Arauco, Chile.

Pelecanus occidentalis thagus Peters, Bds. World, 1, p. 81, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 819, 1936 (monog., life hist.); Philippi,

¹ Bonaparte's description is clearly based on Chilean specimens. Birds from the Galápagos Islands belong to another form, while "Bolivia" doubtless refers to Tacna Province, once part of that republic.

² *Pelecanus molinae* G. R. Gray (List Spec. Bds. Brit. Mus., 3, p. 189, 1844; Gen. Bds., 3, p. [668], 1845) and *Pelecanus molinae* Pelzeln (Reise Novara, Zool., 1, Vögel, p. 158, 1865—Chile) are nomina nuda.

³ *Pelecanus nigricollis* Albert and *P. landbecki* F. Philippi were based on the very same specimen, a young bird, in the Chilean National Collection.

Bol. Mus. Nac. Santiago, 16, p. 63, 1938—Arica, Tacna, Chile; Wetmore, Auk, 62, p. 585, 1945 (dist. chars., range).

Range.—Coasts of Peru and Chile, from Point Pariñas, Piura,¹ south to Chiloé Island (breeding in the central part of this area), and occasionally to Tierra del Fuego (one record from Isla Picton, Ushuaia).²

Field Museum Collection.—2: Peru (Cape Blanco, 2).

Superfamily SULOIDEA

Family SULIDAE. Gannets

Genus MORUS Vieillot

Morus Vieillot, Anal. Nouv. Orn. Elém., p. 63, 1816—type, by monotypy, "Fou de Bassan" Buffon=*Pelecanus bassanus* Linnaeus.

Sulita Mathews, Austr. Av. Rec., 2, p. 123, Jan. 28, 1915—type, by orig. desig., "*Sula*" *bassana* Linnaeus=*Pelecanus bassanus* Linnaeus.

**Morus bassanus* (Linnaeus). GANNET.

Pelecanus bassanus Linnaeus, Syst. Nat., 10th ed., 1, p. 133, 1758—based on "Anser Bassanus" Willoughby, Orn., p. 247, pl. 63, etc.; "Scotia, America" (restricted type locality, Bass Rock, off Scotland).

Pelecanus maculatus Gmelin, Syst. Nat., 1, (2), p. 579, 1789—based on "Fou tacheté" Buffon, Hist. Nat. Ois., 8, p. 375, and "Fou tacheté, de Cayenne" Daubenton, Pl. Enl., pl. 986 (=young).

Sula major Lacépède, Tabl. Méth. Mamm. Ois., p. 303, 1799; idem, in Buffon, Hist. Nat. (Didot ed.), Quadr., 14, p. 318, 1799 (pub. 1802)—based on l.c., Ois., 16, p. 298, 1799—"se trouve sur les côtes de la Florida, et sur les grandes rivieres de cette contrée."

Sula alba Meyer, in Meyer and Wolf, Taschenb. Deuts. Vögelk., 2, p. 582, 1810—substitute name for *Pelecanus bassanus* Linnaeus.

Sula leucophea Stephens, in Shaw, Gen. Zool., 13, (1), p. 106, 1826—based on "Brown and White Booby" Latham, Gen. Hist. Bds., 10, p. 441; supposed to inhabit Cayenne.

Sula americana Bonaparte, Geogr. Comp. List Bds. Eur. N. Amer., p. 60, 1838—based on *Sula bassana* Audubon, Orn. Biog., 4, p. 222, pl. 326; "Central coast"—Great Gannet Rock, near Magdalena Islands, Gulf of St. Lawrence.

Sula bassana Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 425, 1898 (monog.); Winge, Medd. Grøn., 21, p. 245, 1898—Davis Straits, Greenland; Salvin

¹ Forbes's statement (Ibis, 1914, p. 413) that this form occurs at certain seasons even as far north as the Guayaquil River, southwestern Ecuador, is no doubt due to confusion with *P. o. carolinensis*.

² Venturi's sight record from Barracas al Sud, Buenos Aires, needs confirmation.

and Godman, Biol. Centr.-Amer., Aves, 3, p. 145, 1901 (range); Mowbray, Proc. Bost. Soc. N. H., 39, p. 299, 1931—Ferry Point, St. George, Bermuda Islands (Dec. 12, 1930); Wynne-Edwards, Proc. Bost. Soc. N. H., 40, p. 291, 1935 (distr. in North Atlantic); Fisher and Vevers, Journ. Anim. Ecol., 12, p. 173, 1943 (breeding); *idem*, *l.c.*, 13, p. 49, 1944 (distr., hist., pop.).

Morus bassanus Bent, Bull. U. S. Nat. Mus., 121, p. 216, 1922 (life hist.); Peters, Bds. World, 1, p. 82, 1931 (range).

Range.—Breeds locally on islands in the Gulf of St. Lawrence and off Newfoundland,¹ also extralimitally in the British Isles and Iceland; in winter south to the Gulf of Mexico (Vera Cruz; Cuba),² the eastern Atlantic islands (Madeira, Canary Islands, Azores), and northern Africa; accidental in Greenland (Davis Straits).

Field Museum Collection.—17: Labrador (unspecified, 1); Quebec (Gulf of St. Lawrence, 2; Magdalen Islands, 8); Nova Scotia (St. Margaret's Bay, 2); Maine (Matinicus, 1); Massachusetts (Monomoy Island, 1); North Carolina (Pea Island, Dare County, 1); Florida (St. Augustine, 1).

Genus SULA Brisson

Sula Brisson, Orn., 1, p. 60; 6, p. 494, 1760—type, by tautonymy, "*Sula*" = *Sula leucogaster* Boddaert.

Dysporus Illiger, Prodr. Syst. Mam. Av., p. 279, 1811—substitute name for *Sula* Brisson.

Disporus Agassiz, Ind. Univ., p. 127, 1846—emendation of *Dysporus* Illiger.

Abeltera Heine, in Heine and Reichenow, Nomencl. Mus. Hein. Orn., p. 351, 1890—new name for *Sula* Reichenbach, 1883; type, *Pelecanus Sula* Linnaeus.

Parasula Mathews, Austr. Av. Rec., 2, p. 55, Oct. 23, 1913—type, by orig. desig., *Sula dactylatra bedouti* Mathews.

Hemisula Mathews, Austr. Av. Rec., 2, p. 55, Oct. 23, 1913—type, by orig. desig., *Sula leucogaster rogersi* Mathews.

**Sula nebouxii* Milne-Edwards. BLUE-FOOTED BOOBY.

Sula nebouxii Milne-Edwards, Ann. Sci. Nat., (6), Zool., 13, art. 4, p. 37, pl. 14, 1882—"côte Pacifique de l'Amérique" (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 66, 1929); Ridgway, Proc. U. S. Nat. Mus., 19, p. 596, 1897—Galápagos Islands (descr., crit., range); Nelson, N. Amer. Fauna, 14, p. 31, 1899—Isabel and Tres Marias Islands (breeding habits); Rothschild, Bull. Brit. Orn. Club, 35, p. 44, 1915 (juv. plumage); Bent, Bull. U. S. Nat. Mus., 121, p. 197, 1922 (life hist.);

¹ An account of the North American gannetries has been given by Wynne-Edwards (Ibis, 1935, pp. 584-594).

² The record from Cayenne (Daubenton) is open to doubt.

McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 288, 1926—Maria Madre, Maria Magdalena, and Isabel Islands; Grinnell, Univ. Calif. Pub. Zool., 32, p. 69, 1928—Gulf of California (San Pedro Mártir and Ildefonso Islands [breeding]; San Benito Islands; La Paz, etc.); Clary, Condor, 32, p. 160, 1930—Salton Sea, California (Nov. 1, 1929); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 37, 1931—Galápagos Islands; Peters, Bds. World, 1, p. 83, 1931 (range); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 31, 1931—Indefatigable Island, Galápagos Archipelago; van Rossem, Trans. San Diego Soc. N. H., 7, p. 129, 1932—Tiburón, San Pedro Nolasco Island (breeding), San Pedro Mártir, and Estrada de Tasiola, Gulf of California; Griscom, Bull. Mus. Comp. Zool., 78, p. 293, 1935—"Pearl Islands (breeding);" Murphy, Ocean. Bds. S. Amer., 2, p. 829, 1936 (monog., life hist.); Sassi, Temminckia, 3, p. 287, 1938—Puntarenas, Costa Rica (July 8); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 32, 1945—Gulf of California (common resident).

Sula cyanops (not *Dysporus cyanops* Sundevall) Salvin, Proc. Zool. Soc. Lond., 1883, p. 427—Charles Island, Galápagos Archipelago.

Sula gossi (Ridgway MS.) Goss, Auk, 5, p. 241, July, 1888—San Pedro Mártir Island, Gulf of California (type in U. S. National Museum); Ridgway, Proc. U. S. Nat. Mus., 12, p. 114, 1890—Chatham Island (crit.).

Sula nebouxi Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 435, 1898—Tres Marias Islands, Charles Island, and "coast of Chile;" Rothschild and Hartert, Nov. Zool., 6, p. 178, 1899—Galápagos Islands (egg descr.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 148, 1901 (range in Mexico); Rothschild and Hartert, Nov. Zool., 9, p. 407, 1902—Wenman, Seymour, Daphne, and Indefatigable Islands (excl. descr. first plumage); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 248, 1904—Albemarle, Narborough, and Hood Islands (breeding); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 92, 1905—Gorgonilla Peninsula, Gorgona Island, Colombia; Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 93, pl. 5, fig. 2, 1913—Galápagos Islands (crit., plumages, eggs); Coker, Proc. U. S. Nat. Mus., 56, p. 471, 1919—coast of Peru south to Guañape Islands (breeding habits); Chapman, Bull. Amer. Mus. N. H., 55, p. 214, 1926—Pelado (Santa Elena Bay), Santa Clara, Jambeli, and La Plata Islands, Ecuador; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 18, 1927—off San Blas, Nayarit.

Range.—Breeds on islands off the coasts of Mexico (San Pedro Mártir, San Pedro Nolasco, Ildefonso, Isabel, Tres Marias, Cláron), Panama (Pacheca and Galera, Pearl Islands), Colombia (Gorgona), Ecuador, northern Peru (Lobos de Tierra, Guañape), and in the Galápagos Islands; migrating occasionally as far south as Ancon, Lima (fide Chapman);¹ accidental in California (Salton Sea, Nov. 1, 1929).

¹ No authentic record appears to exist for the occurrence of the Blue-footed Booby in Chile. The original specimen obtained by Nebois during the voyage of the *Venus* in 1839 has no exact locality, and Milne-Edwards merely surmised that it might have come from Chile. The British Museum has a skin, presented by C. Crawley, said to be from "the coast of Chile."

Field Museum Collection.—13: Mexico (Ildefonso Island, Lower California, 1; Isabella Island, 2); Galápagos Islands (Daphne Island, 1; Charles Island, 1; Gardner Island, 4; Champion Island, 1; Hood Island, 2; unspecified, 1).

**Sula variegata* (Tschudi). PERUVIAN BOOBY.

Dysporus variegatus Tschudi, Arch. Naturg., 9, (1), p. 390, 1843—"in littoribus et insulis Oceani Pacifici" (type in Neuchâtel Museum); idem, Unters. Faun. Peru., Orn., p. 313, 1846—*islands off Peruvian coast*; idem, Journ. Orn., 4, p. 188, 1856—*same locality (descr.)*.

Sula (—?) Fraser, Proc. Zool. Soc. Lond., 11, p. 120, 1843—*Chilean coast, from Chiloé Islands to Copiapó*; Boeck, Naumannia, 1855, p. 512—*Valdivia, Chile*.

Sula variegata Tschudi, Arch. Naturg., 10, (1), p. 316, 1844—*Peru*; Hartlaub, Naumannia, 3, p. 219, 1853—*Corral, Valdivia, Chile*; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 156, 1865—*Chile (crit.)*; Sclater, Proc. Zool. Soc. Lond., 1867, pp. 336, 340—*Chile*; Philippi, Anal. Univ. Chile, 31, p. 290, 1868—*coast of Chile to Peru*; Pelzeln, Verh. Zool. Bot. Ges. Wien, 23, p. 161, 1873—*Callao, Peru*; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 554—*Chorillos, Lima, Peru*; Milne-Edwards, Ann. Sci. Nat., (6), Zool., 12, art. 4, p. 34, 1882—*Callao*¹ (crit.); Salvin, Proc. Zool. Soc. Lond., 1883, p. 427—*Callao Bay and San Lorenzo Island, Lima, Peru*; Reed, Anal. Univ. Chile, 93, p. 206, 1896—*Chile*; Lane, Ibis, 1897, p. 185—*outside Coquimbo and south to Arauco, Chile*; Schalow, Zool. Jahrb., Suppl., 4, p. 689, 1898—*Isla los Pájaros, Coquimbo, Chile*; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 434, 1898—*Peru (Callao, San Lorenzo Island, Chorillos) and Chile (Coquimbo, Valparaíso)*; Albert, Anal. Univ. Chile, 101, p. 929, 1898—*Chile (monog.)*; Paessler, Orn. Monatsber., 17, p. 102, 1909—*from Coquimbo northward, common at Antofagasta, Chile*; Rothschild, Bull. Brit. Orn. Club, 35, pp. 42, 44, 1915—*Peruvian guano islands (crit., plumages)*; Coker, Proc. U. S. Nat. Mus., 56, p. 466, pls. 56–59, 1919—*coastal islands of Peru (nesting habits)*; Housse, Rev. Chil. Hist. Nat., 28, p. 54, 1924—*Isla La Mocha, Arauco, Chile*; Chapman, Bull. Amer. Mus. N. H., 55, p. 214, 1926—*near Puná Island, Gulf of Guayaquil, Ecuador*; Peters, Bds. World, 1, p. 83, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 295, 1932—*Chile*; Murphy, Ocean. Bds. S. Amer., 2, p. 838, 1936 (monog., life hist.); Philippi, El Hornero, 6, p. 233, 1936—*Arica, Tacna, and near Quintero, Aconcagua, Chile (breeding)*; idem, Bol. Mus. Nac. Santiago, 16, p. 63, 1938—*Bay of Arica, Tacna, Chile (resident)*.

Sula fusca (not of Vieillot) Des Murs, in Gay, Hist. Fis. Pol. Chile, Zool., 1, p. 488, 1847—*Chiloé (excl. descr.)*; Philippi, Reise Wüste Atacama, p. 165, 1860—*coast of Atacama, Chile*; idem, Ornis, 4, p. 160, 1888—*Atacama*.

¹ The other localities mentioned ("Santa Cruz," d'Orbigny; "Magellan," Sabatier) cannot possibly be correct. Oustalet (Miss. Sci. Cap Horn, 6, p. B. 303, 1891), indeed, points out that the origin of these specimens preserved in the Paris Museum is altogether uncertain and that they probably were secured on the Peruvian coast off Lima.

Range.—Pacific coast of South America, from the Gulf of Guayaquil, Ecuador, south to Chiloé Island, Chile (breeding on islands from Punta Talara, Piura, Peru to Quintero, Aconcagua, Chile).

Field Museum Collection.—2: Peru (Talara, 1); Chile (Concepcion, 1).

****Sula dactylatra dactylatra* Lesson. ATLANTIC BLUE-FACED BOOBY.**

Sula dactylatra "Lesson,¹ *Traité d'Orn.*, livr. 8, p. 601, 1831—l'île de l'Ascension" (descr. of adult male; type in Paris Museum; cf. Berlioz, *Bull. Mus. Hist. Nat. Paris*, (2), 1, p. 66, 1929); Bryant, *Proc. Bost. Soc. N. H.*, 7, p. 125, 1859—Santo Domingo Kay, Bahama Islands (breeding; descr.); Milne-Edwards, *Ann. Sci. Nat.*, (6), Zool., 13, art. 4, p. 35, pl. 13 (fig. of type), 1882—Ascension Island (crit.); Murphy, *Auk*, 32, p. 258, 1915—South Trinidad; Wilkins, *Ibis*, 1923, p. 510—Ascension Island; Murphy, *Ocean. Bds. S. Amer.*, 2, p. 846, 1936—part, Atlantic localities (life hist.).

Dysporus cyanops Sundevall, *Physiogr. Sällsk. Tidskr. Lund*, 1, No. 3, p. 218 (footnote), pl. 5, 1837—"ad aequatorem maris Atlant." (type in Stockholm Museum; cf. Gyldenstolpe, *Ark. Zool.*, 19, A, No. 1, p. 95, 1927); idem, *Ann. Mag. Nat. Hist.*, 19, p. 236 (footnote), 1847—same locality (descr.).

"*Sula dactylatra (nigrodactyla* Less.)" Bonaparte, *Compt. Rend. Acad. Sci. Paris*, 41, No. 26, p. 1114, 1855; idem, *Consp. Gen. Av.*, 2, p. 165, 1857—Ascension Island (descr.).

[*Sula elegans* Bryant, *Proc. Bost. Soc. N. H.*, 7, p. 125, 1859—Santo Domingo Kay, Bahama Islands (cotypes in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, *Bull. Mus. Comp. Zool.*, 70, p. 184, 1930).

Sula cyanops Penrose, *Ibis*, 1879, p. 281—Ascension Island (breeding); Ridgway, *Proc. U. S. Nat. Mus.*, 12, p. 130, 1890—Abrolhos Islands, off Bahía, Brazil; Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 430, 1898—part, spec. a-c, Ascension Island; Clark, *Proc. Bost. Soc. N. H.*, 32, p. 231, 1905—Kick 'em Jenny and Battowia, Grenadines (breeding); Berlepsch, *Nov. Zool.*, 15, p. 312, 1908—Cayenne; Lowe, *Ibis*, 1909, p. 324—Los Hermanos Islands, off Venezuela (breeding); Cory, *Field Mus. Nat. Hist.*, Orn. Ser., 1, p. 226, 1909—Los Hermanos Islands; Bent, *Bull. U. S. Nat. Mus.*, 121, p. 193, 1922—part, Lesser Antilles, Los Hermanos Islands, Yucatan (Alacron Reefs), and formerly Bahama Islands.

Parasula dactylathra [sic] Miranda-Ribeiro, *Arch. Mus. Nac. Rio de Janeiro*, 22, p. 182, 1919—South Trinidad Island (August).

Sula dactylatra dactylatra Rothschild, *Bull. Brit. Orn. Club*, 35, p. 43, 1915 (crit.); Peters, *Bds. World*, 1, p. 83, 1931 (range); Pinto, *Rev. Mus. Paul.*, 22, p. 25, 1938—part, Fernando Noronha; Oberholser, *Bull. Dept. Conserv. State Louisiana*, 28, p. 36, 1938—Grand Gosier Island (July 28, 1929); Nichols and Bond, *Mem. Soc. Cub. Hist. Nat.*, 17, p. 25, 1943—Cockroach Cay, Virgin Islands (nesting).

¹*Sula dactylatra* Lesson (*Voy. Coquille, Zool.*, 1, livr. 11, p. 494, May 30, 1829) is a nomen nudum.

Range.—Breeds locally in the Virgin Islands (Cockroach Cay), Lesser Antilles (Kick 'em Jenny and Battowia, Grenadines);¹ on Los Hermanos Islands, off Venezuela; on the Alacron Reefs, Yucatan; on Fernando Noronha, Rocas Reef, the Abrolhos Islands, possibly also on South Trinidad (and extralimitally on Ascension Island); formerly in the Bahama Islands (Santo Domingo Kay); accidental in Louisiana (Grand Gosier Island, July 28, 1929).

Field Museum Collection.—9: Bahama Islands (Santo Domingo Cay, 2); Virgin Islands (St. Thomas, 6); Venezuela (Los Hermanos Islands, Nueva Esparta, 1).

****Sula dactylatra californica* Rothschild.² CALIFORNIAN
BLUE-FACED BOOBY.**

Sula dactylatra californica Rothschild, Bull. Brit. Orn. Club, 35, p. 43, Jan. 27, 1915—"coasts of California and Central America" (type, from San Benedicto Island, Revillagigedo group, Mexico, in Tring Collection [cf. Hartert, Nov. Zool., 32, p. 274, 1925], now in the American Museum of Natural History, New York); Oberholser, Auk, 34, p. 467, 1917 (crit.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 69, 1928—Alijos Rocks, off Lower California; Peters, Bds. World, 1, p. 83, 1931 (range).

Sula cyanops (not *Dysporus cyanops* Sundevall) Grayson, Proc. Bost. Soc. N. H., 14, p. 302, 1872—Socorro Island; Anthony, Auk, 15, pp. 314, 316, 317, 1898—San Benedicto, Socorro, and Clarion Islands; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 145, 1901—part, Revillagigedo Islands; Rothschild and Hartert, Nov. Zool., 9, p. 406, 1902—Alijos Rocks, off Lower California; Snodgrass and Heller, Proc. Wash. Acad. Sci., 4, p. 512, 1902—Clipperton Island (eggs descr.); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 84, 1913—San Benedicto Island (nesting) and Clipperton Island.

Sula dactylatra (not of Lesson) McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 287, 1926—Alijos Rocks, Clarion Island (nesting), and San Benedicto Island (breeding).

Range.—Breeds on islands off the west coast of Mexico (Alijos Rocks, Clarion Island, the Revillagigedo group, and Clipperton Island).

Field Museum Collection.—2: Mexico (Clarion Island, 2).

¹ Bryant's record from "Haiti" is questionable (cf. Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 70, 1931).

² *Sula dactylatra californica* Rothschild: Similar to the nominate race, but distinguished by its much larger, stouter bill and differently colored soft parts, the bill being bright yellow instead of horny blue-gray, while the feet and legs are orange rather than yellow.

****Sula dactylatra granti* Rothschild.¹ GRANT'S BLUE-FACED BOOBY.**

Sula granti Rothschild, Bull. Brit. Orn. Cl., 13, p. 7, Oct. 31, 1902—Galápagos Islands (type, from Culpepper Island, in Tring Collection [cf. Hartert, Nov. Zool., 32, p. 274, 1925], now in the American Museum of Natural History, New York).

Dysporus cyanops Sundevall (not of 1837), Proc. Zool. Soc. Lond., 1871, p. 125—Galápagos Islands.

Sula variegata (not *Dysporus variegatus* Tschudi) Rothschild and Hartert, Nov. Zool., 6, p. 178, 1899—Wenman, Culpepper, Hood, Gardner (near Charles), and Tower Islands (crit., eggs descr.); iidem, l.c., 9, p. 407, 1902—Culpepper, Chatham, Bindloe, Daphne, Indefatigable, and Wenman Islands (crit.); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 244, 1904—Galápagos Islands (habits); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 89, 1913—Galápagos Islands (habits, eggs); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 32, 1931—Tower Island.

Sula cyanops Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 49, 1900—Santa Elena Bay, Ecuador.

Sula dactylatra granti Rothschild, Bull. Brit. Orn. Cl., 35, p. 44, 1915 (crit.); Peters, Bds. World, 1, p. 84, 1931 (range); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 37, 1931—Galápagos Islands; Bond and Schauensee, Proc. Acad. Nat. Sci. Phila., 90, p. 156, 1938—Malpelo Island.

Sula dactylatra (not of Lesson) Chapman, Bull. Amer. Mus. N. H., 55, p. 214, 1926—La Plata Island, Ecuador; Murphy, Ocean. Bds. S. Amer., 2, p. 846, 1936—part, Pacific localities (monog., life hist.).

Range.—Breeds in the Galápagos Islands, off the coast of Ecuador (La Plata Island), on the islets of San Felix and San Ambrosio, off Chile, and probably on Malpelo Island, Colombia.

Field Museum Collection.—10: Galápagos Islands (Tower Island, 2; Hood Island, 7); Ecuador (Isla Silva Sur, Province de los Rios, 1).

****Sula sula websteri* Rothschild.² WEBSTER'S RED-FOOTED BOOBY.**

Sula websteri Rothschild, Bull. Brit. Orn. Cl., 7, p. lii, May 25, 1898—"Clarion Island, Galápagos, and neighbouring seas" (type, from Clarion Island, Revillagigedos group, off Mexico, in Tring Collection [cf. Hartert, Nov. Zool., 32, p. 274, 1925], now in the American Museum of Natural History, New York); Anthony, Auk, 15, pp. 314, 316, 317, 1898—San Benedicto, Socorro, and Clarion Islands (habits); Nelson, N. Amer. Fauna, 14, p. 29, 1899—Isabel Island (ex Grayson); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 147, 1901—Revillagigedo and Galápagos Islands.

¹ *Sula dactylatra granti* Rothschild: Precisely like *S. d. californica*, but bill red, legs and feet bluish green. Even in juvenile plumage, this race is recognizable by its dull purplish-pink bill.

² *Sula sula websteri* Rothschild differs from the nominate race by having longer wings and the tail nearly always grayish-brown, very rarely mixed with white or partly white.

Sula piscator (not *Pelecanus piscator* Linnaeus) Ridgway, Proc. U. S. Nat. Mus., 19, p. 598, 1897—part, Indefatigable, Tower, and Wenman Islands, Galápagos Archipelago; Bent, Bull. U. S. Nat. Mus., 121, p. 211, 1922—part, Revillagigedo and Galápagos Islands (life hist.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 289, 1926—Clarion and San Benedicto Islands (breeding); idem, l.c., (4), 16, p. 17, 1927—Labrados, Sinaloa.

Sula piscatrix websteri Rothschild and Hartert, Nov. Zool., 6, p. 177, 1899—Clarion and Tower Islands (breeding; crit.); idem, l.c., 9, p. 406, 1902—Culpepper, Wenman, and Bindloe Islands (habits); Snodgrass and Heller, Proc. Wash. Acad. Sci., 4, p. 515, 1902—Galápagos, Clarion, and Cocos Islands; idem, l.c., 5, p. 246, 1904—Galápagos Islands.

Sula piscatrix Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 85, pl. 5, fig. 1, 1913—San Benedicto, Cocos, Culpepper, Tower, and Wenman Islands (crit., meas., habits).

Sula piscator websteri Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 37, 1931—Galápagos Islands.

Sula sula websteri Peters, Bds. World, 1, p. 84, 1931—Galápagos Islands.

Range.—Breeds in the Revillagigedo (San Benedicto, Socorro, Clarion), Cocos, and Galápagos Islands (Culpepper, Wenman, Tower, etc.).

Field Museum Collection.—5: Mexico (Clarion Island, 1); Costa Rica (Cocos Island, 1); Galápagos Islands (Tower Island, 2; Culpepper Island, 1).

**Sula sula sula* (Linnaeus). RED-FACED BOOBY.

Pelecanus Sula Linnaeus,¹ Syst. Nat., 12th ed., 1, p. 218, 1766—"in Pelago indico"² (descr. of adult); Nelson, Proc. Biol. Soc. Wash., 18, p. 121, 1905 (nomencl.).

Pelecanus fiber Linnaeus, Syst. Nat., 12th ed., 1, p. 218, 1766—principally based on "Le Fou brun" Brisson, Orn., 6, p. 499, pl. 43, fig. 1; "in Oceano Africano, Americano"³ (= grayish phase).

Sula candida Stephens, in Shaw, Gen. Zool., 13, (1), p. 103, 1826—new name for *Pelecanus piscator* Linnaeus, Syst. Nat., 12th ed., 1, p. 217, 1766 (in part).

¹ While all of the references, except Browne (Civ. Nat. Hist. Jamaica, p. 481) in part, pertain to *S. leucogaster*, Linnaeus' description ("corpore albedo, remigibus primoribus apice nigricantibus, facia rubra" and again "remiges non tantum primores, sed et secundariae extrorsum nigricantes," etc.) is clearly referable to the Red-faced Booby.

² Though Ascension Island was designated by Mathews (Bds. Austr., 4, p. 216, 1915), Grant and Mackworth-Praed (Bull. Brit. Orn. Cl., 53, pp. 185-187, 1933) explain at length that this procedure is inadmissible, and suggest, in its place, Barbados, Lesser Antilles, as an appropriate type locality (p. 187) for *S. sula sula*.

³ The bird described by Brisson was in the Réaumur Collection, no precise locality being specified.

Sula erythrorhyncha Lesson, *Traité d'Orn.*, livr. 8, p. 601, 1831—locality unknown (possibly only a substitute name for *Pelecanus piscator* Gmelin, 1789=*P. piscator* Linnaeus, 1766, not of Linnaeus, 1758).

Sula piscator (not *Pelecanus piscator* Linnaeus, 1758;)¹ Salvin, *Ibis*, 1866, p. 200—Half Moon Cay, British Honduras (breeding); Saunders, *Proc. Zool. Soc. Lond.*, 1880, p. 163—South Trinidad Island; Cory, *Auk*, 5, p. 72, 1888—West Indian localities (descr.); Ridgway, *Proc. U. S. Nat. Mus.*, 12, p. 578, 1888—Swan Island; Richmond, *l.c.*, 16, p. 531, 1893—off Greytown, Nicaragua; Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 432, 1898—part, spec. c'-l', South Trinidad, Redonda, St. Vincent, Jamaica, and British Honduras (Half-Moon Cay); Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 146, 1901 (localities in Central America); Nicoll, *Ibis*, 1904, p. 588—Little Cayman (soft parts, plumages); Clark, *Proc. Bost. Soc. N. H.*, 32, p. 231, 1905—St. Vincent and Grenadines (Kick 'em Jenny, Battowia; breeding); Nicoll, *Ibis*, 1906, p. 672—South Trinidad (nesting); Berlepsch, *Nov. Zool.*, 15, p. 312, 1908 (“not recorded from French Guiana”); Lowe, *Ibis*, 1909, pp. 316, 325, 333—Los Testigos (breeding), Los Hermanos (breeding; crit.), and eastern Swan Island (breeding); Cory, *Field Mus. Nat. Hist., Orn. Ser.*, 1, pp. 226, 229, 1909—Los Hermanos and Los Testigos (ex Lowe); Bent, *Bull. U. S. Nat. Mus.*, 121, p. 211, 1922 (life hist.; range in part); Wetmore, *Sci. Surv. Porto Rico and Virgin Is.*, 9, p. 284, 1927—Desecheo Island, near Puerto Rico (breeding; plumages disc.); Bond, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 526, 1928—off Grenadines and Trinidad; Wetmore and Swales, *Bull. U. S. Nat. Mus.*, 155, p. 69, 1931—Navassa Island, Hispaniola; Fisher and Wetmore, *Proc. U. S. Nat. Mus.*, 79, art. 10, p. 3, 1931—Little Swan Island (breeding); Wetmore, *l.c.*, 81, art. 2, p. 10, 1932—Navassa Island (breeding).

Dysporus Hernandezi Gundlach, *Journ. Orn.*, 26, p. 298, 1878—Matanzas, Cuba (type in coll. of J. Gundlach, now in Habana Museum); idem, *l.c.*, 29, p. 401, 1881 (crit.).

Sula piscatrix Milne-Edwards, *Ann. Sci. Nat.*, (6), *Zool.*, 12, art. 4, p. 36, 1882—Cayenne (Martin) and Haiti (Ricord); Sharpe, *Ibis*, 1904, p. 214—South Trinidad Island (breeding); Lowe, *l.c.*, 1911, p. 148—Little Cayman.

Sula cyanops (not *Dysporus cyanops* Sundevall) Cory, *Auk*, 6, p. 31, 1889—Little Cayman and Cayman Brac.

Sula coryi Maynard, *Contrib. Sci.*, 1, No. 1, p. 40, April, 1889—Little Cayman (cotypes in coll. of C. J. Maynard, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, *Bull. Mus. Comp. Zool.*, 70, p. 185, 1930); idem, *l.c.*, No. 2, pp. 51–57, pl. 5, July, 1889 (habits); idem, *l.c.*,

¹ *Pelecanus piscator* Linnaeus (*Syst. Nat.*, 10th ed., 1, p. 134, 1758), according to description and references, is an indeterminable composite of some form of *S. sula* and of *S. leucogaster*, and even though Linnaeus subsequently (*Syst. Nat.*, 12th ed., 1, p. 217, 1766) used the name for one of the races of the Red-faced Booby (cf. Townsend and Wetmore, *Bull. Mus. Comp. Zool.*, 63, pp. 168–170, 1919), such a procedure does not seem to be admissible under the Rules. Moreover, there would be no means of ascertaining its racial pertinence, as the type is no longer extant (cf. Lönnberg, *Bihang Vetensk. Akad. Handl.*, 22, Afd. 4, No. 1, p. 28, 1896).

No. 3, p. 142, pl. 11, Oct., 1889 (notes on young); Sharpe, Bull. Brit. Orn. Cl., 14, p. 65, 1904 (habits).

Piscatrix sula Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 183, 1919—South Trinidad Island (plum. disc.).

[*Piscatrix sula*] *autumnalis* Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 186 (in text), with plate, 1919 (name proposed for the white-rumped, brown-backed variety).

Sula sula Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Nat. Hist. Rep., Zool., 4, p. 184, 1930—South Trinidad; Murphy, Ocean. Bds. S. Amer., 2, p. 861, 1936 (monog., life hist.; distrib. excl. of Revillagigedo, Cocos, and Galápagos Islands).

Sula sula sula Peters, Bds. World, 1, p. 84, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 578—Giles Islets, off Tobago (breeding; nest and eggs descr.); Pinto, Rev. Mus. Paul., 22, p. 25, 1938 (range).

Range.—Breeds locally in the West Indies (Navassa Island, Hispaniola; Desecheo, near Puerto Rico; Little Cayman, south of Cuba; Dominica; Kick 'em Jenny and Battowia, Grenadines; Giles Islets, off Tobago), off the coast of Venezuela (Los Testigos and Los Hermanos Islands) and British Honduras (Half-Moon Cay and Little Swan Island), on Fernando Noronha and on South Trinidad in the tropical Atlantic Ocean.¹

Field Museum Collection.—20: Puerto Rico (Mona Island, 2); Western Caribbean (Saint Andrews, 6; Little Swan, Swan Islands, 1); Jamaica (Cayman Brac, 1; Little Cayman, 6); British Honduras (Half Moon Cay, 3); Venezuela (Los Hermanos Island, Nueva Esparta, 1).

**Sula leucogaster leucogaster* (Boddaert). WHITE-BELLIED BOOBY.

Pelecanus leucogaster Boddaert, Tabl. Pl. Enl., p. 57, Dec., 1783—based upon "Le Fou, de Cayenne" Daubenton, Pl. Enl., pl. 973; Cayenne.²

¹ The plumages of the Red-faced Booby are very puzzling, and the one with white rump, tail coverts, and tail in contrast to the remaining dark gray plumage, described as *S. coryi*, has been the subject of much speculation. Birds of this type, however, are not confined to the Cayman Islands, as has been pointed out by Nicoll (Ibis, 1904, p. 588). They occur even on Fernando Noronha, so that it can hardly be anything else but a plumage phase, the significance of which is yet to be determined.

Another variety, with the head, upper parts, breast, and abdomen brown with a slight gloss, the rump, tail coverts, vent, thighs, and tail white, was regarded by Maynard and Nicoll as an immature or intermediate plumage of "*S. coryi*," and as it has no range of its own, this interpretation is probably correct. It has been named (*Piscatrix sula*) *autumnalis* by Ribeiro, from South Trinidad, and more recently described as a distinct species, *S. nicolli*, by Grant and Mackworth-Praed (Bull. Brit. Orn. Cl., 53, p. 118, Feb. 22, 1933—type, from Glorioso Island, north of Madagascar, in the British Museum).

² The White-bellied Booby is recognizably figured by Sloane (Voy. Jamaica, 2, p. 322, pl. 271, fig. 2) as well as by Catesby (Nat. Hist. Carolina, 1, p. 87, pl. 87). The latter naturalist stated that he found it breeding in the Bahamas.

- Pelecanus parvus* Gmelin, Syst. Nat., 1, (2), p. 579, 1789—based on "Le Petit Fou" Buffon, Hist. Nat. Ois., 8, p. 374, and Daubenton, Pl. Enl., pl. 973; Cayenne.
- Sula brasiliensis* Spix, Av. Spec. Nov. Bras., 2, p. 83, pl. 107, 1825—"in insulis maritimis urbis Rio de Janeiro" (type in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 716, 1906); Burmeister, Syst. Uebers. Th. Bras., 3, p. 458, 1856—bay of Rio de Janeiro and Ilha do Santa Catharina, Brazil.
- Sula fusca* Vieillot (and Oudart), Galerie Ois., 2, p. 194, pl. 277,¹ 1826—part, Antilles, Isla de Aves, Cayenne (roc du Grand Connétable), coast of New Spain (= Venezuela), Bahama Islands, and "Carolina" (no type specified); Gosse, Bds. Jamaica, p. 417, 1847—Jamaica; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 156, 1865—Jurujuba Bay, Rio de Janeiro; idem, Orn. Bras., 3, p. 325, 1870—Bay of Rio de Janeiro and Paranaguá, Paraná, Brazil.
- Sula fulca* Lesson, Traité d'Orn., livr. 8, p. 601, 1831—emendation of *Sula fulca* Vieillot (and Oudart), Galerie Ois., 2, pl. 277.
- Dysporus sula* Wied, Beitr. Naturg. Bras., 4, (2), p. 890, 1833—bay of Rio de Janeiro.
- Sula fiber* (not *Pelecanus fiber* Linnaeus) Bryant, Proc. Bost. Soc. N. H., 7, p. 123, 1859—San Domingo Cay, Bahama Islands (breeding habits); Salvin, Ibis, 1864, p. 381—Half-Moon Cay, British Honduras; Cory, Bds. Bahamas, p. 191, 1880—Bahama Islands; Ihering, Rev. Mus. Paul., 3, p. 369, 1899—São Sebastião, São Paulo.
- Sula leucogastra* Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 651—part, Ascension and St. Paul's Rock; Penrose, Ibis, 1879, p. 281—Ascension Island (breeding); Ridgway, Proc. U. S. Nat. Mus., 10, p. 578, 1888—Swan Island; idem, l.c., 12, p. 130, 1890—Abrolhos Islands, off Bahia, Brazil; Sharpe, Journ. Linn. Soc. Lond., Zool., 20, p. 480, 1890—Fernando Noronha (breeding); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 149, 1901—part, Swan Island, Atlantic Coast of Nicaragua and Costa Rica; Nicoll, Ibis, 1904, pp. 31, 38—St. Paul's Rock (breeding) and Fernando Noronha; Clark, Proc. Bost. Soc. N. H., 32, p. 231, 1905—Grenadines (Battowia, Kick 'em Jenny, Little Martinique; breeding); Chapman, Pap. Tortugas Lab. Carnegie Inst. Wash., 2, p. 143, 1908—Cay Verde, Bahama Islands (breeding habits); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 214, 227, 229, 1909—Islas de Aves, Los Hermanos, and Los Testigos; Carriker, Ann. Carnegie Mus., 6, p. 439, 1910—Caribbean coast of Costa Rica (breeding on Uvita Island and on rocky islets at mouth of Moina River); Lüderwaldt and Fonseca, Rev. Mus. Paul., 13, pp. 471, 490, 1922—Ilha dos Alcatrazes, São Paulo (breeding); Griscom, Bull. Amer. Mus. N. H., 64, p. 147, 1932—off Puerto Barrios, Guatemala.
- Dysporus fiber* Gundlach, Journ. Orn., 23, p. 402, 1875—Cuba (Cayo Mono Grande, near Cardénas; breeding); idem, l.c., 26, p. 191, 1878—Desecheo Island, Puerto Rico.
- Sula leucogaster* Richmond, Proc. U. S. Nat. Mus., 16, p. 532, 1893—kays off Caribbean Nicaragua (breeding); Berlepsch, Nov. Zool., 15, p. 312, 1908—

¹ Misspelt "fulca" on the plate.

Cayenne; Murphy, *Auk*, 32, p. 47, 1915—Fernando Noronha; Chubb, *Bds. Brit. Guiana*, 1, p. 201, 1916—Georgetown; Wilkins, *Ibis*, 1923, pp. 478, 510—St. Paul's Rock and Ascension Island.

Sula sula Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 436, 1898—part, spec. a-q, Half-Moon Cay, Panama (Lion Hill Station), Grenada, St. Vincent, Nevis, Brazil (Bahía, Fernando Noronha), St. Paul's Rock, and Ascension Island; Lowe, *Ibis*, 1909, pp. 315, 324, 333—Los Testigos (breeding), Los Hermanos, and eastern Swan Island (breeding); Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 97, 1910—Bahía, Brazil.

Sula leucogastris (sic) Bent, *Bull. U. S. Nat. Mus.*, 121, p. 200, 1922 (life hist.).

Sula leucogastra leucogastra Wetmore, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 281, 1927—Puerto Rico (breeding on Desecheo and Mona Islands); Bond, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 526, 1928—off Grenadines and Santa Lucia; Kennard and Peters, *Proc. Bost. Soc. N. H.*, 38, p. 449, 1928—Almirante Bay, Panama; Bradlee and Mowbray, *l.c.*, 39, p. 298, 1931—Bermuda Islands (occasional autumn visitor); Wetmore and Swales, *Bull. U. S. Nat. Mus.*, 155, p. 68, 1931—Hispaniola; Fisher and Wetmore, *Proc. U. S. Nat. Mus.*, 79, art. 10, p. 3, 1931—Little Swan Island (breeding); Wetmore, *l.c.*, 82, art. 25, p. 17, 1933—Alta Vela Island, Hispaniola (probably breeding); Oberholser, *Bull. Dept. Conserv. State Louisiana*, 28, p. 37, 1938—Louisiana (Mississippi River below New Orleans, Sept., 1884; Grand Isle, April, 1929).

Sula leucogaster leucogaster Peters, *Bull. Mus. Comp. Zool.*, 71, p. 307, 1931—Swan Key, Almirante Bay, Panama; *idem*, *Bds. World*, 1, p. 84, 1931 (range); Belcher and Smooker, *Ibis*, 1934, p. 577—Giles Islets, off Tobago, and Soledade Rock, Gulf of Paria (breeding); Griscom, *Bull. Mus. Comp. Zool.*, 78, p. 293, 1935—Almirante and Colon Harbour, Panama; Murphy, *Ocean. Bds. S. Amer.*, 2, p. 854, 1936 (monog., life hist.); Pinto, *Rev. Mus. Paul.*, 22, p. 26, 1938—Rio de Janeiro (Bahia da Guanabara), and São Paulo (São Sebastião, Ilha dos Alcatrazes, Santos); Wetmore, *Proc. U. S. Nat. Mus.*, 87, p. 181, 1939—Ensenada de Ocumare, Venezuela.

Range.—Breeds on Florida Keys (formerly), in the Bahama Islands (Cay Verde, Santo Domingo Key, Berry Islands, etc.), on islands off the Caribbean coast of Central America, locally in the West Indies (Cay Mono Grande, Cuba; Desecheo and Mona Islands, Puerto Rico; Grenadines; Giles Islets, off Tobago), on islands off the coast of Venezuela (Isla de Aves, Los Testigos, Los Hermanos, Soledade Rock), Guiana (Grand Connétable Rock, Cayenne), and Brazil (Fernando Noronha; Rocas Reef; São Sebastião, Ilha dos Alcatrazes, São Paulo); also in the tropical Atlantic Ocean (St. Paul's Rock and Ascension Island); straying to Santa Catharina, and even to Buenos Aires;¹ casual in Massachusetts (Cape Cod, Sept. 17, 1878), Bermuda Islands, and Louisiana (Sept., 1884; April, 1929).²

¹ A specimen in the Geneva Museum.

² Bennett (*Ibis*, 1926, p. 329) admits *S. leucogaster* to the Falkland Islands with the caption: "an accidental visitor. Seen and reported by Garnot." How-

Field Museum Collection.—32: Bahama Islands (Marypaivo Island, 2); western Caribbean (Old Providence Island, 12; Little Swan Island, 3); Puerto Rico (Mona Island, 8); Virgin Islands (Cockroach Cay, 2; St. Thomas, 2); Venezuela (Los Aves, Colon, 3).

****Sula leucogaster brewsteri* Goss.¹ BREWSTER'S BOOBY.**

Sula brewsteri Goss, Auk, 5, p. 242, July, 1888—San Pedro Mártir Island, Lower California (type in U. S. National Museum); Townsend, Proc. U. S. Nat. Mus., 13, p. 138, 1890—Georges Islands, Gulf of California (breeding); Ridgway, l.c., 19, p. 597, 1897 (descr. of type); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 440, 1898—part, Gulf of California; Anthony, Auk, 15, pp. 314, 316, 317, 1898—San Benedicto, Socorro, and Rocco Partida Islands, Revillagigedo group (breeding); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 150, 1901—part, Lower California and Revillagigedo Islands; Brewster, Bull. Mus. Comp. Zool., 41, p. 34, 1902—Lower California; Thayer, Condor, 13, p. 106, 1911—San Ildefonso Island, Gulf of California (breeding); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 97, 1913—part, San Benedicto Island; McLellan, l.c., (4), 15, p. 289, 1926—San Benedicto (breeding) and Rocca Partida Islands; Bancroft, Condor, 29, p. 192, 1927—Consag Rock and San Luis Island, Gulf of California (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 78, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 7, p. 129, 1932—about Tiburón Island, Gulf of California.

Sula leucogastra (not *Pelecanus leucogaster* Boddaert) Belding, Proc. U. S. Nat. Mus., 6, p. 352, 1883—near Pichalique Bay, La Paz (January).

Sula sula (not *Pelecanus sula* Linnaeus) Bryant, Proc. Calif. Acad. Sci., (2), 2, p. 253, 1889—near Pichalique Bay (ex Belding).

Sula leucogaster brewsteri Peters, Bds. World, 1, p. 85, 1931 (in part); Wetmore, Smiths. Misc. Coll., 98, No. 22, p. 2, 1939—Lower California to Revillagigedo Islands (char., meas.); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 33, 1945—Gulf of California (common resident).

Range.—Breeding on islands in the Gulf of California (Georges, San Pedro Mártir, Ildefonso, Consag Rock, San Luis Island, etc.) and in the Revillagigedo Islands (San Benedicto, Socorro, Rocca Partida).

Field Museum Collection.—5: Mexico, Lower California (La Paz, 2; Consag Rock, 3).

ever, it is pretty certain that the *Pelecanus fiber* Garnot (Voy. Coquille, Zool., 1, livr. 12, p. 550, July 4, 1829), described as "entièrement brune, quelques individus . . . sans nul doute . . . des variétés d'âge, offrent quelques taches blanches sur le corps," is something quite different and may not even belong to the genus *Sula* (cf. also Oustalet, Miss. Sci. Cap Horn, 6, p. B. 302, 1891).

¹ *Sula leucogaster brewsteri* Goss: Male with head partly light in color, the paler area confined mainly to the face; female with upper surface, head and neck brownish, uniform in shade (not unlike *S. l. plotus*, of the western Pacific, but lighter).

**Sula leucogaster nesiotis* Heller and Snodgrass.¹ CLIPPERTON BOOBY.

Sula nesiotis Heller and Snodgrass, Condor, 3, p. 75, May, 1901—Clipperton Island (type in coll. of Leland Stanford University, Palo Alto); *idem*, Proc. Wash. Acad. Sci., 4, p. 514, 1902—Clipperton Island (descr.).

Sula brewsteri (not of Goss) Rothschild and Hartert, Nov. Zool., 6, p. 179, 1899—100° W. long., 11° 20' N. lat. (crit.); Nelson, N. Amer. Fauna, 14, p. 29, 1899—Isabel Island, Piedra Blanca Rock (off San Blas, Nayarit), and islet off Maria Cleofa, Tres Marias (breeding; plumages descr.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 150, 1901—part, Tres Marias Islands and coast of Mexico (Jalisco and off San Blas); Bailey, Auk, 23, p. 380, 1906—White Rock, off San Blas, Nayarit (breeding); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 97, 1913—part, Clipperton Island (breeding); Bent, Bull. U. S. Nat. Mus., 121, p. 208, 1922 (life hist.; range in part); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 18, 1927—Maria Madre, Tres Marias Islands.

Sula brewsteri nesiotis (sic) Rothschild and Hartert, Nov. Zool., 9, p. 408, 1902—200 miles south of Clarion and at 107° W. long., 12° 15' N. lat. (crit.).

Sula leucogaster brewsteri Peters, Bds. World, 1, p. 85, 1931 (in part).

Sula leucogastra albiceps van Rossem, Trans. San Diego Soc. N. H., 9, p. 9, Nov. 21, 1938—Isabel Island, western Mexico (type in coll. of D. R. Dickey, University of California, Los Angeles).

Sula leucogaster nesiotis Wetmore, Smiths. Misc. Coll., 98, pp. 1, 3, 1939—Clipperton Island (char., range).

Range.—Breeding on Clipperton Island and on various islands off the coast of Nayarit, western Mexico (Isabel Island, Tres Marias, White Rock, etc.); straying to the coast of Jalisco and Colima (Manzanillo).

Field Museum Collection.—3: Mexico (Tres Marias Islands, 2); western Pacific (Clipperton Island, 1).

**Sula leucogaster etesiaca* Thayer and Bangs.² GORGONA BOOBY.

Sula etesiaca Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 92, June, 1905—Gorgona Island, Colombia (type in Bangs Collection, now in

¹ *Sula leucogaster nesiotis* Heller and Snodgrass: Similar to *S. l. brewsteri*, but male with head and neck much lighter, sometimes almost white, and with back and breast more grayish (less brownish); female with upper parts, foreneck, and breast darker, more sooty gray and less brownish.

Breeding birds from Isabel and the Tres Marias Islands (*albiceps*) were found by Wetmore, on comparison, to be identical in coloration with a topotypical series from Clipperton Island, and while their bills are on average (though not constantly) slightly shorter and slenderer, this trifling divergency is not considered worthy of recognition in nomenclature.

² *Sula leucogaster etesiaca* Thayer and Bangs: Nearest to *S. l. brewsteri*, but darker; male with light color restricted to anterior part of the head; female with

- Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 185, 1930; iidem, l.c., p. 141, 1905—San Miguel and Saboga Islands, Pearl Archipelago, Panama (breeding); Carriker, Ann. Carnegie Mus., 6, p. 439, 1910—off mouth of Río Grande de Térraba, Costa Rica; Rendahl, Ark. Zool., 13, No. 4, p. 10, 1920—Pacheca and Chepillo Islands, Pearl Archipelago (breeding); Chapman, Bull. Amer. Mus. N. H., 55, p. 215, 1926—off coast of northern Ecuador.
- Sula fusca* (not of Vieillot) Taylor, Ibis, 1859, p. 151—Bird (=Pájaro) Island, Bay of Fonseca, Honduras (nesting); idem, l.c., 1860, p. 316—Pájaro Island, Honduras, and on way from Panama to La Unión, El Salvador.
- Sula fiber* (not *Pelecanus fiber* Linnaeus) Frantzius, Journ. Orn., 17, p. 379, 1869—Puntarenas, Gulf of Nicoya, Costa Rica.
- (?) *Dysporus leucogaster* (not *Pelecanus leucogaster* Boddaert) Sundevall, Proc. Zool. Soc. Lond., 1871, p. 125—Galápagos.
- Sula leucogastra* (not *Pelecanus leucogaster* Boddaert) Nutting, Proc. U. S. Nat. Mus., 5, p. 405, 1882—La Palma de Nicoya, Costa Rica; idem, l.c., 6, p. 378, 1883—San Juan del Sur, Nicaragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 149, 1901—part, Honduras (Bird Island, Fonseca Bay), Nicaragua (San Juan del Sur), Costa Rica (Puntarenas, La Palma), and Pearl Islands; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 596, 1938—coast of Salvador.
- Sula* sp. Townsend, Bull. Mus. Comp. Zool., 27, p. 125, 1895—Cocos Island; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 13, 1899—near Pearl Islands (crit.).
- Sula brewsteri* (not of Goss) Snodgrass and Heller, Proc. Wash. Acad. Sci., 4, p. 513, 1902—Cocos Island (descr.); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 97, 1913—part, Cocos Island (egg descr.).
- Sula leucogaster etesiaca* Peters, Bds. World, 1, p. 85, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 293, 1935—Pearl Islands, Panama; Murphy, Ocean. Bds. S. Amer., 2, p. 859, 1936 (monog.); Sassi, Temminckia, 3, p. 287, 1938—Puntarenas, Costa Rica (July); Wetmore, Smiths. Misc. Coll., 98, No. 22, p. 4, 1939 (char., range).
- Sula leucogastra plotus* (not *Pelecanus plotus* Forster) Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 30, 1931—Cocos Island.

Range.—Breeds off the Pacific coast of southern Central America (Pájaro Island, Gulf of Fonseca, Honduras; Cocos Island; San Miguel, Saboga, Pacheca, and Chepillo Islands, Pearl Archipelago; Taboguilla Island, Panama) and Colombia (Gorgona Island); straying to the coast of Costa Rica, Ecuador, and (?) the Galápagos Islands.¹

Field Museum Collection.—1: Costa Rica (Cocos Island, 1).

head and neck darker sooty brown and closely similar to *S. l. plotus*, though slightly darker and more uniform.

Birds from Cocos, Gorgona, and Pearl Islands appear to be the same, though those from the first-named locality are very slightly paler.

¹ The only specimen ever taken within the waters of the Galápagos Islands (without precise locality) is the one listed by Sundevall as *Dysporus leucogaster*

Family PHALACROCORACIDAE. Cormorants

Genus PHALACROCORAX Brisson

Phalacrocorax Brisson, Orn., 1, p. 60; 6, p. 511, 1760—type, by tautonymy, "*Phalacrocorax*" = *Pelecanus carbo* Linnaeus.

Carbo Lacépède, Tabl. Méth. Mam. Ois., p. 15, 1799—type, by tautonymy, *Pelecanus carbo* Linnaeus.

Haliæus Illiger, Prodr. Syst. Mam. Aves, p. 279, 1811—type, by subs. desig. (Ridgway, Water Bds. N. Amer., 2, p. 144, 1884), *Hydrocorax melanoleucus* Vieillot.

Carbonarius Rafinesque, Anal. Nat., p. 72, 1815—substitute name for *Carbo* Lacépède.

Stiæcarbo Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, No. 26, p. 1115, Dec., 1855—type, by subs. desig. (Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 331, 1898), *Pelecanus punctatus* "Gmelin" (=Sparrman).

Urile Bonaparte, Consp. Gen. Av., 2, p. 175, 1857—type, by tautonymy, *Pelecanus Urile* Gmelin.

Leucocarbo Bonaparte, Consp. Gen. Av., 2, p. 176, 1857—type, by subs. desig. (Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 331, 1898), *Carbo bougainvillii* Lesson.

Compsohaliæus Ridgway, in Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 145, 1884—type, by monotypy and orig. desig., *Carbo penicillatus* Brandt.

**Phalacrocorax auritus cincinatus* (Brandt). WHITE-CRESTED CORMORANT.

Carbo cincinatus Brandt, Bull. Sci. Acad. Sci. St. Pétersb., 3, No. 4, col. 55, Nov. 16, 1837—Kodiak Island, Alaska (type in Leningrad Museum).

Phalacrocorax dilophus cincinnatus Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 150, 1884 (monog.).

[*Phalacrocorax auritus*] subsp. a. *P. cincinatus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 373, 1898 (in part).

Phalacrocorax auritus cincinatus Bent, Bull. U. S. Nat. Mus., 121, p. 255, 1922 (life hist.); Peters, Bds. World, 1, p. 86, 1931 (range).

Range.—Breeds on the Pacific coast of North America from the Alaska Peninsula and Kodiak Island south to Washington (the Olympiades); in winter occasionally to California.

Field Museum Collection.—2: British Columbia (Vancouver Island, 2).

(cf. Rothschild and Hartert, Nov. Zool., 6, p. 179, 1899), provided it was correctly identified. Another questionable record is that of *Sula parva* by Milne-Edwards (Ann. Sci. Nat., (6), Zool., 12, art. 4, p. 36, 1882) from "les côtes du Chili" (spec. in Paris Museum, collector not stated).

***Phalacrocorax auritus albociliatus** Ridgway. FARALLON CORMORANT.

Phalacrocorax dilophus albociliatus Ridgway, Proc. Biol. Soc. Wash., 2, p. 94, Apr. 10, 1884—"Pacific coast of the United States from California to Cape San Lucas"—Farallon Islands, California¹ (no type extant; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 263, 1932); Brewster, Bull. Mus. Comp. Zool., 41, p. 36, 1902—near San José Island, Lower California (breeding).

Phalacrocorax auritus albociliatus Bent, Bull. U. S. Nat. Mus., 121, p. 257, 1922 (life hist.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 290, 1926—San Martín Island, Lower California; Grinnell, Univ. Calif. Pub. Zool., 32, p. 70, 1928—coasts of Lower California; Peters, Bds. World, 1, p. 86, 1931 (range); van Rossem, Trans. San Diego Soc. N. H., 7, p. 130, 1932—Gulf of California; idem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 33, 1945—Gulf of California (common resident).

Range.—Breeds on the Pacific coast of North America from Oregon to Lower California, and on inland waters in Oregon, Nevada, Utah, Arizona, and California.

Field Museum Collection.—20: Oregon (Agate Beach, Lincoln County, 2); California (Farallon Islands, 1; Monterey, 3; Carmel River, 1; Pacific Grove, 1; Kern County, 1; San Diego, 1; Hyperion, 8; San Clemente Island, 2).

***Phalacrocorax auritus auritus** (Lesson). DOUBLE-CRESTED CORMORANT.

Carbo auritus Lesson, Traité d'Orn., livr. 8, p. 605, 1831—based on *Hydrocorax dilophus* (not of Vieillot, 1817) Vieillot (and Oudart), Galerie Ois., 2, pl. 275; no locality stated (no type extant).

Phalacrocorax auritus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 370, 1898 (in part); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 152, 1901—part, eastern North America; Soper, Auk, 63, p. 16, 1946—Baffin Island.

Phalacrocorax auritus auritus Bent, Bull. U. S. Nat. Mus., 121, p. 243, 1922 (life hist.); Peters, Bds. World, 1, p. 86, 1931 (range); Behle, Condor, 38, p. 77, 1936; idem, l.c., 43, p. 288, 1941—Great Salt Lake (breeding); Hagar, Auk, 58, p. 567, 1941—vicinity of Boston, Mass. (breeding); Gross, l.c., 61, p. 513, 1944—Maine coast (nesting status).

Range.—Breeds from central Saskatchewan, northern Ontario, and Newfoundland south to northern Utah, middle Mississippi Valley, and Massachusetts; winters from Virginia to the Gulf coast and southern Mexico. Accidental on Baffin Island.

Field Museum Collection.—31: Saskatchewan (Quill Lake, 6); Utah (Bear River marshes, 1); North Dakota (Stump Lake, 10);

¹ As designated by the A.O.U. Check List, ed. 3, p. 63, 1910.

Towner County, 1); Minnesota (Rocky Point, Lake of the Woods, 1; Heron Lake, 1); Arkansas (Fayetteville, 1); Wisconsin (Beaver Dam, 1; Fox Lake, 2); Illinois (Hamilton, 1; McHenry, 1); New Brunswick (Lepreaux, 2); Massachusetts (Chatham, 1); Connecticut (Branford, 1); New York (Shelter Island, 1).

***Phalacrocorax auritus floridanus** (Audubon).¹ FLORIDA CORMORANT.

Carbo floridanus Audubon, Bds. Amer., folio ed., 3, pl. 252, 1835; idem, Orn. Biogr., 3, p. 387, 1835—Florida (type probably lost).

Graculus floridanus Bryant, Proc. Bost. Soc. N. H., 7, p. 128, 1859—Bimini Islands, Bahama Islands (breeding); Gundlach, Journ. Orn., 23, p. 400, 1875—Cuba and adjacent islets (breeding); Bonhote, Ibis, 1903, p. 312—Andros Island, Bahama Islands (breeding).

Phalacrocorax floridanus Salvin, Ibis, 1864, p. 374—Turneff Lagoon, British Honduras; idem, l.c., 1866, p. 200—Man-o'-War Cay, British Honduras; idem, l.c., 1889, p. 376—Cozumel Island.

Phalacrocorax auritus (not *Carbo auritus* Lesson) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 370, 1898—part, spec. f-r, Florida (Tarpon Springs), Texas (Corpus Christi), British Honduras (Turneff Lagoon), Yucatan (Cozumel), and Cuba (Bemba); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 152, 1901—South Atlantic and Gulf states, British Honduras (Turneff Lagoon, Man-o'-War Cay), and Cozumel Island.

Phalacrocorax auritus floridanus Todd, Ann. Carnegie Mus., 10, p. 171, 1916—Los Indios, Isle of Pines, Cuba; Bent, Bull. U. S. Nat. Mus., 121, p. 251, 1922 (life hist.); Wetmore and Swales, l.c., 155, p. 70, 1931—Hispaniola (occurrence doubtful); Peters, Bds. World, 1, p. 86, 1931 (range).

Range.—Breeds in the southeastern United States from North Carolina south to Florida and coastal Louisiana, on some of the Bahama Islands (Great Abaco, Andros, Bimini, etc.), in Cuba (formerly), and on the Isle of Pines; winters in the greater part of its breeding range and on the coast of Texas, Mexico (Cozumel Island, Contoy Island), and British Honduras (Turneff Lagoon, Man-o'-War Cay).²

Field Museum Collection.—25: North Carolina (Craven County, 2); Florida (Nassau County, 1; unspecified, 1; Punta Rassa, 1; Bassenger, 2; Kissimmee River, 1); Bahama Islands (Andros Island, 3; Interior Lake, San Salvador, 4; Great Bahama Island, 5); Cuba

¹ *Phalacrocorax auritus floridanus* (Audubon) resembles the typical race in coloration but is smaller. Wing about 300 mm.

² Its reputed occurrence in Hispaniola rests on the doubtful record by Descourtiz. "Guadeloupe," as cited by Ogilvie-Grant (l.c., p. 373, spec. 5), refers to Guadalupe Island, off Lower California, where Captain Markham obtained an immature cormorant (cf. Salvin, Proc. Zool. Soc. Lond., 1883, p. 427), doubtless *P. a. albociliatus*.

(Pinar del Rio, 1; Isle of Pines, 3); Mexico (Contoy Island, Quintana Roo, 1).

Phalacrocorax brasilianus chancho van Rossem and Hachisuka.
SONORA CORMORANT.¹

Phalacrocorax olivaceus chancho van Rossem and Hachisuka, Proc. Biol. Soc. Wash., 52, p. 9, Feb. 4, 1939—Dow Ranch (seven miles east of Tésia), lower Mayo River, Sonora, Mexico (type in coll. of Donald R. Dickey, University of California, Los Angeles); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 34, 1945—Sonora (Tobari Bay, Agiabampo, Camoa, and Tesia).

Graculus mexicanus (not *Carbo mexicanus* Brandt) Lawrence, Mem. Bost. Soc. N. H., 2, p. 316, 1874—Mazatlan, Sinaloa.

Phalacrocorax vigua subsp. a. *P. mexicanus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 381, 1898—part, spec. l, m, Presidio de Mazatlan, Sinaloa.

Phalacrocorax mexicanus Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 155, 1901—part, Mazatlan and Presidio de Mazatlan, Sinaloa.

(?) *Phalacrocorax vigua mexicanus* McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 17, 1927—Labrados (Sinaloa) and San Blas (Nayarit), Mexico.

Phalacrocorax olivaceus mexicanus Peters, Bds. World, 1, p. 86, 1931—part, northwestern Mexico.

Range.—Northwestern Mexico, in states of Sonora (Tésia, Guaymas), and Sinaloa (Mazatlan, Presidio).

***Phalacrocorax brasilianus mexicanus** (Brandt).² MEXICAN CORMORANT.

Carbo mexicanus Brandt, Bull. Sci. Acad. Sci. St. Pétersb., 3, No. 4, col. 56, Nov. 16, 1837—Mexico (type in Leningrad Museum).

Phalacrocorax mexicanus Sclater, Proc. Zool. Soc. Lond., 25, p. 207, 1857—Jalapa, Vera Cruz; Moore, l.c., 27, p. 65, 1859—Lake Petén, Guatemala; Nutting, Proc. U. S. Nat. Mus., 6, p. 378, 1883—San Juan del Sur, Nicaragua; idem, l.c., 6, p. 396, 1884—Island of Ometépe, Lake Nicaragua; Ferrari-Perez, l.c., 9, p. 169, 1886—Santa Anna, Vera Cruz, Mexico; Salvin, Ibis, 1889, p. 376—Cozumel Island; Salvin and Godman, Biol.

¹ *Phalacrocorax brasilianus chancho* van Rossem and Hachisuka: Similar to *P. b. mexicanus* (Brandt), of eastern and southern Mexico and northern Central America, but black of under parts, head and neck glossed with brownish instead of greenish or violaceous; upper parts duller, paler, and more grayish slate with the feather margins duller black and distinctly narrower. Size, particularly of bill, tarsi, and feet, distinctly smaller. Type just losing the last of the breeding plumes (van Rossem and Hachisuka, l.c.).

² *Phalacrocorax brasilianus mexicanus* (Brandt), a rather ill-defined race, differs from the nominate form by rather smaller size and by the somewhat paler central areas of the upper wing coverts and scapulars, which show more contrast with the black borders.

Several specimens from Lake Nicaragua agree perfectly with others from Mexico and Texas.

Centr.-Amer., Aves, 3, p. 155, 1901—Mexico (excepting Presidio de Mazatlan and Mazatlan) and Guatemala.

Graculus mexicanus Gundlach, Journ. Orn., 23, p. 401, 1875—Cuba (breeding).

Phalacrocorax vigua mexicanus Ridgway, Proc. U. S. Nat. Mus., 12, p. 139, 1890 (crit.); Nelson, Condor, 5, p. 139, 1903—Lake Chapala, Jalisco (breeding habits); Riley, Auk, 22, p. 350, 1905—Watlings Island, Bahama Islands; Todd, Ann. Carnegie Mus., 7, p. 409, 1911—Watlings Island, Bahama Islands; idem, l.c., 10, p. 172, 1916—Bibijagua, Isle of Pines, Cuba; Bent, Bull. U. S. Nat. Mus., 121, p. 261, 1922 (life hist.).

Phalacrocorax vigua subsp. *a. P. mexicanus* Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 381, 1898—part, spec. a-k, n-y, Texas (Brownsville, Aransas Bay, Corpus Christi), Mexico (Valles, San Luis Potosí; Tampico; Santana and Chapala, Jalisco; Cozumel Island), and Guatemala (Chiapám, Dueñas, Lake Petén).

Phalacrocorax olivaceus mexicanus Peters, Bull. Mus. Comp. Zool., 69, p. 413, 1929—Tolosa, Honduras; idem, Bds. World, 1, p. 86, 1931 (range excl. of northwestern Mexico); Griscom, Bull. Amer. Mus. N. H., 64, p. 146, 1932—Guatemala; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 67, 1938—El Salvador (Lake Olomega, San Sebastián, etc.; breeding habits); Oberholser, Bull. Dept. Conserv. State Louisiana, 28, p. 40, 1938—Louisiana.

Range.—Breeds in southern Louisiana (Vermilion Bay to Cameron Parish), southeastern Texas (lower Rio Grande Valley), and south through Mexico, Guatemala, Honduras, and El Salvador to northern Nicaragua (Lake Nicaragua); in the Bahama Islands (Watlings Island), Cuba, and the Isle of Pines.

Field Museum Collection.—17: Texas (Corpus Christi, 1; Brownsville, 7; Cameron County, 3); Mexico (Tampico, 2; unspecified, 2); El Salvador (San Sebastian, La Paz, 2).

***Phalacrocorax brasilianus brasilianus** (Gmelin). BRAZILIAN CORMORANT.

Procellaria brasiliana Gmelin, Syst. Nat., 1, (2), p. 564, 1789—based on "Majagué" Piso, Ind. utriusque Re Nat. Med., p. 83, 1658; northeastern Brazil.¹

¹ Gmelin's description rests exclusively on Piso's account, all his references (Brisson, Buffon, Raius) going back to the same source. His name has been rejected by Ridgway (Proc. U. S. Nat. Mus., 12, p. 138, 1890) and subsequent authors as not applicable to the present species. While Piso's description and crude drawing are admittedly unsatisfactory, his statement "colli tantum parte anteriori flavis plumis decorata" can easily be construed as referring to the naked gular skin (dark yellow in life), which Piso, who made up his description from a drawing, might have mistaken for feathers. Moreover, we are informed by Schneider (Journ. Orn., 86, p. 83, 1938) that the original pictures in the Mentzel Collection at Berlin, inscribed "Miguajuba, Majaja," and "Miguá" respectively, which formed the basis of Piso's diagnosis, represent indeed the Brazilian Cormorant. Aside from the aforesaid discrepancy, there is nothing in Piso's account that could not be applied to the bird.

- Pelecanus olivaceus* Humboldt, Rec. Obs. Zool. Anat. Comp., 1, livr. 1, p. 47 (footnote), 1805—Banco, Rio Magdalena, Colombia (type lost); idem, Beob. Zool., livr. 1, p. 10, 1806—same locality (cf. Richmond, Proc. Biol. Soc. Wash., 39, p. 142, 1926).
- Hydrocorax vigua* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 90, 1817—based on "Zaramagullón negro" Azara, Apunt. Hist. Nat. Páx., 4, p. 395, No. 423; Paraguay and Rio de la Plata.
- Haliæus brasilianus* Lichtenstein, Verz. Doubl. Berliner Mus., p. 86, 1823—Brazil; Wied, Beitr. Naturg. Bras., 4, (2), p. 895, 1833—eastern Brazil; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 764, 1849—British Guiana; Burmeister, Syst. Uebers. Th. Bras., 3, p. 460, 1856—Brazil.
- Phalacrocorax niger* King, Zool. Journ., 4, No. 13, April to July, p. 101, 1828—Straits of Magellan (type lost).
- Carbo mystacalis* Lesson, Traité d'Orn., livr. 8, p. 604, 1831—Brazil (cotypes in Paris Museum; cf. Pucheran, Rev. Mag. Zool., (2), 2, p. 628, 1850, and Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 64, 1929).
- Haliæus gracilis* Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Curios., 16, Suppl., p. 113, pl. 23, 1834—San Fernando, Colchagua, Chile (descr. of young; type in Berlin Museum); Philippi, Anal. Univ. Chile, 31, p. 323, 1868 (crit.).
- Phalacrocorax brasiliensis* Fraser, Proc. Zool. Soc. Lond., 11, p. 119, 1843—Los Guauros, Valdivia Bay, Chile; Sclater and Salvin, l.c., 1873, p. 304—Cashiboya, upper Ucayali, and Marañón, Peru; Macfarlane, Ibis, 1887, p. 207—Callao Bay, Peru; Oustalet, Miss. Sci. Cap Horn, 6, Zool., p. B. 142, 1891—Patagonia (Isla de los Leones, 45° 6' 20" S. lat.; Missioneros), Tierra del Fuego (Orange Bay; Packsaddle Bay), Magellan Straits (Port Churrucha), and New Year Sound, False Cape Horn.
- Graculus brasilianus* Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 490, 1847—Chile; Boeck, Naumannia, 1855, p. 513—Valdivia, Chile; Germain, Proc. Bost. Soc. N. H., 7, p. 315, 1860—Chile (breeding habits); Schlegel, Mus. Pays-Bas, livr. 4, Pelecani, p. 22, 1863—Brazil, Cayenne, and "Côte ferme" (= Venezuela); Philippi, Anal. Univ. Chile, 31, p. 291, 1868—Chile; Pelzeln, Orn. Bras., 3, p. 325, 1870—Rio de Janeiro (Sapitiba), São Paulo (Ypanemá), Paraná (Rio do Boraxudo), and Pará (Cajútuba), Brazil; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 553—Junín, Peru; Streets, Bull. U. S. Nat. Mus., 7, p. 24, 1877—Concepción Bay, Chile.
- Phalacrocorax gracilis* Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 132, 1853—coast of Chile.
- Phalacrocorax brasilianus* Hartlaub, Naumannia, 3, p. 219, 1853—Corral Bay, Valdivia; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 205, pl. 28, 1855—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, pp. 336, 340—Chile; idem and Salvin, l.c., 1868, p. 146—Conchitas, Buenos Aires; idem, l.c., 1869, p. 601—Cosnipata, Cuzco, Peru; idem, Ibis, 1870, p. 499—Goods Bay, Straits of Magellan; Salvin, Proc. Zool. Soc. Lond., 1870, p. 219—Castillo, Veraguas; Berlepsch, Journ. Orn., 22, p. 282, 1874—Blumenau, Santa Catharina; Allen, Bull. Mus. Comp. Zool., 3, p. 358, 1876—Carapata, Lake Titicaca; Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 17—

Laguna de Tungasuca, Cuzco, Peru; Durnford, *Ibis*, 1876, p. 162—Flores Island, Buenos Aires; idem, l.c., 1877, pp. 40, 188—Chubut Valley and Prov. Buenos Aires (Baradéro); Taczanowski, *Proc. Zool. Soc. Lond.*, 1877, p. 745—Tumbez, Peru; Durnford, *Ibis*, 1878, p. 398—Sengel and Sengelen rivers, Chubut, Patagonia; Doering, *Inf. Ofic. Exp. Rio Negro, Zool.*, 1, p. 52, 1881—Rio Colorado and Rio Negro; White, *Proc. Zool. Soc. Lond.*, 1882, p. 624—Salto, Buenos Aires; Salvin, l.c., 1883, p. 427—Paracas Bay, Peru; Barrows, *Auk*, 1, p. 270, 1884—Concepción del Uruguay, Entre Ríos; Berlepsch and Ihering, *Zeits. Ges. Orn.*, 2, p. 173, 1885—Rio Grande do Sul; Salvin, *Ibis*, 1886, p. 168—Camacusa, British Guiana; Taczanowski, *Orn. Pér.*, 3, p. 429, 1886—Peruvian localities; Berlepsch, *Journ. Orn.*, 35, p. 28, 1887—Rio Pilcomayo, Chaco; Zeledón, *Anal. Mus. Nac. Costa Rica*, 1, p. 132, 1887—Rio Súcio, Costa Rica; Allen, *Bull. Amer. Mus. N. H.*, 2, p. 111, 1889—Lake Titicaca; Kerr, *Ibis*, 1892, p. 144—Paraná, Paraguay and lower Pilcomayo rivers; Hartert, l.c., 1893, pp. 302, 326—Aruba and Curaçao Islands; Cherrie, *Anal. Inst. Fís.-Geogr. Mus. Nac. Costa Rica*, 4, p. 147, 1893—Rio Grande de Térraba, Costa Rica; Aplin, *Ibis*, 1894, p. 197—Uruguay; Salvadori, *Boll. Mus. Zool. Torino*, 10, No. 208, p. 21, 1895—Corumbá, Matto Grosso; Reed, *Anal. Univ. Chile*, 93, p. 206, 1896—Corral, Valdivia, and the whole coast of Chile; Lane, *Ibis*, 1897, p. 186—Laraquete, Arauco, and Corral, Valdivia, Chile (habits); Schalow, *Zool. Jahrb., Suppl.*, 4, p. 688, 1898—Isla dos Pájaros (Coquimbo), Villarrica, and Lago Llanquihue, Chile; Albert, *Anal. Univ. Chile*, 103, p. 842, 1899—Chile (monog.); Ihering, *Rev. Mus. Paul.*, 3, p. 370, 1899—Iguapé, São Paulo; Kerr, *Ibis*, 1901, p. 231—Paraguay (Villa Concepción; Riacho Verde; Chaco); Goodfellow, l.c., 1902, p. 226—upper Napo, Ecuador; Ménégau, *Bull. Soc. Phil. Paris*, (10), 1, p. 219, 1909—Lake Titicaca, Bolivia; Grant, *Ibis*, 1911, p. 335—Tebicuarí and Monte Alto, Paraguay; Bullock, *Rev. Chil. Hist. Nat.*, 33, p. 207, 1929—Angol, Malleco, Chile.

Carbo brasilianus(?) Cassin, *Proc. Acad. Nat. Sci. Phila.*, 1860, p. 197—Rio Truando, Colombia.

Haliaeus brasiliensis Burmeister, *Journ. Orn.*, 8, p. 267, 1860—Rio Paraná, Argentina; idem, *Reise La Plata St.*, 2, p. 520, 1861—Rio Paraná.

Graculus brasiliensis Pelzeln, *Reise Novara, Zool.*, 1, Vögel, p. 158, 1865—Chile; Reinhardt, *Vidensk. Medd. Naturhist. Foren.*, 1870, p. 20—Lagõa Santa and Lagõa dos Pitos, Minas Geraes; Waugh and Lataste, *Act. Soc. Sci. Chile*, 4, p. clxxiii, 1894—San Alfonso (Quillota), Valparaiso; iidem, l.c., 5, p. lx, 1895—Peñaflor, Santiago, Chile.

Phalacrocorax vigua Ridgway, *Proc. U. S. Nat. Mus.*, 12, p. 138, 1890—Port Otway, Chile (crit.); Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 378, 1898—part, spec. a-n, r-d', Chubut, Buenos Aires (Santa Elena), Brazil (Rio de Janeiro, Bahía), Cayenne, British Guiana (Camacusa), Costa Rica, Veraguas (Castillo), Ecuador (Sarayacu), Peru (Laguna de Langui, Paracas Bay), and Chile; Salvadori and Festa, *Boll. Mus. Zool. Torino*, 14, No. 339, p. 13, 1899—Rio Coconati and Rio Sabana, Darien, Panama; iidem, l.c., 15, No. 368, p. 48, 1900—Rio Zamora and Rio Peripa, Ecuador; Salvadori, *Ann. Mus. Civ. Stor. Nat. Genova*, 40, p. 627, 1900—Isla de Leones, Santa Cruz, Patagonia; Allen, *Bull. Amer. Mus. N. H.*, 13, p. 124,

1900—Bonda, Santa Marta, Colombia; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 154, 1901—part, Costa Rica and Panama; Berlepsch and Hartert, *Nov. Zool.*, 9, p. 127, 1902—Caicara and Quiribana de Caicara, Orinoco, Venezuela; Berlepsch and Stolzmann, *Proc. Zool. Soc. Lond.*, 1902, (2), p. 47—Ingapirca and La Merced, Junín, Peru; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 8, p. 395, 1902—Tierra del Fuego; Lillo, l.c., p. 206, 1902—Rio Calera and Famaillá, Tucumán; Lönnberg, *Ibis*, 1903, p. 453—San Luis, near Tarija, Bolivia; Nicoll, l.c., 1904, p. 47—Gray's Harbour, Straits of Magellan; Ihering, *Cat. Faun. Braz.*, 1, p. 79, 1907—São Paulo (Iguapé) and Rio Grande do Sul (Novo Hamburgo); Berlepsch, *Nov. Zool.*, 15, p. 311, 1908—Cayenne; Hartert and Venturi, l.c., 16, p. 241, 1909—Córdoba (Cosquin) and Buenos Aires (Est. San Martín Monte; Barracas al Sud); Cory, *Field Mus. Nat. Hist.*, Orn. Ser., 1, pp. 195, 234, 1909—Aruba and Margarita Islands; Paessler, *Orn. Monatsber.*, 17, p. 102, 1909—Corral, Valdivia, Chile; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 237, 1910—Tierra del Fuego; Stone, *Proc. Acad. Nat. Sci. Phila.*, 65, p. 194, 1913—Jacopita, Manimo River, Venezuela; Snethlage, *Bol. Mus. Goeldi*, 8, p. 118, 1914—Marajó (Pacoval), Brazil; Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, Orn., p. 508, 1915—Patagonia (descr.); Cherrie, *Sci. Bull.*, Mus. Brookl. Inst., 2, p. 367, 1916—Orinoco Valley as far as the falls of Atures, Venezuela; Doello-Jurado, *El Hornero*, 1, p. 11, 1917—Puerto Deseado, Patagonia; Coker, *Proc. U. S. Nat. Mus.*, 56, p. 478, 1919—Lobos de Tierra Islands, Peru (breeding); Chubb, *Ibis*, 1919, p. 278—San Lorenzo Island, Callao, Peru; Tremoleras, *El Hornero*, 2, p. 16, 1920—Uruguay (Colonia, San José, Montevideo, Canelones); Delacour, *Ibis*, 1923, p. 144—northern Venezuela; Housse, *Rev. Chil. Hist. Nat.*, 28, p. 54, 1924—Isla La Mocha, Arauco, Chile; Jaffuel and Pirion, l.c., 31, p. 114, 1927—Marga-Marga, Valparaiso, Chile.

Phalacrocorax sp. inc. Holland, *Ibis*, 1897, p. 168—Santa Elena, Buenos Aires.

Phalacrocorax vigua vigua Thayer and Bangs, *Bull. Mus. Comp. Zool.*, 46, p. 141, 1905—San Miguel and Saboga Islands, Pearl Archipelago, Panama (breeding); Carriker, *Ann. Carnegie Mus.*, 6, p. 438, 1910—vicinity of San José, Matina River, and Guácimo, Costa Rica; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 236, 1917—Cali (Cauca), Magdalena Valley, and Ciénaga, Colombia; Stone, *Proc. Acad. Nat. Sci. Phila.*, 70, p. 248, 1918—Gatún Lake, Panama; Rendahl, *Ark. Zool.*, 13, No. 4, p. 11, 1920—San Elmo and Pacheca Islands, Pearl Islands (breeding); Barros, *Rev. Chil. Hist. Nat.*, 24, p. 46, 1920—Nilahue, Curicó, Chile; idem, l.c., 25, p. 174, 1921—Rio Aconcagua, Aconcagua, Chile; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 132, 1922—Bonda and Trojas de Cataca, Colombia; Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 53, 1926—Paraguay, Chaco, Formosa, Buenos Aires, and Uruguay; idem, *Univ. Calif. Pub. Zool.*, 24, p. 412, 1926—Bariloche, Rio Negro; Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 213, 1926—Puná Island, Ecuador; Friedmann, *Bull. Mus. Comp. Zool.*, 68, p. 147, 1927—Santa Elena Island, Santa Fé.

Carbo vigua Hellmayr, *Nov. Zool.*, 14, p. 28, 1907—Urucuritúba, Rio Tapajóz; idem, *Proc. Zool. Soc. Lond.*, 1911, p. 1209—Noanamá, Chocó, Colombia; Chrostowski, *Compt. Rend. Soc. Scient. Varsovie*, 5, pp. 466, 494, 1912—

Vera Guarany, Paraná; Lönnberg and Rendahl, *Ark. Zool.*, **14**, No. 25, p. 29, 1922—Yaguarcocha, San Pedro, Chilló, and Santo Domingo, Ecuador.

Phalacrocorax olivaceus olivaceus Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, **12**, p. 500, 1929—coast of Piauí and Maranhão, Brazil; Naumburg, *Bull. Amer. Mus. N. H.*, **60**, p. 100, 1930—Descalvados, Matto Grosso; Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp.*, *Vögel*, p. 48, 1930—San José, Formosa; Peters, *Bds. World*, **1**, p. 86, 1931 (range); idem, *Bull. Mus. Comp. Zool.*, **71**, p. 307, 1931—Manati and Western rivers, Almirante, Panama; idem, *l.c.*, p. 361, 1931—Ciénaga Grande and Rio Frio, Magdalena, Colombia; Griscom, *l.c.*, **72**, p. 310, 1932—Permé, Panama; Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, **19**, p. 297, 1932—Chile (range);¹ Belcher and Smooker, *Ibis*, 1934, p. 578—Caroni Swamp, Trinidad (visitor); Reynolds, *l.c.*, 1935, p. 80—Wollaston Islands, Cape Horn region; Griscom, *Bull. Mus. Comp. Zool.*, **78**, p. 293, 1935—Panama; Bullock, *Rev. Chil. Hist. Nat.*, **39**, p. 242, 1935—Isla la Mocha, Chile; Murphy, *Ocean. Bds. S. Amer.*, **2**, p. 909, 1936 (monog.); Philippi, *El Hornero*, **6**, p. 234, 1936—Arica, Tacna, Chile; Pinto, *Rev. Mus. Paul.*, **22**, p. 26, 1938—Pará (Lago Cuipéua), Bahía (Barra do Rio Grande, Ilha Madre de Deus), Minas Geraes (Pirapóra), São Paulo (Canaanéa, Ilha do Cardoso), and Rio Grande do Sul (Novo Hamburgo).

Phalacrocorax olivaceus hornensis Murphy, *Ocean. Bds. S. Amer.*, **2**, p. 915, 1936—Bertrand Island (south of Navarino Island), Chile (type in American Museum of Natural History, New York).

Range.—Coasts, lakes, and rivers of Central and South America from Costa Rica to Tierra del Fuego and the Cape Horn region.²

Field Museum Collection.—33: Dutch West Indies (Aruba, 1); Venezuela (Paramo Culata, Merida, 1; Lake Valencia, 6; Margarita Island, 2); British Guiana (unspecified, 1); Colombia (unspecified, 1); Ecuador (Isla Silva Sur, Province de los Rios, 1; Piedras, 1; Pucayacu, 1); Bolivia (Vacas, Cochabamba, 2; Rio Surutu, Santa Cruz, 3); Paraguay, Chaco (Guachalla, Rio Pilcomayo, 580 km. west of Ascuncion, 1); Argentina (Rio Paranay, Misiones, 1; Resistencia, Chaco, 1; Concepcion, Tucumán, 8; Puerto Deseado, Santa Cruz, 1); Chile (Malinka, Ascension Island, Chilóe, 1).

**Phalacrocorax carbo carbo* (Linnaeus). NORTH ATLANTIC CORMORANT.

Pelecanus Carbo Linnaeus, *Syst. Nat.*, 10th ed., **1**, p. 133, 1758—based principally on *Faun. Svec.*, No. 116; Sweden (restricted by Hartert,

¹ *Phalacrocorax promaucanus* Philippi (*Anal. Univ. Chile*, **103**, p. 674, 1899—central provinces of Chile; idem, *Arch. Naturg.*, **65**, (1), p. 173, 1899; idem, *Anal. Mus. Nac. Chile*, **15**, p. 107, pl. 51, 1902—type, from Matanzas, coast of Colchagua, in National Museum, Chile) cannot be made out with certainty. Possibly based upon a juvenile specimen of *P. b. brasiliensis*.

² Birds from the southern end of South America (Straits of Magellan, Tierra del Fuego, Cape Horn region) are on average slightly smaller (wing, 265–285;

Vög. Palae. Fauna, 2, p. 1387, 1920, to the "rock-nesting form of the North Atlantic Ocean").

Carbo glacialis Brehm, Ornith., 1, p. 53, 1824; idem, Handb. Naturg. Vög. Deutschl., p. 817, 1831—Greenland to the Färoes, in winter to Iceland and the German coast of the North Sea (type evidently lost);¹ Hartert, Nov. Zool., 23, p. 294, 1916 (crit.).

Carbo macrorhynchos Lesson, Traité d'Orn., livr. 8, p. 604, 1831—"Terre Nueve"—Newfoundland (type formerly in Paris Museum; cf. Pucheran, Rev. Mag. Zool., (2), 2, p. 537, 1850 [crit.], and Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 65, 1929).

Graculus americanus Reichenbach, Vollst. Naturg. Schwimmvögel, pl. cccI (=xxxv^e), figs. 2746-49, 1850—no locality given, but presumably North America.

Phalacrocorax carbo Winge, Medd. Grønl., 21, p. 243, 1898—Greenland; Bent, Bull. U. S. Nat. Mus., 121, p. 236, 1922 (life hist.); Buchheister, Audubon Mag., New York, 46, p. 14, 1944—Maine (status).

Phalacrocorax carbo carbo Peters, Bds. World, 1, p. 87, 1931 (range); Lewis, Auk, 58, p. 360, 1941—Canada (breeding localities).

Range.—Bred formerly from western Greenland (Godhaven) and Baffin Land (Cumberland Sound) south to Newfoundland, southern Labrador, and Nova Scotia (extraliminally breeding in Iceland, the Färoe Islands, British Isles, and northern Scandinavia east to the Kola Peninsula); in winter south to New York (Long Island), Maryland (Chesapeake Bay), and Virginia.

Field Museum Collection.—9: Quebec (Cape Whittle, 1); Nova Scotia (Cape Breton, 2); New Brunswick (St. Johns, 1; White Horse Island, 2); Maine (Brewer, 1; Bangor, 2).

***Phalacrocorax penicillatus (Brandt). BRANDT'S CORMORANT.**

Carbo penicillatus Brandt, Bull. Sci. Acad. Sci. St. Pétersb., 3, No. 4, col. 55, Nov. 16, 1837—no locality stated (type in Leningrad Museum).

Phalacrocorax townsendi Audubon, Bds. Amer. (folio ed.), 4, pl. 412, fig. 2, 1838; idem, Orn. Biog., 5, p. 150, 1839—mouth of Columbia River (type in U. S. National Museum; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 17).

Phalacrocorax penicillatus Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 363, 1898 (monog.); Bent, Bull. U. S. Nat. Mus., 121, p. 265, 1922 (life hist.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 290, 1926—Guadalupe Island (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 70, 1928—Lower California; Peters, Bds. World, 1, p. 89, 1931 (range); van Rossem, Trans.

bill, 46-52 mm.), but the divergency is too insignificant to warrant recognition in nomenclature. The earliest name for this disputable form is *P. niger* King, based on an example from the Straits of Magellan.

¹ Not listed by Hartert among the types in the Brehm Collection (Nov. Zool., 25, pp. 4-63, 1918).

San Diego Soc. N. H., 7, p. 130, 1932—Tiburón Island, Sonora; idem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 34, 1945—Sonoran coast (resident).

Range.—Breeds on the Pacific coast of North America from southern Alaska (Forrester Island) to Cape San Lucas, Lower California.

Field Museum Collection.—36: British Columbia (Vancouver Island, 1); California (Bear Valley, 1; Trinidad, 1; Santa Barbara, 1; La Patera Point, 2; Eureka, 1; Monterey, 12; Carmel Bay, 3; Carmel River, 1; San Diego, 1; San Clemente Island, 4; Hyperion, 8).

***Phalacrocorax pelagicus pelagicus Pallas. PELAGIC CORMORANT.**

Phalacrocorax pelagicus Pallas, Zoogr. Rosso-Asiat., 2, p. 303, pl. 76, 1811—East Kamtchatka and the American [= Aleutian] Islands; Stejneger, Bull. U. S. Nat. Mus., 29, p. 187, 1885—Bering and Copper Islands (plumages); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 360, 1898 (in part).

Phalacrocorax pelagicus robustus Ridgway, in Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 160, 1884—coast of Alaska (type in U. S. National Museum); Preble and McAtee, N. Amer. Fauna, 46, p. 40, 1923—Pribilof Islands (Sealion Rock, St. Paul and St. George Islands).

Phalacrocorax pelagicus pelagicus Bent, Bull. U. S. Nat. Mus., 121, p. 271, 1922 (life hist.); Peters, Bds. World, 1, p. 89, 1931 (range); Swarth, Pac. Coast Avifauna, 22, p. 18, 1934—Nunivak Island (breeding); Sutton and Wilson, Condor, 48, p. 85, 1946—Attu Island (wintering).

Range.—Breeds on the Chukchi Peninsula, Kamchatka, the Commander, Kurile, and Aleutian Islands, and on the coast and islands of northwestern North America, from Bering Strait to southern Alaska and the coastal islands of British Columbia; south in winter to Japan, China, and Washington (Puget Sound).

Field Museum Collection.—10: Alaska (Diomede Island, 2; St. Lawrence Island, 3; Morzhovoi Bay, 1; St. Lazaria Island, Sitka Bay, 3); British Columbia (Vancouver Island, 1).

***Phalacrocorax pelagicus resplendens Audubon. BAIRD'S CORMORANT.**

Phalacrocorax resplendens Audubon, Bds. Amer. (folio ed.), 4, pl. 412, fig. 1, 1838; idem, Orn. Biog., 5, p. 148, 1839—Cape Disappointment, Washington (type lost; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 17).

Graculus bairdii (Gruber MS.) Cooper, Proc. Acad. Nat. Sci. Phila., 1865, p. 5—Farallon Islands, California (no veritable type identifiable; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 263, 1932).

Phalacrocorax pelagicus (not of Pallas) Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 360, 1898—part, spec. w-z, California (San Francisco, Monterey,

Santa Barbara and Farallon Islands); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 151, 1901—part, Mazatlan, Lower California, etc.

Phalacrocorax pelagicus resplendens Bent, Bull. U. S. Nat. Mus., 121, p. 276, 1922 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 71, 1928—sea coast of northwestern Lower California (breeding); Peters, Bds. World, 1, p. 89, 1931 (range).

Range.—Pacific coast of North America, from extreme southern British Columbia (Sidney Island, near Victoria) to Lower California and Sinaloa (Mazatlan).¹

Field Museum Collection.—20: British Columbia (Victoria, 1); California (Point Reyes, 2; Westport, 1; Eureka, 1; Trinidad, 1; Carmel Bay, 1; Pacific Grove, 4; Monterey, 8; Castle Island, 1).

***Phalacrocorax urile** (Gmelin). RED-FACED CORMORANT.

Pelecanus urile Gmelin,² Syst. Nat., 1, (2), p. 575, 1789—based on "Red-faced Cormorant" Pennant (Arct. Zool., 2, p. 584, C), "Red-faced Shag" Latham (Gen. Syn. Bds., 3, (2), p. 601, No. 17), and "Urile" Steller (Hist. Kamtschatka, p. 157); Kamchatka.

Phalacrocorax bicristatus Pallas, Zoogr. Rosso-Asiat., 2, p. 301, pl. 75, fig. 2, 1811—Kamchatka; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 358, 1898 (monog.).

Phalacrocorax urile Stejneger, Bull. U. S. Nat. Mus., 29, p. 181, 1885—Copper Island (nomencl., crit., eggs descr.); Palmer, in The Fur Seals and Fur Seal Islands, 3, p. 377, 1899—Pribilof Islands (downy and juv. plumages, habits); Hartert, Nov. Zool., 27, p. 148, 1920—Bering Island; Bent, Bull. U. S. Nat. Mus., 121, p. 279, 1922 (life hist.); Preble and McAtee, N. Amer. Fauna, 46, 1923—Pribilof Islands (breeding); Peters, Bds. World, 1, p. 90, 1931 (range); Gabrielson, Auk, 61, p. 113, 1944—Bogoslof and Pribilof Islands, Alaska (nesting).

Range.—Breeds on the Aleutian, Pribilof, Bering and Copper Islands, as well as on the Kamchatkan coast and in the Kurile Islands, northeastern Asia.

Field Museum Collection.—3: Alaska (St. George Island, 1; Walrus Island, 1; Bering Sea, 1).

***Phalacrocorax magellanicus** (Gmelin). MAGELLANIC CORMORANT.

Pelecanus magellanicus Gmelin, Syst. Nat., 1, (2), p. 576, 1789—based on "Magellanic Shag" Latham, Gen. Syn. Bds., 3, (2), p. 604, Tierra del

¹ The extinct *Phalacrocorax perspicillatus* Pallas, of Bering Island, has never been found on American territory.

² As fully explained by Stejneger, all the references quoted by Gmelin pertain to the Red-faced Cormorant. On the other hand, *Pelecanus violaceus* Gmelin (Syst. Nat., 1, (2), p. 575, 1789) is wholly undeterminable.

Fuego and Staten Island; Forster, *Descr. Anim.*, p. 356, 1844—Isla Año Nuevo and Staten Island.

Phalacrocorax sarmientonus King, *Proc. Comm. Sci. Corresp. Zool. Soc. Lond.*, 1, p. 30, March 2, 1831—Straits of Magellan (type apparently lost).

Phalacrocorax erythrops King, *Proc. Comm. Sci. Corresp. Zool. Soc. Lond.*, 1, p. 30, March 2, 1831—Straits of Magellan (type in British Museum).

Carbo leucotis (Cuvier MS.) Lesson, *Traité d'Orn.*, livr. 8, p. 604, 1831—Falkland Islands (cotypes in Paris Museum; cf. Pucheran, *Rev. Mag. Zool.*, (2), 2, p. 536, 1850, and Berlioz, *Bull. Mus. Hist. Nat. Paris*, (2), 1, p. 65, 1929).

Carbo ater Lesson, *Traité d'Orn.*, livr. 8, p. 604, 1831—"de la baie des Chiens marins, à la Nouvelle Hollande," errore, = probably Falkland Islands (type in Paris Museum); Pucheran, *Rev. Mag. Zool.*, (2), 2, p. 627, 1850 (crit.); Berlioz, *Bull. Mus. Hist. Nat. Paris*, 33, p. 350, 1927 (=young).

Graculus sarmientonus Des Murs, in Gay, *Hist. Fís. Pol. Chile, Zool.*, 1, p. 490, 1847 (ex King).

Graculus magellanicus Des Murs, in Gay, *Hist. Fís. Pol. Chile, Zool.*, 1, p. 492, 1847—Tierra del Fuego and Straits of Magellan; Boeck, *Naumannia*, 1855, p. 513—Valdivia, Chile; Germain, *Proc. Bost. Soc. N. H.*, 7, p. 315, 1860—Chiloé Archipelago (breeding habits); Schlegel, *Mus. Pays-Bas*, livr. 4, Pelecani, p. 21, 1863—Falkland Islands; Pelzeln, *Reise Novara, Zool.*, 1, Vögel, pp. 159, 163, 1865—Chiloé Islands, Chile; Philippi, *Anal. Univ. Chile*, 31, p. 291, 1868—Chiloé.

Phalacrocorax magellanicus Hombron and Jacquinot, *Voy. Pôle Sud, Zool.*, 3, p. 128, pl. 31 bis, fig. 1 (adult), 2 (young), 1853; Sclater, *Proc. Zool. Soc. Lond.*, 28, p. 391, 1860—Falkland Islands; Abbott, *Ibis*, 1861, p. 167—Falkland Islands; Sclater and Salvin, *l.c.*, 1870, p. 499—Port Churruca and Port Tamar, Straits of Magellan; Sharpe, *Proc. Zool. Soc. Lond.*, 1881, p. 11—Trinidad Channel, Magellan Straits; Oustalet, *Miss. Sci. Cap Horn, Zool.*, 6, p. B. 150, 1891—Tierra del Fuego (Orange Bay; Romanche Channel), Cape Horn Archipelago (Maxwell Bay; Hermit Island), and Straits of Magellan (Port Famine; Magdalena Island); Reed, *Anal. Univ. Chile*, 93, p. 207, 1896—Chile; Schalow, *Zool. Jahrb., Suppl.*, 4, p. 681, pl. 37, 1898—Chile (Valparaiso; Isla Lagartiza, Calbuco, Llanquihue); Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 388, 1898—Staten Island, Straits of Magellan (Trinidad Channel, Port Tamar), and Falkland Islands; Albert, *Anal. Univ. Chile*, 103, p. 836, 1899—Llanquihue and Chiloé (monog.); Salvadori, *Ann. Mus. Civ. Stor. Nat. Genova*, 40, p. 628, 1900—Staten Island (Penguin Rookery, Puerto Cook); Dabbene, *Anal. Mus. Nac. Buenos Aires*, 8, p. 396, 1902—Tierra del Fuego; Philippi, *Anal. Mus. Nac. Chile*, 15, p. 105, 1902—Chiloé Island; Vallentin, *Mem. Proc. Manchester Lit. Phil. Soc.*, 48, No. 23, p. 32, 1904—Falkland Islands (breeding); Nicoll, *Ibis*, 1904, p. 48—Churruca Bay and Puerto Dixon, Straits of Magellan; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 236, 1910—Tierra del Fuego and Staten Island; Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, Orn., p. 512, 1915 (monog.); Brooks, *Bull. Mus. Comp. Zool.*, 61, p. 157, 1917—Falkland Islands; Bennett, *Ibis*, 1926, p. 328—Falkland Islands; Peters, *Bds. World*, 1, p. 90, 1931 (range); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 19, p. 300, 1932—Melinka,

- Ascension Island, Guaitecas Islands, Chile (range in Chile); Reynolds, Ibis, 1932, p. 36—Snipe and Woodcock Islands, Beagle Channel; idem, El Hornero, 5, p. 349, 1934—Tierra del Fuego; idem, Ibis, 1935, p. 80—Wollaston and Hermit Islands, Cape Horn (nesting); Murphy, Ocean. Bds. S. Amer., 2, p. 895, 1936 (monog.).
- Urile magellanicus*(a) Bonaparte, Consp. Gen. Av., 2, p. 177, 1857 (diag.); Ridgway, Proc. U. S. Nat. Mus., 12, p. 139, 1890—San Martín Island, Straits of Magellan.
- Carbo magellanicus* Cassin, U. S. Expl. Exp., Mamm. Orn., p. 370, 1858—Orange Harbour, Tierra del Fuego.
- Haliaeetus penicillatus* (not *Carbo penicillatus* Brandt) C. Burmeister, Anal. Mus. Nac. Buenos Aires, 3, p. 249, 1888—Santa Cruz, Patagonia.
- Phalacrocorax eumegethes* Philippi, Anal. Univ. Chile, 103, p. 673, 1899—Reloncaví Bay, Llanquihue, Chile (type in Museo Nacional, Santiago); idem, Arch. Naturg., 65, (1), p. 173, 1899—Calbuco, Reloncaví Bay.
- Phalacrocorax gracilis* (not *Haliaeetus gracilis* Meyen) Philippi, Anal. Mus. Nac. Chile, 15, p. 105, pl. 49, 1902—Calbuco (Llanquihue) and Valdivia.

Range.—Coasts of southern South America from Valdivia, Chile, and Rio Santa Cruz, Patagonia, south to the Cape Horn region, and the Falkland Islands; accidental as far north as Valparaiso and Buenos Aires.

Field Museum Collection.—3: Chile (Melinka, Ascensión Island, Guaitecas Islands, 2; Isla Hermita, Cape Horn, 1).

Phalacrocorax bougainvillii (Lesson). BOUGAINVILLE'S CORMORANT.

- Carbo bougainvillii* Lesson, Journ. Navig. Thétis et Espérance, 2, p. 331, 1837—Valparaiso, Chile (location of type unknown).
- Carbo albigula* Brandt, Bull. Sci. Acad. Sci. St. Pétersb., 3, No. 4, col. 57, Nov. 16, 1837—Chile (type in Leningrad Museum).
- Phalacrocorax albigula* Gray, List Spec. Bds. Brit. Mus., 3, p. 187, 1844—Valparaiso, Chile; Fraser, Proc. Zool. Soc. Lond., 12, p. 157, "1844," 1845—coast of Chile.
- Haliaeetus albigula* Tschudi, Unters. Faun. Peru., Orn., p. 313, 1846—Islay (Arequipa), Peru, and Arica (Tacna), Chile.
- Graculus bougainvillii* Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 491, 1847—Valparaiso (ex Lesson); Philippi, Anal. Univ. Chile, 31, p. 291, 1868 (ex Lesson); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 554—Chorillos, Lima, Peru.
- Graculus albigula* Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 491, 1847—Chile (ex Brandt); Philippi, Anal. Univ. Chile, 31, p. 291, 1868—Chile (ex Brandt).
- Urile bougainvillii* Bonaparte, Consp. Gen. Av., 2, p. 176, 1857—Peru (diag.).
- Phalacrocorax bougainvillii*(ei) Selater, Proc. Zool. Soc. Lond., 1867, pp. 336, 340—Chile (crit.); Taczanowski, Orn. Pér., 3, p. 430, 1886 (Peruvian

localities); Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 387, 1898—Peru and Chile (Valparaiso); Coker, Proc. U. S. Nat. Mus., 56, p. 474, pls. 61–63, 1919—Lobos de Tierra, Ballestas, and Chinchas Islands (breeding habits); Barros, Rev. Chil. Hist. Nat., 30, p. 138, 1926—San Felipe and Los Andes, Aconcagua, Chile; Murphy, Bird Islands of Peru, p. 73, 1925—Peru south to Corral, Valdivia, Chile; Chapman, Bull. Amer. Mus. N. H., 55, p. 213, 1926—Guayaquil (Feb. 28) and Santa Clara Island (Feb. 26), Ecuador; Peters, Bds. World, 1, p. 91, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 299, 1932—Chile; Bullock, Rev. Chil. Hist. Nat., 39, p. 242, 1935—Isla la Mocha, Chile (nesting); Philippi, El Hornero, 6, p. 234, 1936—coast of Arica and Atacama (Chañaral), Chile; Murphy, Ocean. Bds. S. Amer., 2, p. 899, 1936 (monog.).

Phalacrocorax albigula Albert, Anal. Univ. Chile, 103, p. 845, 1899—Prov. Santiago, Chile (monog., crit.).

Phalacrocorax ventralis Philippi, Anal. Mus. Nac. Chile, 15, p. 106, pl. 50, 1902—Santiago, Chile (descr. of young; cotypes in Museo Nacional, Santiago; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago de Chile, 13, p. 28, 1930).

Range.—Pacific coast of South America from southwestern Ecuador (Gulf of Guayaquil) to Valdivia (Corral), Chile; breeding on islands off the coast of Peru (Lobos de Tierra, Ballestas, Chinchas, etc.) and Chile (Alacrán Islet, Arica; Isla Muerta, near Mocha Island).

**Phalacrocorax gaimardi* (Lesson and Garnot). GAIMARD'S CORMORANT.

Carbo gaimardi Lesson and Garnot, Voy. Coquille, Zool., Atlas, livr. 7, pl. 48, June 21, 1828¹—"Lima, au Pérou"—San Lorenzo Island, off Callao (cf. *Pelecanus Gaimardi* Garnot, Voy. Coquille, Zool., 1, (2), livr. 14, p. 602, Jan., 1830, type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 64, 1929); Lesson, Traité d'Orn., p. 605, 1831—"côtes du Pérou, la rade de Lima sur l'île San Lorenzo;" Kittlitz, Denkw. Reise, 1, p. 133, 1858—Valparaiso, Chile.

Pelecanus gaimardi Lesson, Man. d'Orn., 2, p. 373, June, 1828¹—"les bords de la rade de Callao," Peru.

Phalacrocorax strigiger King, Zool. Journ., 4, No. 3, April–July, p. 103, July, 1828—straits of Magellan (type in British Museum); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 506, 1912—Patagonia.

Phalacrocorax gaimardii Fraser, Proc. Zool. Soc. Lond., 11, p. 119, 1843—Valparaiso Bay; Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 132, 1853—Algodon Bay, Chile; Hartlaub, Naumannia, 3, p. 219, 1853—Corral, Valdivia, Chile; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 206, 1855—Chile; Scater, Proc. Zool. Soc. Lond., 1867, p. 340—Chile; Cunningham, Not. Nat. Hist. Str. Magellan, p. 365, 1871—near Chilofé

¹ It is impossible to ascertain whether the plate of the *Coquille* or Lesson's account in the *Manuel* was published first. We notice, however, that the plate is quoted by Lesson.¹

Island and Messier Channel, Chile; Salvin, Proc. Zool. Soc. Lond., 1883, p. 427—San Lorenzo Island, Peru; Taczanowski, Orn. Pér., 3, p. 431, 1886 (Peruvian localities); Macfarlane, Ibis, 1887, p. 207—Callao Bay, Peru; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 156, 1891—Puerto Deseado, Santa Cruz, Patagonia; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Lane, Ibis, 1897, p. 187—Corral, Valdivia, Chile; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 353, 1898—Peru (San Lorenzo Island), Chile (Iquique, Valparaiso, Corral), Straits of Magellan, and Patagonia (Puerto San Julián); Schalow, Zool. Jahrb., Suppl., 4, p. 688, 1898—Chile (Cavancho and Iquique, Tarapacá; Tumbes, Concepción); Albert, Anal. Univ. Chile, 103, p. 839, 1899—from Chiloé northward (monog.); Philippi, Arch. Naturg., 65, p. 172, 1899—Chiloé and Algarrobo, Chile; Paessler, Orn. Monatsber., 17, p. 103, 1909—Chile (Arica, Tacna; Caleta Buena, Tarapacá; Taltal, Antofagasta); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 236, 1910—Rio Deseado (ex Oustalet); Doello-Jurado, El Hornero, 1, p. 11, 1917—Puerto Deseado, Patagonia (breeding); Coker, Proc. U. S. Nat. Mus., 56, p. 480, 1919—coast of Peru north to Callao Bay (breeding habits); Housse, Rev. Chil. Hist. Nat., 28, p. 53, 1924—Isla La Mocha, Arauco, Chile; Renard, El Hornero, 4, p. 412, 1931—Isla del Cañadon, Rio Deseado, Patagonia (breeding); Peters, Bds. World, 1, p. 91, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 296, 1932—Chile (range); Bullock, Rev. Chil. Hist. Nat., 39, p. 242, 1935—Isla La Mocha, Chile (nesting); Philippi, El Hornero, 6, p. 234, 1936—Arica, Tacna, Chile (breeding); Murphy, Ocean. Bds. S. Amer., 2, p. 873, 1936 (monog.).

Haliaeetus gaimardii(i) Tschudi, Unters. Faun. Peru., Orn., p. 313, 1846—San Lorenzo Island, Peru; idem, Journ. Orn., 4, p. 190, 1856—coast of middle Peru (soft parts).

Graculus gaimardi Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 489, 1847—southern Chile; Boeck, Naumannia, 1855, p. 513—Valdivia, Chile; Philippi, Reise Wüste Atacama, p. 165, 1860—coast between Coquimbo and Caldera, Atacama; Pelzeln, Reise Novara, Zool., 1, Vögel, pp. 158, 163, 1865—Chiloé Island; Philippi, Anal. Univ. Chile, 31, p. 290, 1868—Chiloé to central Chile; Pelzeln, Verh. Zool. Bot. Ges. Wien, 23, p. 161, 1873—Callao, Peru; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 553—Chorillos, Peru.

Sticticorbo gaimardi Bonaparte, Consp. Gen. Av., 2, p. 174, 1857—Chile (diag.).

Graculus gainsardii (sic) Germain, Proc. Bost. Soc. N. H., 7, p. 315, 1860—Chiloé (breeding habits).

Phalacrocorax criniger (lapsu) Chubb, Ibis, 1919, p. 278—San Lorenzo Island, Peru.

Range.—Coasts of Peru (from the Guañape Islands southward) and Chile south to Chiloé Island (breeding), rarely to the Straits of Magellan (two records), and likewise breeding on the coast of Santa Cruz, Patagonia (Isla de Cañadon, estuary of the Rio Deseado; San Julián).

Field Museum Collection.—4: Chile (Concepción, Concepción, 2); Argentina (Puerto Deseado, Santa Cruz, 2).

**Phalacrocorax atriceps atriceps* King. IMPERIAL CORMORANT.

Phalacrocorax atriceps King,¹ Zool. Journ., 4, No. 13, April–July, p. 102, July, 1828—Straits of Magellan (type apparently lost);² Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 390, figs. 4, 5, 1898—Chile (Corral, Chiloé Island) and Straits of Magellan (Cove Harbour, Messier Channel); Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 627, 1900—Isla de Leones, Santa Cruz, Patagonia; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 395, 1902—Tierra del Fuego (ex Oustalet); Nicoll, Ibis, 1904, p. 48—Puerto Dixon and Molineux Sound, Straits of Magellan; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 237, 1910—"Patagonia (San Julián)," Tierra del Fuego, and Staten Island; Sharpe and Scott, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 516, 1915—near Mount Tigre, Santa Cruz, Patagonia; Murphy, Bull. Amer. Mus. N. H., 35, p. 33, 1916—Corral, Chile (crit., char.).

Phalacrocorax imperialis King,¹ Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, "1830," p. 30, pub. March 2, 1831—"in sinibus inferioribus orae occidentalis"—west entrance of Straits of Magellan (type apparently lost); Selater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 652—Cove Harbour, Messier Channel; *idem*, Rep. Challenger, Zool., 2, Birds, p. 120, pl. 25, fig. 1, 1880—Cove Harbour (crit.); Forbes, Ibis, 1893, p. 541—Straits of Magellan and Chile (crit.); Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile.

Graculus albiventer (not *Carbo albiventer* Lesson) Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 491, 1847—part, Chile; Boeck, Naumannia, 1855, p. 513—Valdivia, Chile; Philippi, Anal. Univ. Chile, 31, p. 291, 1868—Corral, Valdivia.

Graculus cirrhatus (not *Pelecanus cirrhatus* Gmelin) Boeck, Naumannia, 1855, p. 513—Valdivia; Philippi, Anal. Univ. Chile, 31, p. 291, 1868—Chiloé and Corral, Valdivia, Chile.

Graculus elegans Philippi, Arch. Naturg., 24, (1), p. 305, 1858—Chiloé Island, Chile (type in Museo Nacional, Santiago; cf. Gigoux and Looser, Bol. Mus. Nac. Santiago, 13, p. 29, 1930).

Graculus cristatus (lapsu) Germain, Proc. Bost. Soc. N. H., 7, p. 315, 1860—Chiloé Archipelago (breeding habits).

Graculus carunculatus (not *Pelecanus carunculatus* Gmelin) Pelzeln, Reise Novara, Zool., 1, Vögel, pp. 159, 163, pl. 6, fig. 16 (egg), 1865—Chiloé Island.

¹ King appears to have described the same species under two different names within a few years. *P. atriceps* was seemingly based on an immature bird without any white on wings and back, whereas the diagnosis of *P. imperialis* (crested head; purple-glossed upper parts; white band across wings; white patch on middle back) describes an adult in nuptial plumage.

² Unless spec. *d* of *P. atriceps*, Straits of Magellan (Captain P. P. King), in the British Museum, be the type.

Phalacrocorax cirrhatus Sclater, Proc. Zool. Soc. Lond., 1867, pp. 336, 340—Chile; idem and Salvin, Ibis, 1868, p. 189—Straits of Magellan; Schalow, Zool. Jahrb., Suppl., 4, p. 683, 1898—Calbuco (Llanquihue) and Straits of Magellan (crit.); Albert, Anal. Univ. Chile, 103, p. 833, 1899—Chiloé and southern Chile (monog.); Philippi, Arch. Naturg., 65, p. 172, 1899—Chiloé; idem, Anal. Mus. Nac. Chile, 15, p. 104, pl. 48, 1902—Chile.

Phalacrocorax carunculatus Sclater and Salvin, Ibis, 1869, p. 284—Santa Magdalena Island, Straits of Magellan; idem, l.c., 1870, pp. 499, 500—Mayne Harbour, Port Churruca, Straits of Magellan (crit.); Newton, l.c., 1870, p. 504—Santa Magdalena Island (egg descr.); Cunningham, Not. Nat. Hist. Str. Magellan, pp. 191, 271, 1871—Tierra del Fuego (Quartermaster Island) and Santa Magdalena Island (breeding habits); Oustalet, Miss. Sci. Cap Horn, 6, Zool., p. B. 144, pl. 6, small fig., 1891—part, Punta Arenas, Tierra del Fuego (Bahía Orange, Bahía Lort, Bahía Buen Suceso, Bahía Stockwell), Staten Island, New Year Sound, and Button Island.

Phalacrocorax verrucosus (not *Halieus verrucosus* Cabanis) Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 395, 1902—Ushuaia, Tierra del Fuego (crit.); idem, l.c., 18, p. 237, 1910—Tierra del Fuego.

(?) *Phalacrocorax albiventer* (not *Carbo albiventer* Lesson?) Hartert and Venturi, Nov. Zool., 16, p. 241, 1909—Ushuaia, Tierra del Fuego.

Phalacrocorax atriceps atriceps Peters, Bds. World, 1, p. 92, 1931 (range in part, excl. of "South Shetlands"); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 301, 1932—Valdivia to Straits of Magellan; Reynolds, Ibis, 1932, p. 36—Woodcock Island, Beagle Channel; idem, El Hornero, 5, p. 349, 1934—Isla de los Conejos and Lake Yewin, Tierra del Fuego; idem, Ibis, 1935, p. 80—Barnevelt Islands, Cape Horn (crit.); Bullock, Rev. Chil. Hist. Nat., 39, p. 242, 1935—Isla la Mocha (nesting); Murphy, Ocean. Bds. S. Amer., 2, p. 881, 1936 (monog.).

Range.—Breeds on the coast of southern Chile, from Mocha Island to the Straits of Magellan, Tierra del Fuego, and the Cape Horn Islands; straying, outside the breeding season, to the mouth of the Santa Cruz River, eastern Patagonia and Graham Land in the Antarctic Archipelago.

Field Museum Collection.—3: Chile (Melinka, Ascension Island, Guaitecas, 1); Argentina (Puerto Deseado, Santa Cruz, 1); Antarctic Archipelago (Wilhelmina Bay, Graham Land, 1).¹

***Phalacrocorax atriceps albiventer (Lesson).² WHITE-BELLIED CORMORANT.**

¹ This specimen has the facial markings and the white patch on the back that are characteristic of *P. a. atriceps*. Its bill length is the same as that of the specimen from Chile, but the bill looks somewhat heavier.

² *Phalacrocorax atriceps albiventer* (Lesson), in adult plumage, differs from the nominate race by its longer, fuller, apically recurved crest and the larger caruncles at the base of the upper mandible, while the purple-black color of the pileum

Carbo albiventer Lesson, *Traité d'Orn.*, livr. 8, p. 604, 1831—Falkland Islands (type in Paris Museum; cf. Pucheran, *Rev. Mag. Zool.*, (2), 2, p. 627, 1850).¹

Phalacrocorax carunculatus (not *Pelecanus carunculatus* Gmelin) Darwin, *Zool. Beagle*, 3, Birds, p. 145, 1841—Puerto San Julián, Santa Cruz, Patagonia (breeding; soft parts); Sclater, *Proc. Zool. Soc. Lond.*, 28, p. 391, 1860—Falkland Islands; Abbott, *Ibis*, 1861, p. 166—East Falkland Island (breeding); Oustalet, *Miss. Sci. Cap Horn*, 6, p. B. 144, pl. 6, front fig., 1891—part, Missioneros and Rio Gallegos, Santa Cruz, Patagonia.

Phalacrocorax cirrhatus (not *Pelecanus cirrhatus* Gmelin) Gray, *List Spec. Bds. Brit. Mus.*, 3, p. 186, 1844—part, spec. b, c, i, Falkland Islands and San Julián, Patagonia.

Graculus albiventer Des Murs, in Gay, *Hist. Fís. Pol. Chile, Zool.*, 1, p. 491, 1847—part, Falkland Islands.

Phalacrocorax albiventris Sclater, *Proc. Zool. Soc. Lond.*, 1879, p. 310—Falkland Islands (eggs); idem and Salvin, *Rep. Challenger, Zool.*, 2, Birds, p. 121 (in text), pl. 25, fig. 2, 1880—Falkland Islands and Straits of Magellan (crit.); Forbes, *Ibis*, 1893, p. 540 (crit.).

Phalacrocorax imperialis (not of King) Sharpe, *Proc. Zool. Soc. Lond.*, 1881, p. 11—Tom Bay, Magellan Straits; Vallentin, *Mem. Proc. Manchester Lit. Phil. Soc.*, 48, No. 23, p. 32, 1904—West Point Island, Falkland Islands (eggs descr.).

Urile albiventer ? Ridgway, *Proc. U. S. Nat. Mus.*, 12, p. 139, 1890—San Martín Island, Magellan Straits (crit.).

Phalacrocorax albiventer Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 392, fig. 7, 1898—Falkland Islands, Patagonia (San Julián), and Straits of Magellan (Tom Bay); Salvadori, *Ann. Mus. Civ. Stor. Nat. Genova*, 40, p. 627, 1900—Penguin Rookery and Puerto Cook, Staten Island; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 8, p. 395, 1902—Tierra del Fuego; idem, l.c., 18, p. 237, 1910—Tierra del Fuego and Staten Island; Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, Orn., p. 520, 1915—Coy Inlet and Cape Fairweather, Santa Cruz, Patagonia (breeding); Murphy, *Bull. Amer. Mus. N. H.*, 35, pp. 33, 37, 1916—Coy Inlet (crit.); Brooks, *Bull.*

extends down over the greater part of the auriculars. Besides, there is no white dorsal patch at any time of the year. This well-characterized race replaces the nominate form in the Falkland Islands as well as on the coast of Santa Cruz in southeastern Patagonia. Darwin found it breeding at Puerto San Julián and the members of the Princeton Expedition found it between the estuary of the Coy River and Cape Fairweather. While we have not been able to study a good Patagonian series, two specimens from that region seem to be identical with birds from the Falkland Islands. Reynolds (*Ibis*, 1935, p. 81) states positively that *albiventer* does not breed anywhere in Tierra del Fuego where *atriceps* is abundantly met with, and suggests that the few specimens recorded from the Straits are merely stragglers or vagrants. On the other hand, *P. a. atriceps* has never been found nesting either in the Falklands or on the coast of Santa Cruz, so that it would seem to be established that these two cormorants replace each other geographically during the breeding period.

¹ Not listed by Berlioz (*Bull. Mus. Hist. Nat. Paris*, (2), 1, pp. 63–65, 1929) among the types of cormorants in the Paris Museum.

Mus. Comp. Zool., 61, p. 157, 1917—Falkland Islands; Doello-Jurado, El Hornero, 1, p. 15, 1917—Puerto Deseado, Santa Cruz, in winter in Buenos Aires Province (Punta Lara, Rio Santiago); Wace, l.c., 2, p. 202, 1920—Falkland Islands; Daguerre, l.c., 2, p. 265, 1922—Rosas, Buenos Aires (winter); Pereyra, l.c., 3, p. 164, 1923—Zelaya, Buenos Aires; Bennett, Ibis, 1926, p. 328—Falkland Islands; Wetmore, Univ. Calif. Pub. Zool., 24, p. 412, 1926—San Antonio Oeste, Rio Negro; Tremoleras, El Hornero, 4, p. 17, 1927—Carrasco (near Montevideo), Uruguay (Aug. 20, 1926); Murphy, Ocean. Bds. S. Amer., 2, p. 891, 1936 (monog.).

Phalacrocorax albiventer albiventer Peters, Bds. World, 1, p. 92, 1931 (range).

Range.—Breeds in the Falkland Islands and on the coast of Santa Cruz, southeastern Patagonia, from Puerto Deseado to the mouth of the Rio Gallegos; straying in winter south to Staten Island, Straits of Magellan (Tom Bay, San Martín Island), and north to the coast of Buenos Aires Province (Punta Lara, Rio Santiago, Rosas, Zelaya) and Uruguay (Carrasco, near Montevideo; Aug. 20, 1926).

Field Museum Collection.—1: Chile (Porvenir, Magallanes, 1).

Phalacrocorax atriceps georgianus Lönnberg.¹ SOUTH GEORGIAN CORMORANT.

Phalacrocorax atriceps georgianus Lönnberg, Svensk. Vetensk. Akad. Handl., 40, No. 5, p. 69, pl. 2 (upper figures), 1906—Boiler Harbour, Cumberland Bay, South Georgia (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 96, 1927); Shufeldt, Sci. Bull., Mus. Brookl. Inst., 2, p. 95, pls. 17, 18, 1914 (anatomy); Wilkins, Ibis, 1923, p. 489—South Georgia; Bennett, l.c., 1926, p. 328—South Georgia; Murphy, Ocean. Bds. S. Amer., 2, p. 885, 1936 (monog.).

Phalacrocorax carunculatus (not *Pelecanus carunculatus* Gmelin) Pagenstecher, Jahrb. Hamb. Wiss. Anst., 2, p. 27, 1885—South Georgia (crit.).

Phalacrocorax georgianus Murphy, Bull. Amer. Mus. N. H., 35, pp. 34, 38, 39, 1916—South Georgia (descr.; crit., life hist.); Mathews, Discovery Rep., 1, p. 584, pl. 47, figs. 5-7, 1929—South Georgia (nesting).

Phalacrocorax albiventer (not *Carbo albiventer* Lesson) Carcelles, El Hornero, 4, p. 400, 1931—Cooper Harbour, Holmestrand, and Rosita Bay, South Georgia.

Phalacrocorax (albiventer) georgianus Peters, Bds. World, 1, p. 92, 1931—South Georgia.

Range.—Island of South Georgia.²

¹ *Phalacrocorax atriceps georgianus* Lönnberg is stated by Murphy to resemble *P. a. albiventer* in long, recurved crest and strongly developed caruncles, but to differ by decidedly shorter bill; while in extent of black on sides of head it occupies an intermediate position between *atriceps* and *albiventer*. We are not acquainted with the South Georgian Cormorant.

² The status of the cormorants breeding on the South Orkney and South Shetland Islands remains to be determined. Bennett (Ibis, 1926, p. 328) refers

Genus NANNOPTERUM Sharpe

Nannopterum Sharpe, Handlist of Birds, 1, p. 235, 1899—type, by monotypy,
Phalacrocorax harrisi Rothschild.

**Nannopterum harrisi* (Rothschild). FLIGHTLESS CORMORANT.

Phalacrocorax harrisi Rothschild, Bull. Brit. Orn. Cl., 1, p. lii, May 25, 1898—Narborough Island, Galápagos Islands (type in Tring Collection [cf. Hartert, Nov. Zool., 32, p. 274, 1925]; now in the American Museum of Natural History, New York); Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 655, 1898 (repr. orig. descr.); Rothschild and Hartert, Nov. Zool., 6, p. 179, 1899—north side of Narborough Island; Gadow, l.c., 9, p. 169, pls. 14, 15, 1902 (wings and skeleton descr.); Rothschild and Hartert, l.c., p. 408, pl. 10 (fig. of type), 1902—south side of Narborough Island (crit., female, eggs descr.); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 249, 1904—Narborough and Albemarle Islands (habits, eggs descr.).

Nannopterum harrisi Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 80, pl. 4, 1913—Albemarle and Narborough Islands (habits, soft parts, meas.); Shufeldt, Emu, 15, p. 86, pls. 15–19, 1915 (osteology); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 38, 1931—Narborough and Albemarle (Tagus Cove) Islands; Peters, Bds. World, 1, p. 94, 1931 (range); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 32, 1931—Narborough Island (eggs descr.); Murphy, Ocean. Bds. S. Amer., 2, p. 916, 1936 (monog.).

Range.—Coasts of Narborough and Albemarle Islands, Galápagos Archipelago.

Field Museum Collection.—5: Galápagos Islands (Narborough Island, Mangrove Point, 2; Narborough Island, 2; Albemarle Island, 1).

Family ANHINGIDAE. Water-Turkeys

Genus ANHINGA Brisson

Anhinga Brisson, Orn., 1, p. 60; 6, p. 476, 1760—type, by tautonymy and monotypy, "*Anhinga*" = *Plotus anhinga* Linnaeus.

to them as being similar to *P. a. georgianus*, but much larger. Clarke (l.c., 1906, p. 184, pl. 13, fig. 2) had called South Orkney birds *P. atriceps*, but Murphy (Bull. Amer. Mus. N. H., 35, p. 39, 1916) pointed out that they were evidently much closer to *georgianus*. Other references pertaining to this unsettled form are *P. georgianus* Bennett (El Hornero, 2, p. 32, 1920 [South Orkney and South Shetland Islands]), *P. albiventris* Carcelles (l.c., 4, p. 83, 1927 [South Orkney Islands]), *P. atriceps* Ardley (Discovery Rep., 12, p. 374, 1936 [South Orkney Islands]), and *P. atriceps* Eklund (Proc. Amer. Phil. Soc., 89, No. 1, p. 302, 1945 [64° 42' S.—63° 25' W.]). Murphy (Ocean. Bds. S. Amer., p. 888, 1936), under the heading of *P. atriceps* subsp., states that South Shetland birds resemble *P. a. atriceps* and *P. a. georgianus*, but have a longer bill than the latter, larger caruncles than the former, and a longer tail (128–138) than either, while the demarcation line between dark and white on the sides of the head is more as in the continental form. Murphy (p. 889) publishes Bennett's MS. name *bransfieldensis*, which will become available should the race prove to be valid. We have no material.

Plotus (not of Gunnerus, 1761) Linnaeus, Syst. Nat., 12th ed., 1, p. 218, 1766—type, by monotypy, *Plotus anhinga* Linnaeus.

Plotus "Klein" Scopoli, Introd. Hist. Nat., p. 474, 1777 (emendation).

***Anhinga anhinga anhinga** (Linnaeus). SOUTH AMERICAN DARTER.

Plotus anhinga Linnaeus, Syst. Nat., 12th ed., 1, p. 218, 1766—based on "Anhinga" Marcgrave (Hist. Nat. Bras., p. 218; northeastern Brazil) and Brisson (Orn., 6, p. 476; Cayenne); type locality, Brazil (as designated by Berlepsch, Nov. Zool., 15, p. 311, 1908); Wied, Beitr. Naturg. Bras., 4, (2), p. 900, 1833—eastern Brazil (Lagõa Feia, Rio Belmonte, Rio Itahype); Tschudi, Unters. Fauna Peru., Orn., p. 314, 1846—"coast of Peru (nesting on sandy islands)"; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 764, 1849—rivers up to 1,200 ft. (habits); Burmeister, Syst. Uebers. Th. Bras., 3, p. 461, 1856—Rio Chipato (Rio Belmonte), Brazil; Tschudi, Journ. Orn., 4, p. 188, 1856 (habits); Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 197—Rio Truando and Rio Atrato, Colombia; Pelzeln, Orn. Bras., 3, p. 325, 1870—Goyáz (Porto do Rio Araguay), Matto Grosso (Cuyabá, Caiçara, Villa Bella), and Amazonas (Borba, Rio Madeira; Marabitanas, Rio Negro; Barra do Rio Negro), Brazil; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 20—Rio Taquaruçu, Sumidouro, and Ribeirão do Mato, Minas Geraes; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 304—eastern Peru (Yurimaguas, Ucayali, Marañón); Allen, Bull. Essex Inst., 8, p. 82, 1876—Marajó, Brazil; Berlepsch, Journ. Orn., 35, p. 28, 1887—Rio Pilcomayo, Paraguay; idem, l.c., 37, p. 100, 1889—Tonantins, Rio Solimões, Brazil; Goeldi, Ibis, 1897, pp. 157, 162—near Coupany and Amapá, northern Pará; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 419, 1898—part, specimens i'-w' (monog.); Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 48, 1900—Rio Peripa, western Ecuador; Kerr, Ibis, 1901, p. 231—Villa Concepción, Paraguay; Berlepsch and Hartert, Nov. Zool., 9, p. 127, 1902—Quiribana de Caiçara and Caiçara, Orinoco, Venezuela; Goeldi, Ibis, 1903, p. 500—Rio Capim, Pará, Brazil; Hagmann, Zool. Jahrb. (Syst.), 26, p. 54, 1907—Mexiana Island, Brazil (breeding); Ihering, Cat. Faun. Braz., 1, p. 79, 1907—São Paulo; Berlepsch, Nov. Zool., 15, p. 311, 1908—Cayenne, French Guiana; Lillo, Apunt. Hist. Nat., 1, p. 22, 1909—Ledesma, Jujuy, Argentina; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 97, 1910—Bahia (Rio São Francisco, near Sambaiba) and Piauhy (mouth of Tetra-Farada and above São Estevão, Rio Parnahyba); Dabene, Anal. Mus. Nac. Buenos Aires, 18, p. 237, 1910—Chaco Argentino; Grant, Ibis, 1911, p. 336—Tebicuari and Mortero, Paraguay; Sneathlage, Bol. Mus. Goeldi, 8, p. 119, 1914—Dunas, Marajó, Brazil; Lönningberg and Rendahl, Ark. Zool., 14, No. 25, p. 29, 1922—La Carolina (Quito) and Rio Curaray, Ecuador.

Plotus tupinambis Bonnaterre, Tabl. Enc. Méth., Orn., 1, livr. 47, p. 40, 1791 (substitute name for *Plotus anhinga* Linnaeus).

Plotus cayennensis Bonaparte, Compt. Rend. Acad. Sci. Paris, 41, No. 26, p. 1115, Dec., 1855—based on *Plotus melanogaster* var. γ Gmelin, Syst.

Nat., 1, (2), p. 580, 1789, which, in its turn, rests on "Anhinga noir, de Cayenne" Buffon (=Daubenton), Pl. Enl., pl. 960.

Anhinga anhinga Allen, Bull. Amer. Mus. N. H., 2, p. 111, 1889—lower Beni River, Bolivia; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 194, 1913—Caño Vagre, Venezuela; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 366, 1916—lower and middle stretches of the Orinoco, Venezuela; Chubb, Bds. Brit. Guiana, 1, p. 199, 1916 (numerous localities); Chapman, Bull. Amer. Mus. N. H., 36, p. 237, 1917—Cauca and Magdalena rivers, Colombia; Wetmore, Proc. Biol. Soc. Wash., 33, p. 182, 1920 (soft parts); Todd and Carriker, Ann. Carnegie Mus., 14, p. 131, 1922—Palenque, Santa Marta, Colombia; Delacour, Ibis, 1923, p. 144—Apure and Portuguese rivers, Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 214, 1926—Chone and Rio Suno, Ecuador; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 121, 1926—Porto Xavier da Silva, Paraná, Brazil; Wetmore, Bull. U. S. Nat. Mus., 133, p. 54, 1926—Riachó Quia, near Las Palmas, Chaco; Friedmann, Bull. Mus. Comp. Zool., 68, p. 148, 1927—Paraná River, near Santa Elena, Entre Ríos; Naumburg, Bull. Amer. Mus. N. H., 60, p. 100, 1930—Palmiras, Matto Grosso; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 49, 1930—Misión Tacaaglé, Formosa; Peters, Bds. World, 1, p. 95, 1931—part, South America; Belcher and Smooker, Ibis, 1934, p. 579—Trinidad (Caroni) and Tobago; Davis, l.c., 1935, p. 535—Rupununi River, British Guiana (breeding); Pinto, Rev. Mus. Paul., 22, p. 27, 1938—Amazonas (Manacapurú), Pará, Bahia (Rio Gongogy), São Paulo (Pirituba), and Rio Grande do Sul (Porto Alegre).

Anhinga anhinga anhinga Griscom and Greenway, Bull. Mus. Comp. Zool., 88, p. 103, 1941 (disc. races, type locality restricted to Rio Tapajos, Pará, Brazil); Gyldenstolpe, K. Svensk. Vetensk. Akad. Handl., (3), 22, p. 22, 1945—Igarape do Gordao, Rio Jurua, Brazil.

Range.—Tropical South America from Colombia and Venezuela to western Ecuador (Rio Peripa, Chone) and east of the Andes¹ to northern Argentina (Ledesma, Jujuy; Chaco Argentino; Entre Ríos), Bolivia (lower Beni River), Paraguay, and extreme southern Brazil (Rio Grande do Sul). Also the islands of Tobago and Trinidad.

Field Museum Collection.—10: Venezuela (Lake Valencia, Aragua, 1); Ecuador (Montes del Suno, Loreto, 2; Concepción, Pato Paqual, 1); British Guiana (Abary Creek, 2; Rockstone, 1); Brazil (Conceicao, Matto Grosso, 1); Paraguay (Chaco, 1); Argentina (Resistencia, Chaco, 1).

**Anhinga anhinga leucogaster* (Vieillot).² NORTH AMERICAN DARTER.

¹ South of Ecuador, the Darter has been found only east of the Andes, there being but a few records from Amazonian Peru (Yurimaguas, Ucayali, Marañón) and Bolivia (lower Beni River). Tschudi's statement that it breeds on sandy islands along the Peruvian coast is due to confusion with some other bird.

² *A. a. leucogaster* (Vieillot) differs from the typical race by its somewhat smaller size and narrower, darker, less buffy tail tips.

- Plotus leucogaster* Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. ed., 1, p. 545, 1816—Florida (descr. of immature; location of type not stated).
- Plotus anhinga* Gundlach, *Journ. Orn.*, 23, p. 405, 1875—Cuba (breeding habits); Ogilvie-Grant, *Cat. Bds. Brit. Mus.*, 26, p. 419, 1898—part, specimens a-h' (monog.); Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 156, 1901 (Central American references and localities).
- Anhinga anhinga* Ridgway, *Man. N. Amer. Bds.*, p. 77, 1887; Carriker, *Ann. Carnegie Mus.*, 6, p. 438, 1910—Bolson and mouth of Matina River, Costa Rica; Todd, *l.c.*, 10, p. 171, 1916—Isle of Pines, Cuba; Rendahl, *Ark. Zool.*, 12, No. 8, p. 5, 1919—Nicaragua (Rio Ometepe, Chano Verde; San Juan del Norte); Bent, *Bull. U. S. Nat. Mus.*, 121, p. 229, 1922 (life hist.); Peters, *Bds. World*, 1, p. 95, 1931—part, North and Central America; Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 147, 1932—Rio Polochic and near Ocos, Guatemala; idem, *Bull. Mus. Comp. Zool.*, 78, p. 293, 1935—Panama; Dickey and van Rossem, *Field Mus. Nat. Hist.*, Zool. Ser., 23, p. 69, 1938—El Salvador (Lake Olomega, San Sebastian, etc.).
- Anhinga anhinga minima* van Rossem,¹ *Ann. Mag. Nat. Hist.*, (11), 4, p. 439, Oct., 1939—Acaponeta, Nayarit, Mexico (type in U. S. National Museum, Biological Survey Collection).
- Anhinga anhinga leucogaster* Griscom and Greenway, *Bull. Mus. Comp. Zool.*, 88, p. 103 (in text), 1941 (recognized as distinct northern race); Wetmore, *Proc. U. S. Nat. Mus.*, 93, p. 232, 1943 (descr. races; a northern and a southern one recognized).

Range.—Southern United States, from Texas, southern Illinois and North Carolina southward through Mexico and Central America to Panama; Cuba (including Isle of Pines). Intergrading with the typical race in Colombia.

Field Museum Collection.—26: Florida (Wens Creek, 1; Ocklawaha River, Marion County, 1; Cabbage Bay, 1; Anclote, 1; Lake Flirt, 2; Bassenger, 2; Palm Beach County, 4; Enterprise, 1; Seminole County, 1); Louisiana (Avery Island, Iberia County, 1); Texas (Cameron County, 6; Nueces County, 1); Cuba (Artemisa, 1); Mexico (Tampico, Tamaulipas, 1); El Salvador (San Sebastian, La Paz, 1; Laguna Olomega, San Miguel, 1).

Suborder FREGATAE

Family FREGATIDAE. Man-o'-War Birds

Genus FREGATA Lacépède

Fregata Lacépède, *Tabl. Méth. Mam. Ois.*, p. 15, 1799—type, by subs. desig. (Daudin, in Buffon, *Hist. Nat.*, éd. Didot, *Quadr.*, 14, p. 317, 1802), *Pelecanus aquila* Linnaeus.

¹ *A. a. minima* van Rossem is said to differ from the typical race by smaller size and paler tail tips. Wetmore states (*Proc. U. S. Nat. Mus.*, 93, p. 232, 1943)

Tachypetes Vieillot, Anal. Nouv. Orn. Elém., pp. 63, 70, 1816—type, by monotypy, "Fregata" Buffon=*Fregata minor magnificens* Mathews.

Fregatta Stephens, in Shaw, Gen. Zool., 13, (1), p. 119, 1826—emendation, type as in *Fregata* Lacépède.

Atagen "Mochrine" G. R. Gray, List Gen. Bds., 2nd ed., p. 101, 1841—type, by orig. desig., *Pelecanus aquila* Linnaeus.

Parrifregata Mathews, Bds. Austr., Suppl., 1, p. 64, 1920—type, by orig. desig., *Atagen ariel* G. R. Gray.

Fregata ariel trinitatis Ribeiro.¹ SOUTH TRINIDAD MAN-O'-WAR BIRD.

Fregata ariel trinitatis Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 192 (in text), 1919—South Trinidad Island (type in Museo Nacional, Rio de Janeiro); Peters, Bds. World, 1, p. 97, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, pp. 921, 939, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 28, 1938—South Trinidad.

Fregata ariel (not *Atagen Ariel* G. R. Gray) Sharpe, Ibis, 1904, p. 214—South Trinidad (crit.); Nicoll, l.c., 1906, p. 673—South Trinidad; Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 189, 1919—South Trinidad.

Fregata ariel subsp.? Murphy, Auk, 32, p. 346, 1915—South Trinidad Islet.

Fregata ariel wilsoni Lowe, Nov. Zool., 31, p. 311, Oct., 1924—South Trinidad Island (type in British Museum).

Fregata wilsoni Lowe and Kinnear, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 186, pl. 1, fig. 2, 1930—South Trinidad (crit.).

Range.—South Trinidad Island and Martin Vas Islets, South Atlantic Ocean.

***Fregata magnificens** Mathews.² AMERICAN MAN-O'-WAR BIRD.

Fregata minor magnificens Mathews, Austr. Av. Rec., 2, p. 120, Dec. 19, 1914—"Barrington, Indefatigable, Albemarle Islands, etc.," Galápagos

that the type is an immature and doubts the validity of the form. He suggests withholding recognition until a series of adults can be examined.

¹*Fregata ariel trinitatis* Ribeiro: Similar to the extralimital *F. a. ariel* (Gray), of the western Pacific Ocean, but immature plumage with the head brown and the white of the flanks running well back into the axilla.

²*Fregata magnificens* Mathews: Male, like the extralimital *F. aquila*, of Ascension Island, without any brown wing-bar, but chiefly distinguished by the greenish-purple head and iridescent purple mantle and scapulars; female recognizable by the conspicuous brown band along the cubital edge of the wing, while the breast is white, in strong contrast to the black color of throat, foreneck, abdomen, and under tail coverts. Immature birds have the head, neck, and throat white with no trace of buff or rusty.

Authors differ as to the possibility of subdividing this species. Mathews attempted to separate the birds breeding in the Caribbean Sea from those of the Galápagos Islands, but as has been pointed out by Rothschild the only character is their seemingly shorter tail, a feature in study skins that is largely dependent on mode of preparation. Swarth (Condor, 35, pp. 148-150, 1933) and Murphy would restrict *magnificens* to the Galápagos, referring those from Lower California

(type, from Barrington Island, in Tring Collection [cf. Hartert, Nov. Zool., 32, p. 274, 1925], now in the American Museum of Natural History, New York).

Tachypetes aquila (not *Pelecanus aquilus* Linnaeus) Wied, Beitr. Naturg. Bras., 4, (2), p. 885, 1833—eastern Brazil (Caravellas, Villa Viçosa, Mucuri, Alcobaça, and Bahia); Tschudi, Unters. Fauna Peru., Orn., p. 314, 1846—Islands off Peruvian coast; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 763, 1849—coast of British Guiana; Bryant, Proc. Bost. Soc. N. H., 7, p. 126, 1859—Booby Kay and Seal Island, Bimini (breeding); Pelzeln, Orn. Bras., 3, p. 326, 1870—Rio de Janeiro, Sapitiba (Rio), Paranaguá (Paraná), and Cajútuba (Pará), Brazil; Ihering, Rev. Mus. Pául., 3, p. 368, 1899—São Sebastião and Iguapé, São Paulo; Bonhote, Ibis, 1903, p. 312—Little Abaco, Bahama Islands.

Fregata aquila Taylor, Ibis, 1859, p. 150—Bird (Pájaro) Island, Bay of Fonseca, Honduras (breeding); idem, l.c., 1860, p. 316—same locality; Salvin, Proc. Zool. Soc. Lond., 1883, p. 427—Payta, Peru (Jan.); Hartert, Ibis, 1893, pp. 308, 326, 336—Aruba, Curaçao, and Bonaire; Ridgway, Proc. U. S. Nat. Mus., 19, p. 590, 1897—Tower and Barrington Islands, Galápagos; Ogilvie-Grant, Cat. Bds. Brit. Mus., 26, p. 443, 1898 (in part); Nelson, N. Amer. Fauna, 14, p. 33, 1899—Isabel Island, Mexico (breeding); Rothschild and Hartert, Nov. Zool., 6, p. 175, 1899 (in part); Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 49, 1900—Rio Daule and Bay of Santa Elena, Ecuador; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 139, 1901 (range, exc. of Revillagigedo Islands); Nicoll, Ibis, 1904, p. 589—Little Cayman; Clark, Proc. Bost. Soc. N. H., 32, p. 233, 1905—Lesser Antilles (breeding on Battowia, Grenadines); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, pp. 96, 141, 1905—Gorgona Island (Gorgonilla Peninsula), Colombia, and San Miguel and Saboga Islands, Pearl Archipelago, Panama (breeding); Bailey, Auk, 23, p. 382, 1906—Isabel Island, Nayarit, Mexico (breeding); Berlepsch, Nov. Zool., 15, p. 312, 1908—Cayenne; Chapman, Pap. Tortugas Lab. Carnegie Inst. Wash., 2, p. 149, 1908—Cay Verde, Bahama Islands (breeding habits); Lowe, Ibis, 1909, pp. 317, 325, 333—Los Testigos, Los Hermanos, and eastern Swan Island, Caribbean Sea (breeding); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 195, 203, 209, 215, 220, 227, 229, 235, 1909—Aruba, Curaçao, Bonaire, Los Roques, Tortuga, Blanquilla, Los Hermanos, Los Testigos, and Margarita Island; Carriker, Ann. Carnegie Mus., 6, p. 440, 1910—Pacific and Caribbean coasts of Costa Rica (bibliog. ref.); Todd, l.c., 7, p. 409, 1911—Great Inagua Island, Bahamas; Lowe, Ibis, 1911, p. 148—Little Cayman (breeding); Rendahl, Ark. Zool., 12, No. 8, p. 5, 1919—Ciste Island, Ometépe River, Nicaragua; idem, l.c., 13, No. 4, p. 11, 1920—Bayoneta and Cangrejo Islands, Pearl Archipelago, Panama (breeding).

Fregata magnificens Rothschild, Nov. Zool., 22, pp. 145, 146, 1915 (crit. char.); Mathews, Bds. Austr., 4, p. 280, 1915—Galápagos Islands (monog.);

and western Mexico to *rothschildi*, while Peters and Griscom call the Pacific birds *magnificens*, the Caribbean *rothschildi*. Wetmore denies any racial variation and, from the material we have seen, we are inclined to agree with him. The subject requires further investigation with the help of extensive material of breeding birds.

Todd, Ann. Carnegie Mus., 10, p. 174, 1916—Bird Island, Isle of Pines, Cuba; Noble, Bull. Mus. Comp. Zool., 60, p. 364, 1916—Tête Anglaise, Guadeloupe Island (breeding); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 286, 1927—Puerto Rico (breeding on Desecheo Island) and Virgin Islands; Grinnell, Univ. Calif. Pub. Zool., 32, p. 72, 1928—Lower California; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 71, 1931—Hispaniola; Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 300, 1931—Bermuda Islands (occasional visitant); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 38, 1931—Galápagos (Indefatigable, Albemarle, Duncan, Hood Islands); Swarth, Condor, 35, p. 148, 1933—Galápagos Islands (crit.).

Fregata minor rothschildi Mathews, Bds. Austr., 4, p. 280, 1915—Aruba, Dutch West Indies (type in Tring Collection, now in the American Museum of Natural History, New York; cf. Hartert, Nov. Zool., 32, p. 275, 1925).

Fregata minor januaria Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 186, 1919—coast of Brazil from Rio de Janeiro to Santos (type in Museu Nacional, Rio de Janeiro).¹

Fregata minor (not *Pelecanus minor* Gmelin) Lüderwaldt and Fonseca, Rev. Mus. Paul., 13, pp. 464, 491, 1922—Ilha dos Alcatrazes, São Paulo (breeding; meas.; eggs descr.).²

Fregata magnificens rothschildi Bent, Bull. U. S. Nat. Mus., 121, p. 306, 1922 (life hist.); Lowe, Nov. Zool., 31, p. 303, 1924 (crit., range); Chapman, Bull. Amer. Mus. N. H., 55, p. 215, 1926—Santa Elena, Jambeli, and Santa Clara Island (breeding), Ecuador; Peters, Bds. World, 1, p. 96, 1931 (range); Swarth, Condor, 35, p. 150, 1933—Lower California and Isabel Island, Nayarit, Mexico (crit.); Belcher and Smooker, Ibis, 1934, p. 579—Giles Islets, off Tobago (breeding); Griscom, Bull. Mus. Comp. Zool., 78, p. 293, 1935—off Caribbean coast of Panama; Murphy, Ocean. Bds. S. Amer., 2, pp. 921, 927, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 28, 1938—São Paulo (São Sebastião, Piassaguera, Santos, Ilha dos Alcatrazes); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 71, 1938—El Salvador (coast and Lake Olomega); Wetmore, Proc. U. S. Nat. Mus., 87, p. 181, 1939—Ensenada de Ocumare (islet of El Morro), Aragua, Venezuela; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 35, 1945—Gulf of California (status).

Fregata magnificens magnificens Lowe, Nov. Zool., 31, p. 303, pls. 22, 23, 1924—Galápagos Islands to Mexico and California (crit.); Peters, Bds. World, 1, p. 95, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 293, 1935—Pacific coast of Panama (breeding in the Pearl Islands); Murphy, Ocean. Bds. S. Amer., 2, pp. 920, 926, 1936—Galápagos Islands.

¹ The description of the adult male, notably “cabeça pescoço e dorso . . . de brilho metálico que cambia do azul purpurescente, na cabeça, para a purpureo violáceo no dorso,” together with the author's failure to mention any brownish wing-band, indicates that *F. m. januaria* is synonymous with *F. magnificens*. The white-headed female is a young bird.

² At my request, Dr. O. M. de O. Pinto very kindly re-examined these specimens and found them to be unquestionably referable to *F. magnificens*.

Range.—Breeds on some of the Bahama Islands (Cay Verde, Bimini Seal Key, Atwood's Key, etc.), Cuba (Puerto Escondido; Isle of Pines, Bird Island), Puerto Rico (Desecheo Island), in the Lesser Antilles (Guadeloupe; Battice and Carriacou, Grenadines; Giles Islets, off Tobago), on islands off the coast of Venezuela (Margarita Island, Los Hermanos, Los Testigos), and Brazil (Ilha dos Alcatrazes, São Paulo), in the Caribbean Sea (Little Cayman and Swan Islands), off the coast of Mexico (Isabel Island, Nayarit) and Honduras (Pájaro Island, Gulf of Fonseca), Panama (Pearl Islands), Colombia (Gorgona Island), Ecuador (Santa Clara Island), and in the Galápagos Archipelago; straying to the coasts of Florida, Louisiana, Texas, Bermuda Islands, California, northern Peru (Payta, Talara), the Guianas, and eastern Brazil (Bahia to Rio Grande do Sul).

Field Museum Collection.—42: Florida (Cape Roman, 1; Maximo Point, 1); Bahama Islands (Cay Verde, 2; Man o' War Cay, 1; Whale Cay, 1; Great Bahama, 2); Cuba (Isle of Pines, 1); Jamaica (Grand Cayman, 1); Dominican Republic (Samana, 1); Virgin Islands (St. Croix, 3); Lesser Antilles (Santa Lucia, 1); Texas (Aransas County, 3; Corpus Christi, 1); western Caribbean (St. Andrews, 2; Old Providence, 2; Little Swan, 4); California (Orange County, 1); Mexico (La Paz, Lower California, 1; San Luis Island, Lower California, 1; Contoy Island, Quintana Roo, 2); British Honduras (Half Moon Cay, 3); Guatemala (Puerto Barrios, Izabal, 1); Panama (Panama Bay, 1); Galápagos Islands (Gardner Island, 1; Elizabeth Bay, Albemarle Island, 1); Dutch West Indies (Bonaire, 1); British Guiana (Buxton, 2).

***Fregata minor ridgwayi Mathews.¹ RIDGWAY'S MAN-O'-WAR BIRD.**

Fregata minor ridgwayi Mathews, Austr. Av. Rec., 2, p. 120, Dec. 19, 1914—Galápagos Islands (Culpepper and Wenman) (type, from Culpepper, in the Tring Collection [cf. Hartert, Nov. Zool., 32, p. 275, 1925], now in the American Museum of Natural History, New York); Rothschild, Nov. Zool., 22, pp. 145, 146, 1915 (crit., char.); Lowe, l.c., 31, p. 308, pls. 22, 23, 1924—Galápagos Islands (Wenman and Culpepper); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 39, 1931—Galápagos Islands (Hood and Brattle) (crit.); Peters, Bds. World, 1, p. 96, 1931 (range); Swarth, Condor,

¹*Fregata minor ridgwayi* Mathews: Differs from *F. magnificens*, sex for sex, by lesser size and smaller bill, and by having, in both sexes, a broad brown band on the lesser upper wing coverts; male with back and scapulars iridescent green instead of mainly purple; female with throat and foreneck by no means black, but whitish or gray, shafts and edges of the feathers only dusky, producing a mottled appearance.

35, pp. 149, 150, 1933—Clarion and San Benedicto Islands, Revillagigedo group (crit.); Murphy, Ocean. Bds. S. Amer., 2, pp. 921, 937, 1936—Galápagos Islands (monog.).

Fregata aquila minor (not *Pelecanus minor* Gmelin)¹ Ridgway, Proc. U. S. Nat. Mus., 19, p. 591, 1897—Tower Island, Galápagos (crit.).

Fregata aquila (not *Pelecanus aquilus* Linnaeus) Anthony, Auk, 15, pp. 314, 316, 317, 1898—San Benedicto, Socorro, and Clarion Islands (breeding); Rothschild and Hartert, Nov. Zool., 6, p. 175, 1899—part, Culpepper Island, Galápagos; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 139, 1901—part, Revillagigedo Islands; McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 291, 1926—Clarion and San Benedicto Islands (breeding).

Fregata minor palmerstoni (not *Pelecanus Palmerstoni* Gmelin) Oberholser, Auk, 34, p. 469, 1916—coast of California and Lower California; Grinnell, Univ. Calif. Pub. Zool., 32, p. 72, 1928—Lower California (ex Oberholser); van Rossem and Orr, Auk, 58, p. 399, 1941 (believe birds from west coast of North America referable to Hawaiian race).

Range.—Breeds in the Galápagos Archipelago (Culpepper, Wenman, Brattle, Hood, and probably other islands),² and on the Revillagigedo Islands (San Benedicto and probably Clarion Island); straying to the coast of Lower California and California.

Field Museum Collection.—6: Galápagos Islands (Tower Island, 6).

Fregata minor nicolli Mathews.³ NICOLL'S MAN-O'-WAR BIRD.

Fregata minor nicolli Mathews, Austr. Av. Rec., 2, p. 118, Dec. 19, 1914—South Trinidad Island (type in British Museum); idem, Bds. Austr., 4, p. 272, 1915 (crit.); Rothschild, Nov. Zool., 22, pp. 145, 146, 1915 (char.); Murphy, Auk, 32, p. 346, 1915—South Trinidad; Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 22, p. 187, 1919—South Trinidad Island (plum., meas.); Lowe, Nov. Zool., 31, p. 309, 1924—South Trinidad (meas.); idem and Kinneer, Brit. Antar. (Terra Nova) Exp., Zool., 4, p. 187, pl. 1, fig. 1, 1930—South Trinidad (crit.); Peters, Bds. World, 1, p. 97, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, pp. 921, 939, 1936 (monog.); Pinto, Rev. Mus. Paul., 22, p. 28, 1938—South Trinidad.

Fregata aquila (not *Pelecanus aquilus* Linnaeus) Saunders, Proc. Zool. Soc. Lond., 1880, p. 163—off South Trinidad Islet; Ogilvie-Grant, Cat. Bds.

¹ *Pelecanus minor* Gmelin (Syst. Nat., 1, (2), p. 572, 1789), based on "Man of War Bird" Edwards (Glean. Nat. Hist., 2, p. 209, pl. 309), though applied by Mathews (Austr. Av. Rec., 2, p. 118, 1914) to the West Indian Frigate Bird (*F. magnificens rothschildi*), is clearly the form of the Indian Ocean, as has been pointed out by Rothschild (Nov. Zool., 22, p. 145, 1915) and Lowe (l.c., 31, p. 300, 1924), throat and foreneck in Edwards' plate being represented as white.

² Breeding range in the Galápagos Islands remains to be determined by future field-work. It has been claimed that *F. m. ridgwayi* and *F. magnificens* replace each other on different islands, but proof in the affirmative or negative is yet lacking.

³ *Fregata minor nicolli* Mathews: Similar to *F. m. ridgwayi*, but bill decidedly longer, and the brownish band across the lesser wing coverts wider as well as paler; female, besides, with much lighter, less blackish brown upper parts.

Brit. Mus., 26, p. 443, 1898—part, spec. u', South Trinidad; Nicoll, Ibis, 1906, p. 673—South Trinidad.

Range.—Breeds on South Trinidad Island and Martin Vas Islets, South Atlantic Ocean.

Order CICONIIFORMES

Suborder ARDEAE

Family ARDEIDAE. Herons and Bitterns

Subfamily ARDEINAE. Herons

Genus ARDEA Linnaeus

Ardea Linnaeus, Syst. Nat., 10th ed., 1, p. 141, 1758—type, by subs. desig. (Gray, List Gen. Bds., p. 60, 1840), *Ardea cinerea* Linnaeus.

Audubonia Bonaparte, Compt. Rend. Acad. Sci. Paris, 40, No. 14, p. 722, April, 1855—type, by monotypy, *Ardea occidentalis* Audubon.

Ardea cinerea cinerea Linnaeus. EUROPEAN HERON.

Ardea cinerea Linnaeus, Syst. Nat., 10th ed., 1, p. 143, 1758—based chiefly on Fauna Svec., No. 133; type locality, as restricted by Hartert (Vög. Pal. Fauna, 2, p. 1229, 1920), Sweden; Reinhardt, Ibis, 1861, p. 9—Greenland; Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 243, 1878 (monog.); Winge, Medd. Grønl., 21, p. 242, 1898—Greenland (several records).

Ardea cinerea cinerea Bent, Bull. U. S. Nat. Mus., 135, p. 131, 1926 (life hist.); Peters, Bds. World, 1, p. 99, 1931 (range); Hørring and Salomonsen, Medd. Grønl., 131, p. 56, 1941—Greenland records.

Range.—Breeds in the greater part of Europe and Asia to western China, locally in Africa, and on the Canary Islands; accidental in Greenland (Nenortalik, 1856; Godthaab, Jan. 14, 1877; Nunarsuit, 1888; etc.).

**Ardea herodias fannini* Chapman.¹ NORTHWEST COAST HERON.

Ardea herodias fannini Chapman, Bull. Amer. Mus. N. H., 14, p. 87, April 15, 1901—Skidegate, Graham Island, Queen Charlotte Islands (type in the American Museum of Natural History, New York); Osgood, N. Amer. Fauna, 21, p. 40, 1901—Skidegate and Cumshewa Inlets, Queen Charlotte Islands; Oberholser, Proc. U. S. Nat. Mus., 43, p. 554, 1913—Pacific coast from Alaska to Washington (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 114, 1926 (life hist.); Peters, Bds. World, 1, p. 99, 1931 (range).

¹ *Ardea herodias fannini* Chapman differs from the nominate race by darker upper parts and neck.

Range.—Resident on the Pacific coast of North America from southern Alaska to Washington (Nisqually Flats, etc.).

Field Museum Collection.—7: Alaska (Craig, Prince of Wales Island, 1); British Columbia (Comox, Vancouver Island, 6).

**Ardea herodias hyperonca* Oberholser.¹ CALIFORNIA HERON.

Ardea herodias hyperonca Oberholser, Proc. U. S. Nat. Mus., 43, p. 550, 1913 (pub. Dec. 12, 1912)—Baird, Shasta County, California (type in U. S. National Museum); Bent, Bull. U. S. Nat. Mus., 135, p. 127, 1926 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 81, 1928—northwestern Lower California (seacoast and nearby islands); Peters, Bds. World, 1, p. 99, 1931 (range).

Ardea herodias oligista Oberholser, Proc. U. S. Nat. Mus., 43, p. 553, Dec. 12, 1913—San Clemente Island, Santa Barbara Islands, California (type in U. S. National Museum); Peters, Bds. World, 1, p. 100, 1931 (range); Grinnell, Univ. Calif. Pub. Zool., 38, p. 264, 1932 (crit.;=young-of-the-year).

Range.—Resident on the Pacific coast of North America from Oregon to northwestern Lower California (north of lat. 27°).

Field Museum Collection.—9: Oregon (Blaine, Tillamook County, 1); California (Sacramento, 2; Bridgeport, Mono County, 1; Eureka, 2; Moss Landing, 2; Irvine, Orange County, 1).

**Ardea herodias treganzai* Court.² TREGANZA'S HERON.

Ardea herodias treganzai Court, Auk, 25, p. 291, July, 1908—Egg Island, Great Salt Lake, Utah (type in U. S. National Museum); Oberholser, Proc. U. S. Nat. Mus., 43, p. 545, 1913 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 123, 1926 (life hist.); Peters, Bds. World, 1, p. 99, 1931 (range, except west of Cascades and Sierra Nevada); Grinnell, Univ. Calif. Pub. Zool., 38, p. 81, 1932—Lower California; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 35, 1945—northern Sonora.

Range.—Breeds in the western United States from the Cascades and Sierras east to the Great Plains and south to northeastern Lower California (Colorado delta), southern New Mexico and western Texas; winters from Arizona to Texas and northwestern Mexico.

Field Museum Collection.—5: California (Palo Verde, Imperial County, 1); Utah (Bear River Bay, 1; Brigham, 1); Arizona (Tucson, 2).

¹ *Ardea herodias hyperonca* Oberholser: Similar in coloration to *A. h. herodias*, but larger. Distinguished from *A. h. fannini* by larger dimensions and paler upper parts and neck.

² *Ardea herodias treganzai* Court: Nearest to *A. h. herodias*, but upper parts and neck paler; size on average slightly larger.

***Ardea herodias sancti-lucae** Thayer and Bangs.¹ SAN LUCAS HERON.

Ardea herodias sancti-lucae Thayer and Bangs, Proc. New Engl. Zool. Cl., 4, p. 83, Feb. 23, 1912—Espiritu Santo Island, Lower California (type in coll. of J. E. Thayer, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 180, 1930); Oberholser, Proc. U. S. Nat. Mus., 43, p. 548, 1913 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 130, 1926 (life hist.); Peters, Bds. World, 1, p. 100, 1931 (range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 82, 1932—Lower California; van Rossem, Occ. Paps. Mus. Zool. Louisiana State Univ., 21, p. 36, 1945—southern Sonora.

Range.—Resident on the coasts and islands of Lower California southward from 27° N. lat., and the coast of southern Sonora.

Field Museum Collection.—2: Mexico, Lower California (San Luis Islands, 1; San José del Cabo, 1).

***Ardea herodias cognata** Bangs.² GALAPAGOS HERON.

Ardea herodias cognata Bangs, Proc. New Engl. Zool. Cl., 3, p. 100, Feb. 6, 1903—Indefatigable Island, Galápagos (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 180, 1930); Oberholser, Proc. U. S. Nat. Mus., 43, p. 549, 1913—Indefatigable, Duncan, and Albemarle Islands (monog.); Peters, Bds. World, 1, p. 100, 1931 (range); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 41, 1931—Indefatigable, South Seymour, and Albemarle Islands; Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 34, 1931—Galápagos Islands.

Ardea herodias (not of Linnaeus) Darwin, Zool. Beagle, 3, Birds, p. 128, 1841—Galápagos Islands; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 323—Indefatigable Island; Salvin, Trans. Zool. Soc. Lond., 9, p. 497, 1876—Indefatigable Island; Ridgway, Proc. U. S. Nat. Mus., 12, p. 114, 1890—Duncan and Indefatigable Islands; idem, l.c., 19, p. 601, 1897—same localities; Sharpe, Cat. Bds. Brit. Mus., 26, p. 80, 1898—part, spec. 1^a–n^a, Indefatigable Island; Rothschild and Hartert, Nov. Zool., 6, p. 180, 1899—Albemarle and Indefatigable Islands (crit.; nesting); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 254, 1904—Narborough Island (breeding); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 58, 1913—Albemarle, Charles, Chatham, Duncan, Hood, Indefatigable, James, Narborough, and Seymour Islands.

Range.—Resident in the Galápagos Archipelago (central and southern islands).

Field Museum Collection.—1: Galápagos Islands (Elizabeth Bay, Albemarle Island, 1).

¹ *Ardea herodias sancti-lucae* Thayer and Bangs: Very close to *A. h. treganzai*, but larger throughout and with decidedly paler neck.

² *Ardea herodias cognata* Bangs: Nearest to *A. h. sancti-lucae*, but with shorter wings and tarsi, and thicker bill. From *A. h. treganzai* it may be separated by paler neck, shorter wings and tarsus, and stouter bill.

**Ardea herodias herodias* Linnaeus. GREAT BLUE HERON.

Ardea herodias Linnaeus, Syst. Nat., 10th ed., 1, p. 143, 1758—based on "The Ash-colour'd Heron from North America" Edwards, Nat. Hist. Bds., 3, p. 135, pl. 135; Hudson Bay; Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 196—delta of the Rio Atrato, Colombia (Dec.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 511—vicinity of Caracas, Venezuela; Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 237, 1878 (monog.; in part); Nutting, l.c., 6, p. 379, 1883—San Juan del Sur, Nicaragua; Ridgway, l.c., 7, p. 177, 1884—Curaçao Island, Caribbean Sea; Hartert, Ibis, 1893, p. 325—Curaçao Island; Sharpe, Cat. Bds. Brit. Mus., 26, p. 80, 1898 (in part); Bonhote, Ibis, 1899, p. 519—New Providence, Bahama Islands (Dec.; winter visitant); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 11, 1899—Laguna Pita, Darien, Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 159, 1901—Mexican and Central American references and localities; Bonhote, Ibis, 1903, p. 304—Andros, Bahama Islands (May 10); Clark, Proc. Bost. Soc. N. H., 32, p. 233, 1905—Barbados, St. Vincent, Carriacou, and Grenada Islands (winter visitor); Lowe, Ibis, 1907, p. 554—Margarita Island, Venezuela (Jan. 6); Delacour, l.c., 1923, p. 142—plains of Venezuela (Guarico and Apure); Bleitz, Nat. Hist., New York, 53, p. 160, 1944 (nesting).

Ardea hudsonias Linnaeus, Syst. Nat., 12th ed., 1, p. 238, 1766—based on "The Ash-colour'd Heron from North America" Edwards, Nat. Hist. Bds., 3, p. 135, pl. 135, and "Le Héron de la Baye de Hudson" Brisson, Orn., 5, p. 407 (ex Edwards, pl. 135); Hudson Bay.

Ardea lessonii Wagler, Isis, 1831, Heft 5, col. 531—Mexico (type in Munich Museum examined).

Ardea herodias herodias Carriker, Ann. Carnegie Mus., 6, p. 412, 1910—El Hogar, Costa Rica; Oberholser, Proc. U. S. Nat. Mus., 43, p. 534, 1913 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 101, 1926 (life hist.); Peters, Bull. Mus. Comp. Zool., 69, p. 133, 1929—Corn Islands; Austin, l.c., p. 371, 1929—Belize River, British Honduras; Peters, Bds. World, 1, p. 99, 1931 (range); Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 309, 1931—Bermuda Islands (winter visitant); Peters, Bull. Mus. Comp. Zool., 71, p. 304, 1931—Changuinola, Almirante Bay, Panama (crit.); Griscom, l.c., 72, p. 311, 1932—Permé and Obaldia, Panama; idem, Bull. Amer. Mus. N. H., 64, p. 139, 1932—Guatemala (winter); idem, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Panama (winter); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 72, 1938—El Salvador (winter visitant); Hørring and Salomonsen, Medd. Grønl., 131, p. 57, 1941—near Egedesminde, Greenland (immature); Cooke, Auk, 63, p. 254, 1946—winter records of birds banded in north from Cuba, Jamaica, Mexico, British Honduras, Guatemala, Nicaragua and Panama.

Ardea herodias lessonii Oberholser, Proc. U. S. Nat. Mus., 43, p. 555, 1913—Mexico to Panama and Venezuela (monog.); Peters, Bds. World, 1, p. 100, 1931—Mexico from Chihuahua to Campeche.

Ardea herodias adoxa Oberholser, Proc. U. S. Nat. Mus., 43, p. 544, 1913 (pub. Dec. 12, 1912)—Curaçao Island, Caribbean Sea (type in U. S. National Museum); Wetmore, Sci. Surv. Porto Rico and Virgin Islands,

9, p. 288, 1927—Puerto Rico (not found breeding); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 73, 1931—Hispaniola (not found breeding); Belcher and Smoker, Ibis, 1934, p. 579—Trinidad (Caroni) and Tobago (winter visitant); Bond, Auk, 52, p. 76, 1935 (crit.;=*herodias*).

Ardea herodias subsp. Todd and Carriker, Ann. Carnegie Mus., 14, p. 133, 1922—Bonda, Colombia.

Range.—Breeds from Alberta east to the Gulf of St. Lawrence (Magdalen Islands), southeast through eastern North and South Dakota, central Iowa, northern Illinois, southern Indiana, eastern Kentucky and Tennessee to southeastern South Carolina; winters from the southern United States through Mexico, Central America, and the West Indies to Panama, Colombia (Rio Atrato; Bonda), Venezuela, Tobago, and Trinidad.¹ Accidental in Greenland.

Field Museum Collection.—29: Quebec (Magdalen Islands, 2); Nova Scotia (Seabright, 1); North Dakota (Devil's Lake, 1; Towner County, 1; Adler, 1); Minnesota (Ottertail County, 1); Wisconsin (Beaver Dam, 6; Woodruff, 1); Illinois (unspecified, 1); Massachusetts (Mansfield, 1); Connecticut (Black Hall, 1; Guilford, 2; New Haven, 4; North Haven, 3; Seymour, 1); North Carolina (Pea Island, Dare County, 1); Venezuela (Los Roques, Colon, 1).

****Ardea herodias occidentalis* Audubon.² FLORIDA HERON.**

Ardea occidentalis Audubon, Bds. Amer., folio ed., 3, pl. 281, 1835; idem, Orn. Biogr., 3, p. 542, Dec. 1, 1835—keys near Key West, Florida (type in U. S. National Museum;=white phase); Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 670, 1858—part, Florida (crit.); Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 227, 1878—Florida (monog.); Bent, Bull. U. S.

¹ It is now fairly well established that the Great Blue Heron does not breed anywhere in Central America or in the West Indies (excepting certain Greater Antilles tenanted by the little-known *A. h. repens*) and merely visits these regions during the winter months. The occasional summer records no doubt relate to stragglers, mostly immature birds, and do not denote a resident form. Whatever the ultimate status of a possible breeding race in Mexico may be, one thing is certain, viz., that the name *A. lessonii* is not applicable to it. Wagler's type in the Munich Museum is absolutely indistinguishable, in color and size, from birds taken in the eastern United States (New York) and was evidently a migrant from the north. As to the supposed West Indian race, we cannot but concur with Bond (Auk, 52, p. 76, 1935) in rejecting *A. h. adoza*. Specimens from various islands of the Lesser Antilles as well as two from Venezuela are, to all intent, typical *herodias*, and even the palest individuals can be matched by others from the eastern United States. As stated above and confirmed by Bond, not a single authentic breeding record exists for any of the West Indian islands.

Sztolcman's record of *Ardea herodias* (Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 119, 1926) from Affonso Penna, Paraná, southern Brazil, cannot possibly refer to this species.

² *Ardea herodias occidentalis* Audubon differs from the nominate race by larger dimensions, and, in the gray phase, by lighter upper parts and neck. The entirely white form (*A. occidentalis*) and the white-headed variety (*A. würdemanni*), which

Nat. Mus., 135, p. 93, 1926 (life hist.); Holt, Sci. Pub. Cleveland Mus. N. H., 1, No. 1, pp. 1-35, 1928 (monog.); Sprunt, Auk, 61, p. 150, 1944—South Carolina (white phase).

Ardea wurdemannii Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 669, 1858—South Florida (type in U. S. National Museum;=intermediate phase).

Ardea herodias wardi Ridgway, Bull. Nutt. Orn. Cl., 7, p. 5, 1882—Oyster (=Estero) Bay, Florida (type in U. S. National Museum;=gray phase); Oberholser, Proc. U. S. Nat. Mus., 43, p. 539, 1913 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 118, 1926 (life hist.); Peters, Bds. World, 1, p. 100, 1931 (range).

Ardea occidentalis occidentalis Peters, Bds. World, 1, p. 103, 1931—extreme southern Florida and Florida keys.

Range.—Breeds from eastern Kansas and eastern Texas to the middle Mississippi Valley in southern Illinois and southwestern Indiana, east to southeastern Carolina, south to southern Mexico (Yucatan) and the Florida keys.

Field Museum Collection.—24: Texas (Padre Island, 1; Cameron County, 6); Florida (Wilson, 2; Cape Sable, 2; Anclote, 5; Sanford, 1; Tampa, 2; Florida Bay, 2; unspecified, 1); Mexico (Contoy Island, Quintana Roo, 1; Rio Lagartos, Yucatan, 1).¹

**Ardea herodias repens* Bangs and Zappey.² CUBAN BLUE HERON.

Ardea repens Bangs and Zappey, Amer. Natur., 39, p. 186, April, 1905—Ciénaga, Isle of Pines, Cuba (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 181, 1930;=white phase).

Ardea herodias (not of Linnaeus) March, Proc. Acad. Nat. Sci. Phila., 1864, p. 63—Jamaica (crit.); Gundlach, Journ. Orn., 23, p. 296, 1875—Cuba (descr., breeding habits); Bangs and Zappey, Amer. Natur., 39, p. 186, 1905—Isle of Pines.

Ardea occidentalis (not of Audubon) and *A. wurdemannii* (not of Baird) March, Proc. Acad. Nat. Sci. Phila., 1864, pp. 63, 64—Jamaica (crit.).

Audubonia occidentalis Gundlach, Journ. Orn., 23, p. 298, 1875—Cuba (descr., habits).

occur only on the Florida keys and in the swamps of extreme southern Florida, are clearly but local dichromatisms of the ordinary gray color-type (*A. h. wardi*). Cf. also Bangs, Auk, 32, pp. 481-484, 1915, and Bond, l.c., 52, p. 76, 1935. Even Holt's observations lead to the same conclusion, although this author takes the opposite view.

¹ Some race, yet to be determined, breeds on the coast of Yucatan.

² *Ardea herodias repens* Bangs and Zappey: Similar to *A. h. occidentalis*, but much smaller. Wing, (two females) 413, 440; tail, 152, 156; tars., 154, 172; bill, 121, 144. Like the form of the Florida Heron found in southern Florida and on the Florida keys, this little-known race presents itself in a white (*occidentalis*) and in a gray (*wardi*) phase. March, in his paper on Jamaican birds, describes a third variety that would seem to correspond to the so-called *wurdemannii*. Todd states that a bird in immature dress is more strongly suffused with rufescent underneath than any *herodias* or *wardi* seen by him.

Ardea occidentalis repens Todd, Ann. Carnegie Mus., 10, p. 176, 1916—El Bobo Lagoon, Isle of Pines (crit., meas.); Peters, Bds. World, 1, p. 101, 1931 (range).

Ardea herodias adoza (not of Oberholser) Todd, Ann. Carnegie Mus., 10, p. 178, 1916—Los Indios, Isle of Pines (crit.); Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 26, 1943—St. Thomas, Virgin Islands (nesting).

Ardea herodias repens Barbour, Mem. Nutt. Orn. Cl., 6, p. 27, 1923—Cuba (crit.).

Range.—Resident on the Bahamas, Cuba, Isle of Pines, Jamaica, and the Virgin Islands (St. Thomas and St. Croix).

Field Museum Collection.—4: Bahama Islands (Inagua, 2); Virgin Islands (St. Thomas, 1; St. Croix, 1).¹

**Ardea cocoi* Linnaeus. COCOI HERON.

Ardea cocoi Linnaeus, Syst. Nat., 12th ed., 1, p. 237, 1766—based chiefly on "Le Héron hupé de Cayenne," Brisson, Orn., 5, p. 400, Cayenne; Wied, Beitr. Naturg. Bras., 4, (2), p. 598, 1833—coast of southeastern Brazil; Des Murs, in Gay, Hist. Fis. Pol. Chile, Zool., 1, p. 409, 1847—Laguna de Campeche, Quillota, Chile; Schomburgk, Reisen Brit. Guiana, 2, p. 503, 1848—Demerara; Cabanis, in Schomburgk, l.c., 3, p. 752, 1849—rivers of British Guiana; Philippi, Arch. Naturg., 21, (1), p. 13, 1855—Cordillera and Lake Aculeo, Chile; Boeck, Naumannia, 1855, p. 509—Valdivia, Chile; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 192, 1855—interior of Chile; Burmeister, Syst. Uebers. Th. Bras., 3, p. 415, 1856—Rio São Francisco and Lagõa Santa, Minas Geraes; idem, Journ. Orn., 8, p. 264, 1860—Paraná and Córdoba, Argentina; idem, Reise La Plata St., 2, p. 508, 1861—Paraná, Tucumán, and Córdoba; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 6, 1863—Brazil (crit.); Léotaud, Ois. Trinidad, p. 401, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 199—lower and upper Rio Ucayali, Peru; Sclater, l.c., 1867, pp. 334, 339—Chile; idem and Salvin, l.c., p. 979—Pebas, Peru; Philippi, Anal. Univ. Chile, 31, p. 273, 1868—Chile; Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 634—Conchitas, Buenos Aires; Pelzeln, Orn. Bras., 3, p. 300, 1870—Rio de Janeiro (Sapitiba), São Paulo (Ypanemá), Paraná (Castro), Matto Grosso (Cuyaba, Caiçara, Villa Bella), and Amazonas (Forte do Rio Branco, Barra do Rio Negro); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 28—Rio das Velhas, Minas Geraes; Wyatt, Ibis, 1871, p. 384—Lake Paturia, Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—upper and lower Rio Ucayali, Rio Huallaga, and Pebas, Peru; Berlepsch, Journ. Orn., 22, p. 269, 1874—Blumenau, Santa Catharina; Durnford, Ibis, 1876, p. 162—Uruguay and Buenos Aires; idem, l.c., 1877, p. 189—Baradero, Buenos Aires; Reed, Anal. Univ. Chile, 49, p. 560, 1877—Cauquenes, Colchagua, Chile; Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 244, 1878—Chile, Buenos Aires (Conchitas), Paraguay, and Patagonia (monog.); Durnford, Ibis, 1878, p. 399—Patagonia (Chubut, Sengel, Sengelen); Gibson, l.c., 1880, p. 158—Cape San Antonio,

¹Two Bahama females measure (wing), 440, 447; a female from St. Thomas, 445; a male from St. Croix, 455.

Buenos Aires (breeding); Doering, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—Rio Colorado and Rio Negro; Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 47—Corral, Peru; White, l.c., 1883, p. 41—Cosquin, Córdoba; Berlepsch, Ibis, 1884, p. 438—Angostura, Orinoco, Venezuela; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 89, 1884—Arroyo Tandileufú and on the road from Buenos Aires to Ayacucho, Prov. Buenos Aires; Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos; Berlepsch, Journ. Orn., 35, p. 29, 1887—Rio Pilcomayo, Chaco (crit.); Withington, Ibis, 1888, p. 470—Lomas de Zamora, Buenos Aires; Holland, l.c., 1890, p. 425—Est. Espartillar, Buenos Aires; Kerr, l.c., 1892, p. 144—Rios Paraná, Paraguay, Bermejo, and Pilcomayo; Holland, l.c., 1892, p. 204—Est. Espartillar; Aplin, l.c., 1894, p. 197—Uruguay (descr.); Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 21, 1895—Colonia Risso, Paraguay; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Lane, Ibis, 1897, p. 188—Rio Bueno, Pilmaiquen, Valdivia, and Laguna Llanquihue, Chile; Goeldi, l.c., 1897, p. 163—Lago Grande do Amapá, Pará, Brazil; Schalow, Zool. Jahrb., Suppl., 4, p. 680, 1898—Sotaquí, Coquimbo, Chile; Sharpe, Cat. Bds. Brit. Mus., 26, p. 72, 1898—Patagonia (St. Joseph Bay), Buenos Aires (Belgrano, Lomas de Zamora), Brazil (Bahía), and Peru (Pebas); Albert, Anal. Univ. Chile, 103, p. 239, 1899—Chile (monog.); Ihering, Rev. Mus. Paul., 3, p. 374, 1899—São Paulo; Kerr, Ibis, 1901, p. 231—Villa Concepción and Chaco Paraguayo; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 209, 1902—Lules, Tucumán; Berlepsch and Hartert, Nov. Zool., 9, p. 124, 1902—Caicara, Orinoco, Venezuela; Lönnberg, Ibis, 1903, p. 461—Tatarenda, Bolivia; Hagmann, Zool. Jahrb. (Syst.), 26, p. 48, 1907—Mexiana Island, Pará, Brazil (breeding); Berlepsch, Nov. Zool., 15, p. 302, 1908—Cayenne; Hartert and Venturi, l.c., 16, p. 245, 1909—Est. San Martín Monte and Barracas al Sud, Buenos Aires; Hellmayr, l.c., 17, p. 423, 1910—Maroins, Rio Machados, Brazil; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—Parnaguá, Piahy, Brazil; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 223, 1910 (range in Argentina); Grant, Ibis, 1911, p. 336—Tuyú (Ajó), Buenos Aires; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 375, 1912 (monog.); Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913—Caño Corosal, Venezuela; Sneath, Bol. Mus. Goeldi, 8, p. 106, 1914—Pacoval and Pacovalinho, Marajó, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 362, 1916—Orinoco River; Chapman, Bull. Amer. Mus. N. H., 36, p. 228, 1917—Malena and Villavicencio, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 30, 1918—Braamspunt and Paramaribo, Surinam; Chubb, Ibis, 1919, p. 271—Omotape, Piura, Peru; Tremoleras, El Hornero, 2, p. 14, 1920—Uruguay; Wace, l.c., p. 199, 1921—Falkland Islands; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 26, 1922—Rio Mindo, Ecuador; Delacour, Ibis, 1923, p. 142—Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 205, 1926—upper Santa Rosa, Ecuador; Wetmore, Bull. U. S. Nat. Mus., 133, p. 58, 1926—Paraguay (Puerto Pinasco to Villa Concepción), Buenos Aires (Lavelle, Guaminí), Uruguay (Lazcano, Rocha), and Mendoza (Tunuyán); idem, Univ. Calif. Pub. Zool., 24, p. 413, 1926—Rio Fetaleufú, near Cholilla, Chubut; Bennett, Ibis, 1926, p. 324—Falkland Islands; Szolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 119, 1926—Rio Ivahy, Salto

de Cobre, Paraná; Friedmann, Bull. Mus. Comp. Zool., 68, p. 150, 1927—Bovril Islands, Santa Fé; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 153, 1928—Pará, Brazil; Young, Ibis, 1928, p. 777—coast of British Guiana; Bullock, Rev. Chil. Hist. Nat., 33, p. 200, 1929—Rio Malleco, Malleco, Chile; Naumburg, Bull. Amer. Mus. N. H., 60, p. 90, 1930—Matto Grosso; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 63, 1930—Mision Tacaaglé, Formosa; Peters, Bds. World, 1, p. 101, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 302, 1932—Quellon, Chiloé Island (range in Chile); Belcher and Smooker, Ibis, 1934, p. 579—Trinidad; Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 366, 1934—Descalvados, Matto Grosso; Davis, Ibis, 1935, p. 531—British Guiana (breeding); Pinto, Rev. Mus. Paul., 22, p. 29, 1938—Amazonas (Rio Juruá), Pará (Pataúá, Lago Cuipeya), Minas Geraes (Pirapora, Mayrink), São Paulo (Rio Grande, San Carlos, Bebedouro, "Ypiranga"), and Rio Grande do Sul (Colonia Hansa); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 22, 1945—João Pessôa, Rio Juruá; idem, l.c., (3), 23, p. 37, 1945—Beni (Bresta; Orion) and Tarija, Bolivia.

Ardea coerulescens (not of Latham, 1790) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 413, 1817—based on "Garza Aplomada" Azara, No. 347, Paraguay.

Ardea soco Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 423, 1817—based on "Le Soco" Buffon, Hist. Nat. Ois., 7, p. 379 (ex "Cocoi" Marcgrave, Hist. Nat. Bras., p. 209), and "Soco" Mauduyt, Enc. Méth., Hist. Nat. Ois., 2, p. 446, 1784, "Guiane."

Ardea plumbea Merrem, in Ersch and Gruber, Allg. Encycl. Wiss. Künste, 5, p. 177, 1820—based on "Garza Aplomada" Azara, No. 347, Paraguay; Reichenow, Journ. Orn., 25, p. 264, 1877 (diag.).

Ardea maguari (not of Gmelin, 1789) Spix, Av. Spec. Nov. Bras., 2, p. 71, pl. 90, 1825—"ad ripas fl. Amazonum," Brazil (cotypes in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 711, 1906).

"*Ardea major* ? Mol. (*Ardea Cocoi* ? Linn.);" Fraser, Proc. Zool. Soc. Lond., 11, p. 116, Dec., 1843—southern provinces of Chile.

Ardea paranensis Bertoni, Anal. Cient. Parag., 1, No. 1, p. 13, Jan., 1901—Alto Paraná, Paraguay (type in coll. of A. W. de Bertoni; descr. of young).

Ardea socoi Ihering, Rev. Mus. Paul., 6, p. 450, 1905—Rio Juruá, Brazil; idem, Cat. Faun. Braz., 1, p. 65, 1907—São Paulo (Barretos), Santa Catharina (Colonia Hansa), and Amazonas (Rio Juruá).

Range.—The greater part of South America from Colombia, Venezuela, Trinidad, and the Guianas south to Chiloé Island, Chile, and Chubut, Patagonia; accidental on the Falkland Islands.

Field Museum Collection.—10: Venezuela, Zulia (Encontrados, 1; Rio Catatumbo, 1); British Guiana (Pairima Camp, New River, 1); Dutch Guiana (Tyger Bank, Maroni River, 1); Brazil (Bõa Vista, Amazonas, 1); Bolivia, Santa Cruz (Buena Vista, 2; Rio Surutu, 1); Argentina (Concepción, Tucumán, 1); Chile (Quellon, Chiloé Island, 1).

Genus *PILHERODIUS* Bonaparte

- Pilherodius* Bonaparte, Compt. Rend. Acad. Sci. Paris, 40, No. 14, p. 723, April, 1855—type, by monotypy, *Ardea pileata* "Latham"—Boddaert.
Pilerodius Sharpe, Cat. Bds. Brit. Mus., 26, p. 171, 1898 (emendation).
Pilherodias Chapman, Bull. Amer. Mus. N. H., 36, p. 230, 1917 (emendation).

**Pilherodius pileatus* (Boddaert). CAPPED HERON.

Ardea pileata Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "Héron blanc huppé, de Cayenne" Daubenton, Pl. Enl., pl. 907, Cayenne; Wied, Abbild. Naturg. Bras., livr. 4, pl. [1], 1823—Brazil; idem, Beitr. Naturg. Bras., 3, (2), p. 617, 1833—Rio Itabapua, Espirito Santo, Brazil (habits); Burmeister, Syst. Uebers. Th. Bras., 3, p. 406, 1856—Rio de Pomba, Minas Geraes, Brazil; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 36, 1863—"Chile" (errore), Guiana, and Cuyabá (crit.). °

Nycticorax pileatus Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 754, 1849—rivers (habits); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, pp. 749 (note), 979—Nauta and Pebas, Peru; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 26—Lagõa Santa, Andrequecê, and Sete Lagõas, Minas Geraes; Pelzeln, Orn. Bras., 3, p. 302, 1870—São Paulo (Rio Serapo, Ypanemá), Matto Grosso (Puritis, Cuyabá, Pari, Villa Maria, Caicara, Villa Bella), and Amazonas (Manaqueri), Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—Nauta, Santa Cruz, and Pebas, Peru; Berlepsch, Journ. Orn., 22, p. 271, 1874—Blumenau, Santa Catharina; Reichenow, l.c., 25, p. 240, 1877 (diag.); Taczanowski, Orn. Pér., 3, p. 408, 1886 (Peruvian localities); Allen, Bull. Amer. Mus. N. H., 2, p. 110, 1889—Reyes, Bolivia; Ihering, Rev. Mus. Paul., 3, p. 378, 1899—São Paulo; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 93, 1910—below União, Rio Parnahyba, Piauty, Brazil.

Pilherodius pileata Bonaparte, Consp. Gen. Av., 2, p. 139, 1857—Cayenne (diag.).

Pilherodius pileatus Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 301, 1861—Panama Railroad; Allen, Bull. Amer. Mus. N. H., 5, p. 150, 1893—Chapada, Matto Grosso; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 15, 1895—Carandasinho, Matto Grosso; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 176, 1901—Panama; Berlepsch and Hartert, Nov. Zool., 9, p. 125, 1902—Venezuela (Altagracia, Caicara, Quiribana de Caicara, and El Fraile, Orinoco) (soft parts); Ihering, Cat. Faun. Braz., 1, p. 68, 1907 (range); Berlepsch, Nov. Zool., 15, p. 303, 1908—Cayenne; Hellmayr, l.c., 17, p. 424, 1910—Maroins, Rio Machados, Matto Grosso; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 364, 1916—Ciudad Bolívar, Altagracia, Caicara, and Quiribana de Caicara, Venezuela; Chubb, Bds. Brit. Guiana, 2, p. 174, 1916 (various localities); Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 193, 1922—Jesusito, Darien, Panama; Todd and Carriger, Ann. Carnegie Mus., 14, p. 134, 1922—Cinto and Tucurinca, Colombia; Delacour, Ibis, 1923, p. 143—near Caloboza, at Camaguan, and near San Fernando de Apure, Venezuela; Naumburg, Bull. Amer. Mus. N. H., 60, p. 92, 1930—Rio Roosevelt, Matto Grosso;

Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 66, 1930—Sierra de Chiquitos, Santa Cruz, Bolivia; Peters, Bds. World, 1, p. 102, 1931 (range); Darlington, Bull. Mus. Comp. Zool., 71, p. 362, 1931—Rio Frio, Magdalena, Colombia; Laubmann, Anz. Orn. Ges. Bay., 2, p. 288, 1933—Puerto Casado (Chaco) and Centurión (Apa region), Paraguay; Griscom, Auk, 50, p. 303, 1933—Rio Chepo, Darien, Panama; idem, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Panama (Canal Zone and Darien); Pinto, Rev. Mus. Paul., 22, p. 30, 1938—Minas Geraes (Pirapora), Goyáz (Rio das Almas, Rio São Domingos), São Paulo (Baurú, Rio Tieté; Porto Epitacio, Rio Parana), Matto Grosso (Corumbá, Aquidauana), and Amazonas (Manacapurú); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 23, 1945—Rio Juruá (João Pessôa and Lago Grande), Brazil; idem, l.c., (3), 23, p. 37, 1945—Victoria, Beni, Bolivia.

Pileodius pileatus Sharpe, Cat. Bds. Brit. Mus., 26, pp. 171, 277, 1898—British Guiana (Rio Rupununi), Brazil (Bahia; "Pelotas, Rio Grande do Sul;" Rio de Janeiro), and Peru (Pebas); Kerr, Ibis, 1901, p. 232—Rio Verde, Paraguay; Haggmann, Zool. Jahrb. (Syst.), 26, p. 49, 1907—Mexiana, Brazil; Sneath, Bol. Mus. Goeldi, 8, p. 109, 1914—Mexiana and Monte Alegre, Brazil.

Pilherodias pileatus Chapman, Bull. Amer. Mus. N. H., 36, p. 230, 1917—Rio Sinú, Colombia; Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 365, 1934—Descalvados, Matto Grosso.

Range.—Eastern Panama (from the Canal Zone eastward), northern Colombia, Venezuela, the Guianas, and, east of the Andes, south to eastern Bolivia (Reyes, Sierra de Chiquitos, Santa Cruz), Paraguay, and southern Brazil (Santa Catharina).¹

Field Museum Collection.—12: Brazil (Bõa Vista, Amazonas, 3; São Marcello, Bahia, 2; Descalvados, Matto Grosso, 2); Bolivia (Buena Vista, Santa Cruz, 4; Rio Palometillas, Santa Cruz, 1).

Genus BUTORIDES Blyth

Butorides Blyth, Cat. Bds. Mus. Asiat. Soc., p. 281, "1849" (or June, 1852)²—type, by monotypy, *Ardea javanica* Horsfield.

Ocniscus Cabanis, Journ. Orn., 4, p. 343, 1856—substitute name for *Butorides* Blyth (on grounds of purism).

**Butorides virescens anthonyi* (Mearns).³ ANTHONY'S GREEN HERON.

Ardea virescens anthonyi Mearns, Auk, 12, p. 257, July, 1895—Seven Wells, Salton River, northern Lower California (type in U. S. National Museum);

¹ The locality "Pelotas, Rio Grande do Sul" is doubtless erroneous.

² Cf. Mathews, Bds. Austr., Suppl. No. 4, p. 10, 1925.

³ *Butorides virescens anthonyi* (Mearns) differs from the nominate race by markedly larger size, more cinnamonous foreneck, paler posterior under parts,

Brewster, Bull. Mus. Comp. Zool., 41, p. 54, 1902—Cape region of Lower California (crit.).

Butorides virescens anthonyi Miller, Bull. Amer. Mus. N. H., 22, p. 162, 1906—Rio Sestín, Durango (breeding); Oberholser, Proc. U. S. Nat. Mus., 42, p. 543, 1912 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 195, 1926 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 84, 1928—Lower California (visitor); Peters, Bds. World, 1, p. 103, 1931 (range); van Rossem, Bull. Mus. Comp. Zool., 77, p. 427, 1934—Sonora (Alamos, Oposura) and Chihuahua, Mexico (crit.); idem and Hachisuka, Trans. San Diego Soc. N. H., 8, p. 326, 1937—Sonora (Tecorina, Sáric, Pilares); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 79, 1938—San Salvador (Mar. 12, 14); Larrison, Murrelet, Seattle, 21, p. 1, 1940—Washington (range and status in state); Slipp, Condor, 46, p. 35, 1944—Thurston County, Washington; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 36, 1945—Sonora (distrib. map).

Butorides virescens eremonomus Oberholser, Proc. U. S. Nat. Mus., 42, p. 546, Aug. 29, 1912—San Diego, Chihuahua, Mexico (type in U. S. National Museum).

(?)*Butorides virescens maculatus* Davis, Condor, 46, p. 9, 1944—Acapulco, Mexico.

Range.—Breeds in the arid regions of the southwestern United States (California, Arizona, etc.) and northwestern Mexico; winters south to Lower California, western Mexico, and even El Salvador (San Salvador, Mar. 12–14). Occasionally wanders north to state of Washington.

Field Museum Collection.—14: California (Monterey County, 4; Preston, 1; Calipatria, 1; Eldorado County, 1; San Diego County, 2; Los Angeles County, 3); Arizona (Tucson, 2).

***Butorides virescens frazari** (Brewster).¹ FRAZAR'S GREEN HERON.

Ardea virescens frazari Brewster, Auk, 5, p. 83, Jan., 1888—La Paz, Lower California (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 181, 1930); idem, Bull. Mus. Comp. Zool., 41, p. 53, 1902—La Paz.

Butorides virescens frazari Oberholser, Proc. U. S. Nat. Mus., 42, p. 542, 1912 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 194, 1926 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 85, 1928—Lower California; Peters, Bds. World, 1, p. 103, 1931 (range).

and the slightly lighter green plumage. Intergrades with *B. v. virescens* have been named *B. v. eremonomus*. Wing, 190–202; tail, 70–78; bill, 60–64.

¹*Butorides virescens frazari* (Brewster) is much like the nominate race, but darker, more purplish (less maroon) on hind neck, sides of neck, and foreneck, while both upper and under parts are somewhat darker. Wing, 175–188; tail, 63–70; bill, 60–65.

Range.—Resident in southern Lower California (north to about 27° 20' N. lat.).

Field Museum Collection.—13: Mexico, Lower California (La Paz, 6; San José del Cabo, 1; San Lucas, 3; San Ignacio, 1; San Bruno, 1; Puerto Volando, 1).

***Butorides virescens virescens** (Linnaeus). GREEN HERON.

Ardea virescens Linnaeus,¹ Syst. Nat., 10th ed., 1, p. 144, 1758—based upon "The Small Bittern" Catesby, Nat. Hist. Carolina, 1, p. 80, pl. 80; coast of South Carolina (as restricted by Oberholser, Proc. U. S. Nat. Mus., 42, pp. 534, 537, 1912); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 169, 1901 (in part).

Ardea chloroptura Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "Crabier de la Louisiane" Daubenton, Pl. Enl., pl. 909; Louisiana.

Ardea ludoviciana Gmelin, Syst. Nat., 1, (2), p. 630, 1789—based on Daubenton, Pl. Enl., pl. 909, and "Crabier roux à tête et queue verte," Buffon, Hist. Nat. Ois., 7, p. 407; Louisiana.

Butorides virescens Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 542—Medellin, Antioquia, Colombia; Sharpe, Cat. Bds. Brit. Mus., 26, p. 186, 1898 (in part); Allen, Bull. Amer. Mus. N. H., 13, p. 125, 1900—Bonda, Colombia; idem, Auk, 17, p. 364, 1900—Bonda; idem, Bull. Amer. Mus. N. H., 21, p. 275, 1905—Bonda (Oct. 20).

Butorides saturatus Ridgway,² Proc. U. S. Nat. Mus., 10, p. 577, Aug. 6, 1888—Swan Island, Caribbean Sea (type in U. S. National Museum); Bangs, Bull. Mus. Comp. Zool., 39, p. 141, 1903—Yaruca, Honduras; Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 4, 1931—Swan Island (crit.; = *B. v. virescens*).

Butorides virescens virescens Oberholser, Proc. U. S. Nat. Mus., 42, p. 533, 1912 (monog.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 135, 1922—Bonda, Playa Concha, Trojas de Cataca, and Fundación, Santa Marta, Colombia (crit.); Bent, Bull. U. S. Nat. Mus., 135, p. 185, 1926 (life hist.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 295, 1927—Puerto Rico (Fajardo, Feb. 16); Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 448, 1928—Almirante, Panama (crit.); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 82, 1931—Hispaniola (winter visitor); Bradlee, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 311, 1931—Bermuda Islands (visitor); Peters, Bds. World, 1, p. 103, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 141, 1932—Nebaj, Panajachel, and Ocos, Guatemala (winter visitor); idem, Bull. Mus.

¹ Although Linnaeus also quotes "*Ardea stellaris minor*" of Sloane (Voy. Jam., 2, p. 315, pl. 263, fig. 2; Jamaica) and Raius (Syn. Av., p. 189), which seem to refer to *Ixobrychus exilis*, his diagnosis is clearly based on Catesby's plate.

² The supposed Swan Island race (*saturatus*) has been shown by Fisher and Wetmore to be based on North American migrants, partly of abnormal coloration. In dimensions, the three specimens taken on that island, where the species is merely an occasional visitor, agree with individuals from the eastern United States.

Comp. Zool., 78, p. 294, 1935—Panama (winter); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 37, 1945—Sonora (distrib. map).

Butorides virescens saturatus Oberholser, Proc. U. S. Nat. Mus., 42, p. 552, 1912—Swan Island (crit.).

Range.—Breeds in central and eastern North America from northeastern South Dakota, central Minnesota, southern Ontario, and Nova Scotia south to eastern Mexico and Florida; winters from the southeastern United States through Mexico and Central America to Panama, northern Colombia (Santa Marta region; Medellin, Antioquia) and northern Venezuela (Escorial, Merida); occasionally to Puerto Rico (Fajardo, Feb. 16, 1899) and Hispaniola.

Field Museum Collection.—82: North Dakota (Nelson County, 1; Dickinson, 1); Arkansas (Fayetteville, 1); Texas (Corpus Christi, 1); Wisconsin (Beaver Dam, 3; Fox Lake, 1); Illinois (Fox Lake, 1; Chicago, 1; Grand Chain, 2; Joliet, 1; Grand Tower, 1; Olive Branch, 1); Massachusetts (Chatham, 1; unspecified, 1); Connecticut (East Hartford, 3; Guilford, 3; Westville, 1; North Haven, 2; Orange, 1; Warren, 3); New York (Shelter Island, 3; Cayuga Lake, 1); North Carolina, Dare County (Bodie Island, 2; Pea Island, 2); South Carolina (Mt. Pleasant, 1); Mississippi (Vicksburg, 1); Alabama (Hollins, 1); Georgia (Chatham County, 1; Milton County, 1); Florida (Wilson, 4; Nassau County, 3; Mary Esther, 1; East Pass, 2; Monroe County, 3; Palm Beach County, 19); Mexico (Alta Mira, Tamaulipas, 2; Tampico, 1; Santa Engracia, Tamaulipas, 1; Pacaitan, Campeche, 1; San Felipe, Yucatan, 1); Venezuela (Escorial, Merida, 1).

***Butorides virescens bahamensis** (Brewster).¹ BAHAMA GREEN HERON.

Ardea bahamensis Brewster, Auk, 5, p. 83, Jan., 1888—Watlings Island (type in U. S. National Museum); Bangs, l.c., 17, p. 287, 1900—New Providence Island; Bonhote, Ibis, 1903, p. 306—New Providence, Andros, and Little Abaco Islands (crit.).

Butorides virescens bahamensis Todd, Ann. Carnegie Mus., 7, p. 410, 1911—New Providence, Great Inagua, and Watlings Islands (crit.); Oberholser, Proc. U. S. Nat. Mus., 42, p. 555, 1912—Bahama Islands (monog.); Peters, Bds. World, 1, p. 103, 1931 (range).

Range.—Resident in the Bahama Islands.

¹*Butorides virescens bahamensis* (Brewster), a very poor race, seems to differ from *B. v. maculatus* merely by its paler general coloring. As most of the specimens examined are in rather poor condition, we are not certain that the divergency will prove to be of any real value, though Todd insists on the distinctness of the Bahaman form.

Field Museum Collection.—25: Bahama Islands (Mayaguana, 5; Andros, 1; Auklin Island, 1; Berry Island, 1; Bimini, 2; Eleuthera, 2; Great Bahama, 1; Inagua, 9; Long Island, 1; New Providence, 2).

***Butorides virescens maculatus** (Boddaert).¹ WEST INDIAN GREEN HERON.

Canceroma maculata Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "Crabier tacheté, de la Martinique" Daubenton, Pl. Enl., pl. 912; Martinique.

Ardeola virescens (not *Ardea virescens* Linnaeus) Jardine, Ann. Mag. Nat. Hist., 20, p. 376, 1847—Tobago.

Ardea brunescens (sic) (Gundlach MS.) Lembeye, Av. Isla Cuba, p. 84, pl. 12, 1850—Cuba (type in Habana Museum; descr. of erythristic variety).

Ocniscus brunescens Gundlach and Cabanis, Journ. Orn., 4, p. 344, 1856—Cuba (descr.); Gundlach, l.c., 23, p. 308, 1875—Cárdenas, Cuba.

Butorides virescens Sharpe, Cat. Bds. Brit. Mus., 26, p. 186, 1898—part, spec. i²-a⁵, West Indies and Central America (in part).

Butorides virescens maculata(us) Riley, Smiths. Misc. Coll., 47, p. 278, 1904—Barbuda and Antigua (crit.); Clark, Proc. Bost. Soc. N. H., 32, p. 234, 1905—Barbados, Bequia, Carriacou and Grenada (crit., meas.); Bangs and Zappey, Amer. Natur., 39, p. 188, 1905—Bibyhagua and Santa Fé, Isle of Pines (crit.); Carriker, Ann. Carnegie Mus., 6, p. 432, 1910—Azahar de Cartago, San José, Guápiles, Cuábre, and El Pózo de Térraba, Costa Rica; Oberholser, Proc. U. S. Nat. Mus., 42, p. 564, 1912—Martinique (monog.); Noble, Bull. Mus. Comp. Zool., 60, p. 364, 1916—Guadeloupe (crit.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 296, 1927—Puerto Rico to Virgin Gorda (crit., breeding); Griscom, Bull. Mus. Comp. Zool., 69, p. 155, 1929—El Real, Tuyra Valley, Darien, Panama (Jan. 18); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 83, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 103, 1931 (range); idem, Bull. Mus. Comp. Zool., 71, p. 305, 1931—Almirante Bay, Panama (crit., var., meas.); Griscom, Bull. Amer. Mus. N. H., 64, p. 142, 1932—Ocos, Guatemala; (?) Belcher and Smooker, Ibis, 1934, p. 579—Trinidad (nest and eggs descr.); Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—coast of Panama; Bond, Proc. Acad. Nat. Sci. Phila., 88, p. 355, 1936—Utila and Bonacca Islands; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 76, 1938—El Salvador (crit.); Sassi, Temminckia, 3,

¹*Butorides virescens maculatus* (Boddaert) differs from the nominate race solely by its smaller size. Wing, 160 (male) to 173 (female).

Birds from various islands in the West Indies, though presenting considerable individual variation, seem to belong to a single form, as has already been pointed out by Bangs, Peters, and Wetmore. Eight specimens from Tobago (*tobagensis*) are inseparable from Martinique birds, a fact that renders the existence of local races on the intervening islands, to say the least, extremely unlikely. The so-called *B. brunescens* from Cuba and the Isle of Pines is now admitted to be merely an erythristic variety of local occurrence. The inhabitants of Central America, while varying in a somewhat different way, are not satisfactorily distinguishable from those of the West Indies. Two adults from Managua, Nicaragua (*mesatus*) are practically similar to others from Martinique, Guatemala, and Tobago.

Ninety-four specimens examined.

p. 292, 1938—Costa Rica (races discussed); de Schauensee, Not. Nat. Acad. Nat. Sci. Phila., 144, p. 2, 1944—Rio Baudo, Colombia (first record from South America).

Butorides brun[n]escens Bangs and Zappey, Amer. Natur., 39, p. 188, 1905—Nueva Gerona, Isle of Pines (crit.); Todd, Ann. Carnegie Mus., 10, p. 185, 1916—Los Indios and Nueva Gerona, Isle of Pines.

Butorides virescens mesatus Oberholser, Proc. U. S. Nat. Mus., 42, p. 548, Aug. 29, 1912—Managua, Nicaragua (type in U. S. National Museum); Peters, Bds. World, 1, p. 104, 1931—western Nicaragua.

Butorides virescens hypernotius Oberholser, Proc. U. S. Nat. Mus., 42, p. 549, Aug. 29, 1912—Rio Indio, near Gatún, Canal Zone, Panama (type in U. S. National Museum); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 247, 1918—Gatún, Panama.

Butorides virescens cubanus Oberholser, Proc. U. S. Nat. Mus., 42, p. 557, Aug. 29, 1912—Palmarito, Cuba (type in U. S. National Museum); Todd, Ann. Carnegie Mus., 10, p. 182, 1916—Los Indios, Nueva Gerona, Jacksonville, and Sigüanea, Isle of Pines (crit.).

Butorides virescens christophorensis Oberholser, Proc. U. S. Nat. Mus., 42, p. 561, Aug. 29, 1912—St. Christopher (=St. Kitts), Lesser Antilles (type in U. S. National Museum).

Butorides virescens dominicanus Oberholser, Proc. U. S. Nat. Mus., 42, p. 562, Aug. 29, 1912—Roseau, Dominica, Lesser Antilles (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 182, 1930).

Butorides virescens lucianus Oberholser, Proc. U. S. Nat. Mus., 42, p. 565, Aug. 29, 1912—Port Castries, Santa Lucia, Lesser Antilles (type in U. S. National Museum).

Butorides virescens barbadosis Oberholser, Proc. U. S. Nat. Mus., 42, p. 567, Aug. 29, 1912—Joe's River, Barbados (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 182, 1930).

Butorides virescens grenadensis Oberholser, Proc. U. S. Nat. Mus., 42, p. 568, Aug. 29, 1912—Grenada, Lesser Antilles (type in U. S. National Museum).

Butorides virescens tobagensis Oberholser, Proc. U. S. Nat. Mus., 42, p. 571, Aug. 29, 1912—Tobago (type in Museum of Comparative Zoology, Cambridge, Mass.).

Butorides virescens brunescens Bangs, Auk, 32, p. 481, 1915 (crit.); idem, Bull. Mus. Comp. Zool., 60, p. 305, 1916—Grand Cayman.

Range.—Breeds in the West Indies from Cuba and the Virgin Islands to Tobago¹ and throughout Central America from Guatemala south to the Canal Zone of Panama; straying to Colombia (Rio Baudo, one record).

¹ The breeding in Trinidad requires confirmation by critical study of specimens. Belcher and Smooker's record may possibly be due to confusion with *B. s. striatus*.

Field Museum Collection.—72: Guatemala (Lago de Atitlan, 2; Los Amates, 1); El Salvador (Laguna Olomega, San Miguel, 1; San Sebastian, La Paz, 2); Honduras (Ruatan, Bay Islands, 1); Nicaragua (San Emilio, Rivas, 1); Costa Rica (Garza, Limón, 1; Piedra de Blanca, Guanacaste, 1; Bebedero, 1); western Caribbean (Old Providence, 1; St. Andrews, 3); Dominican Republic (Aguacate, La Vega, 1; Catarey, 1); Puerto Rico (unspecified, 1); Jamaica (Grand Cayman, 12; Little Cayman, 2; Cayman Brac, 1; Priestman's River, 1); Virgin Islands (St. Croix, 5; Virgin Gorda, 2; Anegada, 1; Tortola, 1); Lesser Antilles (St. Christopher, 2; Antigua, 3; Guadeloupe, 7; Desirade, 1; Dominica, 5; Martinique, 1; Santa Lucia, 5; Barbados, 1; Tobago, 4).

***Butorides virescens margaritophilus* Oberholser.¹ PEARL ISLAND GREEN HERON.**

Butorides virescens margaritophilus Oberholser, Proc. U. S. Nat. Mus., 42, p. 553, Aug. 29, 1912—San Miguel Island, Pearl Archipelago, Panama (type in U. S. National Museum); Rendahl, Ark. Zool., 13, No. 4, p. 14, 1920—Chapera Island (crit.); Peters, Bds. World, 1, p. 104, 1931—Pearl Islands; Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Pearl Islands.

Butorides virescens (not *Ardea virescens* Linnaeus) Bangs, Auk, 18, p. 25, 1901—San Miguel Island.

Butorides virescens maculata (not *Cancroma maculata* Boddaert) Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 142, 1905—San Miguel Island (crit.).

Range.—Resident in the Pearl Islands, Bay of Panama.

****Butorides virescens curacensis* Oberholser.² CURACAO GREEN HERON.**

Butorides virescens curacensis Oberholser, Proc. U. S. Nat. Mus., 42, p. 573, Aug. 29, 1912—St. Patrick, Curaçao Island (type in Carnegie Museum); Peters, Bds. World, 1, p. 104, 1931—Curaçao Island.

¹*Butorides virescens margaritophilus* Oberholser: Very similar to *B. v. maculatus*, but darker throughout with the median white stripe on throat and breast greatly reduced, often obliterated posteriorly; center of throat frequently tinged with ochraceous instead of white.

Specimens resembling the erythristic Cuban variety (*brunescens*) are not rare. About the extraordinary variation exhibited by this insular race, cf. Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 142, 1905.

²*Butorides virescens curacensis* Oberholser is stated by the describer to differ from *B. v. "tobagensis"* (= *maculatus*) by darker (less rufescent, more purplish) sides of head and neck, much darker (less fulvescent) foreneck, and narrow barring of the breast-feathers. The supposed smaller size (wing of type, 157½ mm.) does not hold, for a male from Curaçao examined by us has the wing fully as long (163 mm.) as numerous Antillean specimens. The study of a satisfactory series from the Dutch West Indies is required to establish beyond doubt the claims of this form to recognition.

Butorides virescens (not *Ardea virescens* Linnaeus) Hartert, Ibis, 1893, pp. 307, 325, 334—Aruba, Curaçao, and Bonaire (crit.); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 204, 209, 1909—Curaçao and Bonaire (ex Hartert).

Butorides virescens subsp. Hartert, Nov. Zool., 9, p. 306, 1902—Aruba, Curaçao, and Bonaire.

Butorides virescens robinsoni (not *B. robinsoni* Richmond) Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 196, 1909—Aruba (crit.).

Range.—Islands of Aruba, Curaçao, and Bonaire, in the southern Caribbean Sea.

Field Museum Collection.—2: Dutch West Indies (Aruba, 2).

****Butorides striatus robinsoni* Richmond.¹ ROBINSON'S STRIATED HERON.**

Butorides robinsoni Richmond, Proc. U. S. Nat. Mus., 18, p. 655, Aug. 12, 1896—Margarita Island, off Venezuela (type in U. S. National Museum); Lowe, Ibis, 1907, p. 117—Blanquilla Island (crit.).

Butorides virescens robinsoni Lowe, Ibis, 1907, p. 554—Margarita Island (crit.); idem, l.c., 1909, p. 322—Laguna del Obispo, Cariaco Peninsula, Venezuela; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 216, 223, 236, 1909—Los Roques, Blanquilla, and Margarita Islands.

Butorides striatus robinsoni Peters, Bds. World, 1, p. 104, 1931 (range).

Range.—Los Roques, Blanquilla, and Margarita Islands, and northeastern Venezuela (Laguna del Obispo, Cariaco Peninsula).

Field Museum Collection.—1: Venezuela (Los Roques Islands, Colon, 1).

***Butorides striatus patens* Griscom.² PANAMA STRIATED HERON.**

Butorides striatus patens Griscom, Bull. Mus. Comp. Zool., 69, p. 156, April, 1929—near Panama City, Panama (type in Museum of Comparative

¹*Butorides striatus robinsoni* Richmond: Similar in coloration to the nominate race, but decidedly smaller. Wing, 155 mm.

As pointed out by Todd (Ann. Carnegie Mus., 14, p. 136, 1922), the color character used to separate the Margarita Island Heron is by no means diagnostic, birds with vinous-brown sides of head and neck occurring likewise in the range of typical *striatus*. However, the only specimen which we have been able to examine is so much smaller that it seems advisable to recognize *robinsoni* for the present, on the basis of size. A good series from the range given above is needed to settle the status of this little-known form.

²*Butorides striatus patens* Griscom is described as differing from typical *B. s. striatus* by the less rufous, more ochraceous brown markings on throat and fore-neck, and much darker gray posterior under parts (wherein it is said to resemble *B. virescens*). We are not acquainted with this race, and cannot venture any opinion on its merits. Still, we would like to observe that the brown coloration of the neck and the sides of the head, another character insisted upon by the describer, is of no importance, since similar examples are not infrequently met with in the range of *B. s. striatus*.

Zoology, Cambridge, Mass.); Peters, Bds. World, 1, p. 104, 1931—Canal Zone; Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Canal Zone.

Butorides striata (not *Ardea striata* Linnaeus) Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 214, 1906—savanna of Panama.

Butorides virescens (not *Ardea virescens* Linnaeus) Hallinan, Auk, 41, p. 308, 1924—Canal Zone of Panama.

Range.—Said to breed in the Canal Zone, Panama.

****Butorides striatus*¹ *striatus*** (Linnaeus). STRIATED HERON.

Ardea striata Linnaeus, Syst. Nat., 10th ed., 1, p. 144, 1758—Surinam (ex Rolander MS.); Ihering, Rev. Mus. Paul., 3, p. 376, 1899—Iguapé, São Paulo.

(?)*Ardea noevia* I. F. Miller, Var. Subj. Nat. Hist., Part 6, pl. 35, 1782—"South America."

Cancroma grisea Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "Crabier de Cayenne" Daubenton, Pl. Enl., pl. 908; Cayenne.

Ardea chalybea Stephens, in Shaw, Gen. Zool., 11, (2), p. 582, 1819—based on ["Le Crabier Chalybe" Buffon, Hist. Nat. Ois., 7, p. 404, and "Le Crabier du Brésil" Brisson, Orn., 5, p. 479, ex] "*Ardeola*" Marcgrave, Hist. Nat. Bras., p. 210, Brazil (cf. Schneider, Journ. Orn., 86, p. 86, 1938).

Ardea scapularis (not of Lichtenstein) Wied, Beitr. Naturg. Bras., 4, (2), p. 623, 1833—southeastern Brazil (habits); Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 753, 1849—coast regions; Burmeister, Syst. Uebers. Th. Bras., 3, p. 411, 1856—Areas, lower Parahyba, Rio de Janeiro; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 42, 1863—Surinam and Caracas; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 123, 1865—Rio de Janeiro (soft parts); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 27—Minas Geraes (Lagõa Santa; Saco da França, Rio Paraopeba; Lagõa dos Vitos; Sete Lagõas); Pelzeln, Orn. Bras., 3, p. 301, 1870—Rio de Janeiro (Sapitiba, Rio de Janeiro, Taixera), São Paulo (Ypanemá, Itararé, Borda do Matto), Paraná (Paranaguá), Matto Grosso (Cuyabá, Caçara, Villa Bella), and Amazonas (Marabitanas), Brazil; Finsch, Proc. Zool. Soc. Lond., 1870, p. 589—Trinidad.

Butorides scapularis Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 39, 1857—Cayenne; idem, Consp. Gen. Av., 2, p. 128, 1857—Brazil (diag.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 199—Rio Ucayali, Peru.

Butorides grisea Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 196—Cartagena, Colombia.

Ardea grisea Léotaud, Ois. Trinidad, p. 421, 1866—Trinidad.

¹ If we follow Peters and Griscom in according the Striated Heron specific rank, it is not that we are convinced of the correctness of such procedure, but that it has been impossible to assemble the necessary series for a thorough study of the rather complicated interrelations between the Green Heron and the Striated Heron. Besides, breeding specimens from the critical regions, where representatives of the two groups are supposed to approach or even to overlap each other, viz. the Panama Canal Zone and the islands off northern Venezuela (Aruba to Margarita), are too scarce in collections to permit of final conclusions.

- Butorides virescens* (not *Ardea virescens* Linnaeus) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 253—Lake Valencia, Carabobo, Venezuela; Taczanowski, l.c., 1877, p. 746—Santa Lucia, Tumbez, Peru; idem, l.c., 1879, p. 243—Pacasmayo, Peru; Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 185, 1904—Ouanary, French Guiana; Haggmann, Zool. Jahrb. (Syst.), 26, p. 49, 1907—Mexiana Island, Pará, Brazil; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 219, 1925—coast of Piahy, Brazil (spec. examined).
- Butorides cyanurus* (not *Ardea cyanura* Vieillot) Wyatt, Ibis, 1871, p. 384—Lake Paturia and savanna of Bucaramanga, Colombia; Berlepsch, Journ. Orn., 22, p. 270, 1874—Blumenau, Santa Catharina; Salvin and Godman, Ibis, 1879, p. 206—Santa Marta region (=Valle d'Upar), Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 542—Remedios and Medellín, Antioquia, Colombia (eggs descr.); Forbes, Ibis, 1881, p. 355—Recife and Estancia, Pernambuco, Brazil; Berlepsch, l.c., 1884, p. 439—Angostura and Río Apuré, Venezuela; Allen, Bull. Amer. Mus. N. H., 5, p. 150, 1893—Cachoeira, Matto Grosso; Goodfellow, Ibis, 1902, p. 226—Santo Domingo, Ecuador; Grant, l.c., 1911, p. 337—Rabicho, Matto Grosso.
- Butorides scapulatus* (lapsu) Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—Río Ucayali and Santa Cruz, Peru.
- Butorides striata* Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 174, 1885—Taquara do Mundo Novo, Río Grande do Sul; idem, l.c., 37, p. 318, 1889—Sarayacu, Río Ucayali, Peru; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 21, 1895—part, Corumbá, Matto Grosso; Sharpe, Cat. Bds. Brit. Mus., 26, pp. 175, 279, 1898—part, spec. a-d', h', Colombia (Medellín, Valle d'Upar), Ecuador (Quito, Sarayacu), British Guiana (Bartica Grove), and Brazil (Mexiana, Pernambuco, Recife, Bahia, Chapada, Pelotas, Río de Janeiro, Ypanema, Paraná Boyassú); Hartert, Nov. Zool., 5, p. 502, 1898—Cachaví, Ecuador; Allen, Bull. Amer. Mus. N. H., 13, p. 125, 1900—Bonda, Colombia; Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 47, 1900—Río Daule, Río Peripa, and Vinces, Ecuador; Berlepsch and Hartert, Nov. Zool., 9, p. 126, 1902—Orinoco River (Altigracia, Caicara) and Caura River (Suapuré, La Unión); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 94, 1905—Gorgona Island, Colombia; Ihering, Cat. Faun. Braz., 1, p. 68, 1907—São Paulo (Jaboticabal, Iguapé, Río Mogy-Guassú), Minas Geraes (Vargem Alegre), and Matto Grosso (Porto Faya); Hellmayr, Nov. Zool., 14, p. 411, 1907—Humaythá, Río Madeira; Berlepsch, l.c., 15, p. 303, 1908—Cayenne and Ouanary, French Guiana; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 93, 1910—Bahia (Río Vermelho, Joazeiro, Barra do Río Grande), Maranhão (Barra do Galiota), and Piahy (coast near Amaração), Brazil; Chrostowski, Compt. Rend. Soc. Sci. Varsovie, 5, pp. 464, 494, 1912—Vera Guarany and Río Ivahy, Paraná, Brazil; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913—Manimo River, Venezuela; Sneath, Bol. Mus. Goeldi, 8, p. 109, 1914—Ilha das Onças, Bragança Railroad, Río Guamá (Ourém), Río Capim (Resacca), Río Mojú, Marajó (Río Arary, Pacoval), Cunany, Monte Alegre, and Maranhão, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 365, 1916—Orinoco region (nest and eggs

descr.); Chapman, Bull. Amer. Mus. N. H., 36, p. 230, 1917—Sinú, Atrato, Quindío, Barbacoas, Tumaco, Cali, La Palma, Chicoral, Honda, La Olanda, Villavicencio, and La Morelia, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 31, 1918—vicinity of Paramaribo, Surinam; Chubb, Ibis, 1919, p. 273—Eten, Reque, and Trujillo, Peru; Todd and Carriker, Ann. Carnegie Mus., 14, p. 136, 1922—Mamatoco, Bonda, Santa Marta, Fundación, Trojas de Cataca, and Don Diego, Colombia (crit., var.); Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 26, 1922—La Carolina and Yaguarcocha, Ecuador; Delacour, Ibis, 1923, p. 143—Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 207, 1926—Esmeraldas, Rio de Oro, Chone, Bucay, Santa Rosa, Puná Island, Zamora, and Lago San Pablo, Ecuador; Young, Ibis, 1928, p. 780—coast of British Guiana; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 153, 1928—Pará, Brazil; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 487, 1929—São Bento, Maranhão, and Ibiapaba, Piahy, Brazil; Naumburg, Bull. Amer. Mus. N. H., 60, p. 93, 1930—part, Agua Blanca de Corumbá, Matto Grosso.

Ardea cyanurus (not of Vieillot) Salvin, Ibis, 1886, p. 170—Bartica Grove, British Guiana.

Ardea virescens Allen, Bull. Amer. Mus. N. H., 2, p. 110, 1889—Reyes, Bolivia; Ihering, Rev. Mus. Paul., 3, p. 376, 1899—"São Paulo."

Butorides striatus striatus Griscom, Bull. Mus. Comp. Zool., 69, p. 155, 1929—El Real, Darien, Panama (one spec.); Darlington, l.c., p. 362, 1931—Rio Frio, Magdalena, Colombia; Peters, Bds. World, 1, p. 104, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 580—Trinidad (breeding); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 366, 1934—Descalvados, Matto Grosso; Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Darien, Panama; Pinto, Rev. Mus. Paul., 22, p. 30, 1938—Amazonas (Manacapurú), Bahia (Cidade da Barra, Rio Gongohy, Aratuhye, Ilha de Madre Deus, Ilha Bimbarro), Rio de Janeiro (São João da Barra), Minas Geraes (Vargem Alegre), São Paulo (numerous localities), Rio Grande do Sul (Itaquy), Matto Grosso (Rio Paraná), Goyáz (Inhúmas, Cana Brava), and Colombia (Cauca); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 23, 1945—João Pessôa, Rio Juruá, Brazil; idem, l.c., (3), 23, p. 37, 1945—Beni (Reyes and Bresta), Bolivia.

Range.—Tropical South America, from eastern Panama (one record from El Real, Darien), Colombia, Venezuela, and Trinidad south to western Ecuador, Peru, eastern Bolivia, and southern Brazil.¹

Field Museum Collection.—40: Colombia (Rio Atrato, Antioquia, 1; unspecified, 2; La Holanda, Cundinamarca, 1); Venezuela (Rio

¹ While birds from eastern Brazil as far south as São Paulo and Paraná are identical with others from the Guianas, Venezuela and Colombia, those from Matto Grosso and Rio Grande do Sul are so variously intermediate to *B. s. fuscicollis* that their reference to one rather than to the other race is largely a matter of personal preference.

Seventy-two specimens examined.

Catatumbo, Zulia, 2; Encontrados, Zulia, 1; La Ceiba, Trujillo, 1; Maracay, Aragua, 1; Lake Valencia, Aragua, 3); Ecuador (Isla Silva Sur, Province de los Rios, 2; Rio Pimocha, 2; Tunguragua, 1); Peru (Lower Huallaga, Loreto, 1); British Guiana (Georgetown, 2; Buxton, 5); Brazil (Murutucu, Pará, 1; São Bento, Maranhão, 2; Ibiapaba, Piahy, 1; Quixada, Ceará, 5; Barra do Rio Dourado, São Paulo, 2; Joinville, Santa Catharina, 2; Descalvados, Matto Grosso, 1; Vaccaria, Matto Grosso, 1).

***Butorides striatus fuscicollis (Vieillot).¹ SOUTHERN STRIATED HERON.**

Ardea fuscicollis Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 410, 1817—based on "Garza cuello pardo" Azara, Apunt. Hist. Nat. Pax., 3, p. 180, No. 359; Paraguay (descr. of young).

Ardea cyanura Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 421, 1817—based on "Garza cuello aplomado" Azara, Apunt. Hist. Nat. Pax., 3, p. 177, No. 358; Paraguay (descr. of adult).

Ardea scapularis Lichtenstein, Verz. Doubl. Berliner Mus., p. 77, 1823—based on Azara, No. 359; Paraguay.

Butorides cyanurus Selater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 145—Conchitas, Buenos Aires; Lee, Ibis, 1873, p. 137—Rio Gato, Entre Ríos; Durnford, l.c., 1878, p. 62—Lujan Bridge and Punta Lara, Buenos Aires; Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos; Withington, Ibis, 1888, p. 471—Lomas de Zamora, Buenos Aires; Selater and Hudson, Arg. Orn., 2, p. 101, 1889—Argentina; Holland, Ibis, 1892, p. 205—Est. Espartillar, Buenos Aires; Aplin, l.c., 1894, p. 198—Uruguay (habits); Gibson, l.c., 1919, p. 522—Cape San Antonio, Buenos Aires (breeding).

Butorides grisea (not *Cancroma grisea* Boddaert) Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 90, 1884—Sierra de las Animas, Buenos Aires.

Butorides striata (not *Ardea striata* Linnaeus) Berlepsch, Journ. Orn., 35, p. 31, 1887—Rio Pilcomayo, Chaco; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 21, 1895—part, Colonia Risso, Paraguay; idem, l.c., 12, No. 292, p. 30, 1897—Caiza, Bolivian Chaco; Sharpe, Cat. Bds. Brit. Mus., 26, pp. 175, 279, 1898—part, spec. e'-g', Lomas de Zamora, Buenos Aires, and Santa Elena, Uruguay; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Rio Salí, Tucumán; Bruch, Rev. Mus. La Plata, 11, p. 205, 1904—Orán, Salta; Hartert and Venturi, Nov. Zool., 16, p. 246,

¹*Butorides striatus fuscicollis* (Vieillot): Differs from the nominate race by decidedly paler under parts, the neck and throat being lighter, ochraceous rather than rufescent, with the dusky streaking reduced or even absent, and the abdomen pearly gray instead of slate gray.

Examination of a dozen skins from Tucumán, Formosa, Entre Ríos, and Buenos Aires shows this form to be fairly distinguishable. Bolivian skins and a single one from Paraguay are evidently the same. *Ardea fuscicollis*, based on a young bird, has page priority over *A. cyanura*.

1909—Entre Ríos (La Soledad), Buenos Aires (Est. San Martín Monte Barracas al Sud), and Santa Fé (Mocoví); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 224, 1910 (range in Argentina); Tremoleras, El Hornero, 2, p. 14, 1920—Montevideo and Canelones, Uruguay; Serié and Smyth, l.c., 3, p. 42, 1923—Santa Elena, Entre Ríos (breeding); Giacomelli, l.c., p. 79, 1923—La Rioja; Pereyra, l.c., p. 164, 1923—Zelaya and San Isidro, Buenos Aires; Wilson, l.c., 3, p. 353, 1926—Venado Tuerto, Santa Fé; Naumburg, Bull. Amer. Mus. N. H., 60, p. 93, 1930—part, Rio Negro, Paraguay.

Butorides striatus cyanurus Wetmore, Bull. U. S. Nat. Mus., 133, p. 55, 1926—Puerto Pinasco, Paraguay, and Lazcano, San Vicente, etc., Uruguay (crit., nomencl.); Friedmann, Bull. Mus. Comp. Zool., 68, p. 149, 1927—Rio de Gastone, Tucumán, and Bovril Islands, Santa Fé; Griscom, l.c., 69, p. 155 (in text), 1929 (crit.); Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 64, 1930—San José and Lapango, Formosa (crit.); Peters, Bds. World, 1, p. 105, 1931 (range).

Range.—Southeastern Bolivia (Santa Cruz; Caiza), Paraguay, northern Argentina south to La Pampa and Buenos Aires Province, and Uruguay.

Field Museum Collection.—7: Bolivia, Santa Cruz (Rio Yapacani, 3; Rio Surutú, 2); Argentina (Caragatay, Misiones, 1); Uruguay (Arazati, San José, 1).

***Butorides sundevalli** (Reichenow).¹ PLUMBEOUS HERON.

Ardea plumbea (not of Merrem, 1820) Sundevall, Proc. Zool. Soc. Lond., 1870, pp. 125, 127—James Island, Galápagos Archipelago (type in Stockholm Museum; cf. Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 42, 1931).

Ardea sundevalli Reichenow, Journ. Orn., 25, p. 253, 1877—new name for *Ardea plumbea* Sundevall, preoccupied.

Butorides javanicus (not *Ardea javanica* Horsfield) Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 323—Indefatigable Island.

Butorides plumbeus Salvin, Trans. Zool. Soc. Lond., 9, p. 497, 1876—Indefatigable and James Islands; idem, Proc. Zool. Soc. Lond., 1883, p. 428—Charles Island; Ridgway, Proc. U. S. Nat. Mus., 12, p. 114, 1890—Hood, James, Duncan, and Abingdon Islands; idem, l.c., 19, p. 602, 1897 (monog.); Rothschild and Hartert, Nov. Zool., 6, p. 181, 1899—Chatham, Bindloe, Jervis, Hood, Indefatigable, Wenman, Abingdon, Albemarle, and Barrington Islands (crit.); iidem, l.c., 9, p. 411, 1902—Narborough and Indefatigable Islands (note on young); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 255, 1904—Albemarle Island (eggs descr.).

¹*Butorides sundevalli* (Reichenow) differs from the other American members of the genus by stouter bill, larger size, and much darker coloration. The edges to the wing coverts are deep rufous brown; there is no white edging to the inner primaries; the under parts are very dark with mere traces of rufous on neck, but with very distinct longitudinal patches of black. The orange-red legs would seem to place this heron next to *B. s. striatus*.

Butorides sundevalli Sharpe, Cat. Bds. Brit. Mus., 26, p. 185, 1898 (monog.); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 62, 1913 (plum., var., habits); Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 42, 1931 (crit.); Peters, Bds. World, 1, p. 104, 1931 (range); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 35, 1931—Tower and Duncan Islands.

Range.—Resident in the Galápagos Archipelago.

Field Museum Collection.—5: Galápagos Islands (Indefatigable Island, 1; Tower Island, 1; Albemarle Island, 3).

Genus FLORIDA Baird

Florida Baird, Rep. Expl. Surv. R. R. Pac., 9, pp. xxi, xlv, 671, 1858—type, by monotypy, *Ardea caerulea* Linnaeus.

Glaucoerodius Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 307, 1890—substitute name for *Florida* Baird.

**Florida caerulea* (Linnaeus).¹ LITTLE BLUE HERON.

*Ardea caerulea*² Linnaeus, Syst. Nat., 10th ed., 1, p. 143, 1758—based principally on "The Blew Heron" Catesby, Nat. Hist. Carolina, 1, p. 76, pl. 76; "in America septentrionali"=Carolina (ex Catesby); Wied, Beitr. Naturg. Bras., 4, (2), p. 604, 1833—southeastern Brazil; Burmeister, Journ. Orn., 8, p. 265, 1860—Mercedes, Rio Negro, Uruguay; Taylor, Ibis, 1864, p. 95—Trinidad (Caroni River) and Orinoco; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 122, 1865—Brazil (plumages); Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 252—Lake Valencia, Venezuela; Pelzeln, Orn. Bras., 3, p. 301, 1870—Rio de Janeiro (Sapitiba), São Paulo (Ypanemá), and Paraná (Rio Boraxudo, Paranaguá); Wyatt, Ibis, 1871, p. 384—Lake Paturia and Ciénaga, Colombia; Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 745—Santa Lucia, Tumbez, Peru; Aplin, Ibis, 1894, p. 198—banks of the Rio Negro, Uruguay; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 165, 1901—Central American localities and references.

Ardea caerulescens Latham, Ind. Orn., 2, p. 690, 1790—Cayenne.

Herodias poucheti Bonaparte, Consp. Gen. Av., 2, p. 123, 1857—South America (type in Paris Museum).

Herodias caerulea Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 39, 1857—Cayenne.

Florida caerulea Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 671, 1858 (descr.); Gundlach, Journ. Orn., 23, p. 305, 1875—Cuba (plumages; breeding habits); Sharpe, Cat. Bds. Brit. Mus., 26, p. 100, 1898 (monog.); Salvadori

¹ *Ardea cyanopus* Gmelin (Syst. Nat., 1, [2], p. 644, 1789) has been quoted in the synonymy of this Heron. It is based on "Le Héron cendré d'Amérique" Brisson (Orn., 5, p. 406) and "Le Crabier cendré" Buffon (Hist. Nat. Ois., 7, p. 401), both accounts going back to "Héron ou Calidris leucophaea" of Feuilleé (Journ. Obs. phys., éd. 1725, p. 287) from "New Spain," a very ambiguously described bird, not much larger than a pigeon.

² Frequently spelled "*coerulea*."

and Festa, *Boll. Mus. Zool. Torino*, 15, No. 368, p. 46, 1900—Vinces, Rio Peripa, and Rio Daule, Ecuador; Berlepsch and Hartert, *Nov. Zool.*, 9, p. 124, 1902—Caicara, Rio Orinoco, and Mato River, Venezuela; Hartert, l.c., p. 605, 1902—Vaqueria, Ecuador; Ménégau, *Bull. Mus. Hist. Nat. Paris*, 10, p. 185, 1904—Mahury, French Guiana; Hellmayr, *Nov. Zool.*, 13, p. 50, 1906—Trinidad (Caroni) and Tobago; Hagmann, *Zool. Jahrb. (Syst.)*, 26, p. 48, 1907—Mexiana Island, Brazil; Ihering, *Cat. Faun. Braz.*, 1, p. 65, 1907—São Paulo (Ypiranga, Iguapé), Paraná (Curytiba), and “Amazonas”; Berlepsch, *Nov. Zool.*, 15, p. 302, 1908—Cayenne and Mahury, French Guiana; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 223, 1910—“northern provinces” (Holmberg) and Mercedes, “Prov. Buenos Aires (Burmeister)” [errore, = Uruguay]; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 92, 1910—coast of Piauh, Brazil; Sneath, *Bol. Mus. Goeldi*, 8, p. 107, 1914—Bragança Railroad, Marajó (Pacoval, Livramento), and Mexiana, Brazil; Todd, *Ann. Carnegie Mus.*, 10, p. 179, 1916—Los Indios and Majagua River, Isle of Pines (crit.); Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 229, 1917—Noanamá (Chocó) and Malena (Magdalena), Colombia; Bangs and Penard, *Bull. Mus. Comp. Zool.*, 62, p. 30, 1918—Braamspunt, Surinam; Tremoleras, *El Hornero*, 2, p. 14, 1920—Cerro Largo, Uruguay; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 134, 1922—Gaira, Bonda, Cinto, Trojas de Cataca, and Punto Caimán, Colombia (crit.); Lönnberg and Rendahl, *Ark. Zool.*, 14, No. 25, p. 26, 1922—La Carolina, Ecuador; Delacour, *Ibis*, 1923, p. 142—Venezuela; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 217, 1925—Bahía (Pedro do Ernesto, Rio São Francisco), Piauh (Amaração), and Maranhão (Miritiba); Bent, *Bull. U. S. Nat. Mus.*, 135, p. 177, 1926 (life hist.); Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 205, 1926—Esmeraldas, Chone, and Puná Island, Ecuador; Young, *Ibis*, 1928, p. 778—Abary Savanna and flats of Corentyne River, British Guiana; Peters, *Bds. World*, 1, p. 107, 1931 (range); Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 139, 1932—Finca Sepacuite and Ocos, Guatemala; Belcher and Smooker, *Ibis*, 1934, p. 580—Trinidad and Tobago (breeding); Griscom, *Bull. Mus. Comp. Zool.*, 78, p. 294, 1935—Panama; Pinto, *Rev. Mus. Paul.*, 22, p. 31, 1938—Pará (Ilha Grande, Ilha Marajó, Pataná, Lago Cuiapéva), Maranhão (Primeira Cruz), and São Paulo (Iguapé, Cananéa, Ilha do Cardoso).

Florida caerulea caerulescens Riley, *Smiths. Misc. Coll.*, 47, p. 279, 1904—Barbuda and Antigua (crit.); Clark, *Proc. Bost. Soc. N. H.*, 32, p. 234, 1905—St. Vincent, Grenadines (Carriacou), and Grenada (breeding); Wetmore, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 293, 1927—Puerto Rico, Vieques, Culebra, St. Croix, and Tortola (crit.); idem and Swales, *Bull. U. S. Nat. Mus.*, 155, p. 80, 1931—Hispaniola; Dickey and van Rossem, *Field Mus. Nat. Hist., Zool. Ser.*, 23, p. 75, 1938—El Salvador; van Rossem, *Occ. Pap. Mus. Zool. Louisiana State Univ.*, 21, p. 38, 1945—Sonora (distr.).

Florida caerulea caerulea Carriker, *Ann. Carnegie Mus.*, 6, p. 429, 1910—Rancho Redondo, Guanacaste, Guápiles, and El Pózo de Terraba, Costa Rica; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 363, 1916—Orinoco Valley, Venezuela; Hagar, *Auk*, 58, p. 568, 1941—Marshfield, Massachusetts (nesting).

Range.—South Atlantic and Gulf states of North America, coasts of Mexico and Central America, the West Indies, and coasts and rivers of South America south to northwestern Peru (Santa Lucia, Tumbes) in the west, and to Uruguay (Mercedes, Rio Negro;¹ Cerro Largo) in the east.² One nesting record for Massachusetts.

Field Museum Collection.—103: Texas (Padre Island, 1; Brownsville, 2); Connecticut (Guilford, 1); North Carolina (New Inlet, Dare County, 4; Raleigh, 2); South Carolina (Mt. Pleasant, 1); Georgia (Montezuma, 1; Chatham County, 1; Camden County, 3); Florida (New River, 1; Wilson, 1; Duval County, 3; Manatee County, 1; Enterprise, 4; Anclote, 2; Oklawaha River, 1; Amelia Island, 2; Bassenger, 1; Palm Beach County, 8); Cuba (Isle of Pines, 1); Dominican Republic (Catarey, 1); Virgin Islands (Tortola, 1; St. Croix, 2); Lesser Antilles (Dominica, 1; Antigua, 22; Saint Eustatius, 1; Santa Lucia, 3); western Caribbean (Saint Andrews, 1); Mexico (La Paz, Lower California, 1; Tampico, 3; Tamaulipas, 1); El Salvador (San Sebastian, 1); Costa Rica (Limón, 1; Filadelfia, Guanacaste, 1); Panama (Barro Colorado Island, Canal Zone, 2); Colombia (Magdalena, 1; unspecified, 1); Ecuador (Isla Silva Sur, Province de los Rios, 2); Venezuela (Encontrados, Zulia, 2; Maracaibo, 1; Rio Chama, Merida, 2); Dutch West Indies (Aruba, 1); British Guiana (Georgetown, 7; Buxton, 3).

Genus BUBULCUS Bonaparte

Bubulcus (Pucheran MS.) Bonaparte, Compt. Rend. Acad. Sci. Paris, 40, No. 14, p. 722, April, 1855—type, by tautonymy, *Ardea ibis* "Hasselquist" (=Linnaeus)=*Ardea bubulcus* Audouin.

**Bubulcus ibis ibis* (Linnaeus). BUFF-BACKED HERON.

Ardea Ibis Linnaeus, Syst. Nat., 10th ed., 1, p. 144, 1758—Egypt (ex Hasselquist, It. Palaest., p. 248, 1757).³

¹ Burmeister's locality "Mercedes, Rio Negro," Banda Oriental [=Uruguay], was wrongly attributed by Dabbene to "Buenos Aires Province," while Scott and Sharpe (Rep. Princet. Univ. Exped. Patagonia, 2, Orn., pp. 382, 387, 1912) even identified the river with the Rio Negro of Patagonia! *F. caerulea* has never been found either in Argentina or Paraguay, and it may be taken for granted that Holmberg's record from the "northern provinces" was caused by his confusing this species with the White Heron.

² In agreement with Todd we are quite unable to see any constant difference between North American specimens on one side and those from the West Indies and tropical America on the other.

³ Linnaeus' diagnosis is taken from Hasselquist's account, which clearly refers to the Buff-backed Heron. The reference to Raius (Syn. Méth. Av., p. 98) under var. *β*. does not belong here, however.

Bubulcus ibis ibis Peters, Bds. World, 1, p. 108, 1931 (range); Blake, Auk, 56, p. 470, 1939—near Buxton, British Guiana (May 27, 1937).

Bubulcus ibis Phelps, Auk, 61, p. 656, 1944—San José de Tiznados, west of Calabozo, Guárico, Venezuela (possibly a captive bird).

Range.—Iberian Peninsula; Africa to Madagascar, the Comoro Islands, Aldabra, and the Seychelles; western Asia from the Caspian Sea and Arabia to Persia; accidental in England, Italy, Madeira, on the Canary Islands, in British Guiana (near Buxton, east of Georgetown, May 27, 1937)¹ and (?) Venezuela.

Field Museum Collection.—1: British Guiana (near Buxton, 1).

Genus DICHROMANASSA Ridgway

Dichromanassa Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, No. 1, pp. 224, 246, Feb. 5, 1878—type, by orig. desig., *Ardea rufa* Boddaert=*Ardea rufescens* Gmelin.

**Dichromanassa rufescens rufescens* (Gmelin). REDDISH EGRET.

Ardea rufa (not of Scopoli, 1769) Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "L'Aigrette rousse, de la Louisiane" Daubenton, Pl. Enl., pl. 902, Louisiana; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 167, 1901—part, Gulf States and West Indies (descr.).

Ardea rufescens Gmelin, Syst. Nat., 1, (2), p. 628, 1789—principally based on "L'Aigrette rousse, de la Louisiane" Daubenton, Pl. Enl., pl. 902, Louisiana.

Ardea pealii Bonaparte, Ann. Lyc. Nat. Hist. N. Y., 3, p. 154, pub. Feb., 1827—"Florida and probably the analogous climates of America" (descr. of white phase; type probably lost); idem, Amer. Orn., 4, p. 96, pl. 26, fig. 1, 1833—Florida.

Ardea cubensis (Gundlach MS.) Lembeye, Av. Isla Cuba, p. 84, pl. 13, fig. 1, 1850—Cuba (descr. of young; type in coll. of J. Gundlach, Havana Museum).

Herodias rufescens Gundlach, Journ. Orn., 4, p. 341, 1856—Cuba (crit.); idem, l.c., 10, p. 82, 1862—Cuba (crit.).

Demigretta pealii Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 661, 1858—Florida (crit.); March, Proc. Acad. Nat. Sci. Phila., 1864, p. 63—Jamaica (descr.); Gundlach, Journ. Orn., 23, p. 301, 1875—Cuba (crit.; breeding).

Demigretta rufa Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 662, 1858—Mata-moros and Texas (crit.); Gundlach, Journ. Orn., 23, p. 302, 1875—Cuba (Punta-Maya near Matanzas; Cayo Galindo; Ensenada de Cochinos).

Herodias pealii Gundlach, Journ. Orn., 10, p. 82, 1862—cayos of north coast and mouth of Rio Cauto, Cuba (breeding).

¹ An extraordinary occurrence.

Dichromanassa rufa Sennett, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 60, 1878—Corpus Christi Pass, Texas; Sharpe, Cat. Bds. Brit. Mus., 26, p. 106, 1898—part, spec. from Florida (Tarpon Springs, Punta Rassa) and Texas (Corpus Christi, Brownsville, Aransas Bay).

Dichromanassa rufescens Bent, Bull. U. S. Nat. Mus., 135, p. 157, 1926 (life hist.).

Dichromanassa rufescens rufescens Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 78, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 109, 1931 (range in part); Oberholser, Dept. Conserv. State Louisiana, Bull., 28, p. 56, 1938—Louisiana.

Range.—Breeding (and mainly resident) in the Gulf States, Bahama Islands (Great Bahama, Abaco, New Providence, Great Inagua, etc.), and in the Greater Antilles (Cuba, Jamaica, and Hispaniola); occasionally straying to southern Mexico (Cuicatlan, Oaxaca, Oct. 20, 1923); accidental in Venezuela.

Field Museum Collection.—32: Texas (Brownsville, 4; Green Island, 10; Padre Island, 4; Corpus Christi, 7; Port Lavaca, 1); Florida (Tarpon Springs, 1; unspecified, 1); Bahama Islands (Andros, 1; Inagua, 1; Caicos Bank, 1); Venezuela (Los Roques, Colon, 1).

****Dichromanassa rufescens dickeyi* van Rossem.¹ LOWER CALIFORNIA REDDISH EGRET.**

Dichromanassa rufescens dickeyi van Rossem, Condor, 28, p. 246, Sept., 1926—San Luis Island, Gulf of California (type in coll. of Donald R. Dickey); Grinnell, Univ. Calif. Pub. Zool., 32, p. 83, 1928—Lower California; van Rossem and Hachisuka, Trans. San Diego Soc. N. H., 8, p. 326, 1937—Guaymas and Tóbari Bay, Sonora; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 74, 1938—Barra de Santiago, El Salvador (April 2); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 38, 1945—Sonora (distr.).

Demiegretta pealii (not *Ardea pealii* Bonaparte) Salvin, Ibis, 1865, p. 192—Chiapám, Pacific Guatemala; idem, l.c., 1866, p. 196—Chiapám.

Demiegretta rufa (not *Ardea rufa* Boddaert) Salvin, Ibis, 1866, p. 196—Chiapám, Guatemala; Lawrence, Mem. Bost. Soc. N. H., 2, p. 310, 1874—Mazatlan, Sinaloa.

Dichromanassa rufa Sharpe, Cat. Bds. Brit. Mus., 26, p. 106, 1898—part, spec. from Mexico (Presidio de Mazatlan) and Guatemala (Istan, Chiapám).

¹ *Dichromanassa rufescens dickeyi* van Rossem: Similar to the nominate race, but head and neck decidedly darker, between cameo brown and chocolate. The other differences claimed by the describer do not seem to hold.

A single adult from Presidio, Sinaloa, and one from Istan, Guatemala, are markedly darker on the head and neck than any in a series of twelve from Texas and Florida, so that we cannot but recognize this form as distinct. Griscom (Amer. Mus. Nov., 235, p. 9, 1926), however, strongly questions its validity.

Ardea rufa Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 167, 1901—part, Mexico (Lower California; Mazatlan)¹ and Guatemala (Chiapám, Istan).

Dichromanassa rufescens rufescens (not *Ardea rufescens* Gmelin) Peters, Bds. World, 1, p. 109, 1931 (range in part).

Range.—Breeds in Lower California; migrates along the Mexican coast (Mazatlan, Presidio) to Pacific Guatemala (Istan, Chiapám) and El Salvador (Barra de Santiago).

Field Museum Collection.—1: Mexico, Lower California (San Luis Island, 1).

Dichromanassa rufescens colorata Griscom.² YUCATAN RED-DISH EGRET.

Dichromanassa rufescens colorata Griscom, Amer. Mus. Nov., 235, p. 9, Nov. 18, 1926—Culebra Key, Ascension Bay, eastern Quintana Roo, Mexico (type in the American Museum of Natural History, New York); Peters, Bds. World, 1, p. 109, 1931 (range).

Demiegretta rufa (not *Ardea rufa* Boddaert) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 210, 1869—Progreso, Yucatan.

Ardea rufa Salvin, Ibis, 1889, p. 376—Cozumel Island; idem and Godman, Biol. Centr.-Amer., Aves, 3, p. 167, 1901—part, Yucatan (Progreso) and Cozumel Island.

Ardea peali (not *A. pealii* Bonaparte) Salvin, Ibis, 1889, p. 376—Cozumel Island.

Dichromanassa rufa Sharpe, Cat. Bds. Brit. Mus., 26, p. 106, 1898—part, spec. from Cozumel Island.

Range.—Yucatan Peninsula and adjacent islands.

Genus CASMERODIUS Gloger

Casmerodius Gloger, Gemeinn. Hand- und Hilfsb. Naturg., Heft 6, p. 412, 1842—type, by subs. desig. (Salvadori, Orn. Pap., 3, p. 349, 1882), *Ardea egretta* Gmelin.

**Casmerodius albus egretta* (Gmelin). AMERICAN EGRET.

Ardea Egretta Gmelin, Syst. Nat., 1, (2), p. 629, 1789—based principally on "La Grande Aigrette" Buffon, Hist. Nat. Ois., 7, p. 377; "in insulis S.

¹ Without re-examination of the respective specimens, it is impossible to allocate properly the localities in Oaxaca (San Mateo, Ventosa).

² *Dichromanassa rufescens colorata* Griscom: Similar to the nominate race, but slightly larger, with a proportionately shorter bill; adults in nuptial plumage with head and neck on an average paler and browner, less chestnut; ornamental plumes strongly tinged with vinaceous instead of uniform slaty blue, the feathers more or less vinaceous at their bases. Wing, 342, (female) 311; bill, 103, (female) 93.

Dominici, insulis Falkland et America australi ad Louisianam usque" (Cayenne [ex Buffon] designated as type locality by Berlepsch and Hartert, Nov. Zool., 9, p. 124, 1902); Wied, Beitr. Naturg. Bras., 4, (2), p. 607, 1833—eastern Brazil; Sclater and Salvin, Ibis, 1869, p. 284—Port Otway, Gulf of Peñas, Chile; Pelzeln, Orn. Bras., 3, p. 300, 1870—Rio de Janeiro (Sapitiba), São Paulo (Ypanemá), Paraná (Rio de Boraxudo, Paranaguá), Matto Grosso (Caicara, Villa Bella), and Amazon River, Brazil; Berlepsch, Journ. Orn., 22, p. 265, 1874—Blumenau, Santa Catharina; Allen, Bull. Essex Inst., 8, p. 82, 1876—Santarém, Brazil; Durnford, Ibis, 1878, p. 399—Chubut and Sengel River, Patagonia; Gibson, l.c., 1880, p. 156—Cape San Antonio, Buenos Aires (breeding); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—Rio Colorado and Rio Negro; White, Proc. Zool. Soc. Lond., 1882, p. 624—Punta Lara, Buenos Aires, and Orán, Salta; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 89, 1884—Tandil, Arroyo Tandil, and La Tinta, Buenos Aires; Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos (breeding), and Prov. Buenos Aires (south to Carhué); Salvin, Ibis, 1886, p. 169—Bartica Grove, British Guiana; Berlepsch, Journ. Orn., 35, p. 29, 1887—Rio Pilcomayo, Chaco; idem, l.c., 37, p. 100, 1889—Tonantins, Rio Solimões, Brazil; Holland, Ibis, 1890, p. 425—Est. Espartillar, Buenos Aires; Kerr, l.c., 1892, p. 144—Rio Paraná and Pilcomayo, Paraguay; Holland, l.c., 1892, p. 204—Est. Espartillar, Buenos Aires; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 389—Lima, Peru; Allen, Bull. Amer. Mus. N. H., 5, p. 150, 1893—Chapada, Matto Grosso; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 21, 1895—Paraguay (Paraguari) and Matto Grosso (Corumbá); idem, l.c., 12, No. 292, p. 30, 1897—Caiza, Bolivia; Kerr, Ibis, 1901, p. 231—Villa Concepción and Chaco, Paraguay; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 161, 1901—Central American references and localities; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—Faz. do Estreito, Rio Grande, Bahia; Grant, Ibis, 1911, p. 336—Los Ynglases, Ajó, Buenos Aires; Gibson, l.c., 1919, p. 519—Cape San Antonio, Buenos Aires.

Ardea leuce (Illiger MS.) Lichtenstein, Verz. Doubl. Berliner Mus., p. 77, 1823—Brazil (type in Berlin Museum); Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 752, 1849—marshes of the savannas; Burmeister, Syst. Uebers. Th. Bras., 3, p. 416, 1856—Lagõa Santa, Minas Geraes; Pelzeln, Reise Novara, Zool., 1, p. 118, 1865—Chile; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 29—Sumidouro and Venda Nova, Minas Geraes.

Egretta Americana Swainson, Nat. Hist. Class. Bds., 2, p. 354, July, 1837—based on *Ardea egretta* Wilson, Amer. Orn., 7, p. 106, pl. 61, fig. 4, 1813.

Egretta leuce Darwin, Zool. Beagle, 3, Birds, p. 128, 1841—Maldonado (Uruguay) and Patagonia; Sclater, Proc. Zool. Soc. Lond., 28, p. 290, 1860—Babahoyo, Ecuador.

Herodias egretta var. *californica* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 667, 1858—San Diego, California (type in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 264, 1982).

Herodias egretta March, Proc. Acad. Nat. Sci. Phila., 1864, p. 63—Jamaica; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 199—lower and upper

- Ucayali River, Peru; *idem*, l.c., 1873, p. 305—Ucayali River and Santa Cruz, Peru; Gundlach, *Journ. Orn.*, 23, p. 299, 1875—Cuba (breeding); *idem*, l.c., 26, p. 187, 1878—Puerto Rico; Sharpe, *Cat. Bds. Brit. Mus.*, 26, pp. 95, 270, 1898 (monog.); Berlepsch and Hartert, *Nov. Zool.*, 9, p. 125, 1902—Caicara, Orinoco, Venezuela; Berlepsch and Stolzmann, *Proc. Zool. Soc. Lond.*, 1902, (2), p. 97—Ingapirca, Junín, Peru; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 209, 1902—Tucumán (Vipos; Rio Calera); Lönnberg, *Ibis*, 1903, p. 462—Colonia Crévieux, Tarija, Bolivia; Clark, *Proc. Bost. Soc. N. H.*, 32, p. 233, 1905—Barbados (one record); Ihering, *Cat. Faun. Braz.*, 1, p. 65, 1907—São Paulo (Ypiranga, Itapura); Hagmann, *Zool. Jahrb. (Syst.)*, 26, p. 48, 1907—Mexiana Island, Brazil (breeding); Lowe, *Ibis*, 1907, p. 554—Margarita Island, Venezuela; Berlepsch, *Nov. Zool.*, 15, p. 302, 1908—French Guiana; Hartert and Venturi, l.c., 16, p. 246, 1909—Barracas al Sud, Buenos Aires; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 223, 1910 (range in Argentina); Carriker, *Ann. Carnegie Mus.*, 6, p. 428, 1910—Costa Rica (Guanacaste; Pózo Azúl de Pirris; Guápiles); Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, *Orn.*, p. 379, 1912—Patagonia (descr.); Cooke, *U. S. Dept. Agric., Bull. Biol. Surv.*, 45, p. 40, 1913 (range; migr.); Sneath, *Bol. Mus. Goeldi*, 8, p. 106, 1914—Mexiana Island and Rio Jamauchim, Pará, Brazil; Todd, *Ann. Carnegie Mus.*, 10, p. 179, 1916—Pasadita, Isle of Pines; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 363, 1916—Orinoco Valley; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 228, 1917—Cauca Valley, Magdalena River, and La Morelia, Colombia.
- Egretta egretta* Bangs and Penard, *Bull. Mus. Comp. Zool.*, 62, p. 30, 1918—Tijgerbank, Surinam; Delacour, *Ibis*, 1923, p. 142—Apure district, Venezuela; Bennett, l.c., 1926, p. 324—Falkland Islands (rare visitor).
- Casmerodius egretta* Chubb, *Ibis*, 1919, p. 271—Colta, Riobamba, Ecuador; Lönnberg and Rendahl, *Ark. Zool.*, 14, No. 25, p. 26, 1922—La Carolina, Ecuador; Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 205, 1926—Ecuador; Bent, *Bull. U. S. Nat. Mus.*, 135, p. 133, 1926 (life hist.); Young, *Ibis*, 1928, p. 777—Abary savannas and flats of Corentyne River, British Guiana; Swarth, *Occ. Pap. Calif. Acad. Sci.*, 18, p. 42, 1931—Albemarle and Indefatigable Islands, Galápagos; Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 139, 1932—Guatemala; Davis, *Ibis*, 1935, p. 533—Rupununi River, British Guiana (breeding).
- Casmerodius albus egretta* Tremoleras, *El Hornero*, 2, p. 14, 1920—Maldonado and Rocha, Uruguay; Wace, l.c., p. 199, 1921—Falkland Islands; Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 57, 1926—Paraguay (Puerto Pinasco), Uruguay (Carrasco), and Chaco; *idem*, *Univ. Calif. Pub. Zool.*, 24, p. 413, 1926—Lago Buenos Aires, Santa Cruz, Patagonia; *idem*, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 290, 1927—Puerto Rico and Vieques; Friedmann, *Bull. Mus. Comp. Zool.*, 68, p. 149, 1927—La Noria, Santa Fé; Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 91, 1930—Descalvados, Matto Grosso; Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp., Vögel*, p. 64, 1930—Mision Tacaáglé and Lapango, Formosa; Fisher and Wetmore, *Proc. U. S. Nat. Mus.*, 79, art. 10, p. 34, 1931—Tower Island, Galápagos; Peters, *Bds. World*, 1, p. 110, 1931 (range); Wetmore and

Swales, Bull. U. S. Nat. Mus., 155, p. 75, 1931—Hispaniola; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 302, 1932—Chile (range, full bibliog.); Belcher and Smooker, Ibis, 1934, p. 580—Trinidad and Tobago (breeding); Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 32, 1938—Amazonas (Manacapurú; São Gabriel; Rio Negro), Pará (Pataná), Bahia (Cidade da Barra), Minas Geraes (Pirapora), São Paulo (Itapura, Ypiranga), Matto Grosso (Aqui-dauana), and Goyáz (Rio das Almas, Inhúmas); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 73, 1938—El Salvador; Stonor, Univ. State New York Bull. to Schools, 24, p. 119, 1938—Albany region, New York (status and occ.); Gabrielson, Wilson Bull., 51, p. 240, 1939—Trempealeau County, Wisconsin (breeding); Mitchell, Passenger Pigeon, 5, (2), p. 49, 1943—Horicon, Wisconsin (nesting); Harlan, Iowa Bd. Life, 13, p. 59, 1943—Jackson County, Iowa (nesting colony); Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 27, 1943—St. Thomas, Virgin Islands (nesting); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 23, 1945—João Pessôa, Rio Juruá; idem, l.c., 23, p. 38, 1945—El Beni (Reyes; Bresta), Bolivia; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 38, 1945—Sonora (distr.).

Casmerodius alba egretta Hicks, Wilson Bull., 56, p. 169, 1944—Ohio (nesting).

Range.—Breeds from the temperate United States (Oregon, Wisconsin, New Jersey), Mexico, the Greater Antilles (Cuba, Jamaica, Hispaniola, Puerto Rico), Virgin Islands (St. Thomas), Central America, and South America, including the Galápagos Islands, south to the Gulf of Peñas, Chile, and western Santa Cruz, Patagonia (Lago Buenos Aires); accidental on the Falkland Islands. Wanders north in summer to southern Canada.

Field Museum Collection.—47: California (Los Angeles County, 2); Texas (Brownsville, 2; Cameron County, 3); Arkansas (Fayetteville, 1); Mississippi (Rosedale, 1); North Carolina (Pea Island, Dare County, 2); Georgia (Sapelo Island, 1); Florida (Enterprise, 1; Pilot Town, 1; Dade County, 3; Bassenger, 2; Anclote, 4; Jupiter, 3); Bahama Islands (Andros, 1; Caicos Bank, 2); Virgin Islands (St. Croix, 1); Mexico (Santa Engracia, Tamaulipas, 1; Rio Lagartos, Yucatan, 3); Costa Rica (Bebedero, Guanacaste, 2); Colombia (unspecified, 1); Ecuador (Totoral, Occidente, 1); Peru (Rio Ucayali, Loreto, 1); Venezuela (Encontrados, Zulia, 1); Brazil (Bõa Vista, Amazonas, 3); Argentina (Tres Posos, Salta, 3; Santa Cruz, Tucumán, 1).

Genus LEUCOPHOYX Sharpe

Leucophoyx Sharpe, Bull. Brit. Orn. Cl., 3, p. xxxix, Apr. 30, 1894—type, by orig. desig., *Ardea candidissima* Gmelin=*Ardea thula* Molina.

****Leucophoyx thula brewsteri* (Thayer and Bangs).¹ BREWSTER'S EGRET.**

Egretta candidissima brewsteri Thayer and Bangs, Proc. New Engl. Zool. Cl., 4, p. 40, April 29, 1909—San José Island, Lower California (type in coll. of J. E. Thayer, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 181, 1930); Bent, Bull. U. S. Nat. Mus., 135, p. 156, 1926 (life hist.).

Egretta thula brewsteri Bailey, Auk, 45, pp. 430–436, pls. 13–15, 1928 (crit., meas., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 83, 1928—Lower California.

Leucophoyx thula brewsteri Peters, Bds. World, 1, p. 113, 1931 (range); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 39, 1945—Sonora (distr.).

Range.—United States west of the Rocky Mountains from Great Salt Lake, Utah, southward, and Lower California; migrating in winter as far as Guerrero; Mexico.

Field Museum Collection.—4: Utah (Salt Lake City, 4).

****Leucophoyx thula thula* (Molina). SNOWY EGRET.**

Ardea thula Molina, Sagg. Stor. Nat. Chile, pp. 235, 344, 1782—Chile.

Ardea nivea (not of S. G. Gmelin, 1770) Jacquin, Beytr. Gesch. Vögel, p. 18, 1784—Cartagena, Colombia; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 753, 1849—coast; Burmeister, Syst. Uebers. Th. Bras., 3, p. 417, 1856—southeastern Brazil.

Ardea Ohula Gmelin, Syst. Nat., 1, (2), p. 633, 1789—Chile (ex Molina, Sagg. Stor. Nat. Chile, p. 208; doubtless pen-slip for *A. thula*).

Ardea candidissima Gmelin, Syst. Nat., 1, (2), p. 633, 1789—based on Jacquin, Beytr. Gesch. Vögel, p. 18, No. 13, Cartagena, Colombia; Wied, Beitr. Naturg. Bras., 4, (2), p. 612, 1833—eastern Brazil; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 28—Lagõa Santa and Sete Lagõas, Minas Geraes; Pelzeln, Orn. Bras., 3, p. 300, 1870—Rio de Janeiro (Sapitiba, Marambaya), São Paulo (Ypanemá), Matto Grosso (Caiçara, Pansecco), and Amazonas (Forte do Rio Branco), Brazil; Wyatt, Ibis, 1871, p. 384—Lake Paturia, Colombia; Berlepsch, Journ. Orn., 22, p. 267, 1874—Blumenau, Santa Catharina; Allen, Bull. Essex Inst., 8, p. 82, 1876—Santarem, Brazil; Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 745—Santa Lucia, Tumbes, Peru; Durnford, Ibis, 1877, p. 189—Prov. Buenos Aires; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 542—Cauca, Colombia; Gibson, Ibis, 1880, p. 158—Cape San Antonio, Buenos Aires (breeding); Forbes, l.c., 1881, p. 355—Parahyba River, Brazil; White, Proc. Zool. Soc. Lond., 1882, p. 624—Bañado de Flores,

¹*Leucophoyx thula brewsteri* (Thayer and Bangs) differs from the nominate race by longer tarsi and bill.

Birds from the United States west of the Rocky Mountains, though not fully attaining the measurements of topotypes, are shown by Bailey to be much nearer to *brewsteri* than to the eastern form.

- Buenos Aires; Berlepsch, *Ibis*, 1884, p. 438—Angostura, Orinoco, Venezuela; Barrows, *Auk*, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos (breeding); Salvin, *Ibis*, 1886, p. 169—Bartica Grove, British Guiana; Berlepsch, *Journ. Orn.*, 35, p. 30, 1887—Rio Pilcomayo, Chaco; Allen, *Bull. Amer. Mus. N. H.*, 2, p. 109, 1889—Reyes, Bolivia; Holland, *Ibis*, 1890, p. 425—Est. Espartillar, Buenos Aires; idem, l.c., 1891, p. 16—Est. Espartillar, Buenos Aires; Kerr, l.c., 1892, p. 144—Rio Paraná and lower Rio Pilcomayo, Paraguay; Holland, l.c., 1892, p. 205—Est. Espartillar; Allen, *Bull. Amer. Mus. N. H.*, 5, p. 150, 1893—Chapada, Matto Grosso; Kerr, *Ibis*, 1901, p. 231—Riacho Verde and Paraguayan Chaco; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 162, 1901—Central American references and localities; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 92, 1910—Bahia (Rio São Francisco, near Sambaiba) and Piauhú (Pedrinha); Gibson, *Ibis*, 1919, p. 521—Cape San Antonio, Buenos Aires.
- Ardea carolinensis* Ord, ed. Wilson, *Amer. Orn.*, 7, p. 125, pl. 62, fig. 4, 1825—isthmus of Darien to the Gulf of St. Lawrence.
- Egretta candidissima* Gosse, *Bds. Jamaica*, p. 336, 1847—Jamaica; Clark, *Proc. Bost. Soc. N. H.*, 32, p. 233, 1905—St. Vincent, Grenadines, and Grenada Islands (casual visitor); Cherrie, *Sci. Bull.*, Mus. Brookl. Inst., 2, p. 363, 1916—Orinoco Valley, Venezuela; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 229, 1917—Cauca Valley, Colombia; idem, l.c., 55, p. 205, 1926—Jambeli and Santa Rosa River, Ecuador; Delacour, *Ibis*, 1923, p. 142—southern part of Venezuelan llanos.
- Garyetta candidissima* Bonaparte, *Bull. Soc. Linn. Normandie*, 2, p. 39, 1857—Cayenne; Cassin, *Proc. Acad. Nat. Sci. Phila.*, 1860, p. 196—Cartagena and Rio Atrato, Colombia; Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1866, p. 199—Ucayali River, Peru; idem, l.c., 1873, p. 305—Ucayali River and Santa Cruz, Peru; Gundlach, *Journ. Orn.*, 23, p. 304, 1875—Cuba (breeding); Holmberg, *Act. Acad. Nac. Cienc. Córdoba*, 5, p. 89, 1884—Arroyo Tandileufú and Rio Salado, Buenos Aires; Robinson, *Proc. U. S. Nat. Mus.*, 18, p. 655, 1895—Margarita Island, Venezuela.
- Leucophoyx candidissima* Sharpe, *Cat. Bds. Brit. Mus.*, 26, pp. 124, 273, 1898 (monog.); Dalmas, *Mém. Soc. Zool. France*, 13, p. 144, 1900—Tobago; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 209, 1902—Rio Vipos, Tucumán; Berlepsch and Stolzmann, *Proc. Zool. Soc. Lond.*, 1902, (2), p. 47—Ingapirca, Junín, Peru; Ihering, *Cat. Faun. Braz.*, 1, p. 66, 1907—Ypiranga, São Paulo; Hagmann, *Zool. Jahrb.*, (Syst.), 26, p. 49, 1907—Mexiana Island, Brazil (visitor); Berlepsch, *Nov. Zool.*, 15, p. 302, 1908—Cayenne; Hartert and Venturi, l.c., 16, p. 246, 1909—Est. San Martín Monte and Barracas al Sud, Buenos Aires; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 224, 1910 (range in Argentina); Snethlage, *Bol. Mus. Goeldi*, 8, p. 107, 1914—Magoary, Marajó, Brazil.
- Egretta candidissima candidissima* Carriker, *Ann. Carnegie Mus.*, 6, p. 430, 1910—Guanacaste, Costa Rica; Bent, *Bull. U. S. Nat. Mus.*, 135, p. 146, 1926 (life hist.).
- Egretta thula thula* Todd, *Ann. Carnegie Mus.*, 10, p. 180, 1916—Isle of Pines; Wetmore, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 291, 1927—Puerto Rico (breeding); Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 91,

1930—Matto Grosso; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 76, 1931—Hispaniola (breeding); Griscom, Bull. Amer. Mus. N. H., 64, p. 140, 1932—Rio Polochic, Guatemala; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 303, 1932—Tarapacá to Ñuble, Chile (full bibliog.); McDonald and others, Auk, 57, p. 106, 1940—Cape May County, New Jersey (nesting again).

Egretta thula Chubb, Ibis, 1919, p. 272—Eten, Peru; Tremoleras, El Hornero, 2, p. 14, 1920—Maldonado, Uruguay.

Leucophoyx thula Young, Ibis, 1928, p. 778—Abary Savanna and flats of Corentyne River, British Guiana.

Leucophoyx thula thula Peters, Bull. Mus. Comp. Zool., 69, p. 411, 1929—Toloa, Honduras (gen. char.); idem, Bds. World, 1, p. 113, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 580—Trinidad and Tobago (breeding); Griscom, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 33, 1938—Bahía (Cidade da Barra), Minas Geraes (Pirapora), Goyáz (Rio das Almas), and São Paulo (Cananéa, Ypiranga, Piassaguera); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 73, 1938—El Salvador; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 38, 1945—Bresta, El Beni, Bolivia.

Range.—Breeds in the southeastern United States, Mexico, Central America, the Greater Antilles (Cuba, Jamaica, Hispaniola, Puerto Rico), and South America south to Ñuble, Chile, and Buenos Aires Province, Argentina. Formerly bred north to southern Illinois and Cape May, New Jersey, where it now seems to be re-establishing itself.

Field Museum Collection.—24: Texas (Corpus Christi, 1; Cameron County, 6); North Carolina (Bodie Island, Dare County, 2); Florida (Mayport, 1; Cape Sable, 1; Kissimmee, 3; southern part, 1; Manatee County, 2); Bahama Islands (Inagua, 1); Virgin Islands (St. Croix, 2); Mexico (Rio Lagartos, Yucatan, 1); British Guiana (Buxton, 1); Bolivia, Santa Cruz (Cercado, 1; Buena Vista, 1).

Genus HYDRANASSA Baird

Hydranassa Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 660 (in text), 1858—type, by orig. desig., *Ardea ludoviciana* Wilson=*Egretta ruficollis* Gosse.

Hydranassa Snehlage, Bol. Mus. Goeldi, 8, p. 107, 1914 (emendation).

**Hydranassa tricolor ruficollis* (Gosse). LOUISIANA HERON.

Egretta ruficollis Gosse, Bds. Jamaica, p. 338, 1847—Burnt Savanna River and Bluefields Creek, Jamaica (type now in British Museum); idem, Illust. Bds. Jamaica, pl. 93, 1849 (fig. of type).

Herodias ruficollis Gundlach and Cabanis, Journ. Orn., 4, p. 342, 1856—Cuba (descr., soft parts, crit.).

- Ardea leucoprymna* (Lichtenstein)¹ G. R. Gray, Hand-List Gen. Spec. Bds., 3, p. 29, 1871—based on *Ardea ludoviciana* (not of Gmelin, 1789) Wilson, Amer. Orn., 8, p. 13, pl. "61" (=64), fig. 1, and *E. ruficollis* Gosse.
- Demigretta ruficollis* Gundlach, Journ. Orn., 23, p. 303, 1875—Cuba (breeding; descr.); idem, l.c., 26, p. 187, 1878—Boquerón, Puerto Rico.
- Hydranassa tricolor* (not *Ardea tricolor* P. L. S. Müller) Sennett, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 60, 1878—Brownsville, Texas (breeding).
- Ardea cyanostris* Cory, Bds. Bahama Islands, p. 168, pl. [5], 1880—Great Inagua Island, Bahama Islands (type in coll. of C. B. Cory, now in Field Museum).
- Ardea tricolor ruficollis* Cory, Auk, 3, p. 502, 1886—Grand Cayman and Little Cayman; Bonhote, Ibis, 1903, p. 305—Andros and New Providence, Bahama Islands (breeding).
- Ardea tricolor* Hartert, Ibis, 1893, pp. 307, 334—Aruba and Bonaire Islands; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 164, 1901—part, Mexican and Central American references and localities; Hartert, Nov. Zool., 9, p. 306, 1902—Aruba and Bonaire Islands.
- Hydranassa ruficollis* Sharpe, Cat. Bds. Brit. Mus., 26, pp. 127, 274, 1898 (monog.).
- Hydranassa tricolor* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 11, 1899—Rio Sabana, Darien, Panama.
- Hydranassa tricolor ruficollis* Hartert, Nov. Zool., 9, p. 605, 1902—Vaqueria, Ecuador; Bangs and Zappey, Amer. Nat., 39, p. 187, 1905—Ciénaga, Isle of Pines; Allen, Bull. Amer. Mus. N. H., 21, p. 275, 1905—Don Diego, Colombia; Hellmayr, Nov. Zool., 13, p. 50, 1906 (crit., meas., range); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 196, 236, 1909—Aruba and Margarita Islands; Carriker, Ann. Carnegie Mus., 6, p. 430, 1910—Costa Rica (one record from Puntarenas); Todd, l.c., 7, p. 409, 1911—Great Inagua Island, Bahama Islands; idem, l.c., 10, p. 181, 1916—Los Indios and Bird Island, Isle of Pines (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 229, 1917—Sinú River, Colombia; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 247, 1918—Gatún, Panama; Rendahl, Ark. Zool., 12, No. 8, p. 6, 1919—San Juan del Norte, Nicaragua; Todd and Carriker, Ann. Carnegie Mus., 14, p. 134, 1922—Don Diego, Gaira and Ciénaga, Santa Marta, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 206, 1926—Chone and Jambeli, Ecuador; Bent, Bull. U. S. Nat. Mus., 135, p. 167, 1926 (life hist.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 292, 1927—Puerto Rico (breeding); Grinnell, Univ. Calif. Pub. Zool., 32, p. 84, 1928—Lower California; Peters, Bull. Mus. Comp. Zool., 69, p. 411, 1929—Martinez Creek and Toloa swamp, Honduras; idem, l.c., 71, p. 305, 1931—Almirante, Panama; idem, Bds. World, 1, p. 113, 1931 (range); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 79, 1931—Hispaniola (breeding); Griscom, Bull. Amer. Mus. N. H., 64, p. 140, 1932—Ocos, Guatemala; idem, Bull. Mus. Comp. Zool., 78, p. 294, 1935—Panama; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 74, 1938—El Salvador (San Sebastián, Lake Olomega, etc.); Oberholser,

¹*Egretta leucoprymna* Lichtenstein (Nomencl. Av. Mus. Berol., p. 89, 1854—Mexico) is a nomen nudum.

Bird Life Louisiana, p. 56, 1938—Louisiana (breeding); Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 27, 1943—Steven Cay, Virgin Islands (nesting); Beatty, Auk, 61, p. 146, 1944—St. Croix, Virgin Islands; Scharff, Condor, 46, p. 124, 1944—Oregon; Huey, l.c., p. 201, 1944—California; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 39, 1945—Sonora (distr.).

Hydranassa tricolor occidentalis Huey, Trans. San Diego Soc. N. H., 5, p. 83, Oct. 10, 1927—Scammon Lagoon, Lower California (type in coll. of San Diego Society of Natural History).

Range.—Breeds from Lower California, Arizona, the Gulf states and North Carolina to the Bahama Islands, the Greater Antilles (Cuba, Isle of Pines, Jamaica, Hispaniola, Puerto Rico), the Virgin Islands (Steven Cay; St. Croix), Central America, Colombia, western Ecuador, and northern Venezuela, including Aruba, Bonaire, and Margarita Islands.¹

Field Museum Collection.—70: Arizona (Tucson, 1); Texas (Brownsville, 2; Cameron County, 6 [2 downies]; Corpus Christi, 2; Rockport, 1; Seadrift, 1); North Carolina (Pea Island, Dare County, 5; Brunswick County, 1); South Carolina (Mt. Pleasant, 2); Florida (Bradford County, 1; De Soto County, 1; Duval County, 1; Marion County, 1; Monroe County, 1; Anclote, 4; Enterprise, 1; Bassenger, 1; Palm Beach County, 6); Bahama Islands (Berry Island, 1; Caicos Bank, 2; Inagua, 2; Mayaguana, 1; San Salvador, 2); Virgin Islands (St. Croix, 1); Jamaica (Grand Cayman, 4; Surrey, 1); western Caribbean (St. Andrews, 2); Mexico (La Paz, Lower California, 2; Altamira, Tamaulipas, 2; Laguna Pueblo Viejo, Vera Cruz, 1; Cozumel Island, Yucatan, 1); El Salvador (San Sebastian, La Paz, 1); Ecuador (Rio San Antonio, Province de los Rios, 1); Venezuela (Maracaibo, Zulia, 1; Margarita Island, 3); Dutch West Indies (Aruba, 4).

***Hydranassa tricolor rufimentum* Hellmayr.² TRINIDAD HERON.**

Hydranassa tricolor rufimentum Hellmayr, Nov. Zool., 13, p. 50, Feb., 1906—Caroni Swamp, Trinidad (type in Tring Collection, now in the American

¹ As stated by Cory, birds from Aruba and Margarita agree well with West Indian examples, from which we are likewise unable to separate a single adult from Ecuador (Vaqueria). The supposedly larger form from Lower California (*occidentalis*) is now admitted to be untenable (cf. van Rossem, in Grinnell, Univ. Calif. Pub. Zool., 32, p. 84, 1928).

² *Hydranassa tricolor rufimentum* Hellmayr: Agreeing in small size with *H. t. tricolor*, but upper parts and foreneck much darker, blackish instead of slate gray; the elongated feathers on the rump darker, more umber-brown; chin not white, but chestnut like middle line of throat, the chestnut being decidedly darker than in the nominate race. Wing, (adult male) 214; tail, 73; bill, 85. The type is the only specimen that we have seen of this seemingly well-marked race.

Museum of Natural History, New York); Peters, Bds. World, 1, p. 113, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 580—Trinidad (breeding).

Range.—Breeds on the island of Trinidad.

**Hydranassa tricolor tricolor* (P. L. S. Müller). TRICOLORED HERON.

Ardea tricolor P. L. S. Müller, Natursyst., Suppl., p. 111, 1776—based on "Héron bleuâtre à ventre blanc de Cayenne" Daubenton, Pl. Enl., pl. 350; Cayenne.

Ardea leucogaster Boddaert, Tabl. Pl. Enl., p. 21, 1783—based on Daubenton, Pl. Enl., pl. 350, Cayenne; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 753, 1849—coast districts; Pelzeln, Orn. Bras., 3, p. 301, 1870—Praia do Cajútuba, Pará, Brazil.

Ardea Griseo-Alba Richard and Bernard, Act. Soc. Hist. Nat. Paris, 1, (1), p. 117, 1792—Cayenne (type lost).

Hydranassa tricolor Sharpe, Cat. Bds. Brit. Mus., 26, pp. 126, 273, 1898—Guiana (Ourumee, Savana) and Brazil; Ihering, Cat. Faun. Braz., 1, pp. 66, 407, 1907—Primeira Cruz, Maranhão (crit.; meas.; range in part); Berlepsch, Nov. Zool., 15, p. 302, 1908—Cayenne, Roche-Marie, and Mahury, French Guiana; Young, Ibis, 1928, p. 779—Abary savanna and flats of Corentyne River, British Guiana.

Hydranassa (Ardea) tricolor Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 184, 1904—Mahury, French Guiana.

Hydranassa tricolor tricolor Hellmayr, Nov. Zool., 13, p. 50 (in text), 1906—Cayenne and Surinam (meas.); Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 30, 1918—Fort Nieuw Amsterdam, Surinam; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 486, 1929—Tury-assú, Maranhão, Brazil; Peters, Bds. World, 1, p. 113, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 33, 1938—Primeira Cruz and Boa Vista, Maranhão.

Florida tricolor Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—coast of Piahy, Brazil; idem, l.c., p. 217, 1925—Amaração, Piahy.

Hydranassa tricolor Snethlage, Bol. Mus. Goeldi, 8, p. 107, 1914—Capanema, Pará, Brazil.

Range.—Coast districts of British, Dutch, and French Guiana,¹ and northeastern Brazil (Capanema and Praia do Cajútuba, Pará; Tury-assú, Primeira Cruz, and Boa Vista, Maranhão; Amaração, Piahy).²

¹ Delacour (Ibis, 1923, p. 142) records *H. tricolor* from "the southern llanos of Venezuela," rather a singular habitat for this coast-land species. We doubt this identification.

² Birds from Brazil average slightly larger (wing, 215–240 against 205–225; bill, 84–90 against 78–86), but agree in coloration with those from the Guianas.

Additional material examined.—Dutch Guiana: near Paramaribo, 2.—French Guiana: Cayenne, 7; Roche-Marie, 1; Mahury, 2.—Brazil: Praia do Cajútuba, Pará, 2; Amaração, Piahy, 2.

Field Museum Collection.—11: British Guiana (Georgetown, 4; Kitty Seawall, 2; Buxton, 4); Brazil (Tury-assú, Maranhão, 1).

Genus AGAMIA Reichenbach

Agamia Reichenbach, Av. Syst. Nat., p. xvi, "1852" (=1853)—type, by orig. desig. and monotypy, *Agamia picta* Reichenbach=*Ardea agami* Gmelin.

Doryphorus (not of Cuvier, 1829) Reichenow, Journ. Orn., 25, p. 259, 1877—substitute name for *Agamia* Reichenbach (on grounds of purism).

Doriponus Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 308, 1890—substitute name for *Doryphorus* Reichenow.

**Agamia agami* (Gmelin). AGAMI HERON.

Ardea Agami Gmelin, Syst. Nat., 1, (2), p. 629, 1789—based on "Le Héron Agami" Buffon, Hist. Nat. Ois., 7, p. 382, and Daubenton, Pl. Enl., pl. 859, Cayenne; Tschudi, Unters. Faun. Peru., Orn., p. 297, 1846—wooded region of Peru; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 753, 1849—coastal forests; Burmeister, Syst. Uebers. Th. Bras., 3, p. 214, 1856—northern Brazil (Amazonas), Guiana, and Colombia; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 11, 1863—Cayenne, Surinam, and Mexico; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 567—eastern Peru (=Nauta); iidem, l.c., 1867, p. 754—Yurimaguas, Peru; Pelzeln, Orn. Bras., 3, p. 301, 1870—Matto Grosso (Villa Maria, Caiçara, Villa Bella) and Amazonas (Barra do Rio Negro); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—Nauta and Yurimaguas, Peru; Layard, Ibis, 1873, p. 396—Pará; Salvin and Godman, l.c., 1880, p. 178—Santa Marta, Colombia; Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 47—Yurimaguas, Peru; idem, Orn. Pér., 3, p. 396, 1886 (Peruvian localities); Salvin, Ibis, 1886, p. 170—Camacusa, British Guiana; idem and Godman, Biol. Centr.-Amer., Aves, 3, p. 171, 1901—Mexico (Rio Coatzacoalcos; Tuxpango, near Orizaba), British Honduras, Guatemala (Petén), Costa Rica (Pózo Azul de Pirrís), and Panama (Veraguas; San Miguel Island).

Ardea fusca Latham, Ind. Orn., 2, p. 700, 1790—Cayenne (descr. of young).

Agamia picta Reichenbach, Av. Syst. Nat., p. xvi, "1852" (=1853)—substitute name for *Ardea agami* Gmelin; Sclater, Proc. Zool. Soc. Lond., 1862, p. 369—Mexico; Sumichrast, La Naturaleza, 5, p. 233, 1881—Rio Coatzacoalcos and Tuxpango (near Orizaba), Vera Cruz, Mexico; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 131, 1887—Pózo Azul de Pirrís, Costa Rica.

Agamia agami Sharpe, Cat. Bds. Brit. Mus., 26, pp. 135, 274, 1898—British Honduras, Guatemala (Petén), Panama (Veraguas), Colombia (Santa Marta), British Guiana (Takutu River, Camacusa, Carimang River), Cayenne, Brazil (Pará, Barra do Rio Negro), and Peru (Yurimaguas); Allen, Bull. Amer. Mus. N. H., 13, p. 125, 1900—Mamatoco and Bonda, Colombia; Bangs, Auk, 18, p. 25, 1901—San Miguel Island, Pearl Islands, Panama; Berlepsch and Hartert, Nov. Zool., 9, p. 125, 1902—Quiribana de Caicara, Orinoco, and Nicare, Caura River, Venezuela; Hartert, l.c., 9, p. 605, 1902—Pambilár, Ecuador; Ihering, Rev. Mus. Paul., 6, "1904,"

p. 450, 1905—Rio Juruá, Brazil; Thayer and Bangs, *Bull. Mus. Comp. Zool.*, **46**, p. 142, 1905—San Miguel, Pearl Islands; Hellmayr, *Nov. Zool.*, **13**, p. 51, 1906—Caroni Swamp, Trinidad (crit.); Ihering, *Cat. Faun. Braz.*, **1**, p. 66, 1907—Rio Juruá, Brazil; Snethlage, *Journ. Orn.*, **56**, pp. 23, 517, 1908—Rio Purús (Bom Lugar) and Rio Tapajóz (Itaituba), Brazil; Berlepsch, *Nov. Zool.*, **15**, p. 303, 1908—Cayenne; Hellmayr, *l.c.*, **17**, p. 423, 1910—Maroins, Rio Machados, Matto Grosso; Carriker, *Ann. Carnegie Mus.*, **6**, p. 431, 1910—Laguna de Ochomogo and Pózo Azul de Pirrís, Costa Rica; Snethlage, *Bol. Mus. Goeldi*, **8**, p. 108, 1914—Pará, Marajó (Dunas), Monte Alegre, Rio Tapajóz (Itaituba), and Rio Purús (Bom Lugar), Brazil; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, **2**, p. 363, 1916—Quiribana de Caicara, Orinoco, Venezuela; Chapman, *Bull. Amer. Mus. N. H.*, **36**, p. 229, 1917—Rio Salaquí and Rio Atrato, Colombia; idem, *l.c.*, **55**, pp. 206, 736, 1926—Curaray-Napo, Ecuador; Naumburg, *l.c.*, **60**, p. 91, 1930—Matto Grosso; Peters, *Bds. World*, **1**, p. 114, 1931 (range); Griscom, *Bull. Amer. Mus. N. H.*, **64**, p. 140, 1932—Guatemala; Belcher and Smooker, *Ibis*, 1934, p. 581—Trinidad; Griscom, *Bull. Mus. Comp. Zool.*, **78**, p. 295, 1935—Panama; Pinto, *Rev. Mus. Paul.*, **22**, p. 33, 1938—Rio Juruá and Manacapurú, Amazonas, Brazil; Gyldenstolpe, *Svensk. Vetensk. Akad. Handl.*, (3), **22**, p. 23, 1945—João Pessôa, Rio Juruá, Brazil; idem, *l.c.*, **23**, p. 38, 1945—Victoria, El Beni, Bolivia.

Doriponus agami Bangs and Penard, *Bull. Mus. Comp. Zool.*, **62**, p. 30, 1918—near Paramaribo, Surinam; Todd and Carriker, *Ann. Carnegie Mus.*, **14**, p. 133, 1922—Bonda, Colombia.

Range.—Locally in eastern Mexico (states of Vera Cruz and Chiapas), Guatemala (Petén), British Honduras, Costa Rica (Laguna de Ochomogo; Pózo Azul de Pirrís), and Panama (Veraguas; San Miguel, Pearl Islands), and widely distributed in tropical South America from Colombia, Venezuela, the island of Trinidad, and the Guianas south to Ecuador (both sides), and through Amazonia to western Matto Grosso, Brazil¹ and Santa Cruz, Bolivia.

Field Museum Collection.—4: British Guiana (Rio Potaro, 1; unspecified, 1); Bolivia, Santa Cruz (Buena Vista, 1; Rio Surutu, 1).

Genus SYRIGMA Ridgway

Syrigma Ridgway, *Bull. U. S. Geol. Geogr. Surv. Terr.*, **4**, No. 1, pp. 224, 247, Feb. 5, 1878—type, by orig. desig., *Ardea sibilatrix* Temminck.

**Syrigma sibilatrix* (Temminck). WHISTLING HERON.

Ardea cyanocephala (not of Molina, 1782) Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., **14**, p. 411, 1817—based on "Flauta del sol" Azara, *Apunt. Hist. Nat. Páx.*, **3**, p. 169, No. 356; Paraguay.

¹ Two adults from Trinidad (Caroni Swamp) are rather larger than any of the fifteen other examples examined. Material from Mexico or Central America has not been available.

- Ardea sibilatrix* Temminck, Nouv. Rec. Pl. Col., livr. 46, pl. 271, May 22, 1824—Paraguay and Brazil (type, from Brazil, in Leyden Museum; cf. Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 36, 1863); Burmeister, Syst. Uebers. Th. Bras., 3, p. 407, 1856—Paraguay and Montevideo; Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 634—Conchitas, Buenos Aires; Pelzeln, Orn. Bras., 3, p. 301, 1870—Itararé, São Paulo; Lee, Ibis, 1873, p. 137—Rio Gato, Entre Ríos; White, Proc. Zool. Soc. Lond., 1882, p. 624—Orán, Salta; Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos; Berlepsch, Ibis, 1884, p. 438—Rio Apure, Venezuela; Dalglish, Proc. Roy. Phys. Soc. Edin., 10, p. 85, 1889—Est. Ytañú, Paraguay (eggs descr.); Sclater and Hudson, Arg. Orn., 2, p. 100, 1889—Argentina; Kerr, Ibis, 1892, p. 144—Rio Pilcomayo, Chaco; Grant, l.c., 1911, p. 337—Tebicuarí, Paraguay.
- Nycticorax sibilatrix* Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 174, 1885—Taquara do Mundo Novo, Rio Grande do Sul; Berlepsch, Journ. Orn., 35, p. 31, 1887—Rio Pilcomayo, Chaco; Ihering, Rev. Mus. Paul., 3, p. 379, 1899—São Paulo (Iguapé, Itararé).
- Nycticorax sibilator* Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 22, 1895—San José, Villa Rica, and Paraguarí, Paraguay.
- Syrigma cyanocephalum*(a) Sharpe, Cat. Bds. Brit. Mus., 26, pp. 170, 277, 1898—Uruguay (Paysandú), Brazil (Santa Catharina), and Chaco (Rio Pilcomayo); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Rio Salí, Tucumán; Lönnberg, Ibis, 1903, p. 462—Tatarenda, Tarija, Bolivia; Hartert and Venturi, Nov. Zool., 16, p. 246, pl. 3, fig. 14 (egg), 1909—Mocoví, Santa Fé; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 224, 1910 (range in Argentina).
- Syrigma sibilatrix* Kerr, Ibis, 1901, p. 232—Villa Concepción and Chaco, Paraguay; Berlepsch and Hartert, Nov. Zool., 9, p. 126, 1902—Caicara, Orinoco, Venezuela (soft parts); Ihering, Cat. Faun. Braz., 1, p. 67, 1907—São Paulo (Iguapé, Rio Paraná, Itapura); Chrostowski, Compt. Rend. Soc. Scient. Varsovie, 5, pp. 464, 493, 1912—Chapeo de Sol, Paraná, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 365, 1916—Orinoco Valley, Venezuela; Bertoni, El Hornero, 1, p. 188, 1918—Asunción, Paraguay (food); Tremoleras, l.c., 2, p. 14, 1920—Cerro Largo, Uruguay; Serié and Smyth, l.c., 3, p. 42, 1923—Santa Elena, Entre Ríos; Serié, l.c., p. 100, 1923 (food); Delacour, Ibis, 1923, p. 143—Rio Apure, Venezuela; Wetmore, Bull. U. S. Nat. Mus., 133, p. 56, 1926—Chaco (Las Palmas), Formosa (Riacho Pilaga), Paraguay (Puerto Pinasco), and Uruguay (San Vicente, Lazcano, Rio Negro); Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 66, 1930—Formosa (San José) and Bolivia (Villa Montes, Tarija; San José, Santa Cruz); Peters, Bds. World, 1, p. 114, 1931 (range); Zotta and Fonseca, El Hornero, 6, p. 58, 1935—Buenos Aires (Escobar), Entre Ríos (Guauguachú), Misiones, Chaco (Mocoví), and Salta (Rosario de la Frontera); Pinto, Rev. Mus. Paul., 22, p. 34, 1938—São Paulo (Iguapé, Itapura, Bebedouro) and Paraná (Castro, Faz. Monte Alegre); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 39, 1945—El Beni (Reyes; Bresta) and Tarija (Tatarenda), Bolivia.

Range.—Southern Brazil, from São Paulo and Matto Grosso to Rio Grande do Sul; eastern Bolivia; Paraguay; Uruguay; northern Argentina, from Salta and Tucumán south through the Chaco to Santa Fé and Entre Ríos, rarely to Buenos Aires Province (Godoy, Escobar, Conchitas); Venezuela (valleys of the Orinoco and Apure rivers).¹

Field Museum Collection.—13: Brazil (Vaccaria, Matto Grosso, 1; Fazenda Morungaba, Paraná, 1); Bolivia, Santa Cruz (Buena Vista, 5; Cercado, 2; San Carlos, 1); Paraguay (Villa Rica, 1); Argentina (Bompland, Misiones, 1); Uruguay (Passo Correntino, Rio Negro, 1).

Genus NYCTICORAX T. Forster

Nycticorax T. Forster,² Syn. Cat. Brit. Bds., p. 59, 1817—type, by monotypy and tautonymy, *Nycticorax infaustus* T. Forster=*Ardea nycticorax* Linnaeus.

Nyctiardea Swainson, Classif. Nat. Hist. Bds., 2, p. 354, July, 1837—substitute name for *Nycticorax* T. Forster.

Scotaeus Keyserling and Blasius, Wirbelth. Eur., 1, p. lxxx, 1840—type, by monotypy, *Ardea nycticorax* Linnaeus.

Nycterodius Macgillivray, Man. Brit. Bds., 2, p. 126, 1842—type, by monotypy, *Nycterodius nycticorax* Macgillivray=*Ardea nycticorax* Linnaeus.

**Nycticorax nycticorax hoactli* (Gmelin). BLACK-CROWNED NIGHT HERON.

Ardea naevia (not of T. F. Miller, 1782) Boddaert, Tabl. Pl. Enl., p. 56, 1783—based on "Le Pouacre de Cayenne" Daubenton, Pl. Enl., pl. 939.

Ardea Hoactli Gmelin, Syst. Nat., 1, (2), p. 630, 1789—based on "Le Héron hupé du Mexique" Brisson, Orn., 5, p. 418, and "L'Hocti" Buffon, Hist. Nat. Ois., 7, p. 382, ex Hernandez, Hist. Anim. Nov. Hisp., pp. 13 ("Hoacton";=young), 26 ("Hoactli";=adult), lakes of Mexico.

Ardea gardeni Gmelin, Syst. Nat., 1, (2), p. 645, 1789—based on "Le Pouacre de Cayenne" Daubenton, Pl. Enl., pl. 939, and "Gardenian Heron" Pennant, Arct. Zool., 2, p. 450, and Latham, Gen. Syn. Bds., 3, (1), p. 71, South Carolina; Burmeister, Syst. Uebers. Th. Bras., 3, p. 405, 1856—Brazil.

Ardea tayazu-guira Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 437, 1817—based on "Tayazu-Güirá" Azara, Apunt. Hist. Nat. Páx., 3, p. 173, No. 357, Paraguay.

¹ It remains to be ascertained by the study of an adequate series whether Venezuelan birds are really quite the same. A single adult from the Rio Apure is slightly larger with longer tarsus and bill, while the upper wing coverts are more predominantly yellowish and more narrowly streaked with blackish. The divergencies are, however, insignificant.

² *Nycticorax* Rafinesque (Anal. Nat., p. 71, 1815) is a nomen nudum.

- Ardea nycticorax* (not of Linnaeus) Wied, Beitr. Naturg. Bras., 4, (2), p. 646, 1833—Rio Parahyba, Rio de Janeiro, Brazil.
- Ardea discors* Nuttall, Man. Orn. U. S. and Canada, 2, p. 54, 1834—North America.
- Nycticorax americanus* Bonaparte, Geogr. Comp. List Bds. Eur. and N. Amer., p. 48, 1838—based on *Ardea nycticorax* Audubon, Bds. Amer., pl. 236, "America generally"; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 555—Junín, Peru.
- Nycticorax vulgaris* d'Orbigny, in Sagra, Hist. Nat. Cuba, Ois., p. 208, 1839—part, North and South America, West Indies (no type specified).
- Nycticorax gardeni* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 755, 1849; Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 39, 1857—Cayenne; Sclater, Proc. Zool. Soc. Lond., 26, p. 77, 1858—Rio Napo, Ecuador; idem and Salvin, l.c., 1866, p. 199—lower and upper Ucayali River, Peru; Pelzeln, Orn. Bras., 3, p. 303, 1870—Rio de Janeiro (Sapitiba; Rio de Janeiro), São Paulo (Ypanemá, Irisanga), Paraná (Curytiba), and Matto Grosso (Cuyabá, Caiçara); Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 329—Lechugal, Túmbez, Peru; Sclater and Salvin, l.c., 1879, p. 542—Medellin, Colombia; Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—Choele-Choël, Rio Negro; White, Proc. Zool. Soc. Lond., 1882, p. 624—Pacheco, Buenos Aires, and Sauce Redondo, Salta; Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 89, 1884—foot of Sierra de las Animas, Buenos Aires; Berlepsch, Ibis, 1884, p. 439—Angostura, Rio Orinoco, Venezuela; Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos.
- Nycticorax naevius* Léotaud, Ois. Trinidad, p. 431, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—upper and lower Ucayali River, Peru; Philippi, Ornis, 4, p. 159, 1888—Empexa, Tarapacá, Chile; Bonhote, Ibis, 1903, p. 308—Lees Rivér, Andros, Bahama Islands; Chubb, l.c., 1919, p. 272—Talaon, Cajamarca, Peru; Delacour, l.c., 1923, p. 143—rivers of Venezuelan llanos.
- Nycticorax obscurus* (not of Bonaparte) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 156—Tinta, Cuzco, Peru (spec. examined); Allen, Bull. Mus. Comp. Zool., 3, p. 357, 1876—Moho, Bolivia; Durnford, Ibis, 1877, p. 189—Prov. Buenos Aires; idem, l.c., 1878, p. 63—Buenos Aires; Gibson, l.c., 1880, p. 158—Cape San Antonio, Buenos Aires (breeding); White, Proc. Zool. Soc. Lond., 1882, p. 624—Pacheco, Buenos Aires; and Sauce Redondo, Salta; Withington, Ibis, 1888, p. 471—Lomas de Zamora, Buenos Aires; Holland, l.c., 1890, p. 425—Est. Espartillar, Buenos Aires; Sclater, Proc. Zool. Soc. Lond., 1891, p. 136—Sacaya, Tarapacá, Chile; Holland, Ibis, 1892, p. 205—Est. Espartillar; Aplin, l.c., 1894, p. 199—Monzon River, Uruguay; Lane, l.c., 1897, p. 188—part, Sacaya, Tarapacá, Chile; Gibson, l.c., 1919, p. 525—Cape San Antonio, Buenos Aires.
- Nycticorax griseus* (not *Ardea grisea* Linnaeus) Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 25—Lagõa dos Pitos and Sumidouro, Minas Geraes; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 22, 1895—Corumbá, Matto Grosso; idem, l.c., 12, No. 292, p. 31, 1897—Bolivia (Caiza) and Salta (Tala, Cara-huassi); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 172, 1901—Central American references and localities.

Nycticorax griseus naevius Berlepsch, Journ. Orn., 35, p. 31, 1887—Rio Pilcomayo.

Nycticorax nycticorax naevius Allen, Bull. Amer. Mus. N. H., 2, p. 110, 1889—lower Beni River, Bolivia; Ihering, Rev. Mus. Paul., 3, p. 379, 1899—São Paulo; Allen, Bull. Amer. Mus. N. H., 13, p. 125, 1900—Bonda, Colombia; Berlepsch and Hartert, Nov. Zool., 9, p. 125, 1902—Quiribana de Caicara and Caicara, Orinoco, Venezuela; Hellmayr, l.c., 13, p. 51, 1906—Caroni, Trinidad; Ihering, Cat. Faun. Braz., 1, p. 67, 1907—São Paulo, Rio Grande do Sul (Nova Hamburgo), and Buenos Aires; Berlepsch, Nov. Zool., 15, p. 303, 1908—Cayenne; Carriker, Ann. Carnegie Mus., 6, p. 431, 1910—Costa Rica (winter resident); Todd, l.c., 7, p. 411, 1911—Great Inagua, Bahama Islands; Sneath, Bol. Mus. Goeldi, 8, p. 108, 1914—Pará, Marajó (Pacoval, Livramento, Arary), and Mexiana, Brazil; Todd, Ann. Carnegie Mus., 10, p. 186, 1916—Los Indios, Isle of Pines; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 364, 1916—Orinoco region; Chapman, Bull. Amer. Mus. N. H., 36, p. 229, 1917—Cali, Rio Frío, La Morelia, and La Olanda, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 30, 1918—near Paramaribo, Surinam (crit.); Tremoleras, El Hornero, 2, p. 14, 1920—Uruguay (Montevideo, Canelones, Maldonado); Todd and Carriker, Ann. Carnegie Mus., 14, p. 137, 1922—Bonda and Mamatoco, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 206, 1926—Chone and San Pablo, Ecuador; Bent, Bull. U. S. Nat. Mus., 135, p. 197, 1926 (life hist.); Wetmore, l.c., 133, p. 54, 1926—Lavalle, Buenos Aires; idem, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 299, 1927—Puerto Rico; Friedmann, Bull. Mus. Comp. Zool., 68, p. 148, 1927—Bovril Islands, Santa Fé; Grinnell, Univ. Calif. Pub. Zool., 32, p. 85, 1928—Lower California; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 488, 1929—Piahy (crit.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 92, 1930—Matto Grosso; Griscom, l.c., 64, p. 141, 1932—Rio Polochic and Ocos, Guatemala.

Nycticorax tayazu-guira Sharpe, Cat. Bds. Brit. Mus., 26, pp. 155, 275, 1898—part, spec. a-n, w, x, Peru (Tinta, Lake Titicaca), Bolivia, Tarapacá (Sacaya), Buenos Aires (Lomas de Zamora, Est. Espartillar), and Uruguay (Santa Elena, Monzon River); Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 46, 1900—Lake Yaguarcocha, Ecuador; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 209, 1902—Rio Salí, Tucumán; Lönnberg, Ibis, 1903, pp. 447, 462—San Antonio, Jujuy, and Tatarenda, Tarija, Bolivia; Bruch, Rev. Mus. La Plata, 11, p. 250, 1904—Santa Catalina, Jujuy; Hagmann, Zool. Jahrb., (Syst.), 26, p. 49, 1907—Mexiana, Brazil; Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 221, 1909—Lake Titicaca and Pazña, Bolivia; Hartert and Venturi, Nov. Zool., 16, p. 246, 1909—La Soledad, Entre Ríos, and Barracas al Sud, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 224, 1910 (range in Argentina); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 93, 1910—Joazeiro, Bahia, and Lagõa do Parnaguá, Piahy; Grant, Ibis, 1911, p. 339—Los Ynglases, Ajó, Buenos Aires; Sharpe and Scott, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 387, 1912—part, Buenos Aires to Patagonia (descri.); Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 26, 1922—La Carolina and Chilco, Ecuador.

- Nycticorax nycticorax obscurus* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1902, (2), p. 47—Ingapirca and La Merced, Junín, Peru.
- Nycticorax nycticorax* Clark, Proc. Bost. Soc. N. H., 32, p. 236, 1905—Grenada, Carriacou (Harvey Vale), and St. Vincent (records from the West Indies).
- Nycticorax nycticorax tayazu-guira* Chapman, Bull. U. S. Nat. Mus., 117, p. 51, 1921—Peru (Calca, La Raya, Puno) (crit., meas.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 306, 1932—Sacaya, Tarapacá, Chile (crit.); Philippi, El Hornero, 6, p. 234, 1936—Erizera, Arica, Tacna; idem, Bol. Mus. Nac. Santiago, 16, p. 51, 1938—Valle de Chacalluta and Morro de Arica, Tacna, Chile; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 39, 1945—El Beni (Bresta; Orion; San Lorenzo), Bolivia (disc.).
- Nycticorax nycticorax hoactli* Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vogel, p. 65, 1930—Lapango and Tacaaglé, Formosa (nomencl.); Peters, Proc. Bost. Soc. N. H., 39, p. 265, 1930 (char., range, nomencl.); idem, Bds. World, 1, p. 114, 1931 (range); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 85, 1931—Hispaniola; Griscom, Auk, 50, p. 303, 1933—Rio Chepo, Darien, Panama; Belcher and Smooker, Ibis, 1934, p. 581—Trinidad (breeding) and Tobago (ex Kirk); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 367, 1934—Descalvados, Matto Grosso; Griscom, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Canal Zone and Rio Chepo, Panama; Zotta and Fonseca, El Hornero, 6, p. 240, 1936—Argentina from northern boundary to Buenos Aires (crit.); Pinto, Rev. Mus. Paul., 22, p. 34, 1938—Pará (Lagõa Grande), Bahia (Cidade da Barra), São Paulo, Rio Grande do Sul (Nova Hamburgo), and Buenos Aires; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 79, 1938—El Salvador (Lake Olomega, etc.); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 40, 1945—Sonora (distr.); Cooke, Bd. Banding, 17, p. 64, 1946—Santa Clara Province, Cuba (banded in Michigan).

Range.—Breeds locally in North America from northern Oregon, southern Wyoming and Manitoba, northern Quebec and Nova Scotia south through the West Indies, Central America, and South America to extreme northern Chile (Tarapacá) on the west and Buenos Aires Province, Argentina, on the east.¹

¹ South American birds average slightly smaller, but the difference is altogether too trifling for such a large bird to justify the recognition of an additional race (*tayazu-guira*), which we at one time have maintained.

While specimens from extreme northern Chile (Tarapacá) are quite typical in coloration, they are, like others from Tinta (Cuzco), Peru, somewhat larger than a series from Mexico and Brazil. Though all the night herons seen by us from the Andes of Peru and Bolivia belong to the pale-bellied form, it has been shown by Chapman and Peters that in those regions individuals of the "*obscurus*" coloration and intermediates are not infrequent. On the other hand, two adults and two young birds from Valle del Lago Blanco, Chubut, in the distributional area of *obscurus*, are just as light-colored below as any from the eastern United States, Mexico, or Tarapacá! As Chapman also mentions a Panama adult of the "*obscurus*" style, it is quite evident that the difference between the two races is bridged by the occurrence of aberrant individuals in their respective ranges.

Seventy-eight specimens from the area circumscribed above were examined.

Field Museum Collection.—78: California (Monterey County, 2; Los Angeles County, 1); Utah (Salt Lake City, 1); Texas (Cameron County, 1); North Dakota (Ramsey County, 3; Towner County, 1; Nelson County, 1); Wisconsin (Beaver Dam, 11; Milton, 1); Illinois (Waukegan, 1; Cook County, 2; Henry, 1); Quebec (St. Andre, 2); Massachusetts (Great Island, 1; Monomoy Island, 5);-Connecticut (East Hartford, 1; Essex, 1; New Haven County, 4); North Carolina (Pea Island, Dare County, 1); Georgia (Roswell, 2); Florida (New River, 1; Pilot Town, 1; Shark River, 1; Amelia Island, 2; Bassenger, 1; Anclote, 1; Palm Beach County, 2); Mexico (San José del Cabo, Lower California, 1); Ecuador (San Pablo, Imbabura, 1; Quito, 1; Quevedo, Rio Palenque, 1); Venezuela (Pampas, Merida, 1; Rio Chama, Merida, 1; Margarita Island, 1); Dutch Guiana (Paramaribo, 1); Peru (Junín, Junín, 1); Bolivia (Peres, Pacajes, La Paz, 3; Colomi, Cochabamba, 7; Vacas, Cochabamba, 2; Capinota, Cochabamba, 2; Buena Vista, Santa Cruz, 1; Cercado, Santa Cruz, 1); Argentina (Concepción, Tucumán, 1).

**Nycticorax nycticorax obscurus* Bonaparte.¹ CHILEAN NIGHT HERON.

Nycticorax obscurus Bonaparte,² *Consp. Gen. Av.*, 2, p. 141, 1857—part, Chile and Patagonia (type, from Chile, collected by C. Gay in Paris Museum); Pelzeln, *Reise Novara, Zool.*, 1, Vögel, p. 124, 1865—Chile; Sclater, *Proc. Zool. Soc. Lond.*, 1867, pp. 334, 339—Chile; idem and

¹*Nycticorax nycticorax obscurus* Bonaparte: Differs from *N. n. hoactli* by the adults having the whole under parts including sides of head nearly uniform sooty or smoky brown, with only the chin and middle of upper throat white or brownish white. Also the juvenile plumage is much darker above with large deep buffish spots, the sides of the head are densely streaked with blackish brown and buff, and the lower parts are strongly suffused with buff and much more heavily streaked with a deeper, more blackish brown. The dimensions, however, do not seem to be constantly larger, as has been claimed.

Chilean birds from Concepción south to the Straits of Magellan are quite constant in their dark coloring, those from the latter region showing the racial characters perhaps most strongly pronounced. However, on proceeding into Patagonia, a variation analogous to that observed in the Andes of Peru and Bolivia is encountered, for, as we have noted under *N. n. hoactli*, a number of examples from western Chubut (Valle del Lago Blanco) are just as light-colored as the average North American specimen. The same variability appears to exist among breeding birds of Tierra del Fuego, where, according to Reynolds, the pale-bellied individuals are even in preponderance. Nevertheless, if such be the case, we cannot well call them *N. n. tayazu-guira* (= *hoactli*), mainly on geographic grounds. The large percentage of light-colored birds may indicate an approach to the Falkland Island race.

Fifteen specimens from Chile (Coquimbo to Llanquihue), five from the Straits of Magellan, five from western Chubut, and two from Tierra del Fuego examined.

²*Nycticorax obscurus* "Licht." Bonaparte (*Compt. Rend. Acad. Sci. Paris*, 40, No. 14, p. 723, April, 1855) is a nomen nudum.

Salvin, Ibis, 1868, p. 189—Oazy Harbour, Straits of Magellan; iidem, l.c., 1869, p. 284—part, Even Harbour, Straits of Magellan; Reed, Anal. Univ. Chile, 49, p. 561, 1877—Cauquenes, Colchagua, Chile; Durnford, Ibis, 1877, p. 40—Chubut Valley; idem, l.c., 1878, p. 399—Rio Sengel, Chubut; Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 436—part, Tom Bay and Puerto Bueno, Straits of Magellan; Sharpe, l.c., 1881, p. 12—Cockle Cove and Neesham Cove, Trinidad Channel; Ridgway, Proc. U. S. Nat. Mus., 12, "1889," p. 137, 1890—Port Otway, Chile; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 137, 1891—part, Bahía Orange, Ushuaia, Isla Gable, and Isla Wollaston; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Lataste, Act. Soc. Scient. Chile, 6, p. lxvii, 1896—Chile (plumages); Lane, Ibis, 1897, p. 188—part, central and southern Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 679, 1898—Coquimbo, Calbuco (Puerto Montt), Chile, and Rio de los Patos, Patagonia; Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 626, 1900—Staten Island (Penguin Rookery, Puerto Cook) and Magellan Straits (Punta Arenas, Possession Bay); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 393, 1902—Tierra del Fuego; Bullock, Rev. Chil. Hist. Nat., 33, p. 201, 1929—Angol, Malleco, Chile.

Ardea nycticorax (not of Linnaeus) Kittlitz, Kupfert. Naturg., Vögel, Part 3, p. 26, pl. 35, fig. 1, 1833—Chile; Peale, U. S. Expl. Exp., 8, p. 215, 1848—Chile (crit.); Kittlitz, Denkw. Reise, 1, p. 122, 1858—San-Tomé, Concepción, Chile.

Nycticorax americanus (not of Bonaparte) Darwin, Zool. Beagle, 3, Birds, p. 128, 1841—Valparaiso, Chile.

Nycticorax cyanocephalus (not *Ardea cyanocephala* Molina)¹ Fraser, Proc. Zool. Soc. Lond., 11, p. 116, 1843—Chile; Sharpe, Cat. Bds. Brit. Mus., 26, p. 156, 1898—Chile (Rio Contra; Frutillar, Llanquihue) and Straits of Magellan (Cockle Cove, Neesham Cove, Tom Harbour, Puerto Bueno); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 224, 1910—Tierra del Fuego and Staten Island; Scott and Sharpe, Rep. Princet. Univ. Exped. Patag., 2, Orn., p. 391, 1912—head of Rio Chico de Santa Cruz and Lake Pueyrredon, Santa Cruz (descr.); Barros, Rev. Chil. Hist. Nat., 24, p. 54, 1920—Nilahue, Curicó, Chile; idem, l.c., 25, p. 173, 1921—Precordillera of Aconcagua, Chile; Paessler, Journ. Orn., 70, p. 445, 1922—Coronel, Chile; Peters, Bull. Mus. Comp. Zool., 65, p. 299, 1923—Huanuluan and Maquinchao, Rio Negro; Gigoux, Rev. Chil. Hist. Nat., 28, p. 87, 1924—Caldera, Atacama, Chile; Housse, l.c., 28, p. 52, 1924—Isla La Mocha, Arauco, Chile; idem, l.c., 29, p. 149, 1925—San Bernardo, Santiago, Chile; Wetmore, Univ. Calif. Pub. Zool., 24, p. 412, 1926—Rio Negro (Camp Pilcaniyeu, Bariloche), Chubut (Valle Frío), and Mendoza (Guanacache); Jaffuel and Pirion, Rev. Chil. Hist. Nat., 31, p. 112, 1927—Marga-Marga, Valparaiso, Chile.

¹*Ardea cyanocephala* Molina (Sagg. Stor. Nat. Chile, pp. 235, 344, 1782) described as having "la testa e il dorso turchini, le ali nere orlato di bianco, il ventre giallo verdiccio, la coda verde, il beco nero e le gambe gialle," is one of those undeterminable or even fictitious birds that are found in the Chilean naturalist's work. It is the type (by monotypy) of *Syrictor* Heine (in Heine and Reichenow, Nomencl. Mus. Hein. Orn., p. 309, 1890).

- Nycticorax naevius* (not *Ardea naevia* Boddaert) Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 412, 1847—Chile; Boeck, Naumannia, 1855, p. 510—Valdivia; Philippi, Anal. Univ. Chile, 31, p. 273, 1868—Chile; Waugh and Lataste, Act. Soc. Scient. Chile, 4, pp. lxxxviii, clxxxiii, 1894—Peñaflor, Santiago, and San Alfonso (Quillota), Valparaiso, Chile.
- Nycticorax gardeni* (not *Ardea gardeni* Gmelin) Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 131, 1853—Chile; Hartlaub, Naumannia, 3, p. 216, 1853—Valdivia; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 193, 1855—Chile; Germain, Proc. Bost. Soc. N. H., 7, p. 313, 1860—Santiago (nesting habits).
- Nycticorax nycticorax cyanocephalus* Peters, Proc. Bost. Soc. N. H., 39, p. 267, 1930 (crit., in part); idem, Bds. World, 1, p. 115, 1931 (range in part).
- Nycticorax nycticorax obscurus* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 304, 1932—Atacama to Straits of Magellan (crit.); Bullock, Rev. Chil. Hist. Nat., 39, p. 242, 1935—Isla la Mocha, Chile (resident); Zotta and Fonseca, El Hornero, 6, p. 241, 1936—Chubut and Puerto Deseado, Santa Cruz (crit.); Trimble, Ann. Carnegie Mus., 29, p. 416, 1943 (note on two races in Chile).
- Nycticorax nycticorax tayazu-guira* (not *Ardea tayazu-guira* Vieillot) Reynolds, El Hornero, 5, p. 350, 1934—Yewin, Tierra del Fuego; idem, Ibis, 1935, p. 82—Freycinet, Deceit, Jerdan, and Wollaston Islands, Cape Horn region (crit.).

Range.—Chile, from Atacama southward to the Straits of Magellan and Tierra del Fuego, and southern Argentina north to the Rio Negro and in the Andean districts to Mendoza.

Field Museum Collection.—2: Chile (Concepción, 1; Isla Hermita, Magallanes, 1).

Nycticorax nycticorax falklandicus Hartert.¹ FALKLAND NIGHT HERON.

- Nycticorax cyanocephalus falklandicus* Hartert, Bull. Brit. Orn. Cl., 35, p. 15, Nov. 4, 1914—Falkland Islands (type in Tring Collection, now in the American Museum of Natural History, New York; cf. Hartert, Nov. Zool., 32, p. 272, 1925); Brooks, Bull. Mus. Comp. Zool., 61, p. 152, 1917—Falkland Islands; Wace, El Hornero, 2, p. 199, 1921; Bennett, Ibis, 1926, p. 325—Falkland Islands.
- Nycticorax obscurus* Bonaparte, Consp. Gen. Av., 2, p. 141, 1857—part, Falkland Islands (not descr.); Selater and Salvin, Ibis, 1869, p. 284—part, Tyssen Island, Falkland Islands; idem, Proc. Zool. Soc. Lond., 1878, p. 436—part, Falkland Islands; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 142,

¹*Nycticorax nycticorax falklandicus* Hartert: Very similar to *N. n. hoaccli*, but somewhat smaller. Wing, 307–322 mm. In coloration, this insular form is somewhat variable. Among fifteen specimens, twelve—both in adult and juvenile dress—are of the light-colored “*hoaccli*” type, two are intermediate, and only one adult represents the dark “*obscurus*” type, being hardly distinguishable from Temuco birds. Under these circumstances, we cannot well follow Peters in uniting *falklandicus* to *obscurus*, and prefer to keep it separate.

1891—part, Falkland Islands (Edwards and French Bay); Vallentin, Mem. Proc. Manchester Lit. Phil. Soc., 48, No. 23, p. 33, 1904—Falkland Islands.

Nycticorax gardeni (not *Ardea gardeni* Gmelin) Gould, Proc. Zool. Soc. Lond., 27, p. 96, 1859—Falkland Islands (egg descr.); Sclater, l.c., 28, p. 387, 1860—Berkeley Sound; Abbott, Ibis, 1861, p. 157—Hope Place, Falkland Islands (breeding).

Nycticorax tayazu-guira (not *Ardea tayazu-guira* Vieillot) Sharpe, Cat. Bds. Brit. Mus., 26, p. 155, 1898—part, spec. o-u, Falkland Islands.

Nycticorax nycticorax cyanocephalus (not *Ardea cyanocephala* Molina) Peters, Proc. Bost. Soc. N. H., 32, p. 267, 1931—part, Falkland Islands; idem, Bds. World, 1, p. 115, 1931—part, Falkland Islands.

Range.—Resident in the Falkland Islands.

Genus NYCTANASSA Stejneger¹

Nyctherodius (not *Nycterochilus* Macgillivray, 1842) Reichenbach, Av. Syst. Nat., p. xvi, 1852 (=1853)—type, by orig. desig., *Ardea violacea* Linnaeus.

Nyctanassa Stejneger, Proc. U. S. Nat. Mus., 10, p. 295 (note), 1887—type, by orig. desig., *Ardea violacea* Linnaeus.

Nyctinassa Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913 (emendation).

**Nyctanassa violacea violacea* (Linnaeus). YELLOW-CROWNED NIGHT HERON.

Ardea violacea Linnaeus, Syst. Nat., 10th ed., 1, p. 143, 1758—based on "The Crested Bittern" Catesby, Nat. Hist. Carolina, 1, p. 79, pl. 79; Carolina and Bahama Islands (Carolina accepted as type locality).

Ardea jamaicensis Gmelin, Syst. Nat., 1, (2), p. 625, 1789—based on "Jamaica Night-Heron" Latham, Gen. Syn. Bds., 3, (1), p. 54; Jamaica.

Ardea callocephala Wagler, Syst. Av., 1, fol. 12, Ardea, sp. 34, 1827—substitute name for *Ardea violacea* "auct.," inclusive of the Guianan race.

Nyctherodius violaceus Reichenbach, Av. Syst. Nat., p. xvi, 1852; Gundlach, Journ. Orn., 23, p. 311, 1875—Cuba (breeding); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 12, 1899—Rio Lara and Punta de Sabana, Darien, Panama.

Nyctanassa violacea Stejneger, Proc. U. S. Nat. Mus., 10, p. 295 (note), 1887 (nomencl.); Sharpe, Cat. Bds. Brit. Mus., 26, p. 130, 1898—part, spec. a-x, e'-w', c'-b³, United States, Mexico, Costa Rica, Panama, and West Indies (Cuba, Santa Lucia, Dominica, Nevis, Virgin Gorda, St. Vincent, Grenada, Mustique, Grenadines); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 174, 1901—references and localities in eastern Mexico

¹ Mathews (Bull. Brit. Orn. Cl., 58, p. 13, 1937) claims that "*Maridus* is used by Wood (Ornith. Guide, p. 201, June [?], 1836) for the 'Bihoreau de Cayenne,' which Wood calls *Maridus bahamensis*, and this is the type of the genus *Maridus* by present designation." This statement is by no means clear, and not having access to Wood's publication at present, we cannot decide if *Maridus* is validly proposed.

and Central America; Clark, Proc. Bost. Soc. N. H., 32, p. 236, 1905—Barbados (Sept. 12), St. Vincent, Grenadines, and Grenada (breeding); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 141, 1905—San Miguel and Saboga Islands, Pearl Archipelago, Panama (breeding); Carriker, Ann. Carnegie Mus., 6, p. 430, 1910—Costa Rica (Bolson, Limon, (?) El Pózo de Térraba); Todd, l.c., 7, p. 411, 1911—Great Inagua and Watlings Islands, Bahama Islands; idem, l.c., 10, p. 187, 1916—Los Indios, Majagua River, and Caleta Grande, Isle of Pines; Bent, Bull. U. S. Nat. Mus., 135, p. 213, 1926 (life hist.; range in part); Griscom, Bull. Mus. Comp. Zool., 72, p. 311, 1932—Permé and Obaldía, Panama; idem, Bull. Amer. Mus. N. H., 64, p. 140, 1932—Guatemala (part, Rio Polochic); Wyman, Auk, 58, p. 569, 1941—Milwaukee, Wisconsin.

Nycticorax violaceus Salvin, Ibis, 1889, p. 376—Cozumel and Ruatan Islands; Bonhote, l.c., 1899, p. 519—New Providence; idem, l.c., 1903, p. 307—Andros, Hog Cay (Great Abaco), and Little Abaco, Bahama Islands (breeding).

Nyctanassa violacea jamaicensis Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 31, 1918—West Indies (crit.).

Nyctanassa violacea violacea Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 300, 1927—Puerto Rico, Mona Island, St. Thomas, St. Croix, and Virgin Gorda (crit., meas.); idem and Swales, Bull. U. S. Nat. Mus., 155, p. 86, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 116, 1931 (range); idem, Bull. Mus. Comp. Zool., 71, p. 305, 1931—Almirante, Bocas del Toro, and Changuinola, Panama; Griscom, l.c., 78, p. 295, 1935—Panama; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 80, 1938—Barra de Santiago, El Salvador (migrant).

Range.—Breeds from eastern Kansas, southern Illinois and Indiana, and South Carolina south through eastern Mexico, eastern Central America to Panama¹ and throughout the West Indies to Grenada; winters in the southern part of its range.² Casual in summer as far north as Colorado, Wisconsin, Ontario, and Nova Scotia.

Field Museum Collection.—50: Texas (Tarpon Springs, 1; Brownsville, 2); Mississippi (Rosedale, 1); Florida (East Pass, 2; Marion

¹ Wetmore (Proc. Biol. Soc. Wash., 59, p. 49, March 11, 1946) has recently separated the birds from the Pearl Islands, off Panama, under the name *Nyctanassa violacea caliginis*, type from Isla San José, Archipelago de las Perlas, Panama, in the U. S. National Museum. It is said to differ from the typical race by its thicker, heavier bill and the decidedly darker gray color of the adult. It is similar to *N. v. bancrofti* Huey in size of bill but decidedly darker.

² On comparing an ample series of West Indian and Bahama specimens with an equally good one from the southeastern United States, we fail to see any constant difference either in size or coloration, and are unable to recognize *jamaicensis*.

Twenty-two specimens from the Antilles, nine from the Bahamas, twenty-three from the United States, twenty from eastern Mexico, and two from Costa Rica were examined. No material from Panama or the Pearl Islands has been available for study.

County, 4; Monroe County, 3; Amelia Island, 1; Bassenger, 6); Bahama Islands (Mira por vos Island, 1; Andros, 2; Eleuthera, 1; Inagua, 4; Mayaguana, 6); Jamaica (Grand Cayman, 1; Surrey, 1); Virgin Islands (St. Croix, 6); Lesser Antilles (Antigua, 2; St. Christopher, 3; Martinique, 1; Tobago, 1); Guatemala (Escobas, Izabal, 1).

****Nyctanassa violacea bancrofti* Huey.¹ PACIFIC YELLOW-CROWNED NIGHT HERON.**

Nyctanassa violacea bancrofti Huey, Condor, 29, p. 167, May, 1927—Scammon Lagoon, Lower California (type in coll. of San Diego Society of Natural History); Grinnell, Univ. Calif. Pub. Zool., 32, p. 85, 1928—Lower California; Peters, Bds. World, 1, p. 116, 1931 (range); van Rossem and Hachisuka, Trans. San Diego Soc. N. H., 8, p. 327, 1937—Tobari Bay, Sonora; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 80, 1938—Lake Olomega, Puerto del Triunfo, etc., El Salvador (breeding; crit.); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 40, 1945—Sonora (distr.).

Nycticorax violaceus (not *Ardea violacea* Linnaeus) Salvin, Ibis, 1855, p. 191—Chiapám, Pacific Guatemala; Townsend, Proc. U. S. Nat. Mus., 13, p. 135, 1890—Socorro Island, off Mexico; Nelson, N. Amer. Fauna, 14, p. 33, 1899—Isabel Island, Mexico.

Nyctherodius violaceus Grayson, Proc. Bost. Soc. N. H., 14, pp. 285, 301, 1872—Tres Marias and Socorro Islands; Lawrence, Mem. Bost. Soc. N. H., 2, p. 311, 1874—Sinaloa (Mazatlán), Colima (Rio "Coahuana"), Tres Marias and Socorro Islands; Nutting, Proc. U. S. Nat. Mus., 6, p. 379, 1883—San Juan del Sur, Nicaragua.

Nyctanassa violacea Sharpe, Cat. Bds. Brit. Mus., 26, p. 130, 1898—part, spec. y-d', x'-b', Mexico (Presidio and Mazatlán, Sinaloa) and Guatemala (Chiapám); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 174, 1910—part, western Mexico (Socorro Island, Tres Marias, Mazatlán, Rio de Coahuayana) and Guatemala (Chiapám); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 292, 1926—Socorro Island and Maria Magdalena, Tres Marias; Griscom, Bull. Amer. Mus. N. H., 64, p. 140, 1932—Guatemala (part, Ocos).

Range.—Resident in southern Lower California and in the Pacific coast region of Mexico, Guatemala, El Salvador, and northwestern Nicaragua: also on Socorro,² Isabel, and the Tres Marias Islands.

¹ *Nyctanassa violacea bancrofti* Huey: Similar to the nominate race, but larger and the bill heavier as well as longer. Wing, 295-305; bill, 75-82.

Though there is no topotypical material at hand, we have no hesitation in referring four adults from Mazatlán and two from Chiapám (Pacific Guatemala) to this form, whose breeding as far south as El Salvador has been ascertained by van Rossem. A single specimen from Managua, Nicaragua, evidently belongs here, too.

² Van Rossem has recently separated the birds from Socorro Island under the name *Nyctanassa violacea gravirostris* (Occ. Pap. Mus. Zool. Louisiana State Univ., 15, p. 266, Nov. 22, 1943—Socorro Island, Revillagigedo group, Mexico,

Field Museum Collection.—3: Mexico, Lower California (La Paz, 1; San Luis Island, 1); El Salvador (Laguna Olomega, San Miguel, 1).

**Nyctanassa violacea cayennensis* (Gmelin).¹ GUIANAN YELLOW-CROWNED NIGHT HERON.

Ardea cayennensis Gmelin, *Syst. Nat.*, 1, (2), p. 626, 1789—based on "Bihoreau de Cayenne" Buffon, *Hist. Nat. Ois.*, 7, p. 439, and Daubenton, *Pl. Enl.*, pl. 899, Cayenne; Wied, *Beitr. Naturg. Bras.*, 4, (2), p. 652, 1833—coast of Rio de Janeiro (Cabo Frio, Rio Iritiba) and Bahia (Rio Belmonte).

Ardea cayenensis Richard and Bernard, *Act. Soc. Hist. Nat. Paris*, 1, (1), p. 117, 1792—Cayenne.

Ardea sexsetacea Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 14, p. 436, 1817—chiefly based on "Bihoreau de Cayenne" Daubenton, *Pl. Enl.*, pl. 899.

Nycticorax violaceus (not *Ardea violacea* Linnaeus) Cabanis, in Schomburgk, *Reisen Brit. Guiana*, 3, "1848," p. 754, 1849—marshes of the savanna and rivers; Sclater, *Proc. Zool. Soc. Lond.*, 28, p. 290, 1860—Babahoyo, Ecuador; Taylor, *Ibis*, 1864, p. 95—Oropuche Lagoon, Trinidad; Léotaud, *Ois. Trinidad*, p. 433, 1866—Trinidad; Pelzeln, *Orn. Bras.*, 3, p. 303, 1870—Rio de Janeiro (Sapitiba), Paraná (Paranaguá), and Pará (Cajútuba), Brazil; Taczanowski, *Proc. Zool. Soc. Lond.*, 1877, p. 746—Santa Lucia, Túmbez, Peru; Ihering, *Rev. Mus. Paul.*, 3, p. 378, 1899—São Paulo.

Ardea violacea Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 407, 1856—eastern Brazil (ex Wied).

Nyctanassa violacea Sharpe, *Cat. Bds. Brit. Mus.*, 26, pp. 130, 274, 1898—part, spec. c³, d³, g³, h³, Brazil (Bahia, Santa Catharina) and British Guiana (savannas); Hartert, *Nov. Zool.*, 9, p. 605, 1902—Vaqueria, Ecuador; Ihering, *Cat. Faun. Braz.*, 1, p. 66, 1907—São Paulo; Berlepsch, *Nov. Zool.*, 15, p. 302, 1908—Cayenne; Cory, *Field Mus. Nat. Hist.*, *Orn. Ser.*, pp. 214, 236, 1909—Isla de Aves and Margarita Island, Venezuela; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 92, 1910—Amaração, Piauh; Snethlage, *Bol. Mus. Goeldi*, 8, p. 108, 1914—Marajó (Pacoval, Livramento, Magoary) and Maranhão, Brazil; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 364, 1916—Corosal, Orinoco delta (ex Stone); Young, *Ibis*, 1928, p. 779—Abary River (near Blairmont) and Abary Savanna, British Guiana.

type in California Academy of Sciences). They are said to have a heavier bill, shorter, thicker tarsi and the crown of the head overlaid with brown even in the adults.

¹*Nyctanassa violacea cayennensis* (Gmelin): Similar in coloration to the nominate race, but smaller. Wing, 250–275.

The few specimens that we have been able to examine (two from Venezuela, two from Trinidad, one from British Guiana, and four from Brazil) are indeed somewhat smaller than North American and West Indian birds, though the largest individuals closely approach the latter. We do not find any difference in coloration. Mr. Todd pronounces Colombian examples to be inseparable from the North American form, while Chapman refers a single adult from Ecuador (wing, 264) to *cayennensis*. The race appears to require confirmation by larger series.

Nyctanassa violacea violacea Hellmayr, Nov. Zool., 13, p. 51, 1906—Caroni Swamp and Pointe Gourde, Trinidad; Todd and Carriker, Ann. Carnégie Mus., 14, p. 138, 1922—Bonda, Mamatoco, Don Diego, and Gaira, Colombia (crit.).

Nyctinassa violacea Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913—Corosal (Orinoco delta) and Cariaquito, Venezuela.

Nyctanassa violacea cayennensis Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 31, 1918—Braamspunt, Surinam (crit.); Chapman, Bull. Amer. Mus. N. H., 55, p. 207, 1926—Jambeli, Ecuador (crit.); Peters, Bds. World, 1, p. 117, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 581—Trinidad and Tobago (breeding); Pinto, Rev. Mus. Paul., 22, p. 35, 1938—Maranhão (Miritiba), Bahia (Caravellas, Ilha Madre de Deus), and São Paulo.

Range.—Coasts (rarely inland) of Colombia, Venezuela (Isla de Aves; Margarita Island; Cariaquito, Paria Peninsula; Corosal, Orinoco delta), Trinidad, Tobago, the Guianas, and Brazil south to Santa Catharina, and also the Pacific coast region of Ecuador (Babahoyo, Jambeli) and northwestern Peru (Santa Lucia, Tumbes).

Field Museum Collection.—9: Venezuela (Culata, Merida, 1; Emigrante de los Pampas, Merida, 1; Lake Valencia, Aragua, 2; Isla de Aves, Colon, 1; Testigos Islands, Nueva Esparta, 1; Margarita Island, 1); British Guiana (Buxton, 1); Brazil (Miritiba, 1).

****Nyctanassa violacea pauper* (Sclater and Salvin).¹ GALAPAGOS
YELLOW-CROWNED NIGHT HERON.**

Nycticorax pauper Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, pp. 323, 327—Indefatigable Island (descr. of young; cotypes in British Museum); Salvin, Trans. Zool. Soc. Lond., 9, p. 498, 1876—Indefatigable Island; Ridgway, Proc. U. S. Nat. Mus., 12, p. 114, 1890—Hood and Indefatigable Islands.

Nycticorax violaceus (not *Ardea violacea* Linnaeus) Darwin, Zool. Beagle, 3, Birds, p. 128, 1841—Galápagos Islands.

Ardea violacea (var. ?) Sundevall, Proc. Zool. Soc. Lond., 1871, pp. 125, 128—Galápagos Islands (crit.).

Nyctanassa violacea Ridgway, Proc. U. S. Nat. Mus., 19, p. 606, 1897—Galápagos Islands (monog., crit.); Rothschild and Hartert, Nov. Zool., 6, p. 182, 1899—Charles, Chatham, Bindloe, Tower, Albemarle, and Hood Islands (crit.); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 255, 1904—Indefatigable Island (eggs descr.); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 59, pl. 2, fig. 1, 1931—Abingdon, Albemarle, Bindloe, Brattle, Champion, Charles, Chatham, Duncan, Gardner-near-Hood, Hood, In-

¹*Nyctanassa violacea pauper* (Sclater and Salvin) differs from the continental races by markedly darker coloration, this being particularly noticeable on under parts and neck. In dimensions, it seems to be rather variable. Wing of adult males, according to Gifford, 264–290 mm.

defatigable, James, Jervis, Narborough, Seymour, and Tower Islands (crit., plumages, nest, descr., meas.).

Nyctanassa pauper Sharpe, Cat. Bds. Brit. Mus., 26, p. 134, pl. 1c, 1898
Indefatigable Island (descr. of young).

Nyctanassa violacea paupera Rothschild and Hartert, Nov. Zool., 9, p. 411,
1902—Narborough Island (crit.).

Nyctanassa violacea pauper Peters, Bds. World, 1, p. 117, 1931 (range);
Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 43, 1931—Galápagos Islands
(crit.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 36,
1931—Tower, Daphne, and Indefatigable Islands.

Range.—Galápagos Islands.¹

Field Museum Collection.—2: Galápagos Islands (Tower Island, 1;
Gardner Island, 1).

Genus TIGRISOMA Swainson²

Tigrisoma Swainson, Zool. Journ., 3, No. 11, Sept.—Dec. 31, 1827, p. 362,
1827—type, by orig. desig., *Ardea tigrina* "Latham" (=Gmelin)=*Ardea*
lineata Boddaert.

Tigrisoma Sharpe, Bull. Brit. Orn. Cl., 5, p. xii, Dec. 30, 1895 (emendation).

Heterocnus Sharpe, Bull. Brit. Orn. Cl., 5, p. xiv, Dec. 30, 1895—type, by
orig. desig., *Tigrisoma cabanisi* Heine=*Tigrisoma mexicana* Swainson.

Tigribaphe Reichenow, Orn. Monatsber., 20, p. 61, April, 1912—type, by
monotypy, *Tigribaphe leucolaema* Reichenow=*Tigrisoma salmoni* Sclater
and Salvin.

**Tigrisoma lineatum lineatum* (Boddaert). GUIANAN TIGER HERON.

Ardea lineata Boddaert, Tabl. Pl. Enl., p. 52, 1783—based on "L'Onoré rayé,
de Cayenne" Daubenton, Pl. Enl., pl. 860; Cayenne (=adult); Richard and
Bernard, Act. Soc. Hist. Nat. Paris, 1, (1), p. 117, 1792—Cayenne.

Ardea tigrina Gmelin, Syst. Nat., 1, (2), p. 638, 1789—based on "L'Onoré"
Buffon, Hist. Nat. Ois., 7, p. 431, and Daubenton, Pl. Enl., pl. 790;
Cayenne (=young).

¹ A yet undetermined race inhabits Cocos Island. According to Gifford (l.c., p. 60) and Swarth (l.c., p. 44), three birds from that island are remarkable for their very heavy bills, which are even stronger than those of *N. v. bancrofti*.

² The three species are not quite alike in structural details. *T. mexicana* (type of *Heterocnus*) has the throat entirely bare and, in addition to the dorsal tract, a narrow patch of powder-downs on each side of the interscapular region, which is absent in *T. lineatum*. These interscapular powder-downs are also present, though less highly developed, in *T. salmoni* (type of *Tigribaphe*), which differs, however, from the other two members of the genus by its stouter, smaller bill with more decidedly curved culmen, giving the bill a more *Nycticorax*-like appearance. As has been justly remarked by Miller (Bull. Amer. Mus. N. H., 50, p. 328, 1924), either three monotypic genera will have to be admitted, or else the three species have to go together in a single generic group. We prefer to take the latter alternative.

Tigrisoma tigrinum Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 753, 1849—coastal forests; Sclater, Proc. Zool. Soc. Lond., 23, p. 163, 1855—"Bogotá"; idem, l.c., 25, p. 268, 1857—Rio Javarrí; idem, l.c., 26, p. 461, 1858—Gualaquiza, Ecuador; idem, l.c., 28, p. 290, 1860—Babahoyo, Ecuador; Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 196—delta of the Rio Atrato, Colombia; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 12, 1863—Lion Hill, Panama.

Tigrisoma brasiliense (not *Ardea brasiliensis* Linnaeus)¹ Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 754, 1849—coastal forests; Sclater, Proc. Zool. Soc. Lond., 25, p. 268, 1857—Rio Javarrí; idem, l.c., 28, p. 72, 1860—Pallatanga, Ecuador; Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 196—delta of the Atrato River, Colombia; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 301, 1861—Lion Hill, Panama; Léotaud, Ois. Trinidad, p. 426, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 199—upper Ucayali River, Peru; idem, l.c., 1867, p. 979—Pebas, Peru; Pelzeln, Orn. Bras., 3, p. 302, 1870—part, Barra do Rio Negro (= Manãos), Brazil; Wyatt, Ibis, 1871, p. 384—Lake Paturia, Magdalena, Colombia; Layard, l.c., 1873, p. 396—near Pará, Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—Rio Javarrí, upper Ucayali near Cashiboya and Santa Cruz, and Pebas, Peru; Berlepsch, Ibis, 1884, p. 439—Rio Apure, Venezuela; Taczanowski, Orn. Pér., 3, p. 401, 1886 (Peruvian localities); Salvin, Ibis, 1886, p. 170—Merumé Mountains and Camacusa, British Guiana; Berlepsch, Journ. Orn., 37, p. 318, 1889—Shanusí (Yurimaguas), Peru; Allen, Bull. Amer. Mus. N. H., 2, p. 110, 1889—lower Beni River, Bolivia; Riker and Chapman, Auk, 8, p. 161, 1891—Santarém, Brazil; Hartert, Nov. Zool., 5, p. 502, 1898—Paramba, Ecuador; Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 185, 1904—Lunier River (Carsevenne), French Guiana; Hagmann, Zool. Jahrb. (Syst.), 26, p. 50, 1907—Mexiana Island, Brazil.

Ardea brasiliensis Finsch, Proc. Zool. Soc. Lond., 1870, p. 539—Trinidad.

Tigrisoma excellens Ridgway, Proc. U. S. Nat. Mus., 10, "1887," p. 595, 1888—Segovia River, Honduras (type in U. S. National Museum); Richmond, l.c., 16, p. 527, 1893—Rio Escondido, Nicaragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 178, 1901 (ex Ridgway); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 259, 1910—Juan Viñas, Costa Rica.

Tigrisoma lineatum Sharpe, Cat. Bds. Brit. Mus., 26, pp. 194, 281, 1898—British Guiana (Merumé Mountains), Surinam (Maroni River), Ecuador (Sarayacu, Yanayacu), Peru (Pebas), and Panama (Lion Hill); Bangs, Proc. New Engl. Zool. Cl., 2, p. 15, 1900—Loma del León, Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 178, 1901—Lion Hill, Panama; Berlepsch and Hartert, Nov. Zool., 9, p. 126, 1902—Venezuela

¹ *Ardea brasiliensis* Linnaeus (Syst. Nat., 12th ed., 1, p. 239, 1766) is based on "Le Héron du Brésil" Brisson, Orn., 5, p. 441, and "Soco" Marcgrave, Hist. Nat. Bras., p. 199. The latter is *T. l. marmoratum*, the form of Tiger Bittern of the Brazilian highlands. Brisson, who had a specimen from Cayenne sent by Arthur to the Réaumur Collection, also refers to Marcgrave, and his description is by no means clear. From Linnaeus' short diagnosis it cannot even be guessed which of the two references he used as principal basis, and we agree with Berlepsch and Hartert (Nov. Zool., 9, p. 126, footnote, 1902) that the name *brasiliensis* had better be dropped as ambiguous.

- (Caicara and Quiribana de Caicara, Rio Orinoco; Nicare, La Prición, and Cangrejo, Caura Valley); Hartert, l.c., p. 602, 1902—Paramba, Ecuador; Hellmayr, l.c., 14, p. 411, 1907—Humaytá, Rio Madeira; Berlepsch, l.c., 15, p. 303, 1908—Cayenne and Lunier River, French Guiana; Hellmayr, l.c., 17, p. 424, 1910—Jamarysinho, Rio Machados, Brazil; Carriker, Ann. Carnegie Mus., 6, p. 433, 1910—El Hogar, Costa Rica; Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, B. 10, 1911—Santo Domingo, Ecuador; Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 26, p. 83, 1912—near Belém, Pará; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913—Guinipa River, Orinoco delta, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 110, 1914—part, Pará, Ilha das Onças, Marajó (Magoary, Bõa Vista), and Monte Alegre, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 366, 1916—Orinoco Valley, Venezuela; Chubb, Bds. Brit. Guiana, 1, p. 177, 1916 (var. local); Chapman, Bull. Amer. Mus. N. H., 36, p. 230, 1917—Rio Salaquí, Rio Atrato, Malena, and Puerto Berrio, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—vicinity of Paramaribo, Surinam; Todd and Carriker, Ann. Carnegie Mus., 14, p. 136, 1922—Don Diego, Las Vegas, Fundación, and Trojas de Cataca, Colombia (plumages descr., disc.); Delacour, Ibis, 1923, p. 143—near Camaguan and Apure district, Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 208, 1926—Rio Suno, Ecuador; Young, Ibis, 1928, p. 781—Blairmont and Abary River, British Guiana; Griscom, Bull. Mus. Comp. Zool., 72, p. 311, 1932—Obaldia and Ranchon, Panama.
- Tigrisoma* sp. Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 11, 1899—Laguna della Pita, Darien (young descr.).
- Tigrisoma marmoratum* (not *Ardea marmorata* Vieillot) Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 47, 1900—Vinces and Rio Peripa, Ecuador (crit.).
- Tigrisoma lineatum lineatum* Peters, Bds. World, 1, p. 118, 1931 (range); idem, Bull. Mus. Comp. Zool., 71, p. 307, 1931—Changuinola, Quebrada Nigua, and Cricamola, Almirante, Panama; Belcher and Smooker, Ibis, 1934, p. 581—Trinidad (ex Léotaud);¹ Griscom, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 36, 1938—Manãos and São Gabriel, Rio Negro, Brazil; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 23, 1945—João Pessõa, Rio Juruá and Santo Antonio, Rio Eiru; idem, l.c., 23, p. 41, 1945—El Beni (Victoria; Bresta; Orion), Bolivia.

Range.—Central America, from the Segovia River, Honduras, to Panama, and northern South America south to western Ecuador and Amazonia as far south as northeastern Bolivia (lower Beni), the northern confines of Matto Grosso (Rio Machados), and in the east to the Pará region, Brazil;² accidental in Trinidad (one record).

¹ The eggs described do not seem to be those of the Tiger Heron.

² Birds from various parts of the range present no constant differences so far as we can see. The color type described by Ridgway as *T. excellens* has been shown by Todd to be merely an intermediate stage between the juvenile and the adult plumage.

Nineteen specimens examined.

Field Museum Collection.—13: Costa Rica (Juan Vinas, Cartago, 1); Colombia (unspecified, 1); Ecuador (Sarayacu, Napo Pastaza, 1); Venezuela (Orope, Zulia, 2); British Guiana (Rockstone, 3; New River Depot, New River, 1); Dutch Guiana (Paramaribo, 1); Brazil (Bõa Vista, Amazonas, 2; Rio Counany, Pará, 1).

****Tigrisoma lineatum marmoratum* (Vieillot).¹ MARBLED
TIGER HERON.**

Ardea marmorata Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 415, 1817—based on "Garza jaspeada" Azara, Apunt. Hist. Nat. Páx., 3, p. 160, No. 353; Paraguay (descr. of young).

Ardea lineata (not of Boddaert) Wied, Beitr. Naturg. Bras., 4, (2), p. 634, 1833—Rio de Janeiro (lagoons of Marica, Sagoarema, Ponta Negra, Araruama, etc.).

Tigrisoma tigrinum (not *Ardea tigrina* Gmelin) Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 27—Sete Lagõas, Minas Geraes.

Tigrisoma brasiliense (not *Ardea brasiliensis* Linnaeus) Pelzeln, Orn. Bras., 3, p. 302, 1870—part, Goyáz (Ponte Alta, Rio Araguay), Matto Grosso (Engenho do Pari, Caiçara), and São Paulo (Taipa, Ypanemá); Ihering, Cat. Faun. Braz., 1, p. 69, 1870—Itapura, São Paulo, and Vargem Alegre, Minas Geraes; White, Proc. Zool. Soc. Lond., 1882, p. 624—Rio Paraná, near Corrientes City, Corrientes.

Tigrisoma fasciatum (not *Ardea fasciata* Such) Salvin, Ibis, 1880, p. 363—Salta (descr.); Allen, Bull. Amer. Mus. N. H., 5, p. 151, 1893—Chapada, Matto Grosso.

Tigrisoma marmoratum Berlepsch, Journ. Orn., 35, p. 30, 1887—Rio Pilcomayo, Chaco (char., nomencl.); Kerr, Ibis, 1892, p. 130—Fortín Page, lower Rio Pilcomayo; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 21, 1895—Colonia Risso, Paraguay; idem, l.c., 12, No. 292, p. 31, 1897—

¹ *Tigrisoma lineatum marmoratum* (Vieillot) differs principally by larger size, longer tarsi, wider black crown-streaks, and generally by more extensive feathering at the base of the lower mandible. In juvenile plumage only distinguishable by greater dimensions. Wing, 330 (female), 360 (male); bill, 110–120.

Birds from Matto Grosso, Piauhy, Paraguay, and the Chaco agree well together. *T. bahiae* proves to be an intermediate stage between juvenile and adult plumage, corresponding to the one in the northern *T. l. lineatum*, which was described by Ridgway as *T. excellens*. Study of adequate material, furthermore, tends to indicate that *H. bolivianus* (erroneously placed by the describer in the genus *Heterocnus*) is merely an individual mutant of the present form. The dimensions of the type agree with *marmoratum*, and the only character of importance is its blackish, instead of chestnut, upper part of the head. However, two adults from the Bolivian Chaco are just as rufous-headed as any from Paraguay and Argentina, whereas a black-crowned specimen has been recorded by Wetmore from Corrientes, in the heart of the range of *marmoratum*. Moreover, individuals with blackish forehead are occasionally met with in the distributional areas of *lineatum* as well as *marmoratum*, which also speaks for the mutational nature of this character.

Material examined.—Brazil: Primeira Cruz, Maranhão, 1; Lagõa do Parnaguá, Piauhy, 4; Bahia, 1; Matto Grosso, 4.—Bolivia: Caiçara, 1; Alto Paraguay, 1.—Chaco: Fortín Page, 1.—Paraguay: Riacho Verde, 1; Colonia Risso, 2.

Caiza (Tarija), Bolivia, and San Lorenzo, Jujuy; Sharpe, Cat. Bds. Brit. Mus., 26, pp. 195, 281, 1898—Salta and Fortín Page, Rio Pilcomayo; Ihering, Rev. Mus. Paul., 3, p. 377, 1899—São Paulo; Kerr, Ibis, 1901, p. 232—Riacho Verde, Paraguay; Lönnberg, l.c., 1903, p. 462—Tatarenda, Tarija, Bolivian Chaco (young descr.); Hartert and Venturi, Nov. Zool., 16, p. 247, pl. 3, fig. 13 (egg), 1909—Barracas al Sud, Buenos Aires (crit.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 225, 1910 (range in Argentina); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 70, p. 93, 1910—Lagõa do Parnaguá, Piauhy (spec. examined); Grant, Ibis, 1911, p. 338—Alto Paraguay, Bolivia; Ménégau, Rev. Franç. d'Orn., 5, p. 26, 1917—Caceres, Matto Grosso; Serié and Smyth, El Hornero, 3, p. 42, 1923—Santa Elena, Entre Ríos; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 219, 1925—Rio São Francisco, Rio Preto, Bahia, and Piauhy (crit., plumages); Wetmore, Bull. U. S. Nat. Mus., 133, p. 58, 1926—west of Puerto Pinasco, Paraguay (crit., habits).

Tigrisoma bahiae Sharpe, Bull. Brit. Orn. Cl., 5, p. xiv, Dec. 30, 1895—Bahia, Brazil (type in British Museum examined; descr. of intermediate stage).

Tigrisoma bahiae Sharpe, Cat. Bds. Brit. Mus., 26, p. 196, pl. 2A, 1898—Bahia.

Heterocnus bolivianus Lönnberg, Ibis, (8), 3, p. 462, Oct., 1903—Tatarenda, Tarija, Bolivian Chaco (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 98, 1927 [crit.]).

Tigrisoma lineatum Ihering, Cat. Faun. Braz., 1, p. 69, 1907—Barretos, São Paulo.

Tigrisoma bolivianum Wetmore, El Hornero, 2, p. 292, 1922—Corrientes, Rio Paraná (crit.); Zotta, l.c., 6, p. 244, 1936—Corrientes (ex. Wetmore).

Tigrisoma lineatum marmoratum Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 488, 1929—Lake Parnaguá, Piauhy, and Primeira Cruz, Maranhão (crit.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 93, 1930—Matto Grosso and Fazenda do São João, Rio Cuyabá, Matto Grosso; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 67, 1930—San José, Tapikiolé, Lapango, and Tacaaglê, Formosa (crit., meas.); Peters, Bds. World, 1, p. 119, 1931 (range); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 367, 1934—Descalvados, Matto Grosso (plumages); Zotta, El Hornero, 6, p. 242, 1936 (descr., range); Pinto, Rev. Mus. Paul., 22, p. 36, 1938—part, Minas Geraes (Mayrink, Pirapõra, Vargem Alegre, Rio Pandeiro), São Paulo (Barretos, Itapura, Rio Paraná, Valparaiso), and Matto Grosso (Porto Sapé, Coxim); idem, Pap. Avul. Dept. Zool. Sec. Agric., São Paulo, 7, p. 45, 1946 (pls.).

Tigrisoma (lineatum?) bolivianum Peters, Bds. World, 1, p. 119, 1931 (range).

Range.—Highlands of Brazil, from Maranhão and Piauhy south to Bahia, Minas Geraes, São Paulo and Matto Grosso; Paraguay; southeastern Bolivia (Cochabamba; Santa Cruz; Tarija); north-eastern Argentina east of the Andes south to Buenos Aires.

Field Museum Collection.—7: Brazil (Jua, near Iguatu, Ceará, 1; Vaccaria, Matto Grosso, 1); Bolivia (Yungas del Palmar, Cocha-

bamba, 1; Buena Vista, Santa Cruz, 1; Rio Surutu, Santa Cruz, 2; San Carlos, Santa Cruz, 1).

Tigrisoma lineatum fasciatum (Such).¹ BLACK-CROWNED TIGER HERON.

Ardea fasciata Such, Zool. Journ., 2, No. 5, p. 117, April, 1825—"Brazil" (location of type unknown).

Tigrisoma fasciatum Sclater and Salvin, Exot. Orn., p. 183, pl. 92, 1869—southeastern Brazil ("vicinity of Rio de Janeiro"); Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 174, 1885—Taquara do Mundo Novo, Rio Grande do Sul (crit.); Sharpe, Cat. Bds. Brit. Mus., 26, p. 196, 1898—southeastern Brazil; Ihering, Cat. Faun. Braz., 1, p. 69, 1907 (range in part); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 119, 1926—Salto do Cobre, Porto Xavier de Silva, and Ilha do Mutúm, Paraná, Brazil; Zotta, El Hornero, 6, p. 106, 1935—Bonpland, Misiones; idem, l.c., p. 245, 1936—Misiones (descr.); Pinto, Rev. Mus. Paul., 22, p. 37, 1938—Blumenau, Santa Catharina.

Tigrisoma brasiliense (not *Ardea brasiliensis* Linnaeus) Pelzeln, Orn. Bras., 3, p. 302, 1870—part, Curytiba, Paraná.

Tigrisoma (*lineatum*?) *fasciatum* Peters, Bds. World, 1, p. 119, 1931.

Range.—Extreme southeastern Brazil, from Paraná to Rio Grande do Sul, and the adjacent districts of Argentina (Bonpland, Misiones).

***Tigrisoma salmoni salmoni** Sclater and Salvin. SALMON'S TIGER HERON.

Tigrisoma salmoni Sclater and Salvin, Proc. Zool. Soc. Lond., 1875, p. 38—Medellin, Colombia (cotypes in British Museum); Taczanowski, l.c., 1879, p. 242—Tambillo, Peru; Sclater and Salvin, l.c., p. 542—Cauca and Medellin, Colombia; Salvin and Godman, Ibis, 1880, p. 178—Minca (2,000 ft.), Santa Marta, Colombia; Taczanowski, Proc. Zool. Soc. Lond., 1880, p. 212—Callacate, Peru; idem, l.c., 1882, p. 47—Huambo, Peru; Berlepsch and Taczanowski, l.c., 1883, p. 577—Chimbo, Ecuador; Taczanowski, Orn. Pér., 3, p. 402, 1886 (Peruvian localities); Sharpe, Cat. Bds. Brit. Mus., 26, p. 197, 1898—Colombia (Cauca Valley, Medellin, Minca) and Ecuador (Sarayacu); Allen, Bull. Amer. Mus. N. H., 13, p. 125, 1900—Valparaiso, Colombia; Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 47, 1900—Gualaquiza and Rio Santiago, Ecuador (plumages descr.); Berlepsch and Stolzmann, Proc. Zool. Soc.

¹ *Tigrisoma lineatum fasciatum* (Such) agrees with *T. l. marmoratum* in dimensions and extent of feathering on the throat, but differs in that the upper parts of the head and neck are black instead of chestnut.

This character is quite constant in the twelve adults from Paraná, Santa Catharina, and Rio Grande do Sul that we have examined. It is, however, somewhat significant that a black-crowned mutation (*bolivianus*) sporadically reappears in the range of *T. l. marmoratum*, such individuals being hardly distinguishable from *fasciatum*.

London, 1902, (2), p. 48, 1902—La Merced, Junfn, Peru; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 164, 1902—Macuto (near La Guayra), Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 231, 1917—Salento and Juntas de Tamaná, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 137, 1922—La Tigrera, Santa Marta, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 26, 1922—Gualea, Mindo, Rio San Pedro, and Rio Guailabamba, below Zambiza, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 208, 1926—Mindo, Chimbo, Las Piñas, Guainché, below San José, lower Sumaco, and Palmira (east of Baños), Ecuador.

Tigriphaps leucolaema Reichenow, Orn. Monatsber., 20, p. 61, April, 1912—"Ukerewe Island, Lake Victoria," errore, = Colombia (type in Berlin Museum; cf. Miller, Bull. Amer. Mus. N. H., 50, p. 328, note 1, 1924).

Tigrisoma salmoni salmoni Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 203, 1926 (plumages descr.); Peters, Bds. World, 1, p. 119, 1931 (range).

Range.—Tropical zone of northwestern Venezuela (Macuto, near La Guayra), Colombia, Ecuador, and Peru south to Junín (La Merced).

Field Museum Collection.—1: Ecuador (Pajar Vaca, Rio Cotapino, 1).

***Tigrisoma salmoni brevirostre* Sztolcman.¹ SZTOLCMAN'S
TIGER HERON.**

Tigrisoma salmoni brevirostre Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 206, Dec. 31, 1926—Rio Cadena, Marcapata, Peru (type in Warsaw Museum); Peters, Bds. World, 1, p. 119, 1931 (range).

Tigrisoma salmoni (not of Sclater and Salvin) Berlepsch and Stolzmann, Ornith., 13, pp. 102, 125, 1906—Idma (Urubamba) and Rio Cadena (Marcapata), Peru; Chubb, Ibis, 1919, p. 273—Charuplaya, La Paz, Bolivia; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 131, 1920—Chaquimayo, Carabaya, Peru, and Chungamayo Valley, La Paz, Bolivia.

Range.—Tropical zone of southeastern Peru (depts. of Cuzco and Puno) and western Bolivia (Dept. La Paz).

****Tigrisoma mexicana mexicana* Swainson. MEXICAN TIGER
HERON.**

Tigrisoma mexicana Swainson, in Murray's Encl. Geog., p. 1383, July, 1834 (Am. ed., 3, p. 315, fig. 1034, 1839)—Real del Monte (Hidalgo), Mexico (cf. van Rossem, Auk, 59, p. 572, 1942).

¹*Tigrisoma salmoni brevirostre* Sztolcman differs from the nominate race merely by shorter, less elevated bill. Length of bill, 74–80, against 86–95 mm.

One adult male from Chaquimayo, Peru, and three adults from Bolivia (Charuplaya and Chungamayo Valley, Dept. La Paz), compared to four from Colombia, have indeed decidedly smaller bills, so that we cannot but recognize this recently separated race.

- Tigrisoma tigrinum* (not *Ardea tigrina* Gmelin) Selater, Proc. Zool. Soc. Lond., 26, p. 359, 1858—Tigré Island, Honduras; Taylor, Ibis, 1859, p. 151—near Tigré Island, Honduras; Selater and Salvin, l.c., p. 226—same locality; Salvin, l.c., 1865, p. 191—Lagoon of Chiapám, Guatemala; Selater, Proc. Zool. Soc. Lond., 28, p. 253, 1869—Orizaba, Mexico.
- Tigrisoma Cabanisi* Heine, Journ. Orn., 7, p. 407, 1859—Mexico (type in Heine Collection, now in Municipal Museum, Halberstadt); Selater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 280—Bluefields River, Nicaragua; idem, Exot. Orn., p. 95, pl. 48, 1868—southern Mexico to Veraguas; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 142, 1868—San Carlos, Costa Rica; Frantzius, Journ. Orn., 17, p. 376, 1869—Rio Macho (near Orósi) and Rio San Carlos, Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 218—Laguna del Castillo, Veraguas; Selater, Ibis, 1873, p. 373—Chontales, Nicaragua; idem, Bull. U. S. Nat. Mus., 4, p. 49, 1876—Oaxaca (Tapaná, Chihuitan, Santa Efigenia, Tehuantepec City) and Puebla (Venta Salada), Mexico; Nutting, Proc. U. S. Nat. Mus., 5, p. 406, 1882—La Palma de Nicoya, Costa Rica; idem, l.c., 6, p. 379, 1883—San Juan del Sur, Nicaragua; Ferrari-Perez, l.c., 9, p. 170, 1886—Vega de Alatorre, Vera Cruz; Salvin, Ibis, 1889, p. 376—Cozumel Island; Cherrie, Anal. Inst. Fis.-Geogr. Mus. Nac. Costa Rica, 4, p. 146, 1893—Boca Mala, Rio Diquis, Costa Rica; Jouy, Proc. U. S. Nat. Mus., 16, p. 788, 1894—Rio Verde (Hac. Angostura), San Luis Potosí, Mexico; Underwood, Ibis, 1896, p. 450—Miravalles, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 179, 1901—Mexico to Panama; Griscom, Bull. Amer. Mus. N. H., 64, p. 142, 1932—Ocos, Guatemala.
- Tigrisoma brasiliense* (not *Ardea brasiliensis* Linnaeus) Moore, Proc. Zool. Soc. Lond., 27, p. 63, 1859—Aloor River and Omoa, Honduras.
- Heterocnus cabanisi* Sharpe, Cat. Bds. Brit. Mus., 26, p. 198, 1898—part, Mexico (San Blas, Nayarit; Nuevo León; Tampico and above Ciudad Victoria, Tamaulipas; Vega del Casadero and Misantla, Vera Cruz; Tizimín, Yucatan; Cozumel Island), British Honduras (Belize), Guatemala (Chiapán; Juntecholol, Petén), Nicaragua (Chontales), Costa Rica, Veraguas, and Panama (Lion Hill); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 75, 1907—Los Amates, Guatemala; Carriker, Ann. Carnegie Mus., 6, p. 433, 1910—Guápiles, Miravalles, and Coronado de Térraba, Costa Rica; Rendahl, Ark. Zool., 12, No. 8, p. 7, 1919—San Juan del Norte, Nicaragua; idem, l.c., 13, No. 4, p. 17, 1920—Bayoneta Island, Pearl Archipelago, Panama; Peters, Bull. Mus. Comp. Zool., 69, p. 412, 1929—Lancetilla, Honduras; idem, Bds. World, 1, p. 119, 1931 (range, except Sonora and Sinaloa); Huber, Proc. Acad. Nat. Sci. Phila., 84, p. 210, 1932—Banbana River, Nicaragua; Stone, l.c., p. 298, 1932—Cantarranas and Toloa Lagoon, Honduras; Griscom, Bull. Mus. Comp. Zool., 72, p. 311, 1932—Permé, Panama; idem, l.c., 78, p. 295, 1935—Panama; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 81, 1938—Lake Olomega, San Sebastián, and Colima, El Salvador (habits, plumages); Sassi, Temminckia, 3, p. 292, 1938—Costa Rica (Puerto Jiménez, Bebedéro, Waldeck); Davis, Condor, 46, p. 9, 1944—Rio Aguacatillo, Guerrero, Mexico.
- Heterocnus mexicanus mexicanus* van Rossem, Auk, 59, p. 572, 1942 (*mexicanus* Swainson must replace *Cabanisi* Heine).

Range.—Mexico, from Nayarit and southern Tamaulipas south through Central America to northwestern Colombia (Rio Atrato).

Field Museum Collection.—8: Mexico (Apatzingan, Michoacan, 2; Yucatan, 1); Guatemala (Los Amates, Izabal, 1); El Salvador (La Paz, San Sebastian, 2); Nicaragua (San Emilio, Rivas, 1); Colombia (Rio Atrato, Antioquia, 1).

***Tigrisoma mexicana fremitus* (van Rossem and Hachisuka).¹**
SONORAN TIGER HERON.

Heterocnus cabanisi (sic) *fremitus* van Rossem and Hachisuka, Proc. Biol. Soc. Wash., 50, p. 161, Sept. 30, 1937—Guioocoba, Sonora, Mexico (type in coll. of Donald R. Dickey, University of California, Los Angeles).

Botaurus cabanisi Finsch, Abhandl. Naturw. Ver. Bremen, 2, p. 357, 1870—Mazatlán, Sinaloa, Mexico.

Tigrisoma cabanisi Lawrence, Mem. Bost. Soc. N. H., 2, p. 311, 1874—Mazatlán, Sinaloa; Miller, Bull. Amer. Mus. N. H., 21, p. 341, 1905—Escuinapa, Sinaloa.

Heterocnus cabanisi Sharpe, Cat. Bds. Brit. Mus., 26, p. 198, 1898—part, Mazatlán and Presidio, Sinaloa, Mexico; van Rossem, Bull. Mus. Comp. Zool., 77, p. 428, 1934—Alamos, Sonora; idem and Hachisuka, Trans. San Diego Soc. N. H., 8, p. 327, 1937—Tesia, Sonora, Mexico.

Heterocnus mexicanus fremitus van Rossem, Auk, 59, p. 572, 1942 (*mexicanus* Swainson must replace *Cabanisi* Heine).

Range.—Southern Sonora and probably Sinaloa, Mexico.

Subfamily BOTAURINAE. Bitterns

Genus ZEBRILUS Bonaparte

Zebrilus Bonaparte, Compt. Rend. Acad. Sci. Paris, 40, No. 14, p. 723, April, 1855—type, by subs. desig. (Gray, Cat. Gen. Subgen. Bds., Addenda, 1855),² *Ardea undulata* Gmelin.

Microcnus Reichenow, Journ. Orn., 25, p. 249, 1877—type, by orig. desig., *Ardea pumila* Boddaert.

***Zebrilus undulatus* (Gmelin).³** UNDULATED BITTERN.

Ardea pumila (not of Lepechin, 1770) Boddaert, Tabl. Pl. Enl., p. 54, 1783—based on "Crabier des Philippines" Daubenton, Pl. Enl., pl. 898 (=rufous phase).

¹ *Tigrisoma mexicana fremitus* (van Rossem and Hachisuka): Adults of this form are said to have the barring on the upper back, neck and upper chest notably wider and the blackish streaks on the foreneck paler. Size larger. Immatures and juveniles are not distinguishable from the typical race.

² Cf. Sclater, Ibis, 1929, pp. 650-652.

³ The dichromatism in this species is by no means sexual, as the senior author formerly thought.

- Ardea undulata* Gmelin, Syst. Nat., 1, (2), p. 637, 1789—based on "Le Petit Butor de Cayenne" Buffon, Hist. Nat. Ois., 7, p. 430, and Daubenton, Pl. Enl., pl. 763 (=dark phase), Cayenne; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 56, 1863—Guiana and Surinam (crit.).
- Ardea philippensis* Gmelin, Syst. Nat., 1, (2), p. 644, 1789—based on "Le Crabier des Philippines" Brisson (Orn., 5, p. 474, pl. 37, fig. 2) and Daubenton (Pl. Enl., pl. 898), and "Le Petit Crabier" Buffon, Hist. Nat. Ois., 7, p. 395; "Philippine Islands," errore (=rufous phase).
- Zebrilus undulatum* Bonaparte, Compt. Rend. Acad. Sci. Paris, 40, No. 14, p. 723, April, 1855 (listed).
- Zebrilus undulata* Bonaparte, Consp. Gen. Av., 2, p. 138, 1857—Brazil and Cayenne (descr.).
- Tigrisoma undulatum* Pelzeln, Orn. Bras., 3, p. 302, 1870—Caiçara and Engenho do Cap Gama, Matto Grosso (spec. examined).
- Botaurus pumilus* Reichenow, Journ. Orn., 25, p. 249, 1877 (diag.).
- Zebrilus pumilus* Berlepsch, Journ. Orn., 37, p. 318, 1889—Shanusi, near Yurimaguas, Peru (descr.); Riker and Chapman, Auk, 8, p. 161, 1891—Santarém, Brazil; Sharpe, Cat. Bds. Brit. Mus., 26, p. 241, 1898—Cayenne and British Guiana; Forbes, Bull. Liverpool Mus., 3, p. 61, 1901 (crit.); Hellmayr, Orn., 13, p. 56, 1905—Matto Grosso (dichromatism); Ihering, Cat. Faun. Braz., 1, p. 70, 1907 (range); Hellmayr, Nov. Zool., 14, p. 412, 1907—Humaythá, Rio Madeira; Berlepsch, l.c., 15, p. 303, 1908—Cayenne; Hellmayr, l.c., 17, p. 424, 1910—Humaythá, Rio Madeira; Snethlage, Bol. Mus. Goeldi, 8, p. 111, 1914—Pará, Rio Tocantins (Arumatheua), Cussary, and Rio Jamundá (Faro), Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 366, 1916—Agua Salada de Ciudad Bolívar and Caicarita (Caiçara), Orinoco, Venezuela.
- Zebrilus undulatus* Chubb, Bds. Brit. Guiana, 1, p. 180, 1916—Abary, Corentyne, and upper Berbice rivers; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—vicinity of Paramaribo, Surinam; Chapman, Bull. Amer. Mus. N. H., 55, p. 736, 1926—junction of Rios Curaray and Napo, Ecuador; Naumburg, l.c., 60, p. 95, 1930—Matto Grosso; Peters, Bds. World, 1, p. 120, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 37, 1938—Silves, Amazonas, and Belém, Pará, Brazil.

Range.—From southern Venezuela (Orinoco Valley), the Guianas and eastern Ecuador (junction of Rios Curaray and Napo) south through eastern Peru (Yurimaguas), and Amazonian Brazil to western Matto Grosso (Engenho do Cap Gama, Rio Guaporé; Caiçara, Rio Paraguay).¹

Genus IXOBRYCHUS Billberg

- Ixobrychus* Billberg, Syn. Faun. Scand., 1, (2), p. 166, 1828—type, by subs. desig. (Stone, Auk, 24, p. 192, 1907), *Ardea minuta* Linnaeus.

¹ *Material examined*.—French Guiana: Cayenne, 1.—Dutch Guiana: vicinity of Paramaribo, 4.—British Guiana: Maccasseema, 1.—Peru: Shanusi, near Yurimaguas, 1.—Brazil: Humaythá, Rio Madeira, 1; Caiçara, Matto Grosso, 1; Engenho do Cap Gama, Matto Grosso, 1.—"South America," 3.

Ardetta G. R. Gray, List Gen. Bds., Appendix, p. 13, 1842—type, by monotypy, *Ardea minuta* Linnaeus.

Erodiscus Gloger, Gemeinn. Hand- und Hilfsb. Naturg., 1, livr. 6, p. 410, 1842—type, by monotypy, *Ardea minuta* Linnaeus.

**Ixobrychus involucris* (Vieillot).¹ VARIEGATED BITTERN.

Ardea variegata (not of Scopoli, 1769) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 424, 1817—based on "Garza varia" Azara, Apunt. Hist. Nat. Páx., 3, p. 185, No. 361; Rio Paraguay.

Ardea involucris Vieillot, Tabl. Enc. Méth., Orn., 3, livr. 93, p. 1127, 1823—based on "Garza varia" Azara, Apunt. Hist. Nat. Páx., 3, p. 185, No. 361; Rio Paraguay.

Ardea erythromelas (not of Vieillot) Wagler, Isis, 1829, col. 663—part, descr. of adult ex Montevideo; Wied, Beitr. Naturg. Bras., 4, (2), p. 629, 1833—Rio de Braganza, Rio de Janeiro (descr.); Burmeister, Syst. Uebers. Th. Bras., 3, p. 413, 1856 (part, descr. of "young"); Pelzeln, Reise Novara, Zool., 1, Vögel, p. 124, 1865—part, Chile (spec. examined).

Ardeola exilis Fraser, Proc. Zool. Soc. Lond., 13, p. 1, 1845—Chile.

Ardea exilis Des Murs, in Gay, Hist. Fis. Pol. Chile, Zool., 1, p. 411, 1847—Chile (part, excl. of descr.); Boeck, Naumannia, 1855, p. 510—Valdivia, Chile; Philippi, Anal. Univ. Chile, 31, p. 273, 1868—Chile; Lataste, Act. Soc. Scient. Chile, 5, p. lxii, 1895—Junquillos (San Carlos), Ñuble, Chile.

Botaurus exilis Cassin, in Gilliss, U. S. Astron. Exp., 2, p. 194, 1855—Chile.

Ardetta exilis Sclater, Proc. Zool. Soc. Lond., 1867, pp. 334, 339—Chile; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 679, 1898—Chile; Albert, Anal. Univ. Chile, 103, p. 247, 1899—Chile (monog.).

Ardetta involucris Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 634—Conchitas, Buenos Aires (crit.); Hudson, l.c., 1875, p. 625—Buenos Aires (habits); Durnford, Ibis, 1876, p. 162—Buenos Aires; Reed, Anal. Univ. Chile, 49, p. 560, 1877—Laguna de Cauquenes, Colchagua, Chile; Durnford, Ibis, 1877, p. 189—Prov. Buenos Aires; idem, l.c., 1878, p. 62—Prov. Buenos Aires (nest and eggs descr.); Gibson, l.c., 1880, p. 159—Cape San Antonio, Buenos Aires (breeding); Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos, and Carhué, Buenos Aires; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 89, 1884—Arroyo Collongueyú, Buenos Aires; Withington, Ibis, 1888, p. 470—Lomas de Zamora, Buenos Aires (nest descr.); Sclater and Hudson, Arg. Orn., 2, p. 101, pl. 17 (fig. inac.), 1889—Argentina (habits); Holland, Ibis, 1890, p. 425—Est. Espartillar, near Ranchos, Buenos Aires; idem, l.c., 1892, p. 205—same locality (breeding); Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 31, 1897—Caiza, Bolivia; Sharpe, Cat. Bds. Brit. Mus., 26, pp. 235,

¹ *Ixobrychus involucris* (Vieillot) is characterized by the long rufous apical parts of the remiges. This area has the least extent on the outer primaries and gradually increases toward the inner wing-feathers. The pileum is dull ochreous yellow with a median stripe of black, laterally edged with rufous toward the forehead.

Argentine birds agree well with others from Chile.

284, 1898—Buenos Aires (Lomas de Zamora, Punta Lara), Uruguay, Patagonia (Rio Negro), Chile, and British Guiana (savanna); Ihering, *Rev. Mus. Paul.*, 3, p. 381, 1899—Iguapé, São Paulo; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 210, 1902—Laguna de Malvinas, Tucumán; Ihering, *Cat. Faun. Braz.*, 1, p. 70, 1907—Iguapé, São Paulo, and Buenos Aires; Hartert and Venturi, *Nov. Zool.*, 16, p. 247, pl. 3, fig. 5 (egg), 1909—Buenos Aires (Est. San Martín Monte, Barracas al Sud), Tucumán (Laguna de Malvinas), and Santa Fé (San Vicente); Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 225, 1910 (range in Argentina); Grant, *Ibis*, 1911, p. 338—Los Yngleses, Ajó, Buenos Aires (egg and young descr.); Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, Orn., p. 400, 1912—Rio Negro, Patagonia (descr.); Gibson, *Ibis*, 1919, p. 524—Cape San Antonio, Buenos Aires.

Ardetta erythrolaema Heine and Reichenow, *Nomencl. Mus. Orn. Hein.*, p. 308, 1890—Chile.

Ardetta erythromelas Schallow, *Zool. Jahrb., Suppl.*, 4, p. 679, 1898—Puerto Montt, Llanquihue, Chile (eggs descr.).

Ixobrychus involucris Dabbene, *El Hornero*, 1, p. 92, 1918—Isla Martín García, Buenos Aires; Tremoleras, l.c., 2, p. 14, 1920—Uruguay (Montevideo, Canelones, Cerro Largo); Paessler, *Journ. Orn.*, 70, p. 446, 1922—Coronel, Chile (breeding habits); Daguerre, *El Hornero*, 2, p. 264, 1922—Rosas, Buenos Aires; Serié and Smyth, l.c., 3, p. 42, 1923—Santa Elena, Entre Ríos; Pereyra, l.c., p. 164, 1923—Zelaya, Buenos Aires; Wilson, l.c., 3, p. 353, 1926—Venado Tuerto, Santa Fé; Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 60, 1926—Buenos Aires (Los Yngleses, Carhué) and Uruguay (Laguna Castillos, near San Vicente); Friedmann, *Bull. Mus. Comp. Zool.*, 68, p. 150, 1927—Bovril Islands, Santa Fé; Darlington, l.c., 71, p. 361, 1931—Ciénaga, Magdalena, Colombia (crit.); Peters, *Bds. World*, 1, p. 122, 1931 (range); Hellmayr, *Field Mus. Nat. Hist.*, *Zool. Ser.*, 19, p. 303, 1932—Santiago to Llanquihue, Chile; Belcher and Smooker, *Ibis*, 1934, p. 582—Trinidad (nest and eggs descr.); Zotta and Fonseca, *El Hornero*, 6, p. 246, 1936—Montevideo and Buenos Aires (descr.); Pinto, *Rev. Mus. Paul.*, 22, p. 38, 1938—São Paulo (Iguapé) and Buenos Aires (Saladillo).

Egretta involucris Jaffuel and Pirion, *Rev. Chil. Hist. Nat.*, 31, p. 112, 1927—Marga-Marga Valley, Valparaiso, Chile.

Range.—Southern Brazil (Rio de Braganza, Rio de Janeiro; Iguapé, São Paulo; Rio Grande do Sul); Paraguay; Uruguay; northern Argentina south to the Rio Negro; southeastern Bolivia (Caiza, Tarija); Chile, from Santiago to Llanquihue (Puerto Montt); also recorded (winter visitant?) from Venezuela, British Guiana, Trinidad,¹ and Colombia (Ciénaga, Magdalena).

Field Museum Collection.—8: Venezuela (Lake Valencia, Aragua, 3); British Guiana (Mon Repos, 4; unspecified, 1).

¹ Belcher and Smooker describe the nest and eggs from Trinidad, but it is not certain from their account that breeding specimens have actually been taken.

****Ixobrychus exilis hesperis* Dickey and van Rossem.¹ WESTERN LEAST BITTERN.**

Ixobrychus exilis hesperis Dickey and van Rossem, Bull. South. Calif. Acad. Sci., 23, (1), p. 11, Feb. 20, 1924—Buena Vista Lake, Kern County, California (type in coll. of Donald R. Dickey, University of California, Los Angeles); Grinnell, Univ. Calif. Pub. Zool., 32, p. 81, 1928—Lower California (breeding); Peters, Bds. World, 1, p. 122, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 142, 1932—San Lucas, Lake Atitlan, Guatemala (breeding; crit. disc.); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 41, 1945—Sonora (Tobari Bay, April 28; Kino Bay, May 16).

Ardetta exilis (not *Ardea exilis* Gmelin) Salvin, Ibis, 1866, p. 196—part, Lake Dueñas, Guatemala (breeding); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 389—Lima, Peru (Oct. 10, 16, 1889; spec. examined); Sharpe, Cat. Bds. Brit. Mus., 26, p. 231, 1898—part, spec. q', t'-z', California and Guatemala (Lakes Dueñas and Atitlan); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 181, 1901—part, Guatemala (Lakes Dueñas and Atitlan).

Ixobrychus exilis hesperus Carriker, Auk, 53, p. 323, 1936—Huacho, Lima, Peru (Febr.).

Range.—Breeds in western North America from southern Oregon to Lower California (Purísima; east of Cerro Prieto, Colorado River delta) and, according to Griscom, in western Guatemala (Lakes Dueñas and Atitlan); migrates in winter to western Peru (Huacho, Lima).

Field Museum Collection.—4: California (Nigger Slough, Los Angeles County, 2); Mexico, Lower California (San Ignacio, 1); Costa Rica (Ballena, Guanacaste, 1).

***Ixobrychus exilis pullus* van Rossem.² SONORAN LEAST BITTERN.**

Ixobrychus exilis pullus van Rossem, Trans. San Diego Soc. Nat. Hist., 6, p. 227, Nov. 28, 1930—Tóbari Bay, Sonora, Mexico (type in coll. of

¹ *Ixobrychus exilis hesperis* Dickey and van Rossem: Similar to the nominate race in coloration, but larger in all dimensions. Wing of males, 120-131 (against 106-119); tail, 42½-47 (against 38-42½); tarsus, 38½-44 (against 37-42); bill, 45-52 (against 41-46).

Griscom (Bull. Amer. Mus. N. H., 64, p. 143, 1932) finds breeding birds from Lake Atitlan, Guatemala, to be inseparable from Lower Californian specimens.

Two adults from Lima, Peru (October)—with bills of 50½ and 51 mm., respectively—that we have examined, seem decidedly referable to the larger western race.

² *Ixobrychus exilis pullus* van Rossem: Agreeing in small size with *I. e. exilis*, but upper parts in both sexes decidedly darker than in the two North American races, the rufous of the hindneck being almost chocolate-brown and the wing coverts brownish gray, almost concolorous with the rest of the wing, instead of being conspicuously contrasted; under parts with ground color white or white

Donald R. Dickey, University of California, Los Angeles); Peters, Bds. World, 1, p. 122, 1931 (range); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 41, 1945—Sonora (distr.; status; disc.).

Range.—Coastal mangrove swamps of the Arid Tropical zone of southern Sonora, Mexico, from Kino Bay south at least to Tóbari Bay.

****Ixobrychus exilis exilis* (Gmelin).¹ LEAST BITTERN.**

Ardea exilis Gmelin, Syst. Nat., 1, (2), p. 645, 1789—based on "Minute Bittern" Latham, Gen. Syn. Bds., 3, (1), p. 66; Jamaica.

Ardetta exilis March, Proc. Acad. Nat. Sci. Phila., 1864, p. 64—Jamaica; Salvin, Ibis, 1866, p. 196—part, Coban, Guatemala; Gundlach, Journ. Orn., 23, p. 308, 1875—Cuba (breeding); Sharpe, Cat. Bds. Brit. Mus., 26, pp. 231, 284, 1898—part, spec. a-s', b"-e", United States, Canada, Bermuda Islands, and Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 181, 1901—part, Mexico and Coban, Guatemala; Bonhote, Ibis, 1903, p. 308—New Providence, Bahama Islands; Bangs and Zappey, Amer. Natur., 39, p. 188, 1905—Isle of Pines (winter).

Ardetta neoxena Cory, Auk, 3, p. 262, 1886—Florida (type in coll. of C. B. Cory, now in Field Museum;=melano-erythristm); Sharpe, Cat. Bds. Brit. Mus., 26, p. 233, 1898 (monog.).

Ixobrychus exilis exilis Todd, Ann. Carnegie Mus., 10, p. 175, 1916—Siguanea, Isle of Pines; Bent, Bull. U. S. Nat. Mus., 135, p. 84, 1926 (life hist., range in part); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 303, 1927—Puerto Rico (breeding); Danforth, Auk, 45, p. 481, 1928—Black River, Jamaica; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 88, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 122, 1931 (range); Bradley, Mowbray, and Eaton, Proc. Bost. Soc. N. H., 39, p. 308, 1931—Bermuda Islands (occasional transient); Griscom, Bull. Amer. Mus. N. H., 64, p. 142, 1932—San Lucas, Guatemala (winter); (?) Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 84, 1938—Lake Olomega, El Salvador (breeding?); Beatty, Auk, 60, p. 110, 1943—St. Croix, Virgin Islands (nesting).

Ixobrychus exilis Davidson, Flicker, Minneapolis, 16, (2), p. 19, 1944 (nesting notes).

tinged with grayish clay color; females broadly streaked below, from bill to tail, with dark brownish gray, these markings broken up into mottlings posterior to the breast; males much less conspicuously marked below, but variously clouded and streaked with gray or brownish gray on neck, chest, and flanks. Wing, (males) 111-114, (females) 108-109; tail, 37-42, (females) 37-39; bill, 45-47½, (females) 43-47.

Based on eight breeding individuals.

¹ *Ardea spadicea* Gmelin (Syst. Nat., 1, (2), p. 641, 1789—based exclusively upon "*Ardea mexicana seu avis Xoxonquihaoctli*" Seba, Thes., 1, p. 100, pl. 64, fig. 2—Mexico) seems to be unidentifiable.

Range.—Breeds in central and eastern North America¹ from southern Saskatchewan and Nova Scotia south to Florida, the Greater Antilles (Jamaica, Cuba, Hispaniola, Puerto Rico), the Virgin Islands (St. Croix), eastern Mexico (Tampico) and south-eastern Nicaragua (Los Sábalo).²

Field Museum Collection.—68: Texas (Corpus Christi, 1); North Dakota (Benson County, 4; Ramsey County, 1); Iowa (Burlington, 1); Kansas (Burlington, 2); Minnesota (Otter Tail County, 1); Wisconsin (Dodge County, 3; Milton, 1); Illinois (Waukegan, 1; Cook County, 5); Indiana (Liverpool, 1); Ontario (Toronto, 1); Ohio (Sandusky, 2); Massachusetts (Boston, 1); Connecticut (Norwalk, 1; East Hartford, 1; Middlesex County, 1; New Haven County, 4); New York (Cayuga Lake, 1); North Carolina (Pea Island, Dare County, 2; Raleigh, 2); South Carolina (Mount Pleasant, 2); Florida (Brevard County, 6; Duval County, 7; Fort Myers, 6; Marion County, 2; Kissimmee River, 1; Anclote, 5); Bahama Islands (New Providence, 1); Cuba (Tapaste, 1).

Ixobrychus exilis bogotensis Chapman.³ BOGOTÁ LEAST BITTERN.

Ixobrychus exilis bogotensis Chapman, Bull. Amer. Mus. N. H., 33, p. 171, March 19, 1914—Suba marshes, Bogotá, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 231, 1917—Bogotá savanna; Peters, Bds. World, 1, p. 122, 1931 (range).

Range.—Savanna of Bogotá, Colombia.

¹ Birds from the United States appear to be on average darker, more buffy below, but there is so much individual variation that the possibility of separating a continental race—for which Cory's term *neoxenus*, based on a melano-erythristic mutation of frequent occurrence in Ontario and Florida, would be available—seems problematical.

² Breeding birds from Mexico (Tampico) and Nicaragua (Los Sábalo) are stated by Griscom (Bull. Amer. Mus. N. H., 64, p. 143, 1932) to approach *I. e. bogotensis* by their richly colored under surface and wings, but they have the larger dimensions of *I. e. hesperis*. Dickey and van Rossem, on the other side, refer breeding specimens from Lake Olomega, El Salvador, to *I. e. exilis*, though Griscom records *hesperis* as nesting in western Guatemala! With the scanty Central American material in collections this puzzling state of affairs can hardly be settled.

Records of this form from South America are due to confusion with *I. e. erythromelas*.

³ *Ixobrychus exilis bogotensis* Chapman: Similar to *I. e. exilis*, but breeding adult male with under parts more richly colored, breast, abdomen, flanks, under wing and under tail-coverts warm buff; median and lesser upper wing coverts richer, mainly ochraceous-buff more or less margined with tawny-russet; female also deeper buff on posterior under parts, and back slightly darker. Wing, (adult male) 116, (female) 113; tail, 42–43; tarsus, 37–38; bill, 40, (female) 37.

The female, by its clove-brown instead of rich chestnut back, is stated to differ conspicuously from that of *I. e. exilis*. Known only from three specimens, this form requires corroboration by adequate material.

***Ixobrychus exilis erythromelas** (Vieillot).¹ SOUTHERN LEAST BITTERN.

Ardea erythromelas (err. typ.) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 422, 1817—based on "Garza roxa y negra" Azara, Apunt. Hist. Nat. Páx., 3, p. 182, No. 360; Rio Paraguay.

Ardea erythromelas Pelzeln, Reise Novara, Zool., 1, Vögel, p. 124, 1865—part, Lake Paratininga, Rio de Janeiro; idem, Orn. Bras., 3, p. 302, 1870—São Paulo (Ypanemá), Goyás (Rio Araguay), and Amazonas (Barra do Rio Negro), Brazil (re-examined by M. Sassi).

Ardea variegata (not of Vieillot) Léotaud, Ois. Trinidad, p. 419, 1866—Trinidad.

Ardetta erythromelas Sharpe, Cat. Bds. Brit. Mus., 26, pp. 234, 284, 1898—part, spec. a-d, f, Brazil (Bahia) and British Guiana (Georgetown, River Carimang, savanna); Kerr, Ibis, 1901, p. 232—Paraguayan Chaco; Hellmayr, Nov. Zool., 13, p. 51, 1906—Caroni Swamp, Trinidad (crit.); Ihering, Cat. Faun. Braz., 1, p. 70, 1907—Iguapé, São Paulo; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 225, 1910—Misiones; Snethlage, Bol. Mus. Goeldi, 8, p. 110, 1914—Pará, Marajó (Rio Arary), Monte Alegre, and Cussary, Brazil.

Ardetta exilis (not *Ardea exilis* Gmelin) Ihering, Rev. Mus. Paul., 3, p. 380, 1899—Iguapé, São Paulo (descr.); Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 186, 1904—French Guiana (spec. examined).

Ixobrychus erythromelas Berlepsch, Nov. Zool., 15, p. 303, 1908—French Guiana (ex Ménégau); Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—vicinity of Paramaribo, Surinam; Naumburg, Bull. Amer. Mus. N. H., 60, p. 95, 1930—"Matto Grosso."

Ixobrychus exilis erythromelas Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 489, 1929—São Bento, Maranhão, Brazil; Peters, Bds. World, 1, p. 122, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 582—Trinidad (nest and eggs descr.); Pinto, Rev. Mus. Paul., 19, p. 94, 1935—Cahype, Bahia; idem, l.c., 22, p. 38, 1938—Amazonas (Itacoatiará), Bahia (Cahype), and São Paulo (Iguapé), Brazil.

Range.—Island of Trinidad and the Guianas south through the eastern half of Brazil to Paraguay and Misiones (fide Dabbene).²

Field Museum Collection.—5: British Guiana (Mon Repos, 1; Hoorabea Creek, 1); Brazil (São Bento, Maranhão, 2; Joinville, Santa Catharina, 1).

¹ *Ixobrychus exilis erythromelas* (Vieillot) mainly differs by having the cheeks and auriculars rufous like the superciliary stripe, not ochraceous as in the more northern races.

Birds from Trinidad, Surinam, and São Paulo agree well together.

² Birds from Panama (Lion Hill), Colombia (Fundación; Cauca Valley), and western Peru (Pacasmayo, Trujillo) have been identified as *I. e. erythromelas*, but if *I. e. bogotensis* be a valid form, this can hardly be correct. The synonymy of this disputable form is as follows:

Ardetta exilis Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 12, 1863—Lion Hill, Panama; Sharpe, Cat. Bds. Brit. Mus., 26, p. 231, 1898—part,

Genus **BOTAURUS** Stephens

Botaurus Stephens, in Shaw, Gen. Zool., 11, (2), p. 592, 1819—type, by subs. desig. (Gray, List Gen. Bds., p. 66, 1840), *Botaurus stellaris* Stephens=*Ardea stellaris* Linnaeus.

***Botaurus lentiginosus lentiginosus** (Montague). AMERICAN BITTERN.

Ardea lentiginosa Montague, Suppl. Orn. Dict., unpagged text and plate, 1813—Piddletown, Dorsetshire, England (type in British Museum).

Ardea minor Wilson, Amer. Orn., 8, p. 35, pl. 65, fig. 3, 1814—"seacoast of New Jersey; Seneca Lake; Severn River at Hudson's Bay" (type lost).

Ardea mokoko Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 440, 1817—breeds in Hudson Bay and migrates in winter to Louisiana (no type extant).

Ardea Hudsonias Merrem, in Ersch and Gruber, Allg. Encycl. Wiss., 5, p. 175, 1820—based on "The Bittern from Hudson's Bay" Edwards, Nat. Hist. Bds., 3, p. 136, pl. 136; Hudson Bay.

Butor Americana Swainson, Nat. Hist. Class. Birds, 2, p. 354, July, 1837—based on *Ardea minor* Wilson, Amer. Orn., 8, pl. 65, fig. 3.

Botaurus lentiginosus Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 478, 1862—Lion Hill, Panama; Salvin, Ibis, 1866, p. 196—Dueñas and Coban, Guatemala; Gundlach, Journ. Orn., 23, p. 309, 1875—Cuba (Oct. to April); Bangs, Auk, 24, p. 102, 1897—Reventazón, Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 26, p. 259, 1898 (in part); Winge, Medd. Grönl., 21, p. 243, 1898—Egedesminde, Greenland; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 182, 1901—Mexican and Central American localities; Carriker, Ann. Carnegie Mus., 6, p. 434, 1910—Cariblanco and Turrúcares, Costa Rica; Chapin, Auk, 39, p. 196, pl. 6, 1922 (function of esophagus in booming); Barbour, Mem. Nutt. Orn. Cl., 6, p. 31, 1923—Cuba (winter); Bent, Bull. U. S. Nat. Mus., 135, p. 72, 1926 (life hist.; range in part); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 302, 1927—Puerto Rico (winter visitant); Peters, Bds. World, 1, p. 124, 1931 (range in part); Bradlee and Mowbray, Proc. Bost. Soc. N. H., 39, p. 308, 1931—Bermuda Islands (transient); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 87, 1931—Hispaniola (visitor); Griscom, Bull. Amer. Mus. N. H., spec. a", Lion Hill; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 181, 1901—part, Lion Hill.

Ardetta involucris Taczanowski, Orn. Pér., 3, p. 399, 1886—Pacasmayo, Peru, (?) Cochabamba, Bolivia, and (?) Chile.

Ardea erythromelas Sharpe, Cat. Bds. Brit. Mus., 26, p. 234, 1898—part, spec. e, Lion Hill.

Ixobrychus exilis Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 247, 1908—Mount Hope, Panama.

Ixobrychus erythromelas Chapman, Bull. Amer. Mus. N. H., 36, p. 231, 1917—Rio Frio, Cauca, Colombia; Chubb, Ibis, 1919, p. 272—Trujillo, Peru; Todd and Carriker, Ann. Carnegie Mus., 14, p. 132, 1922—Fundación, Santa Marta, Colombia.

Ixobrychus exilis erythromelas Griscom, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Canal Zone, Panama.

64, p. 144, 1932—Ocos and Rio Polochic, Guatemala; idem, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Panama (one record); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 84, 1938—Lake Olomega, El Salvador (Feb. 3).

Ardea freti hudsonis Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 49, 1863—North America (Pennsylvania and Wisconsin).

Botaurus mugilans Coues, Proc. Acad. Nat. Sci. Phila., 1875, p. 353—new name for *Ardea lentiginosa* Montague (ex Bartram, Trav. N. and S. Carol., p. 293, 1791).

Range.—North America, east of the Rocky Mountains, from southern Mackenzie and southern Ungava south to Kansas, the Ohio Valley, and Delaware Bay; winters from the southern part of its breeding range south to Mexico,¹ Guatemala,¹ El Salvador¹ (one record from Lake Olomega), Panama¹ (one record from Lion Hill), Jamaica, Cuba, Hispaniola (one record), and Puerto Rico;² accidental in Greenland, Great Britain (many records), and on the Channel Islands.

Field Museum Collection.—71: Saskatchewan (Maple Creek, 1); North Dakota (Nelson County, 3; Ramsey County, 1; Towner County, 4); Arkansas (Fayetteville, 1); Minnesota (Otter Tail County, 1); Wisconsin (Beaver Dam, 8); Illinois (Lake Forest, 1; Cook County, 10); Indiana (Bluffton, 1); Mississippi (Holly Springs, 1); Quebec (Magdalen Islands, 2); Maine (New Vineyard, 2); New Hampshire (Holderness, 1); Massachusetts (Yarmouth, 2; Monomoy Island, 1); Connecticut (East Hartford, 2; Essex, 1; Lyme, 2; New Haven County, 15); North Carolina, Dare County (Pea Island, 5; Bodie Island, 1); Florida (Brevard County, 2; Buffalo Bluffs, 1; Putnam County, 1; Peniel, 1).

**Botaurus lentiginosus peeti* Brodkorb.³ WESTERN AMERICAN BITTERN.

Botaurus lentiginosus peeti Brodkorb, Occ. Pap. Mus. Zool. Univ. Mich., 333, p. 2, May 26, 1936—Black Point Cutoff, Sonoma County, California (type in Museum of Zoology, University of Michigan, Ann Arbor).

¹ Some of these records may pertain to the western race (*B. l. peeti*).

² We can hardly believe that *B. lentiginosus* of Cabanis (in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 754, 1849) from the swamps of British Guiana, really refers to the American Bittern, which, as far as we know, has never been found in South America. Needless to say, the South American range attributed to the American Bittern by Burmeister (Syst. Uebers. Th. Bras., 3, p. 409, 1856) is altogether imaginary.

³ *Botaurus lentiginosus peeti* Brodkorb: Similar to the nominate race, but top of head and malar stripe more reddish brown, less mixed with blackish; sides of head brighter; buffy markings of remaining upper parts lighter and brighter; markings of remiges orange-cinnamon rather than hazel; lower neck and breast

Botaurus lentiginosus (not *Ardea lentiginosa* Montague) Sharpe, Cat. Bds. Brit. Mus., 26, p. 259, 1898 (in part); Grinnell, Univ. Calif. Publ. Zool., 32, p. 80, 1928—Lower California; Peters, Bds. World, 1, p. 124, 1931 (range in part); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 41, 1945—Sonora (distr.).

Range.—Western North America, from British Columbia to California, east to the Great Basin; winters south to Lower California, Mexico, and perhaps to Central America (winter range yet to be worked out).

Field Museum Collection.—10: British Columbia (Okanagan, 1); California (Alameda County, 1; Orange County, 1; Riverside County, 1; Los Angeles County, 3); Idaho (Coeur d'Alene, 1; Payette, 1); Mexico, Lower California (San José del Cabo, 1).

**Botaurus pinnatus* (Wagler).¹ NEOTROPICAL BITTERN.

Ardea pinnata (Lichtenstein MS.) Wagler, Isis, 1829, Heft 6, col. 662, June, 1829—Bahia, Brazil (type in Berlin Museum); Burmeister, Syst. Uebers. Th. Bras., 3, p. 408, 1856—Bahia (descr.); Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 49, 1863—Guiana (diag.).

Ardea brasiliensis (not of Linnaeus) Wied, Beitr. Naturg. Bras., 4, (2), p. 642, 1833—southeastern Brazil (descr.).

Botaurus pinnatus Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 754, 1849—swamps of the savanna; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 184, 1865—Greytown, Nicaragua; Léotaud, Ois. Trinidad, p. 429, 1866—Trinidad; Sclater and Salvin, Exot. Orn., p. 181, pl. 91, 1869 (monog.); Pelzeln, Orn. Bras., 3, p. 302, 1870—Porto do Rio Araguay, Goyáz, Brazil; Chapman, Bull. Amer. Mus. N. H., 6, p. 81, 1894—Trinidad; Sharpe, Cat. Bds. Brit. Mus., 26, p. 262, 1898—British Guiana (Annai), Cayenne, and Brazil (Pernambuco, Rio de Janeiro); Ihering, Rev. Mus. Paul., 3, p. 380, 1899—São Paulo; Salvadori and Festa, Boll. Mus. Zool. Torino, 15, No. 368, p. 48, 1900—Vinces, Ecuador; Berlepsch, Nov. Zool., 15, p. 303, 1900—Cayenne; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 183, 1901—Greytown, Nicaragua; Hellmayr, Nov. Zool., 13, p. 51, 1906—Caroni Swamp, Trinidad; Ihering, Cat. Faun. Braz., 1, p. 70, 1907—Ypiranga, São Paulo; Hartert and Venturi, Nov. Zool., 16,

with tawny rather than clay-colored stripes; posterior under parts on average warmer buff; tarsus somewhat longer.

Judging from the few California specimens that we have seen, this would seem to be rather an ill-defined race.

¹ *Ardea flava* Gmelin (Syst. Nat., 1, (2), p. 638, 1789) may possibly be an earlier name. All the bibliographic references (Brisson, Buffon, Raius, Willoughby) quoted by Gmelin have as basis "Alia Ardeae species" of Marcgrave, Hist. Nat. Bras., p. 210. His description, while corresponding to the Bittern in various respects, contains certain discrepancies. Schneider (Journ. Orn., 86, p. 101, 1938), when revising Marcgrave's original drawings, has unfortunately transposed the entries in the fourth column of his concordance, as far as this species is concerned, but it appears that no figure exists of the bird in question. Under these circumstances we do not advocate the adoption of Gmelin's name.

p. 247, 1909—Barracas al Sud, Buenos Aires, and Mocoví, Santa Fé; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 225, 1910—Tucumán, Santa Fé (Mocoví), and Buenos Aires (Barracas al Sud); Chubb, Bds. Brit. Guiana, 1, p. 181, 1916—Bonasika, Alary, and Berbice rivers; Rendahl, Ark. Zool., 12, No. 8, p. 5, 1919—Rio Menco, Nicaragua; Tremoleras, El Hornero, 2, p. 14, 1920—Canelones and Maldonado, Uruguay; Chapman, Bull. Amer. Mus. N. H., 55, p. 208, 1926—Vinces, Ecuador; Naumburg, l.c., 60, p. 96, 1930—"Matto Grosso"; Peters, Bds. World, 1, p. 125, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 582—Trinidad (breeding); Daguerre, El Hornero, 5, p. 399, 1934—Las Flores, Buenos Aires; Zotta and Fonseca, l.c., 6, p. 248, 1936—Buenos Aires (Zelaya, Las Flores, Las Rosas, La Plata) (descr.); Pinto, Rev. Mus. Paul., 22, p. 38, 1938—Ypiranga, São Paulo.

Range.—Nicaragua (Greytown and Rio Menco); western Ecuador (Vinces); Venezuela (Aragua); island of Trinidad (breeding); British Guiana (Annai, etc.); French Guiana (Cayenne); eastern and central Brazil (Bahia; Rio de Janeiro; Ypiranga, São Paulo; Porto do Rio Araguay, Goyáz); Uruguay (Canelones, Maldonado); northern Argentina (Tucumán; Córdoba; Mocoví, Santa Fé; Barracas al Sud, Zelaya, Las Rosas, La Plata, Las Flores, Buenos Aires).¹

Field Museum Collection.—3: Venezuela (Lake Valencia, Aragua, 1); British Guiana (Buxton, 1); Argentina (Concepción, Tucumán, 1).

Family COCHLEARIIDAE. Boat-billed Herons

Genus COCHLEARIUS Brisson

Cochlearius Brisson, Orn., 1, p. 48; 5, p. 506, 1760—type, by tautonymy, "Cochlearius"=*Cancroma cochlearia* Linnaeus.

Cancroma Linnaeus, Syst. Nat., 12th ed., 1, p. 233, 1766—type, by monotypy, *Cancroma cochlearia* Linnaeus.

Cymbops Wagler, Syst. Av., 1, fol. 9, 1827—substitute name for *Cochlearius* Brisson.

**Cochlearius cochlearius zeledoni* (Ridgway). ZELEDON'S BOAT-BILLED HERON.

Cancroma zeledoni Ridgway, Proc. U. S. Nat. Mus., 8, p. 93, 1885—Mazatlán, Sinaloa, Mexico (type in U. S. National Museum); Sharpe, Cat. Bds. Brit. Mus., 26, p. 165, 1898—part, spec. a-b', Mexico (Tampico, Tamaulipas; La Antigua, Atoyac, Plan del Rio, and Jalapa, Vera Cruz; Tehuan-

¹ The range of this well-marked species, whose characters have been clearly pointed out by Sclater and Salvin (Exot. Orn., p. 181, pl. 91), is very imperfectly known. Birds from Trinidad, British Guiana, Brazil, and Argentina seem to be alike, as far as we can ascertain from the scanty material available for study (eight skins in all). No Central American specimens have been seen by the authors.

tepec, Oaxaca; Yucatan; Cozumel Island), British Honduras (Grassy Cay), Guatemala (Las Salinas), and Nicaragua (Momotombo, Rio Escondido); Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 185, 1901—part, descr. male and young, Mexico to Costa Rica (Rio Frio).

Canceroma cochlearia (not of Linnaeus) Sclater, *Proc. Zool. Soc. Lond.*, 25, pp. 206, 230, 1857—San Andrés, Tuxtla and Cateman, Vera Cruz, Mexico; idem, *l.c.*, 27, p. 369, 1859—Jalapa, Vera Cruz, Mexico; idem and Salvin, *Ibis*, 1859, p. 227—Atlantic coast of Guatemala; Salvin, *l.c.*, 1864, p. 387—Grassy Cay, British Honduras; Frantz, *Journ. Orn.*, 17, p. 376, 1869—Costa Rica; Finsch, *Abhandl. Naturw. Ver. Bremen*, 2, p. 358, 1870—Mazatlán, Sinaloa, Mexico; Lawrence, *Mem. Bost. Soc. N. H.*, 2, p. 310, 1874—Mazatlán; idem, *Bull. U. S. Nat. Mus.*, 4, p. 48, 1876—Santa Efigenia, Oaxaca, Mexico; Nutting, *Proc. U. S. Nat. Mus.*, 5, p. 406, 1882—La Palma de Nicoya, Costa Rica; Boucard, *Proc. Zool. Soc. Lond.*, 1883, p. 458—Rio Lagartos, Yucatan; Nutting, *Proc. U. S. Nat. Mus.*, 6, p. 396, 1884—Island of Ometépe, Lake Nicaragua; Salvin, *Ibis*, 1889, p. 376—Cozumel Island.

Cochlearius zeledoni Ferrari-Perez, *Proc. U. S. Nat. Mus.*, 9, p. 171, 1886—Paso de la Milpa, Vera Cruz, Mexico; Richmond, *l.c.*, 16, p. 527, 1893—Rio Frio, Costa Rica, and Rio Escondido, Nicaragua; idem, *l.c.*, 18, p. 627, 1896—Alta Mira, Tamaulipas, Mexico; Lantz, *Trans. Kansas Acad. Sci.*, 16, p. 219, 1899—San José, Guatemala; Dearborn, *Field Mus. Nat. Hist.*, Orn. Ser., 1, p. 75, 1907—Gualan, Rio Motagua, Guatemala; Carriker, *Ann. Carnegie Mus.*, 6, p. 431, 1910—part, Cimmarones, Costa Rica; Miller, *Bull. Amer. Mus. N. H.*, 21, p. 341, 1915—Sinaloa (Escuinapa, Hacienda Island, Juanna Gomez River); Rendahl, *Ark. Zool.*, 12, No. 8, p. 7, 1919—Rio Omotépe, Nicaragua.

Cochlearius zeledoni zeledoni Griscom, *Amer. Mus. Nov.*, 235, pp. 10, 11, 1926—Culebra Key, Yucatan (range, char.).

Cochlearius cochlearius zeledoni Peters, *Bds. World*, 1, p. 125, 1931 (range); Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 141, 1932—Hacienda California and Ocos, Guatemala; Dickey and van Rossem, *Field Mus. Nat. Hist.*, Zool. Ser., 23, p. 84, 1938—San Sebastián, Lake Olomega and Zapotitan, El Salvador (plumages, habits); Sassi, *Temminckia*, 3, p. 293, 1938—Bebedero and Waldeck, Costa Rica (crit.); Sutton and Pettingill, *Auk*, 59, p. 8, 1942—Rio Sabinas, Tamaulipas, Mexico.

Range.—Mexico, from Sinaloa (Mazatlán) and Tamaulipas (Tampico, Alta Mira) south through Central America to Costa Rica (excepting southwestern portion).

Field Museum Collection.—6: Mexico (Apatzingan, Michoacan, 1; Laguna Pueblo Viejo, Vera Cruz, 2; State of Vera Cruz, 1); Guatemala (Gualan, Zacapa, 1); El Salvador (Laguna Olomega, San Miguel, 1).

**Cochlearius cochlearius panamensis* Griscom.¹ PANAMA BOAT-BILLED HERON.

¹*Cochlearius cochlearius panamensis* Griscom: Adult male differing from *C. c. zeledoni* in being darker above, light grayish olive rather than lavender gray;

Cochlearius cochlearius panamensis Griscom, Amer. Mus. Nov., 235, p. 11, Nov. 18, 1926—Corozal, Canal Zone, Panama (type in the American Museum of Natural History, New York); Peters, Bds. World, 1, p. 125, 1931 (range); idem, Bull. Mus. Comp. Zool., 71, p. 305, 1931—Fruitdale and Changuinola, Almirante Bay, Panama; Griscom, l.c., 72, p. 311, 1932—Permé, Panama (crit.); idem, l.c., 75, p. 295, 1935—Panama.

Cancroma cochlearia (not of Linnaeus) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 478, 1862—Lion Hill, Panama; idem, l.c., 9, p. 142, 1868—Rio Grande, Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 218—Mina de Chorchá, Chiriquí; (?) Hartert, Nov. Zool., 9, p. 605, 1902—Salidera, western Ecuador.

Cochlearius zeledoni (not *Cancroma zeledoni* Ridgway) Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 130, 1887—part, Las Trojas and Pózo Azul de Pirris, Costa Rica; Bangs, Proc. New Engl. Zool. Cl., 2, p. 15, 1900—Loma del Leon, Panama; Carriker, Ann. Carnegie Mus., 6, p. 431, 1910—Bolson, Pózo Azul de Pirris, and Las Ajuntaderas de Térraba, Costa Rica; (?) Chapman, Bull. Amer. Mus. N. H., 55, p. 207, 1926—Rio Blanco, Ecuador (ex Lönnberg and Rendahl).

Cancroma zeledoni Cherrie, Anal. Inst. Fís.-Geog. Mus. Nac. Costa Rica, 4, p. 146, 1893—Boca Mala, delta del Diquis, Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 26, p. 165, 1898—part, spec. c', d', Mina de Chorchá, Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 185, 1901—part, southern Costa Rica (Rio Grande, Pózo Azul de Pirris) and Panama; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 193, 1922—Jesusito, Darien; (?) Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 26, 1922—Rio Blanco, below Mindo, Ecuador.

Range.—Southwestern Costa Rica and Panama; (?) western Ecuador (Salidera, Prov. Esmeraldas; Rio Blanco, below Mindo).¹

Field Museum Collection.—5: Costa Rica (Boca Rio Matina, Limón, 1; Boca Mala, Puntarenas, 1); Panama (Colon, 1); Ecuador (Isla Silva Sur, Province de los Rios, 2).

**Cochlearius cochlearius cochlearius* (Linnaeus). BOAT-BILLED HERON.

Cancroma cochlearia Linnaeus, Syst. Nat., 12th ed., 1, p. 233, 1766—based on "La Cuillière" Brisson, Orn., 5, p. 506—Cayenne (type in Réaumur Collection); Wied, Beitr. Naturg. Bras., 4, (2), p. 660, 1833—Rio Ilhéos and Caravellas, Bahia, Brazil; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 755, 1849 (habits); Burmeister, Syst. Uebers. Th. Bras., 3, p. 404, 1856—Brazil; Schlegel, Mus. Pays-Bas, livr. 3, Ardeae, p. 62, 1863—Surinam; Léotaud, Ois. Trinidad, p. 436, 1866—Trinidad;

foreneck more olive, less cinnamon; sides of neck light grayish olive, passing through brownish drab into fawn color on throat and breast; adult female much darker, nearest deep quaker drab above, and quaker drab on foreneck; immature also darker above.

¹ The subspecific status of the West Ecuadorian form remains in doubt, as only immature birds appear to exist in collections.

Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 24—Lagõa Santa, Bicudo (Rio Doce), and Rio da Casca, Minas Geraes; Pelzeln, Orn. Bras., 3, p. 303, 1870—Matto Grosso (Cuyabá, Engenho do Pari, Rio do Cabaçal, Caiçara, Villa Bella), and Amazonas (Borba, Rio Madeira; Rio Branco, south of Serra Caraumán; Barra do Rio Negro), Brazil; Finsch, Proc. Zool. Soc. Lond., 1870, p. 589—Trinidad; Sclater and Salvin, l.c., 1873, p. 305—Cashiboya, Rio Ucayali, Peru; Allen, Bull. Essex Inst., 8, p. 82, 1876—Marajó Island, Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 542—Remedios, Antioquia, Colombia; Taczanowski, Orn. Pér., 3, p. 409, 1886—Cashiboya; Allen, Bull. Amer. Mus. N. H., 5, p. 151, 1893—Chapada, Matto Grosso; Chapman, l.c., 6, p. 82, 1894—Trinidad; Sharpe, Cat. Bds. Brit. Mus., 26, p. 163, 1898—Brazil (Rio de Janeiro, Engenho do Pari), Cayenne, British Guiana (Takutu River, Carimang River), Colombia (Remedios), and eastern Ecuador (Sarayacu); Ihering, Rev. Mus. Paul., 3, p. 381, 1899—São Paulo; Allen, Bull. Amer. Mus. N. H., 13, p. 124, 1900—Minca and Bonda, Colombia; Berlepsch and Hartert, Nov. Zool., 9, p. 125, 1902—Quiribana de Caicara and Caicara, Rio Orinoco, Venezuela; Ihering, Rev. Mus. Paul., 6, p. 450, 1905—Rio Juruá, Amazonas, Brazil; Hellmayr, Nov. Zool., 13, p. 51, 1906—Caroni Swamp, Trinidad; Ihering, Cat. Faun. Braz., 1, p. 67, 1907—São Paulo and Rio Juruá; Hagmann, Zool. Jahrb. (Syst.), 26, p. 49, 1907—Mexiana Island, Brazil; Berlepsch, Nov. Zool., 15, p. 303, 1908—Cayenne; Hellmayr, l.c., 17, p. 424, 1910—Borba, Rio Madeira; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 93, 1910—Ilha do Meio, Lagõa do Parnaguá, Piahy; Grant, Ibis, 1911, p. 339—Passage de Bugre, Matto Grosso; Snethlage, Bol. Mus. Goeldi, 8, p. 109, 1914—Pará, Marajó (Dunas), Mexiana, Rio Tocantins (Cameté), and Rio Purús (Bom Lugar), Brazil.

Cancroma cancrophaga Linnaeus, Syst. Nat., 12th ed., 1, p. 233, 1766—based on "La Cuillière Brune" Brisson, Orn., 5, p. 509, which, in its turn, rests on "Cancrofatus major" Barrère, Essai Hist. Nat. France Equin., p. 128 (French Guiana) and "Tamatia itidem Brasiliensis" Marcgrave, Hist. Nat. Bras., p. 208 (northeastern Brazil); Brazil (ex Marcgrave) (descr. of young; cf. Schneider, Journ. Orn., 86, p. 99, 1938).

Cochlearius cochlearius(a) Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 364, 1916—Ciudad Bolívar up to Caicara and Quiribana de Caicara, Orinoco, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 230, 1917—La Olanda, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 31, 1918—vicinity of Paramaribo, Surinam; Todd and Carriker, Ann. Carnegie Mus., 14, p. 138, 1922—Mamatoco and Trojas de Cataca, Santa Marta, Colombia (crit.); Delacour, Ibis, 1923, p. 143—Apure, Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, pp. 207, 736, 1926—junction of Curaray and Napo rivers, Ecuador; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 153, 1928—Utinga Lake, Pará; Naumburg, Bull. Amer. Mus. N. H., 60, p. 92, 1930—Urucúm, Matto Grosso; Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 368, 1934—Descalvados, Matto Grosso; Pinto, Rev. Mus. Paul., 22, p. 39, 1938—Amazonas (Rio Juruá), Pará (Utinga, Lago Cuipeúa), Maranhão (Miritiba), and Minas Geraes (Pirapóra); Zotta, El Hornero, 8, p. 177, 1942—Rio Iguazu, Misiones, Argentina (one example).

Cochlearius cochlearius canerophaga Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 31, 1918—Brazil (crit.).

Cochlearius cochlearius cochlearius Peters, Bds. World, 1, p. 125, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 582—Trinidad (nest and eggs descr.); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 24, 1945—João Pessôa, Rio Juruá, Brazil.

Range.—Northern South America, from Colombia, Venezuela, the island of Trinidad, and the Guianas south through eastern Ecuador, eastern Peru, Amazonia, and Brazil to Matto Grosso,¹ São Paulo, and Rio de Janeiro.² One record from northern Argentina (Rio Iguazu, Misiones).

Field Museum Collection.—2: Venezuela, Zulia (Encontrados, 1; Empelado Savanna, 1).

SUBORDER Ciconiæ

SUPERFAMILY Ciconioidea

Family CICONIIDÆ. Storks and Wood Ibises

Subfamily MYCTERIINÆ. Wood Ibises

Genus MYCTERIA Linnaeus

Mycteria Linnaeus, Syst. Nat., 10th ed., 1, p. 140, 1758—type, by monotypy, *Mycteria americana* Linnaeus.

Tantalus Linnaeus, Syst. Nat., 10th ed., 1, p. 140, 1758—type, by monotypy, *Tantalus loculator* Linnaeus.

Tantalides Reichenbach, Av. Syst. Nat., p. xiv, "1852" (=1853)—type, by orig. desig., *Tantalus loculator* Linnaeus=*Mycteria americana* Linnaeus.

Tantalops Coues, Key N. Amer. Bds., 2nd ed., p. 653, 1884—type, by monotypy, *Tantalus loculator* Linnaeus=*Mycteria americana* Linnaeus.

**Mycteria americana* Linnaeus. WOOD IBIS.

Mycteria americana Linnaeus, Syst. Nat., 10th ed., 1, p. 140, 1758—based on "Jabiru-guaçú" Marcgrave, Hist. Nat. Bras., p. 200, northeastern Brazil;³ Berlepsch, Journ. Orn., 35, pp. 32, 124, 1887—Rio Pilcomayo, Paraguay; Carriker, Ann. Carnegie Mus., 6, p. 427, 1910—lagoons of Guanacaste and marshy lowlands of western and northern Costa Rica; Cherrie, Sci.

¹ Though Graham Kerr (Ibis, 1901, p. 232) noticed that the head of the Boat-billed Heron was among the objects carried by the Gran Chaco Indians in their network-bags, the bird has not yet been actually collected either in Paraguay or northwestern Argentina.

² On comparing a series, we do not find Brazilian birds (*cancrophaga*) to be larger than those from the Guianas.

³ Cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 711, 1906; Allen, Auk, 25, p. 37, 1908; Schneider, Journ. Orn., 86, p. 85, 1938.

Bull., Mus. Brookl. Inst., 2, p. 369, 1916—Orinoco River, Venezuela; Todd and Carriker, Ann. Carnegie Mus., 14, p. 140, 1922—Cacagualito and Fundación, Colombia; Delacour, Ibis, 1923, p. 141—Camaguan to San Fernando de Apure, Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 204, 1926—western Ecuador; Wetmore, Bull. U. S. Nat. Mus., 133, p. 60, 1926—Buenos Aires (between Lavalle and Santo Domingo) and Uruguay (San Vicente); Bent, l.c., 135, p. 57, 1926 (life hist.); Friedmann, Bull. Mus. Comp. Zool., 68, p. 150, 1927—La Noria, Santa Fé; Grinnell, Univ. Calif. Pub. Zool., 32, p. 80, 1928—Lower California (visitant); Young, Ibis, 1928, p. 776—Abary savannahs, British Guiana; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 67, 1930—Lapango and Miss. Tacaaglé, Formosa; Naumburg, Bull. Amer. Mus. N. H., 60, p. 87, 1930—Rio Taquary, Matto Grosso; Peters, Bds. World, 1, p. 126, 1931 (range); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 89, 1931—Dominican Republic, Hispaniola (resident); Darlington, Bull. Mus. Comp. Zool., 71, p. 363, 1931—Ciénaga, Magdalena, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 138, 1932—Ocos and Rio Motagua, Guatemala; Belcher and Smooker, Ibis, 1934, p. 583—Trinidad (visitant); Griscom, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 40, 1938—Amazonas (Rio Juruá), Minas Geraes (Pirapóra), and São Paulo (Ypiranga, Olympia); Oberholser, Bull. Dept. Conserv. State Louisiana, 28, p. 75, 1938—Louisiana (breeding); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 86, 1938—El Salvador; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 42, 1945—Sonora (distr.); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 24, 1945—João Pessôa, Rio Juruá, Brazil; idem, l.c., 23, p. 41, 1945—El Beni (El Consuelo; Orion), Bolivia.

Tantalus loculator Linnaeus, Syst. Nat., 10th ed., 1, p. 140, 1758—based primarily on "The Wood Pelican" Catesby, Nat. Hist. Carolina, 1, p. 81, pl. 81, Carolina; Lesson, Voy. Coquille, Zool., 1, (1), p. 267, 1828—between Payta and Colán, Peru; Wied, Beitr. Naturg. Bras., 4, (2), p. 682, 1833—eastern Brazil; Tschudi, Unters. Faun. Peru., Orn., p. 298, 1846—Prov. Maynas, Peru; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 756, 1849; Burmeister, Syst. Uebers. Th. Bras., 3, p. 420, 1856—Brazil; Sclater, Proc. Zool. Soc. Lond., 28, p. 290, 1860—Babahoyo, Ecuador; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 334, 1862—Panama Railroad; Schlegel, Mus. Pays-Bas, livr. 7, Ciconiae, p. 17, 1864—Surinam and Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 199—upper Ucayali River, Peru; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 23—Rio São Francisco and Rio das Velhas, Minas Geraes; Pelzeln, Orn. Bras., 3, p. 305, 1870—São Paulo (Porto do Rio Paran), Matto Grosso (Cuyab, Villa Maria, Caiçara), and Amazonia (Barra do Rio Negro), Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 305—upper Ucayali River and Santa Cruz, Peru; Gundlach, Journ. Orn., 23, p. 313, 1875—Cuba (Zapat, Cardnas; habits); Lawrence, Bull. U. S. Nat. Mus., 4, p. 48, 1876—Santa Efigenia, Oaxaca, Mexico; Reichenow, Journ. Orn., 25, p. 161, 1877 (diag.); Nutting, Proc. U. S. Nat. Mus., 5, p. 407, 1882—La Palma de Nicoya, Costa Rica; idem, l.c., 6, p. 379, 1883—San Juan del Sur, Nicaragua; Barrows, Auk, 1, p. 272, 1884—Concepcin del Uruguay, Entre Ros; Berlepsch, Ibis, 1884, p. 439—

- Angostura, Orinoco, Venezuela; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 171, 1886—Jalapa and Vega de Alatorre, Vera Cruz, Mexico; Salvin, Ibis, 1889, p. 376—Cozumel Island; Scott, Auk, 9, p. 9, 1892—Jamaica; Kerr, Ibis, 1892, p. 145—lower Rio Pilcomayo; Richmond, Proc. U. S. Nat. Mus., 16, p. 527, 1893—Rio Frio, Costa Rica, and Rio Escondido, Nicaragua; Allen, Bull. Amer. Mus. N. H., 5, p. 150, 1893—Chapada, Matto Grosso; Aplin, Ibis, 1894, p. 199—Arroyo Grande, Rio Negro, Uruguay; Underwood, l.c., 1896, p. 449—Miravalles, Costa Rica; Christy, l.c., 1897, p. 338—mouth of the Yuna, Dominican Republic; Sharpe, Cat. Bds. Brit. Mus., 26, p. 321, 1898 (monog.); Ihering, Rev. Mus. Paul., 3, p. 383, 1899—São Paulo; Kerr, Ibis, 1901, p. 232—Chaco Paraguayo; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 188, 1901—Mexico (Santa Efigenia, Mazatlán, Presidio, San Blas, Guanajuato, Valley of Mexico, Jalapa, Vega de Alatorre, Cozumel Island), Guatemala (Chiapám, Huamachal, Coban), Nicaragua (Rio Escondido, San Juan del Sur), Costa Rica (San José, Rio Frio, La Palma de Nicoya, Miravalles), and Panama; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Manantíal and Rio Calera, Tucumán; Ihering, Rev. Mus. Paul., 6, p. 451, 1905—Rio Juruá, Brazil; Haggmann, Zool. Jahrb. (Syst.), 26, p. 54, 1907—Mexiana, Brazil (breeding); Berlepsch, Nov. Zool., 15, p. 304, 1908—Cayenne; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—Bõa Vista, near Brejão, Piahy; Grant, Ibis, 1911, p. 340—Los Yngleses, Ajó, Buenos Aires; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 366, 1912—"northern Patagonia" (sight record); Sneathlage, Bol. Mus. Goeldi, 8, p. 103, 1914—Pacoval, Marajó, Brazil; Gibson, Ibis, 1919, p. 528—Cape San Antonio, Buenos Aires (soft parts descr.); Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 25, 1922—La Carolina, Quito, Ecuador; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 214, 1925—Bahia and Piahy.
- Ibis nandapoa* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 16, p. 20, 1816—based chiefly on *Mycteria americana*, var., Latham, Ind. Orn., 2, p. 670, 1790, ex "Jabiru-guaçú" Marcgrave, Hist. Nat. Bras., p. 200; northeastern Brazil.
- Tantalus plumicollis* Spix, Av. Nov. Spec. Bras., 2, p. 68, pl. 85, 1825—"in insula St. Francisci," Brazil (type lost, formerly in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 710, 1906).
- Tantalus americanus*(a) Ihering, Cat. Faun. Braz., 1, p. 63, 1907—São Paulo (Ypiranga) and Amazonas (Rio Juruá), Brazil; Hartert and Venturi, Nov. Zool., 16, p. 247, 1909—Barracas al Sud, Buenos Aires (breeding); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 225, 1910—Córdoba, Tucumán, and Buenos Aires; Tremoleras, El Hornero, 2, p. 15, 1920—Canelones, Maldonado, Rocha, and Treinta y Tres, Uruguay; Daguerre, l.c., 2, p. 264, 1922—Rosas, Buenos Aires (breeding).

Range.—Breeds in the southeastern United States from South Carolina to Florida and west to Texas, in the Greater Antilles (islands of Cuba, Hispaniola, and ?Jamaica), in Mexico, Central America, and South America, south to western Ecuador, Peru, and Argentina

(Córdoba and Buenos Aires); occasional visitor in other parts of the United States, in Trinidad, and probably in northern Patagonia.

Field Museum Collection.—21: California (Los Angeles County, 1); Arizona (Tucson, 1); Texas (Cameron County, 2; Corpus Christi, 2; Aransas County, 2); Florida (St. John's River, 1; Nassau County, 2; Fort Denaud, 1); Cuba (San Cristobal, Pinar del Rey, 1); Mexico (San Felipe, Yucatan, 1); Guatemala (Tiquisate, Escuintla, 2); Venezuela (Rio Catatumbo, Zulia, 1; San Cristobal, Tachira, 1); Brazil (Bõa Vista, Amazonas, 1); Bolivia, Santa Cruz (Cercado, 1; Buena Vista, 1).

Subfamily CICONIINAE. Storks

Genus EUXENURA Ridgway

Euxenura Ridgway, Bull. U. S. Geol. Geogr. Surv. Terr., 4, No. 1, pp. 249, 250, Feb. 5, 1878—type, by monotypy, *Ardea maguari* Gmelin.

**Euxenura maguari* (Gmelin).¹ AMERICAN STORK.

Ardea Maguari Gmelin, Syst. Nat., 1, (2), p. 623, 1789—based on "Maguari" Marcgrave, Hist. Nat. Bras., p. 204; northeastern Brazil.

Ciconia jaburu Spix, Av. Spec. Nov. Bras., 2, p. 71, pl. 89, 1825—"in locis . . . insulae St. Joannis, Rio de Janeiro, etc." (type in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 711, 1906).

Ciconia maguari Wied, Beitr. Naturg. Bras., 4, (2), p. 677, 1833—eastern Brazil (Rio Belmonte, etc.); Schomburgk, Reisen Brit. Guiana, 2, p. 28, 1848—Rio Takutu; Cabanis, l.c., 3, "1848," p. 752, 1849—Rio Takutu; Burmeister, Syst. Uebers. Th. Bras., 3, p. 419, 1856—Brazil (descr.); Bonaparte, Consp. Gen. Av., 2, p. 104, 1857—Brazil and Montevideo (diag.); Burmeister, Journ. Orn., 8, p. 265, 1860—Entre Ríos (Paraná) and Uruguay; idem, Reise La Plata St., 2, p. 509, 1861—same localities; Schlegel, Mus. Pays-Bas, livr. 7, Ciconiae, p. 8, 1864—Brazil (crit.); Pelzeln, Reise Novara, Zool., 1, Vögel, p. 125, 1865—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, pp. 334, 339—Chile; Pelzeln, Orn. Bras., 3, p. 304, 1870—São Paulo (Irisanga), Matto Grosso (Caiçara, Villa Bella), and Amazonia (Forte do Rio Branco); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 24—Minas Geraes (Rio São Francisco, Sumidouro, etc.); Durnford, Ibis, 1876, p. 162—Buenos Aires; Reed, Anal. Univ. Chile, 49, p. 561, 1877—Cauquenes, Colchagua, Chile; Durnford, Ibis, 1877, p.

¹ Both *Ardea galeata* Molina (Sagg. Stor. Nat. Chile, pp. 235, 344, 1782) and *Tantalus pillus* Molina (l.c., pp. 243, 344) refer in part to the American Stork, in part to the Egret. Characters of the two species are, however, so badly mixed up in the descriptions that both names should be discarded as indeterminable. In the interest of nomenclatorial stability it is objectionable to replace a name of unquestioned pertinence like *Ciconia maguari* by one of Molina's terms, about which no universal agreement will ever be reached, although such procedure is advocated by Wetmore (Bull. U. S. Nat. Mus., 133, p. 61, 1926) as well as by Deautier and Steullet (Rev. Chil. Hist. Nat., 33, pp. 475, 476, 1929).

189—Punta Lara and Baradéro, Buenos Aires; idem, l.c., 1878, p. 399—Chubut Valley at mouth of Rio Sengel, Patagonia; Gibson, l.c., 1880, p. 153—Cape San Antonio, Buenos Aires (breeding habits); Barrows, Auk, 1, p. 271, 1884—Concepción del Uruguay, Entre Ríos; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 90, 1884—Prov. Buenos Aires (Rio Salado to Ayacucho and Tandil); Gibson, Ibis, 1885, p. 282—Paysandú, Uruguay; Berlepsch, Journ. Orn., 35, p. 32, 1887—Rio Pilcomayo; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 22, 1895—Ajos, Paraguay; Ihering, Rev. Mus. Paul., 3, p. 382, 1899—São Paulo; Hartert and Venturi, Nov. Zool., 16, p. 248, 1909—Barracas al Sud, Buenos Aires.

Ciconia pillus (not *Tantalus pillus* Molina) Fraser, Proc. Zool. Soc. Lond., 11, p. 116, 1843—Colchagua, Chile (habits); Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 156, 1855—Chile.

Ciconia maguaria Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 415, 1847—Chile; Philippi, Anal. Univ. Chile, 31, p. 274, 1868—Colchagua, Chile.

Ciconia dicrura Reichenow, Journ. Orn., 25, p. 168, 1877—substitute name for *Ciconia maguari* Gmelin.

Euxenura maguari Sclater and Salvin, Arg. Orn., 2, p. 106, 1889—Argentina (habits); Kerr, Ibis, 1892, p. 145—lower Rio Pilcomayo; Holland, l.c., 1892, p. 205—Est. Espartillar, Buenos Aires (breeding); Reed, l.c., 1893, p. 596—Chile (resident); Aplin, l.c., 1894, p. 199—Uruguay (Porongos, Santa Elena); Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Albert, l.c., 104, p. 991, 1899—Chile (monog.); Sharpe, Cat. Bds. Brit. Mus., 26, p. 297, 1898—British Guiana and Colchagua, Chile (descr.); Kerr, Ibis, 1901, p. 232—Paraguayan Chaco; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Famaillá and Monteros, Tucumán; Lönnberg, Ibis, 1903, p. 464—Tatarenda, Tarija, Bolivia; Hagmann, Zool. Jahrb. (Syst.), 26, p. 50, 1907—Mexiana Island, Brazil (nesting habits, young descr.); Ihering, Cat. Faun. Braz., 1, p. 64, 1907—Itapura, São Paulo; Berlepsch, Nov. Zool., 15, p. 304, 1908 (not recorded from French Guiana); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 225, 1910 (range in Argentina); Grant, Ibis, 1911, p. 339—Buenos Aires (Luiconia, Tuyú, and Los Ynglases, Ajó) and Paraguay (Tebicuarf); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 370, 1912—La Plata, Buenos Aires (descr.); Snethlage, Bol. Mus. Goeldi, 8, p. 104, 1914—Marajó (Livramento, Teso de Acará) and Mexiana, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 369, 1916—Rio Orinoco, Venezuela (seen); Gibson, Ibis, 1919, p. 527—Cape San Antonio, Buenos Aires; Tremoleras, El Hornero, 2, p. 15, 1920—Uruguay (Maldonado, Rocha, Cerro Largo); Delacour, Ibis, 1923, p. 141—llanos of Guarico and Apure, Venezuela; Young, l.c., 1928, p. 776—Abary savannah, British Guiana; Naumburg, Bull. Amer. Mus. N. H., 60, p. 88, 1930—Matto Grosso; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 68, 1930—Lapango, Formosa; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 308, 1932—Chile; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 42, 1945—El Beni (El Consuelo; Bresta; San Lorenzo), Bolivia.

Euzenura galeata (not *Ardea galeata* Molina)¹ Wetmore, Bull. U. S. Nat. Mus., 133, p. 61, 1926—Chaco Argentino, Buenos Aires, and Uruguay; idem, Univ. Calif. Pub. Zool., 24, p. 413, 1926—Valcheta, Rio Negro; Friedmann, Bull. Mus. Comp. Zool., 68, p. 151, 1927—La Noria, Santa Fé; Peters, Bds. World, 1, p. 129, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 40, 1938—São Paulo (Itapura) and Matto Grosso (Corumbá), Brazil; Nicéforo, Caldasia, 3, (14), p. 369, 1945—Llanos del Meta and Arauca, Colombia.

Range.—From eastern Colombia, Venezuela and British Guiana (Rio Takutu, Abary savannah) south through Brazil, eastern Bolivia, Paraguay, Uruguay, and Argentina as far as the Chubut Valley, and also central Chile (Colchagua Province).

Field Museum Collection.—1: Venezuela (Encontrados, Zulia, 1).

Genus JABIRU Hellmayr

Jabiru Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 711 (in text), May, 1906—type, by orig. desig., *Ciconia mycteria* Lichtenstein.

**Jabiru mycteria* (Lichtenstein). JABIRU.

Ciconia mycteria Lichtenstein, Abhandl. Phys. Kl. Akad. Wiss. Berlin for 1816–17, p. 163, 1819—based on “Jabirú” Marcgrave, Hist. Nat. Bras., p. 200, northeastern Brazil; idem, Verz. Doubl. Zool. Mus. Berlin, p. 76, 1823 (ex *Mycteria americana* Latham [not of Linnaeus], Ind. Orn., 2, p. 670, 1790);² Burmeister, Syst. Uebers. Th. Bras., 3, p. 418, 1856—Surinam and Minas Geraes (Lagõa Santa) (descr.).

Mycteria americana (not of Linnaeus, 1758) Wied, Beitr. Naturg. Bras., 4, (2), p. 675, 1833—Rio Belmonte, Bahia; Tschudi, Unters. Faun. Peru., Orn., p. 298, 1846—Pacchapata, Montaña de Vitoc, and highlands between Cahuarmayo and Cerro de Pasco, Junín, Peru; Schomburgk, Reisen Brit. Guiana, 2, p. 152, 1848—Rio Mahú and Rio Takutú; idem, l.c., 3, p. 751, 1849—savannas; Des Murs, in Castelnau, Expéd. Amér. Sud, Zool., 1, Ois., p. 79, 1856—Rio Araguay, Brazil; Schlegel, Mus. Pays-Bas, livr. 7, Ciconiae, p. 11, 1864—Surinam and Brazil (Cuyabá, Matto Grosso); Salvin, Ibis, 1865, p. 197, and 1866, p. 196—Huamachal, Guatemala; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 24—Minas Geraes (Rio São Francisco and Rio das Velhas); Pelzeln, Orn. Bras., 3, p. 305, 1870—São Paulo (Porto do Rio Paraná), Matto Grosso (Cuyabá, Retiro de Barra, Caiçara, Villa Bella), and Amazonas (Borba, Rio Madeira; Forte do Rio Branco) (soft parts); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 306—Rio Ucayali, Peru; Nutting, Proc. U. S. Nat. Mus., 5, p. 407, 1882—La Palma de Nicoya, Costa Rica (descr. of young); idem, l.c., 6, p. 389, 1884—Sucuyá, Nicaragua; Holmberg, Act. Acad.

¹ Cf. footnote, page 245.

² Berlepsch (Nov. Zool., 15, p. 304, 1908) suggested Cayenne as type locality. This is, however, inadmissible since Lichtenstein, in 1819, based his *Ciconia mycteria* exclusively on Marcgrave's account.

Nac. Cienc. Córdoba, 5, p. 90, 1884—Arroyo Tandileufú, Buenos Aires; Berlepsch, Journ. Orn., 35, p. 32, 1887—Rio Pilcomayo, Chaco; Kerr, Ibis, 1892, p. 145—Rio Paraná, Rio Paraguay, and Rio Pilcomayo; Richmond, Proc. U. S. Nat. Mus., 16, p. 526, 1893—Rio Frio, Costa Rica, and Rio Escondido, Nicaragua; Underwood, Ibis, 1896, p. 450—Hac. Miravalles, Guanacaste, Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 26, p. 314, 1898 (monog.); Ihering, Rev. Mus. Paul., 3, p. 382, 1899—São Paulo; Kerr, Ibis, 1901, p. 232—Chaco Paraguayo (Caraya Vuelta, Riacho Verde, etc.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 187, 1901—Guatemala to Costa Rica; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Tucumán; Lönnberg, Ibis, 1903, p. 464—Fortín Crévieux, Tarija, Bolivia; Hagmann, Zool. Jahrb. (Syst.), 26, p. 51, pl. 3 (nest), 1907—Mexiana, Brazil (nesting habits).

Mycteria mycteria Ihering, Cat. Faun. Braz., 1, p. 64, 1907—São Paulo; Hartert and Venturi, Nov. Zool., 16, p. 248, 1909—Chaco Santafecino (breeding); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 226, 1910—Mar Chiquita, Córdoba, and Mocoví, Santa Fé; Tremoleras, El Hornero, 2, p. 15, 1920—Rocha and Treinta y Tres, Uruguay.

Jabiru mycteria Berlepsch, Nov. Zool., 15, p. 304, 1908—Cayenne; Carriker, Ann. Carnegie Mus., 6, p. 428, 1910—Bolson and Palo Verde, Costa Rica; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 369, 1916—Orinoco Valley from the delta up to the Rio Meta, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 228, 1917—lower Magdalena and Rio San Jorge, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—Tijgerbank, Surinam; Delacour, Ibis, 1923, p. 141—San Fernando de Apure, Venezuela; Wetmore, Bull. U. S. Nat. Mus., 133, p. 60, 1926—Riacho Pilaga, Formosa, and Puerto Pinasco, Paraguay; Bent, l.c., 135, p. 66, 1926 (life hist.); Young, Ibis, 1928, p. 776—Abary savannah, British Guiana; Naumburg, Bull. Amer. Mus. N. H., 60, p. 89, 1930—Matto Grosso; Peters, Bull. Mus. Comp. Zool., 71, p. 304, 1931—Cricamola, Almirante Bay, Panama; idem, Bds. World, 1, p. 130, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 139, 1932—Guatemala; Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 368, 1934—Descalvados, Matto Grosso; Griscom, Bull. Mus. Comp. Zool., 78, p. 295, 1935—Cricamola, Panama; Pinto, Rev. Mus. Paul., 22, p. 41, 1938—Minas Geraes (Rio São Francisco) and São Paulo; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 86, 1938—Lake Olomega, El Salvador; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 42, 1945—El Beni (Victoria; Brestia; Orion), Bolivia.

Jabiru americanus Snethlage, Bol. Mus. Goeldi, 8, p. 104, 1914—Marajó, Brazil.

Range.—Southern Mexico (Rio Cosamaloapam, Vera Cruz), Guatemala (Huamachal), El Salvador (Lake Olomega), Nicaragua (Sucuyá, Rio Escondido), Costa Rica (Rio Frio, Miravalles, Bolson, Palo Verde, La Palma de Nicoya), Panama (Cricamola, Almirante Bay), and South America from Colombia (Rio San Jorge and Magdalena Valley), Venezuela (Orinoco region), and the Guianas through eastern Peru (Rio Ucayali; Pacchapata, etc., Junín), eastern

Bolivia and Brazil to Paraguay, Uruguay and northern Argentina (south to northeastern Córdoba and Buenos Aires); accidental in Texas (Austin).

Field Museum Collection.—3: Costa Rica, Guanacaste (Bebedero, 1); Brazil, Matto Grosso (Conceicao, Rio Paraguay, 1; Vaccaria, 1).

Superfamily THRESKIORNITHOIDEA

Family THRESKIORNITHIDAE. Ibises and Spoonbills

Subfamily THRESKIORNITHINAE. Ibises

Genus HARPIPRION Wagler

Harpiprion Wagler, *Isis*, 1832, col. 1232—type, by subs. desig. (Gray, *List Gen. Bds.*, p. 67, 1840), *Ibis plumbeus* Temminck=*Ibis caerulescens* Vieillot.

Molybdophanes Reichenbach, *Av. Syst. Nat.*, p. xiv, 1852 (=1853)—type, by orig. desig., *Ibis caerulescens* Vieillot.

**Harpiprion caerulescens* (Vieillot). PLUMBEOUS IBIS.

Ibis caerulescens Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 16, p. 18, 1817—based on "Curucáu aplomado" Azara, No. 363, Paraguay south to the Rio de la Plata; Schlegel, *Mus. Pays-Bas*, livr. 4, Ibis, p. 9, 1863—Brazil (descr.); Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1869, p. 635—Conchitas, Buenos Aires; Reichenow, *Journ. Orn.*, 25, p. 155, 1877 (diag.).

Ibis plumbeus(a) Temminck, *Nouv. Rec. Pl. Col.*, livr. 40, pl. 235, Nov., 1823—Paraguay and Brazil (type, from Brazil, in the Leyden Museum; cf. Schlegel, *Mus. Pays-Bas*, livr. 4, Ibis, p. 10, 1863); Wagler, *Syst. Nat.*, 1, fol. 24, Genus Ibis, sp. 14, 1827—Brazil and Paraguay (descr.); Tschudi, *Arch. Naturg.*, 10, (1), p. 311, 1844—"Peru"; idem, *Faun. Peru.*, Orn., p. 298, 1846—"Peru (wood region and along the coastal rivers)"; Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 422, 1856—southern Brazil and Paraguay (descr.); idem, *Journ. Orn.*, 8, p. 265, 1860—Banda Oriental (=Uruguay) and Paraná, Entre Ríos; idem, *Reise La Plata St.*, 2, p. 510, 1861—same localities.

Harpiprion plumbeus Wagler, *Isis*, 1832, col. 1232.

Molybdophanes caerulescens Bonaparte, *Consp. Gen. Av.*, 2, p. 154, 1857—Brazil (diag.); Elliot, *Proc. Zool. Soc. Lond.*, 1877, p. 503 (monog.); Sharpe, *Cat. Bds. Brit. Mus.*, 26, pp. 24, 265, 1898 (monog.); Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 211, 1902—Rio Calera, Tucumán; Lönnberg, *Ibis*, 1903, p. 461—Fortín Crévaux, Tarija, Bolivia; Ihering, *Cat. Faun. Braz.*, 1, p. 60, 1907 (range); Hartert and Venturi, *Nov. Zool.*, 16, p. 248, 1909—Barracas al Sud, Buenos Aires; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 226, 1910—Tucumán and Buenos Aires; Tremoleras, *El Hornero*, 2, p. 15, 1920—Cerro Largo and Rocha, Uruguay; Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 63, 1926—west of Puerto Pinasco, Paraguay

(soft parts; habits); Naumburg, Bull. Amer. Mus. N. H., 60, p. 85, 1930—Bocaina de Descalvados, Matto Grosso; Pinto, Rev. Mus. Paul., 17, (2), p. 716, 1932—Aquidauana, Matto Grosso; Zotta, El Hornero, 5, p. 380, 1934 (food).

Geronticus coerulescens Pelzeln, Orn. Bras., 3, p. 307, 1870—Villa Maria and Caiçara, Matto Grosso, Brazil.

Harpiprion caerulescens Gibson, Ibis, 1880, p. 159—Cape San Antonio, Buenos Aires (breeding); Taczanowski, Orn. Pér., 3, p. 419, 1886—"Peru" (ex Tschudi); Selater and Hudson, Arg. Orn., 2, p. 112, 1889—Argentina; Kerr, Ibis, 1892, p. 145—Fortín Nueve, lower Pilcomayo River, Chaco; idem, l.c., 1901, p. 232—Paraguayan Chaco; Gibson, l.c., 1919, p. 534—Los Yngleses, Buenos Aires; Peters, Occ. Pap. Bost. Soc. N. H., 5, p. 255, 1930 (nomencl.); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 369, 1934—Descalvados, Matto Grosso; Peters, Bds. World, 1, p. 31, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 41, 1938—Aquidauana and Corumbá, Matto Grosso; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 42, 1945—El Beni (Bresta; Orion) and Tarija (Fortin Crevaux), Bolivia.

Range.—Southern Brazil (Matto Grosso and Rio Grande do Sul), Paraguay, Uruguay, and northern Argentina (in provinces of Salta, Tucumán, Chaco, Entre Ríos, occasionally Buenos Aires).¹

Field Museum Collection.—2: Paraguay (83 km. west of Puerto Casado, Chaco, 1); Argentina (Rio Bermejo, Chaco, 1).

Genus THERISTICUS Wagler

Theristicus Wagler, Isis, 1832, col. 1231—type, by monotypy, *Tantalus melanopsis* Gmelin.

**Theristicus caudatus caudatus* (Boddaert). WHITE-THROATED IBIS.

Scolopax caudatus Boddaert, Tabl. Pl. Enl., p. 57, 1783—based on "Courly à col blanc de Cayenne" Daubenton, Pl. Enl., pl. 976; Cayenne.

Tantalus albicollis Gmelin, Syst. Nat., 1, (2), p. 653, 1789—based on Daubenton, Pl. Enl., pl. 976; Cayenne.

Ibis albicollis Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 16, p. 17, 1817—Cayenne and Paraguay (descr.); Wied, Reise Bras., 2, p. 169, 1821—southern Bahia; idem, Beitr. Naturg. Bras., 4, (2), p. 693, 1833—interior of Bahia and Rio Grande do Sul; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 757, 1849—savanna; Burmeister, Reise La Plata St., 2, p. 510, 1861—Tucumán, Paraná, and (?)Mendoza.

Tantalus mandurria "Lath." Drapiez, Dict. Class. Hist. Nat., 8, p. 490, 1825—"l'Amérique méridionale."

¹The reputed occurrence of the Plumbeous Ibis in Peru, where Tschudi claims to have seen it on the coast as well as in the wooded region, has never been confirmed.

- Ibis alba* "Vieill." Lesson, *Traité d'Orn.*, p. 567, 1831—based on Daubenton, *Pl. Enl.*, pl. 976; *Tantalus albicollis* Gmelin; "Curiçaca" Marcgrave, etc.
- Ibis melanopis* (not *Tantalus melanopis* Gmelin) Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 421, 1856—part, Brazil; idem, *Journ. Orn.*, 8, p. 265, 1860—Paraná, Tucumán, and (?)Mendoza; Schlegel, *Mus. Pays-Bas*, livr. 4, *Ibis*, p. 7, 1863—part, spec. Nos. 3, 4, Brazil and Cayenne ("plumage imparfait"); Reinhardt, *Vidensk. Medd. Naturhist. Foren.*, 1870, p. 22—Paracatú, Rio São Francisco, Minas Geraes; Ernst, *Cat. Aves Mus. Caracas*, p. 42, 1887—Zulia and Orinoco, Venezuela.
- Theristicus albicollis* Bonaparte, *Consp. Gen. Av.*, 2, p. 155, 1857—Brazil and Cayenne (diag.).
- Geronticus albicollis* Pelzeln, *Orn. Bras.*, 3, p. 307, 1870—São Paulo (Itararé, Murungaba), Paraná (Jaguaraíba, Tayacocca), Goyáz (Araguay), and Matto Grosso (Zamambaya, Caiçara, Villa Bella), Brazil.
- Theristicus melanopis* Allen, *Bull. Essex Inst.*, 8, p. 82, 1876—Marajó Island, Brazil; Durnford, *Ibis*, 1880, p. 424—Rio Pasaje, Salta; Barrows, *Auk*, 1, p. 272, 1884—Concepción del Uruguay, Entre Ríos; Kerr, *Ibis*, 1901, p. 232—Paraguay (Villa Concepción, near Caraya Vuelta, etc.); Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 211, 1902—La Ramada, Dept. of Burruyaco, Tucumán; Lönnberg, *Ibis*, 1903, p. 461—Tatarenda, Tarija, Bolivia; Baer, *Ornis*, 12, p. 230, 1904—La Criolla, Tucumán (nesting); Hagmann, *Zool. Jahrb. (Syst.)*, 26, p. 46, 1907—Mexiana Island, Brazil (habits, nest, and eggs); Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 226, 1910—part, Tucumán.
- Theristicus caudatus* Elliot, *Proc. Zool. Soc. Lond.*, 1877, p. 498 (in part); Sclater and Hudson, *Arg. Orn.*, 2, p. 110, 1889—Argentina (in part); Kerr, *Ibis*, 1892, p. 145—Fortín Page, lower Pilcomayo River; Berlepsch and Stolzmann, *Proc. Zool. Soc. Lond.*, 1892, p. 392 (diag., synonym., range); Allen, *Bull. Amer. Mus. N. H.*, 5, p. 150, 1893—Chapada, Matto Grosso; Salvadori, *Boll. Mus. Zool. Torino*, 12, No. 292, p. 31, 1895—Cara-huassi, Salta; Sharpe, *Cat. Bds. Brit. Mus.*, 26, pp. 23, 265, 1898—Rupununi and Annai, British Guiana; Ihering, *Rev. Mus. Paul.*, 3, p. 385, 1899—São Paulo; Finsch, *Not. Leyd. Mus.*, 21, p. 24, 1899—Cayenne and Matto Grosso (Caiçara) (crit.); Salvadori, *Ibis*, 1900, p. 506 (monog., synonym., range); Berlepsch and Hartert, *Nov. Zool.*, 9, p. 122, 1902—Altigracia and Quiribana de Caicara, Orinoco, Venezuela; Ihering, *Cat. Faun. Braz.*, 1, p. 60, 1907—part, São Paulo (Itararé, Faxina); Hellmayr, *Nov. Zool.*, 15, p. 100, 1908—Rio Araguaya, Goyáz; Berlepsch, l.c., p. 301, 1908—Cayenne; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 92, 1910—Burití (near Parnaguá) and Faz. Enseada, Piauhy; Sneath, *Bol. Mus. Goeldi*, 8, p. 100, 1914—Marajó (Magoary) and Mexiana, Brazil; Cherrie, *Sci. Bull.*, *Mus. Brookl. Inst.*, 2, p. 361, 1916—lower and middle stretches of the Orinoco River; Chubb, *Bds. Brit. Guiana*, 1, p. 146, 1916—Annai and Rupununi Savanna; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 227, 1917—La Manuelita (Cauca) and Barrigon, Colombia; Tremoleras, *El Hornero*, 2, p. 15, 1920—Treinta y Tres, Uruguay; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 139, 1922—around Camperucho, Santa Marta region, Colombia; Delacour, *Ibis*, 1923, p. 140—llanos of Guarico and Apure, Venezuela; Wetmore, *Bull. U. S. Nat. Mus.*, 133,

p. 64, 1926—west of Puerto Pinasco, Paraguayan Chaco (crit., habits); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 12, p. 484, 1929—Piauhy; Castellanos, *El Hornero*, 4, p. 383, 1931—Sierra Grande, Córdoba (descr. spec. ex Oran, Salta); Peters, *Bds. World*, 1, p. 136, 1931 (range); Pinto, *Rev. Mus. Paul.*, 17, (2), p. 716, 1932—Aquidauana, Matto Grosso.

Ibis caudatus(us) Reichenow, *Journ. Orn.*, 25, p. 154, 1877 (diag.); Frenzel, l.c., 39, p. 124, 1891—Córdoba.

Theristicus columbianus Finsch, *Not. Leyd. Mus.*, 21, p. 23, 1899—Colombia="Bogotá" (type in Leyden Museum examined;=immature).

Theristicus caudatus caudatus Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp., Vogel*, p. 68, 1930—Miss. Tacaaglé, Formosa, and San Ignacio (La Crecencia, Santa Cruz), Bolivia (crit.); Pinto, *Rev. Mus. Paul.*, 22, p. 42, 1938—São Paulo (Itararé, Bebedouro, Faxina), Minas Geraes (Pirapora), Matto Grosso (Aquidauana), Goyáz (Rio São Domingos), Maranhão (Primeira Cruz), and Pará (Lago Cuipéua), Brazil; Gyldenstolpe, *Svensk. Vetensk. Akad. Handl.*, (3), 23, p. 42, 1945—El Beni (Bresta; Orion), Bolivia (disc. races).

Range.—Colombia (Cauca Valley; Antioquia; Camperucho, Santa Marta; Barrigon, east foot of eastern Andes), Venezuela (Zulia; Orinoco Valley), the Guianas, and southward through Brazil, eastern Bolivia (Cochabamba; Santa Cruz), Paraguay, and Uruguay to northern Argentina as far as Tucumán, Córdoba, the Chaco, and Entre Ríos.¹

Field Museum Collection.—12: Brazil (Boa Vista, Amazonas, 1; Monte Alegre, Pará, 1; São Marcello, Rio Preto, Bahia, 1; Vaccaria, Matto Grosso, 2); Bolivia (Tin Tin, Cochabamba, 1; Nueva Moka, Santa Cruz, 3; Buena Vista, Santa Cruz, 3).

****Theristicus caudatus branickii* Berlepsch and Stolzmann.²**
BRANICKI'S IBIS.

Theristicus branickii Berlepsch and Stolzmann, *Ibis*, (6), 6, p. 404, July, 1894—Maraynioc, Pariayacú, Dept. Junín, Peru (cotypes in coll. of H. von Berlepsch, now in Frankfurt Museum [cf. Salvadori, *Ibis*, 1900, p. 505],

¹ All specimens examined by us from northern Argentina are *caudatus*. Six birds from Colombia (*columbianus*) agree well with others from Venezuela, Guiana, and Brazil, the alleged character of the type being due to immaturity, as has been recognized by the late T. Salvadori. No material from Mendoza has been available for study.

Additional material examined.—Colombia: Cauca Valley, 3; Antioquia, 1; "Bogotá," 3.—Venezuela: Altigracia, Orinoco, 2.—British Guiana, 3.—Brazil: Pacoval, Marajó, 1; Burití, Piauhy, 1; Fazenda Enseada, Piauhy, 1; Rio Araguaya, Goyáz, 2; Itararé, São Paulo, 1; Murungaba, São Paulo, 1.—Bolivia: Valle Grande, Santa Cruz, 1.—Argentina: Cara-huassi, Salta, 1; La Criolla, Tucumán, 1; lower Pilcomayo, Formosa, 2.

² *Theristicus caudatus branickii* Berlepsch and Stolzmann: Similar to *T. c. caudatus* in possessing a conspicuous feathered stripe along middle of throat, but bill and tarsi much shorter; tail also shorter and less rounded; lower breast (below

and in Warsaw Museum [cf. Sztolcman and Domaniewski, *Ann. Zool. Mus. Pol. Hist. Nat.*, 6, p. 98, 1927]; Finsch, *Not. Leyden Mus.*, 21, p. 25, 1899—Pitumarca, Peru (crit.); Salvadori and Festa, *Boll. Mus. Zool. Torino*, 15, No. 368, p. 45, 1900—Vallevicioso, Ecuador; Salvadori, *Ibis*, 1900, p. 515, pls. 9 (adult), 10 (young)—Peru and Ecuador (monog.); Berlepsch and Stolzmann, *Proc. Zool. Soc. Lond.*, 1902, (2), p. 47—Maraynioc (Pariayacu), Peru; Goodfellow, *Ibis*, 1902, p. 226—Vallevicioso, Ecuador (habits); Chubb, l.c., 1919, p. 270—Lagunillas, La Paz, Bolivia; Chapman, *Bull. U. S. Nat. Mus.*, 117, p. 51, 1921—Occobamba Pass, Cuzco, Peru; Lönnberg and Rendahl, *Ark. Zool.*, 14, No. 25, p. 25, 1922—Lake Mica (Antisana), Ecuador; Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 203, 1926—Antisana, Ecuador; Peters, *Bds. World*, 1, p. 136, 1931 (range); Morrison, *Ibis*, 1939, pp. 466, 647—between Lircay and Huanca-velica, and Lake Junfn, Peru.

Ibis albicollis (not *Tantalus albicollis* Gmelin) Meyen, *Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur.*, 16, Suppl., 1, p. 105, 1834—part, highlands of southern Peru.

Ibis melanopsis (not *Tantalus melanopsis* Gmelin) Tschudi, *Arch. Naturg.*, 10, (1), p. 312, 1844—Peru; idem, *Unters. Faun. Peru.*, Orn., p. 298, 1846—puna of Peru; Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1869, p. 600—Pitumarca, Cuzco, Peru.

Theristicus melanopsis Taczanowski, *Proc. Zool. Soc. Lond.*, 1874, p. 562—Junfn, Peru; Allen, *Bull. Mus. Comp. Zool.*, 3, p. 356, 1876—Conima (Lake Titicaca), Puno, Peru; Sharpe, *Cat. Bds. Brit. Mus.*, 26, p. 21, 1898—part, spec. g, Pitumarca.

Theristicus caudatus (not *Scolopax caudata* Boddaert) Elliot, *Proc. Zool. Soc. Lond.*, 1877, p. 498—part, Peru (Pitumarca); Taczanowski, *Orn. Pér.*, 3, p. 417, 1886—part, Puna, Junfn, Huanta, and Maraynioc.

Theristicus caudatus branickii Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp.*, Vögel, p. 69, 1930—Cotopaxi, Ecuador (crit.).

Range.—Puna zone of Ecuador, Peru, and northwestern Bolivia (Lagunillas, Dept. La Paz).

Field Museum Collection.—7: Ecuador (Cerro Antisana, Pichincha, 6); Peru (Tirapata, Carabaya, Puno, 1).

**Theristicus caudatus melanopsis* (Gmelin). BLACK-FACED IBIS.

Tantalus melanopsis Gmelin, *Syst. Nat.*, 1, (2), p. 653, 1789—based on "Black-faced Ibis" Latham, *Gen. Syn. Bds.*, 3, (1), p. 108, pl. 79; New Year's Island, near Staten Land (ex Forster); Poepfig, in *Froriep's Not. Geb.*

the gray pectoral band) and middle of abdomen white; upper breast paler rufescent; sides of head and neck rufescent instead of white; upper wing coverts gray instead of white, etc. Wing, 400–420; tail, 190–210; tarsus, 65–70; bill, 120–130.

From *T. c. melanopsis*, the present form may be distinguished by more feathering on the throat, longer wings and tail, shorter bill, white (instead of black) median posterior under parts, less rufescent chest, gray (not white) upper wing coverts, etc.

Additional material examined.—Peru: Cuzco region, 6.

- Natur- und Heilkunde, No. 502 (= 23, No. 18), p. 279, 1829—Rio Colorado, Santiago, Chile.
- Ibis albicollis* (not *Tantalus albicollis* Gmelin) Lesson, in Duperrey, Voy. Coquille, Zool., 1, (1), p. 242, 1828—St. Vincent, Concepción, Chile; Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur., 16, Suppl., 1, p. 105, 1834—part, southern Chile (crit.).
- Theristicus melanops* Darwin, Zool., Beagle, 3, Birds, p. 128, 1841—plains of Patagonia; Fraser, Proc. Zool. Soc. Lond., 11, p. 117, 1843—interior of Chile; Sclater and Salvin, Ibis, 1868, p. 189—Elizabeth Island, Straits of Magellan; Reed, Anal. Univ. Chile, 49, p. 561, 1877—Cauquenes, Colchagua, Chile; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 389—Ica, coast of Peru (Dec.) (crit.).
- Ibis melanopsis* Lesson, Rev. Zool., 5, p. 209, 1842—Valparaiso, Chile; Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 131, 1853—northern Chile; Boeck, Naumannia, 1855, p. 510—Pampa de Negrón, Rio Bueno, Arique, etc., Valdivia, Chile; Gigoux, Rev. Chil. Hist. Nat., 28, p. 87, 1924—Caldera, Atacama, Chile.
- Tantalus melanops* Forster, Descr. Anim., p. 332, 1844—Isla Año Nuevo, Staten Island.
- Ibis melanopsis* Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 417, 1847—Chile to Straits of Magellan; Hartlaub, Naumannia, 3, p. 216, 1853—Valdivia, Chile; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 197, 1855—mountains of Chile; Germain, Proc. Bost. Soc. N. H., 7, p. 313, 1860—Cordillera of Santiago, Chile (breeding habits); Philippi, Reise Wüste Atacama, p. 163, 1860—Cachinal de la Costa, Atacama, Chile; Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 7, 1863—part, spec. Nos. 1, 2, Chile ("plumage parfait"); Sclater, Proc. Zool. Soc. Lond., 1867, p. 339—Chile; Philippi, Anal. Univ. Chile, 31, p. 274, 1868—Chile; Sclater and Hudson, Proc. Zool. Soc. Lond., 1872, p. 549—Rio Negro, Patagonia; Reichenow, Journ. Orn., 25, p. 154, 1877—Chile (descr.); Philippi, Ornith., 4, p. 159, 1888—Cachinal de la Costa, Atacama, Chile; Burmeister, Anal. Mus. Nac. Buenos Aires, 3, p. 319, 1889—Valcheta, Rio Negro; Lataste, Act. Soc. Scient. Chile, 3, p. cxv, 1894—Bureo (Chillan), Ñuble, Chile.
- Theristicus melanopsis* Pelzeln, Reise Novara, Zool., 1, Vögel, p. 127, 1865—Chile; Sclater and Salvin, Ibis, 1870, p. 499—Sandy Point, Straits of Magellan; Newton, l.c., 1870, p. 502—Elizabeth Island (egg descr.); idem, Proc. Zool. Soc. Lond., 1871, p. 56, pl. 4, fig. 8 (egg); Durnford, Ibis, 1877, p. 190—Buenos Aires (winter visitor); idem, l.c., 1878, p. 400—Sengel and Chubut valleys, Patagonia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 436—Sandy Point; Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—lagoons of the Rio Colorado; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 391 (descr., synonym., range); Sharpe, Cat. Bds. Brit. Mus., 26, p. 21, 1898—part, spec. a-f, Chile and Magellan Straits (Sandy Point); Finsch, Not. Leyd. Mus., 21, p. 25, 1899—Santiago, Chile (crit.); Salvadori, Ibis, 1900, p. 511 (monog., synonym., range); Dabbene, Anal. Mus. Hist. Nat. Buenos Aires, 8, p. 392, 1902—Ushuaia, Tierra del Fuego; Crawshaw, Bds. Tierra del Fuego, p. 86, 1907—Useless Bay; Dabbene, Anal. Mus. Hist. Nat. Buenos Aires, 18, p. 226, 1910—part, Tierra del Fuego and Patagonia; Scott and Sharpe,

Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 349, 1912—Rio Chico, Patagonia; Wace, El Hornero, 2, p. 199, 1921—Falkland Islands; Pereyra, l.c., 3, p. 173, 1923—Zelaya, Buenos Aires; Peters, Bull. Mus. Comp. Zool., 65, p. 298, 1923—Huanuluan, Rio Negro (summer resident); Wetmore, Univ. Calif. Pub. Zool., 24, p. 414, 1926—Bariloche, Rio Negro (crit.); Bennett, Ibis, 1926, p. 324—Johnson's Harbour, Falkland Islands (Apr., 1917); Jaffuel and Pirion, Rev. Chil. Hist. Nat., 31, p. 112, 1927—Quebrada de la Madera, Marga-Marga, Valparaiso, Chile; Barros, l.c., 33, p. 356, 1929—Aconcagua, Chile; Peters, Bds. World, 1, p. 136, 1931 (range); Bennett, Ibis, 1931, p. 13—Falkland Islands (Apr. 28, 1928).

Geronticus melanopsis Sclater and Hudson, Proc. Zool. Soc. Lond., 1871, p. 261—Prov. of Buenos Aires (visitor; habits).

Theristicus caudatus (not *Scolopax caudata* Boddaert) Elliot, Proc. Zool. Soc. Lond., 1877, p. 498—part, Chile, Rio Negro, Buenos Aires, and Straits of Magellan; Taczanowski, Orn. Pèr., 3, p. 417, 1886—part, Chorillos, Lima; Holland, Ibis, 1892, p. 205—Est. Espartillar, Buenos Aires (May to August); Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 678, 1898—Villarica, Chile; Albert, Anal. Univ. Chile, 104, p. 1001, 1899—Chile (descr.); Gibson, Ibis, 1919, p. 533—Cape San Antonio, Buenos Aires (winter visitor; April to July); Bullock, Rev. Chil. Hist. Nat., 33, pp. 127, 200, 1929—Cerro del Nahuelbuta, Bio-bio, Chile.

Ibis (Theristicus) caudatus Oustalet, Miss. Sci. Cap Horn, 6, p. B. 140, 1891—Patagonia (Isla da los Leones, 45° 6' 20" S. lat.) and Wollaston Island (Gretton Bay), Cape Horn.

Ibis menalops (sic) Housse, Rev. Chil. Hist. Nat., 28, p. 52, 1924—Isla la Mocha, Arauco, Chile.

Theristicus caudatus melanopsis Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 69, 1930 (char., range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 309, 1932—Chile (Atacama to Magellan Straits); Reynolds, El Hornero, 5, p. 350, 1934—Lago Yewin, Tierra del Fuego (breeding); Bullock, Rev. Chil. Hist. Nat., 39, p. 242, 1935—Isla la Mocha, Chile (resident); Philippi, Bol. Mus. Nac. Santiago, 16, p. 50, 1938—Laguna de Parinacota, Tacna, Chile.

Theristicus melanops melanops Reynolds, Ibis, 1932, p. 37—Snipe and Woodcock Islands, Beagle Channel.

Range.—Temperate zone of Peru (Chorillos, Lima; Ica), Chile, and southern Argentina from the Rio Colorado and Rio Negro to the Cape Horn region; in winter occasionally migrating to the southern part of the province of Buenos Aires; accidental on the Falkland Islands (two records).

Field Museum Collection.—7: Chile (Temuco, Cautin, 1; Rio Pehuenco, Cautin, 1; Quellon, Chiloé Island, 1; Rio Inio, Chiloé Island, 1; Chiloé Island, 1; La Senda, Guaitecas Islands, 1); Argentina (Rio Gallegos, Santa Cruz, 1).

Genus **CERCIBIS** Wagler

Cercibis Wagler, *Isis*, 1832, col. 1232—type, by monotypy, *Ibis oxycercus* Spix.

***Cercibis oxycerca** (Spix). ROUND-TAILED IBIS.

Ibis oxycercus(a) Spix, *Av. Spec. Nov. Bras.*, 2, p. 69, pl. 87, 1825—"in provincia Pará"—Amazonia (type in Munich Museum; cf. Hellmayr, *Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss.*, 22, p. 710, 1906); Wagler, *Syst. Av.*, 1, fol. 24, Genus *Ibis*, sp. 15, 1827 (descr.); Schomburgk, *Reisen Brit. Guiana*, 2, p. 48, 1848—Tenette, Rio Takutu; Cabanis, in Schomburgk, *l.c.*, 3, "1848," p. 757, 1849—same locality; Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 424, 1856—upper Amazon, Rio Negro, and British Guiana (Takutu) (descr.); Schlegel, *Mus. Pays-Bas*, livr. 4, *Ibis*, p. 8, 1863—Rio Branco, Brazil (crit.); Reichenow, *Journ. Orn.*, 25, p. 153, 1877 (crit.).

Cercibis oxycerca Wagler, *Isis*, 1832, col. 1232; Bonaparte, *Comp. Gen. Av.*, 2, p. 156, 1857—Guiana (diag.); Elliot, *Proc. Zool. Soc. Lond.*, 1877, p. 497—Amazons west to Bogotá (crit.); Salvin, *Ibis*, 1886, p. 471—British Guiana (ex Schomburgk); Sharpe, *Cat. Bds. Brit. Mus.*, 26, p. 28, 1898—British Guiana (Rupununi River, Annai), Brazil (Forte do Rio Branco), and Colombia ("Bogotá"); Berlepsch and Hartert, *Nov. Zool.*, 9, p. 124, 1902—Altagracia, Caiçara, and Quiribana de Caiçara, Orinoco, Venezuela; Ihering, *Cat. Faun. Braz.*, 1, p. 61, 1907 (range); Sneath, *Bol. Mus. Goeldi*, 8, p. 101, 1914 (listed); Chubb, *Bds. Brit. Guiana*, 1, p. 149, 1916—Annai and Rupununi River; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 361, 1916—Orinoco region (soft parts); Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 86, 1930—Matto Grosso; Peters, *Bds. World*, 1, p. 136, 1931 (range); Pinto, *Rev. Mus. Paul.*, 22, p. 42, 1938 (range).

Geronticus oxycercus Pelzeln, *Orn. Bras.*, 3, p. 307, 1870—Matto Grosso (Estivão do Formigueiro, Rio Guaporé) and Amazonas (Rio Amazon; Forte do Rio Branco; Barra do Rio Negro), Brazil.

Range.—British Guiana west through the Orinoco region to the east base of the east Colombian Andes and south through Brazilian Amazonia to western Matto Grosso (Estivão do Formigueiro, Rio Guaporé).¹

Field Museum Collection.—2: Brazil (Bõa Vista, Sierra da Lua, Amazonas, 2).

Genus **MESEMBRINIBIS** Peters

Mesembrinibis Peters, *Occ. Pap. Bost. Soc. N. H.*, 5, p. 256, Feb. 24, 1930—type, by orig. desig., *Tantalus cayennensis* Gmelin.

¹ Eight specimens from the Orinoco Valley, two from British Guiana, and seven from Brazilian Amazonia (Rio Branco; Manãos; Rio Guaporé) examined. The species has not yet been found in Lower Amazonia proper. "Provincia Pará," in Spix's time, included almost the whole of the State of Amazonas.

**Mesembrinibis cayennensis* (Gmelin). CAYENNE IBIS.

Tantalus cayennensis Gmelin, Syst. Nat., 1, (2), p. 652, 1789—based on Daubenton, Pl. Enl., pl. 820, Cayenne.

Ibis sylvatica Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 16, p. 16, 1817—based on Daubenton, Pl. Enl., pl. 820, Cayenne; Wied, Beitr. Naturg. Bras., 4, (2), p. 702, 1833—Espírito Santo (Rio Itabapuaana) and Bahia (Rios Itahype, Catolé, and Ilhéos).

Ibis denti-rostris Wagler, Syst. Av., 1, fol. 24, Genus Ibis, sp. 7, 1827—Brazil and Cayenne (cotypes in Paris and Munich museums).

Harpiprion cajennensis Wagler, Isis, 1832, col. 1232.

Ibis cayanensis Temminck, Nouv. Rec. Pl. Col., livr. 102, Tabl. Meth., p. 95, Jan. 29, 1839—based on Daubenton, Pl. Enl., pl. 820, Cayenne.

Ibis cayennensis Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 757, 1849—forest and savanna rivers; Burmeister, Syst. Uebers. Th. Bras., 3, p. 423, 1856—Brazil and Guiana (descr.); Reichenow, Journ. Orn., 25, p. 154, 1877 (diag.).

Harpiprion cayennensis Sclater, Proc. Zool. Soc. Lond., 26, p. 77, 1858—Rio Napo, Ecuador; Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 197—Rio Nercua, Colombia; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 479, 1862—Panama Railroad; Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 8, 1863—Cayenne; Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 372—Lion Hill, Panama Railroad; *idem*, l.c., 1873, p. 306—Chamicuro, Peru; *idem*, l.c., 1879, p. 543—Rio Neché, Antioquia, Colombia; Taczanowski, Orn. Pér., 3, p. 420, 1886—Chamicuro, Peru; Salvin, Ibis, 1886, p. 172—Bartica Grove and Camacusa, British Guiana; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 22, 1895—Colonia Risso, Paraguay; Sharpe, Cat. Bds. Brit. Mus., 26, p. 25, 1898—British Guiana (Bartica Grove), Ecuador (Rio Cotapaza), Colombia (Neché), and Panama (Lion Hill); Ihering, Rev. Mus. Paul., 3, p. 386, 1899—Iguapé, São Paulo; Berlepsch and Hartert, Nov. Zool., 9, p. 123, 1902—Rio Orinoco (Altagracia; Quiribana de Caiçara) and Rio Caura (Cangrejo), Venezuela; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 195, 1902—Panama (Lion Hill) and Colombia (Rio Nercua); Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 185, 1904—French Guiana; Ihering, Cat. Faun. Braz., 1, p. 61, 1907—São Paulo (Iguapé, Rio Mogy-Guassú, Rio Grande, Barretos); Hagmann, Zool. Jahrb. (Syst.), 26, p. 47, 1907—Mexiana Island, Brazil; Sneath, Journ. Orn., 56, pp. 23, 517, 1908—Rio Purús (Bom Lugar) and Rio Tapajóz (Goyana), Brazil; Berlepsch, Nov. Zool., 15, p. 301, 1908—Cayenne; Hellmayr, l.c., 17, p. 423, 1910—Rio Madeira (Calama) and Rio Machado (Jamarysinho; Maroins), Brazil; Chrostowski, Compt. Rend. Soc. Scient. Varsovie, 5, pp. 464, 493, 1912—Vera Guarany, Paraná; Bertoni, Faun. Parag., p. 39, 1914—Paraguay; Sneath, Bol. Mus. Goeldi, 8, p. 100, 1914—Mexiana, Rio Tapajóz (Goyana), and Rio Purús (Bom Lugar); Dabbene, Bol. Soc. Physis, 1, p. 532, 1915—Bonpland, Misiones; Chubb, Bds. Brit. Guiana, 1, p. 147, 1916 (various localities); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 361, 1916—Orinoco region, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 227, 1917—Rio Atrato, Malena (Rio Magdalena), and Villavicencio, Colombia; Bangs and Penard, Bull. Mus.

- Comp. Zool., 62, p. 32, 1918—vicinity of Paramaribo, Surinam; Wood, Condor, 25, p. 199, 1923—Essequibo, British Guiana (nesting notes); Chapman, Bull. Amer. Mus. N. H., 55, p. 204, 1926—Rio Napo, Ecuador (ex Selater); Young, Ibis, 1928, p. 774—Blairmont, British Guiana; Naumburg, Bull. Amer. Mus. N. H., 60, p. 85, 1930—Matto Grosso.
- Geronticus cayennensis* Pelzeln, Orn. Bras., 3, p. 307, 1870—São Paulo (Matto-dentro, Ypanemá, Irisanga), Paraná (Castro), Matto Grosso (Cuyabá, Caiçara), and Amazonas (Marabitanas, Rio Negro).
- Harpiprion cayanensis* Elliot, Proc. Zool. Soc. Lond., 1877, p. 502 (monog.).
- Mesembrinibis cayennensis* Peters, Occ. Pap. Bost. Soc. N. H., 5, p. 256, 1930 (nomencl.); idem, Bds. World, 1, p. 136, 1931 (range); idem, Bull. Mus. Comp. Zool., 71, p. 304, 1931—Changuinola Canal and Chiriquicito, Almirante Bay, Panama; Griscom, l.c., 78, p. 296, 1935—Panama (Canal Zone; Almirante Bay); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 369, 1936—Descalvados, Matto Grosso; Pinto, Rev. Mus. Paul., 20, p. 45, 1936—Inhúmas, Goyáz, Brazil; idem, l.c., 22, p. 43, 1938—São Paulo (Rio Mogy-Guassú; Rio Grande, Barretos; Ituverara) and Goyáz (Crixas, Inhúmas); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 24, 1945—Rio Juruá (João Pessôa; Lago Grande), Brazil; idem, l.c., 23, p. 43, 1945—El Beni (Victoria; Bresta; San Lorenzo; Orion), Bolivia.

Range.—Panama and South America, from Colombia (Rio Nercua; Rio Atrato; Rio Neché; Malena, Magdalena; Villavicencio), southern Venezuela (Orinoco basin), and the Guianas through eastern Ecuador (Rio Cotopaza; Rio Napo), eastern Peru (Chamicuros), eastern Bolivia (El Beni), and Amazonia to southern Brazil (Paraná and Matto Grosso), Paraguay (Colonia Risso), and north-eastern Argentina (Bonpland, Misiones).

Field Museum Collection.—5: Panama (Port Obaldia, Darien, 1); Ecuador (Coca Azul, Rio Napo, Napo Pastaza, 1); British Guiana (Berbice River, 1); Brazil (São Marcello, Rio Preto, Bahia, 1); Bolivia (Buena Vista, Santa Cruz, 1).

Genus PHIMOSUS Wagler

Phimosus Wagler, Isis, 1832, col. 1233—type, by monotypy, *Ibis nudifrons* Spix.

**Phimosus infuscatus berlepschi* Hellmayr.¹ VENEZUELAN BARE-FACED IBIS.

¹*Phimosus infuscatus berlepschi* Hellmayr: Similar to *P. i. nudifrons*, but bare part of the head deep carmine (instead of brick-red), and bill much darker, reddish liver brown (instead of chamois or clay-color).

Ten specimens from the Orinoco Valley, three from near Mérida (Rio Chaura), and two native Bogotá skins examined.

Phimosus berlepschi Hellmayr, Verh. Zool.-Bot. Ges. Wien, 53, p. 247, 1903—Orinoco Valley, Venezuela (type, from Altagracia, in Tring Collection, now in the American Museum of Natural History, New York); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 361, 1916—middle stretches of the Orinoco (soft parts); Chapman, Bull. Amer. Mus. N. H., 36, p. 227, 1917—Barranquilla, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 139, 1922—Fundación, Santa Marta, Colombia (nest and eggs descr.); Delacour, Ibis, 1923, p. 140—llanos of Guarico and Apure, Venezuela.

Ibis nudifrons (not of Spix) Schomburgk, Reisen Brit. Guiana, 1, p. 503, 1848—Demerara River.

Ibis infusata (not of Lichtenstein) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 756, 1849—forest and savanna rivers up to 1,500 feet; Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 8, 1865—part, spec. No. 3, Colombia; Wyatt, Ibis, 1871, p. 384—Lake Paturia, Magdalena, Colombia.

Phimosus infuscatus Elliot, Proc. Zool. Soc. Lond., 1877, p. 495—part, Colombia; Sharpe, Cat. Bds. Brit. Mus., 26, p. 26, 1898—part, spec. e, f, Colombia.

Phimosus nudifrons Berlepsch and Hartert, Nov. Zool., 9, p. 123, 1902—Altagracia and Caiçara, Orinoco, Venezuela (crit.).

Phimosus infuscatus berlepschi Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 485 (in text), 1929—Venezuela (crit.); Peters, Bds. World, 1, p. 137, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 43 (note), 1938—Rio Uraricuera, Brazil.

Range.—Northern South America, from northern Colombia (Barranquilla, Lake Paturia, and Fundación, Magdalena Valley; "Bogotá") through Venezuela (Rio Chaura, Mérida; Orinoco Valley) east to British and Dutch Guiana and the adjoining stretches of extreme northern Brazil (Rio Uraricuera).

Field Museum Collection.—3: Venezuela (Encontrados, Zulia, 2; Emigrante, Merida, 1).

Phimosus infuscatus nudifrons (Spix). BRAZILIAN BARE-FACED IBIS.

Ibis nudifrons Spix, Av. Spec. Nov. Bras., 2, p. 69, pl. 86, 1825—"ad litora lacuum St. Francisci"—Rio São Francisco, Bahia, Brazil (type in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 710, 1906); Wagler, Syst. Av., 1, fol. 24, Genus Ibis, sp. 6, 1827 (descr. of type).

Ibis infusata (not of Lichtenstein) Wied, Beitr. Naturg. Bras., 4, (2), p. 699, 1833—Lagõa Feia, Rio de Janeiro; Burmeister, Syst. Uebers. Th. Bras., 3, p. 423, 1856—part, Rio de Janeiro to "Santa Catharina"; Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 8, 1863—part, spec. Nos. 1, 2, Brazil; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 22—Lagõa dos Pitos, Minas Geraes; Reichenow, Journ. Orn., 25, p. 153, 1877 (diag.).

Phimosus infuscatus Bonaparte, Consp. Gen. Av., 2, p. 156, 1857—part, Brazil; Sharpe, Cat. Bds. Brit. Mus., 26, p. 26, 1898—part, spec. d, Caiçara, Matto Grosso; Ihering, Rev. Mus. Paul., 3, p. 385, 1899—Iguapé and Piracicaba, São Paulo.

Geronticus infuscatus Pelzeln, Orn. Bras., 3, p. 307, 1870—Minas Geraes, São Paulo (Porto do Rio Paraná), and Matto Grosso (Caiçara).

Phimosus nudifrons Ihering, Cat. Faun. Braz., 1, p. 61, 1907 (range).

Plegadis nudifrons Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—Piauhy (Parnaguá) and Bahia (Barra do Rio Grande; Caesara das Cabres, Rio Grande); idem, l.c., p. 212, 1925—Bahia (Rio São Francisco; Rio Grande; Rio Preto) and Piauhy (Lake Parnaguá; Lagõa do Rio Fundú; Rio Parnahyba) (soft parts).

Phimosus infuscatus nudifrons Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 485, 1929—Piauhy (crit.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 85, 1930—Agua Blanca de Corumbá, Matto Grosso; Peters, Bds. World, 1, p. 137, 1931 (range); Pinto, Rev. Mus. Paul., 17, (2), p. 717, 1932—Aquidauana, Matto Grosso; idem, l.c., 20, p. 45, 1936—Jaraguá, Rio das Almas, Goyáz; idem, l.c., 22, p. 43, 1938—Minas Geraes (Pirapora, Rio Pandeiro), Goyáz (Rio das Almas, Inhúmas), São Paulo, and Matto Grosso (Corumbá, Aquidauana).

(?) *Phimosus infuscatus infuscatus* Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 43, 1945—El Beni (Reyes; Bresta; Orion), Bolivia (disc.).

Range.—Tableland of Brazil, from Piauhy south to São Paulo and Matto Grosso,¹ and (?) northeastern Bolivia (El Beni).

****Phimosus infuscatus infuscatus* (Lichtenstein).² AZARA'S BARE-FACED IBIS.**

Ibis infuscata Lichtenstein, Verz. Doubl. Zool. Mus. Berlin, p. 75, 1823—based on "Afeytado" Azara, No. 365, Paraguáy;³ Burmeister, Syst. Uebers. Th. Bras., 3, p. 422, 1856—part, Paraguáy; idem, Journ. Orn., 8, p. 265, 1860—Paraná, Entre Ríos; idem, Reise La Plata St., 2, p. 511, 1861—Paraná.

Phimosus infuscatus Bonaparte, Consp. Gen. Av., 2, p. 156, 1857—part, Paraguáy; Elliot, Proc. Zool. Soc. Lond., 1877, p. 495 (in part); Durnford, Ibis, 1878, p. 63—two hundred miles south of Buenos Aires (breeding); Salvin, Ibis, 1880, p. 363—Salta; Berlepsch, Journ. Orn., 35, p. 32, 1887—Rio Pilcomayo (crit.); Sclater and Hudson, Arg. Orn., 2, p. 113, 1889—

¹ Ten specimens from Bahia, Piauhy, São Paulo, and Matto Grosso examined.

² *Phimosus infuscatus infuscatus* (Lichtenstein) differs from *P. i. nudifrons* by having the more elongated feathers of the hind neck strongly glossed with purplish, and a varying amount of corrugations on the naked portion of the head. No information is available concerning the coloration of bill and face in life.

Material examined.—Paraguáy: Rio Pilcomayo, 2.—Argentina: Salta, 1; Barracas al Sud, Buenos Aires, 3; Est. San Martino Monte, Buenos Aires, 2.

³ Cf. Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 485 (note 1), 1929.

Argentina; Kerr, *Ibis*, 1892, p. 145—Timbo (Rio Paraguay) and mouth of the Rio Pilcomayo, Paraguay; Holland, l.c., 1892, p. 205—Est. Espartillar, Buenos Aires (May to August); Aplin, l.c., 1894, p. 199—Uruguay; Salvadori, *Boll. Mus. Zool. Torino*, 10, No. 208, p. 22, 1895—Paraguarí, Paraguay; Sharpe, *Cat. Bds. Brit. Mus.*, 26, p. 26, 1898—part, spec. a-c, Salta, Buenos Aires (Belgrano), and Rio de la Plata; Kerr, *Ibis*, 1901, p. 232—Villa Concepción and Paraguayan Chaco; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 211, 1902—Rio Salí, Tucumán; Grant, *Ibis*, 1911, p. 341—Santa Rosa, Paraguay; Gibson, l.c., 1919, p. 534—Cape San Antonio, Buenos Aires; Friedmann, *Bull. Mus. Comp. Zool.*, 68, p. 151, 1927—Deniz Island, Santa Fé.

Phimosus azarae Berlepsch and Hartert, *Nov. Zool.*, 9, p. 123, 1902—Rio Pilcomayo, Chaco (type in coll. of H. von Berlepsch, now in Frankfurt Museum, examined).

Phimosus nudifrons azarae Hartert and Venturi, *Nov. Zool.*, 16, p. 248, 1909—Barracas al Sud and Est. San Martín Monte, Buenos Aires; Tremoleras, *El Hornero*, 2, p. 15, 1920—Uruguay (ex Aplin); Daguerre, l.c., p. 263, 1922—Rosas, Buenos Aires; Serié and Smyth, l.c., 3, p. 42, 1923—Santa Elena, Entre Ríos; Pereyra, l.c., p. 163, 1923—Zelaya, Buenos Aires; Daguerre, l.c., 5, p. 398, 1934—Las Flores, Buenos Aires (breeding).

Phimosus nudifrons subsp. *azarae* Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 227, 1910 (range in Argentina).

Phimosus infuscatus infuscatus Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp.*, Vögel, p. 69, 1930—Lapango, Formosa (crit.); Peters, *Bds. World*, 1, p. 137, 1931 (range).

Range.—Southeastern Bolivia (Santa Cruz), northern Argentina (south to Córdoba and Buenos Aires), Paraguay, and Uruguay.

Field Museum Collection.—3: Bolivia (Buena Vista, Santa Cruz, 1); Argentina (Concepción, Tucumán, 2).

Genus GUARA Reichenbach

Guara Reichenbach, *Av. Syst. Nat.*, p. xiv, "1852" (=1853)—type, by orig. desig., *Scolopax rubra* Linnaeus.

Leucibis Reichenbach, *Av. Syst. Nat.*, p. xiv, "1852" (=1853)—type, by orig. desig., *Scolopax alba* Linnaeus.

**Guara alba* (Linnaeus). WHITE IBIS.

Scolopax alba Linnaeus, *Syst. Nat.*, 10th ed., 1, p. 145, 1758—based on "The White Curlew" Catesby, *Nat. Hist. Carolina*, 1, p. 82, pl. 82 (=adult); Carolina.

Scolopax fusca Linnaeus, *Syst. Nat.*, 10th ed., 1, p. 145, 1758—based on "The Brown Curlew" Catesby, *Nat. Hist. Carolina*, 1, p. 83, pl. 83 (=young); Carolina.

Tantalus coco Jacquin, *Beytr. Gesch. Vögel*, p. 13, 1784—"auf den Karibäischen Inseln" (no type extant).

Ibis longirostris Wagler, Isis, 1829, col. 760—Mexico (type in Berlin Museum).

Ibis alba Burmeister, Syst. Uebers. Th. Bras., 3, p. 426, 1856 (descr., range); Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 5, 1863—Mexico (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 746—Santa Luzia, Tumbes, Peru (Sept. 25—Dec. 20).

Eudocimus albus Gundlach, Journ. Orn., 23, p. 315, 1875—Cuba (breeding; habits); Elliot, Proc. Zool. Soc. Lond., 1877, p. 508 (monog.); Nutting, Proc. U. S. Nat. Mus., 5, p. 407, 1882—La Palma de Nicoya, Costa Rica; idem, l.c., 6, p. 379, 1883—San Juan del Sur, Nicaragua; idem, l.c., p. 389, 1884—Sucuyá, Nicaragua; Sharpe, Cat. Bds. Brit. Mus., 26, p. 39, 1898—Florida, Texas, Mexico (Presidio; Tampico; Tamesi; La Antigua, Vera Cruz; Cozumel Island), British Honduras (Grassy Key), Guatemala (Chiapám), Nicaragua (Momotombo), and Costa Rica (Nicoya); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 12, 1899—Rio Sabana, Darien, Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 191, 1902—southeastern United States to Panama; Hartert, Nov. Zool., 9, p. 605, 1902—Vaqueria, Esmeraldas, Ecuador; Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 144, 1905—San Miguel and Pacheca Islands, Pearl Archipelago, Panama; Berlepsch, Nov. Zool., 15, p. 301, 1908—“Guiana” (ex Buffon).

Guara alba Carriker, Ann. Carnegie Mus., 6, p. 426, 1910—Pózo Azul de Pirris and Coronado de Térraba, Costa Rica; Todd, l.c., 10, p. 188, 1916—Los Indios, Bibijagua, and Siguanea, Isle of Pines; Chapman, Bull. Amer. Mus. N. H., 55, p. 204, 1926—Chone, Ecuador; Bent, Bull. U. S. Nat. Mus., 135, p. 23, 1926 (life hist.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 305, 1927—Puerto Rico (accidental); Grinnell, Univ. Calif. Pub. Zool., 32, p. 80, 1928—southern Lower California (resident); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 91, 1931—Hispaniola (resident); Peters, Bds. World, 1, p. 137, 1931 (range); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 298, 1932—Puerto Castilla, Honduras; Griscom, Bull. Amer. Mus. N. H., 62, p. 138, 1932—Ocos, Guatemala; idem, Bull. Mus. Comp. Zool., 70, p. 296, 1935—Panama; Bond, Proc. Acad. Nat. Sci. Phila., 88, p. 355, 1936—Utila Island, off Honduras (breeding); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 88, 1938—El Salvador; Wetmore, Proc. U. S. Nat. Mus., 87, p. 183, 1939—Independencia, Aragua, Venezuela (Oct. 29—30); Sprunt, Auk, 61, p. 144, 1944—South Carolina (extension of breeding range); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 42, 1945—Sonora (distr.).

Guara alba longirostris Bailey, Bull. Bailey Mus. and Libr. Nat. Hist., No. 4, p. [1], 1930 (no type specimen or type locality designated).

Range.—Breeds locally on the South Atlantic and Gulf coasts of the United States (north to South Carolina), in southern Lower California, Mexico, Central America, on the Greater Antilles (islands of Cuba, Jamaica, and Hispaniola), and apparently on the Pacific coast of Ecuador south to northwestern Peru (Santa Lucia, Dept. Tumbes); accidental in the eastern and middle-western United

States, and in Venezuela (two records, Lake Valencia, Carabobo, and Independencia, Aragua).¹

Field Museum Collection.—35: Texas (Bloomington, 3; Victoria County, 2; Brownsville, 6; Cameron County, 1); Florida (Dade County, 1; Osceola County, 2; Anclote, 2; Tampa, 1; Seminole County, 2; Palm Beach County, 8); Cuba (Isle of Pines, 1); Dominican Republic (Samana, 1); Mexico (Altamira, Tamaulipas, 5).

***Guara rubra** (Linnaeus). SCARLET IBIS.

Scolopax rubra Linnaeus, Syst. Nat., 10th ed., 1, p. 145, 1758—based principally on "The Red Curlew" Catesby, Nat. Hist. Carolina, 1, p. 84, pl. 84; coast of Bahama Islands.²

Tantalus minutus Linnaeus, Syst. Nat., 12th ed., 1, p. 241, 1766—based on "The Lesser Ibis" Edwards, Glean. Nat. Hist., 3, p. 303, pl. 356; Surinam (type in coll. of Dr. Fothergill;=young).

Ibis rubra A. de Saint-Hilaire, Mém. Mus. Hist. Nat. Paris, 9, p. 353, 1822—Guaratuba, Paraná, Brazil (breeding); Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 756, 1849—coast and estuaries of rivers (habits); Burmeister, Syst. Uebers. Th. Bras., 3, p. 425, 1856—northern Brazil (Amazon); Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 6, 1863—Surinam and Cayenne (descr.); Taylor, Ibis, 1864, p. 95—Rio Orinoco, Venezuela; Pelzeln, Orn. Bras., 3, p. 306, 1870—Paraná (Paranaguá; Rio Boraxudo) and Pará (Cajútuba), Brazil; Allen, Bull. Essex Inst., 8, p. 82, 1876—Marajó, Brazil.

Ibis leucopygus Spix, Av. Spec. Nov. Bras., 2, p. 70, pl. 88 (=young), 1825—Brazil, locality not specified (type in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 710, 1906).

Eudocimus ruber Elliot, Proc. Zool. Soc. Lond., 1877, p. 509 (monog.); W. L. Slater, Ibis, 1887, p. 317—Maccasseema, Rio Pomeroun, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 26, p. 41, 1898 (monog.); Berlepsch and Hartert, Nov. Zool., 9, p. 124, 1902—Caiçara, Orinoco, Venezuela; Hellmayr, l.c., 13, p. 49, 1906—Caroni Swamp, Trinidad; Hagmann, Zool. Jahrb. (Syst.), 26, p. 47, 1907—Caviana (breeding) and Mexiana, Brazil; Ihering, Cat. Faun. Braz., 1, p. 62, 1907—São Paulo; Berlepsch, Nov. Zool., 15, p. 301, 1908—Cayenne; Beebe, Zoologica (N.Y.), 1, p. 76, 1909—Caño San Juan, Venezuela; Sneath, Bol. Mus. Goeldi, 8, p. 102, 1914—Pará, Marajó (Magoary, Pacoval), Mexiana, and Amapá, Brazil; Chubb, Bds. Brit. Guiana, 1, p. 150, 1916—Berbice River, Maccasseema, and Mora Passage; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—Tijgerbank, Motkreek, Pomonakreek, Nieuw Amsterdam,

¹ Buffon's record from "Guiana" needs confirmation, while Burmeister's surmise that the range of the White Ibis might extend into Amazonia as far as the Rio Negro seems to be without any foundation.

² As Linnaeus' description was clearly based upon Edwards' figure, the Bahama Islands may be regarded as type locality, although the Scarlet Ibis occurs there merely as a casual straggler.

and Herminabank, Surinam; Delacour, *Ibis*, 1923, p. 141—llanos of Venezuela; Young, l.c., 1928, p. 774—coast of British Guiana (soft parts).

Guara rubra Ihering, *Rev. Mus. Paul.*, 3, p. 384, 1899—coast of São Paulo; Cory, *Field Mus. Nat. Hist., Orn. Ser.*, 1, p. 235, 1909—Margarita Island, Venezuela; Reiser, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 76, p. 92, 1910—coast of Piauhy; Hellmayr, *Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss.*, 26, p. 138, 1912—Marajó (Faz. Diamantina and Faz. Menino Jesus); Stone, *Proc. Acad. Nat. Sci. Phila.*, 65, p. 193, 1913—Manimo River (Isla Morocotico and Isla Plata), Orinoco Delta, Venezuela; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 362, 1916—delta region and (rare) along the middle Orinoco; Bent, *Bull. U. S. Nat. Mus.*, 135, p. 33, 1926 (life hist.); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 12, p. 485, 1929—Mangunça Island, Maranhão; Peters, *Bds. World*, 1, p. 137, 1931 (range); Belcher and Smooker, *Ibis*, 1934, p. 583—Trinidad (resident); Pinto, *Rev. Mus. Paul.*, 22, p. 44, 1938—Pará (Marajó) and Maranhão (Primeira Cruz).

Range.—Breeds on the northeast coast (rarely inland) of South America from Trinidad and eastern Venezuela south to the State of Paraná, Brazil; casual in the West Indies (Jamaica), Bahama Islands, Central America (Honduras), and allegedly on the Gulf coast of Louisiana and Texas.¹

Field Museum Collection.—16: Honduras (unspecified, 1); Venezuela (Margarita Island, 1); British Guiana (Berbice, 1; Mahaica Front, 1; Mon Repós, 4; Dúsignan, 1; unspecified, 3); Dutch Guiana (Tigerbanks, Maroni River, 3); Brazil (Mangunça Island, Maranhão, 1).

Genus PLEGADIS Kaup

Plegadis Kaup, *Skizz. Entw.-Gesch. Nat. Syst. Thierw.*, p. 82, 1829—type, by monotypy, *Tantalus falcinellus* Kaup.

Tantalides Wagler, *Isis*, 1832, col. 1231—no type specified.

Falcinellus (not of Illiger, 1816) Gray, *List Gen. Bds.*, p. 67, 1841—type by orig. desig., "*F. igneus* (Gmelin)" = *Tantalus falcinellus* Linnaeus.

Plegadornis Brehm, *Naumannia*, 1855, p. 290—substitute name for *Plegadis* Kaup.

**Plegadis falcinellus falcinellus* (Linnaeus). GLOSSY IBIS.

Tantalus falcinellus Linnaeus, *Syst. Nat.*, 12th ed., 1, p. 241, 1766—based on "Numenius rostro arcuato, corpore castaneo, pedibus obscure virentibus" Kramér (*Elench. Veget. Anim. Austr. inf.*, p. 350), "Le Courly

¹ About the unsatisfactory nature of the United States records, cf. Penard, in Bent, *Bull. U. S. Nat. Mus.*, 135, pp. 34-35, 1926. The occurrence of the Scarlet Ibis in Cuba, even as a straggler, is denied by Gundlach (*Journ. Orn.*, 23, p. 317, 1875).

verd" Brisson (Orn., 5, p. 326, pl. 27, fig. 2 [=immature]), etc.; "Austria, Italia."¹

Ibis ordii Bonaparte, Geogr. Comp. List Bds. Eur. and N. Amer., p. 49, 1838—based on *Tantalus mexicanus?* (not of Gmelin)² Ord, Journ. Acad. Nat. Sci. Phila., 1, No. 4, p. 53, Aug. 1817 (Great Egg Harbor, New Jersey) and *Ibis falcinellus* Audubon, Bds. Amer., pl. 387.³

Ibis erythrorhyncha Gould, Proc. Zool. Soc. Lond., 5, "1837," p. 127, pub. June 14, 1838—Haiti, Greater Antilles (type in coll. of Zoological Society of London, present location unknown).

Falcinellus erythrorhynchus(a) Cabanis, Journ. Orn., 4, p. 349, 1856—Cuba (crit.); Bonaparte, Consp. Gen. Av., 2, p. 159, 1857—Haiti and Cuba (diag.).

Falcinellus ordii Gundlach, in Poey, Repert. Fis.-Nat. Cuba, 1, p. 352, 1866—Cuba (resident); idem, Journ. Orn., 23, p. 318, 1875—Cuba (Cárdenas, Rio Hanabana, etc.) (crit., plumages, soft parts).

Ibis falcinellus var. *Ordii* Coues, Bds. Northwest, p. 517, 1874 (syn., range).

Falcinellus igneus Elliot, Proc. Zool. Soc. Lond., 1877, p. 503 (monog.).

Plegadis autumnalis Ridgway, Man. N. Amer. Bds., 2nd ed., p. 124, 1896—(diag., range); Bagnard, Wilson Bull., 25, pp. 103-117, 1913—Orange Lake, Florida (breeding habits).

Plegadis falcinellus Sharpe, Cat. Bds. Brit. Mus., 26, p. 29, 1898 (monog.); Bent, Bull. U. S. Nat. Mus., 135, p. 45, 1926 (life hist.).

Plegadis falcinellus falcinellus Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 304, 1927 (occurrence doubtful); idem and Swales, Bull. U. S. Nat. Mus., 155, p. 90, 1931—Hispaniola (breeding); Peters, Bds. World, 1, p. 138, 1931 (range); Mowbray, Proc. Bost. Soc. N. H., 39, p. 308, 1931—Bermuda Islands (Coot Pond, St. George, Oct. 20, 1900); Holt, Auk, 50, p. 351, 1933—Cameron Parish, Louisiana (breeding); Oberholser, Bull. Dept. Conserv. State Louisiana, 28, p. 77, 1938—southern Louisiana (breeding); Campbell, Auk, 61, p. 471, 1944—Toledo, Ohio.

Range.—Breeds in North America only in Louisiana (Cameron Parish) and Florida (Micanopy and Bird Island, Orange Lake), and in the Greater Antilles (islands of Cuba and Hispaniola); also widely distributed in the Old World from southern France (Camargue), Austria (Lake Neusiedl), and the Danube Valley to

¹ We suggest as type locality Lake Neusiedl, Lower Austria (ex Kramer: "ad lacum Nischiteriensem").

² *Tantalus mexicanus* Gmelin (Syst. Nat., 1, (2), p. 652, 1789—based on "Le Courly varié du Mexique" Brisson, Orn., 5, p. 333, which, in its turn, goes back to Hernandez's "Acacalot") may possibly refer to an Ibis of this genus, but it is so poorly described (the dimensions, particularly, being much too large) that identification will always remain problematical.

³ Great Egg Harbor, New Jersey, may be regarded as type locality. The whereabouts of the specimen described by Ord is unknown.

tropical Africa and Asia; casual in the eastern United States, eastern Canada, the Bermuda and Bahama Islands, and Jamaica.

Field Museum Collection.—11: Florida (Orlando, 1; Fellsmere, Indian River County, 5); Cuba (San Cristobal, Pinar del Rio, 5).

***Plegadis (falcinellus?) chihi (Vieillot).¹ WHITE-FACED GLOSSY IBIS.**

Numenius chihi Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 8, p. 303, 1817—based on "Cuello jaspeado" Azara, No. 364; Paraguay and campos of Buenos Aires.

Numenius chichi Dumont, *Dict. Sci. Nat.*, 11, p. 253, 1818—based on "Cuello jaspeado" Azara, No. 364.

Ibis guarauna (not *Scolopax guarauna* Linnaeus)² Lichtenstein, *Verz. Doubl. Zool. Mus. Berlin*, p. 75, 1823—Montevideo, Uruguay; Wagler, *Syst. Av.*, 1, fol. 24, Genus Ibis, sp. 8, 1827 (descr.); Bibra, *Denks. Math.-Naturw. Kl. Akad. Wiss. Wien*, 5, p. 131, 1853—northern Chile; Cassin, in Gilliss, *U. S. Astr. Exp.*, 2, p. 197, 1855—Chile; Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 424, 1856—Santa Catharina, Rio Grande do Sul, Montevideo, and Paraguay (descr.); Reinhardt, *Vidensk. Medd. Naturhist. Foren.*, 1870, p. 23—Lagõa Santa and Sete Lagõas, Minas Geraes, Brazil.

Ibis Guaranna (sic) Wagler, *Isis*, 1829, col. 759 (descr.).

Tantalus (sic) *chalcopterus* (not *Ibis chalcoptera* Vieillot, 1817) Temminck, *Nouv. Rec. Pl. Col.*, livr. 86, pl. 511, Sept. 4, 1830—Chile (type in Leyden Museum; cf. Schlegel, *Mus. Pays-Bas*, livr. 4, Ibis, p. 5 [spec. No. 26], 1863).

Ibis (Falcinellus) ordi (not *Ibis ordi* Bonaparte) Darwin, *Zool. Beagle*, 3, Birds, p. 129, 1841—Rio Negro and swampy plains between Bahía Blanca and Buenos Aires.

"*Harpiprion cayanensis (Ibis (Falcinellus) ordi, Bonap.)*" (sic) Fraser, *Proc. Zool. Soc. Lond.*, 11, p. 117, 1843—Chile.

¹ *Plegadis (falcinellus?) chihi* (Vieillot) differs from *P. f. falcinellus* by smaller size, the possession, in adult plumage, of a conspicuous white border to the bare facial space, and lake-red instead of blackish loreal area.

In spite of the fact that both the Glossy Ibis and the White-faced Glossy Ibis have been found breeding in Louisiana as well as in Florida, the differences separating the two birds are not such as to suggest specific distinctness, and the matter requires further investigation, notably in the field. The breeding range of the White-faced Glossy Ibis is discontinuous, for it is practically absent from Central America and northern South America. Birds from the United States average slightly larger, but the divergency appears too insignificant to justify the recognition of a northern race.

² As we have pointed out (*Field Mus. Nat. Hist.*, *Zool. Ser.*, (1), 13, No. 1, p. 301 [footnote], 1942), *Scolopax guarauna* Linnaeus (*Syst. Nat.*, 12th ed., 1, p. 242, 1766) proves to be referable to *Aramus scolopaceus* (Gmelin). The earliest available designation for the White-faced Glossy Ibis is evidently *Numenius chihi* Vieillot, since *Tantalus mexicanus* Gmelin seems to be unidentifiable as to species.

Ibis falcinellus (not *Tantalus falcinellus* Linnaeus) Des Murs, in Gay, Hist. F'is. Pol. Chile, Zool., 1, p. 416, 1847—Chile (descr. of nuptial plumage); Schlegel, Mus. Pays-Bas, livr. 4, Ibis, p. 2, 1863—part, spec. Nos. 26–31, Chile, Brazil, Paraguay, and Mexico; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 125, 1865—Chile (crit., meas.); Sclater, Proc. Zool. Soc. Lond., 1867, pp. 334, 339—Chile; idem and Salvin, l.c., 1868, p. 145—Conchitas, Buenos Aires; Philippi, Anal. Univ. Chile, 31, p. 274, 1868—Chile; Hudson, Proc. Zool. Soc. Lond., 1870, p. 799—Prov. Buenos Aires (habits; breeding at Gualicho, 170 miles south of Buenos Aires); Pelzeln, Orn. Bras., 3, p. 306, 1870—São Paulo (Ypanemá) and Matto Grosso (Pansecco, Caiçara), Brazil; Philippi, Ornith., 4, p. 160, 1888—Antofagasta, Chile; Lataste, Act. Soc. Scient. Chile, 3, p. cxvi, 1894—road to Chillan, Ñuble, Chile.

Falcinellus guaraua Des Murs, in Gay, Hist. F'is. Pol. Chile, Zool., 1, p. 418, 1847—vicinity of Valparaiso, Chile (descr. of young and winter plumage); Bonaparte, Consp. Gen. Av., 2, p. 159, 1857—Brazil (diag.); Germain, Proc. Bost. Soc. N. H., 7, p. 313, 1860—Santiago, Chile (breeding habits); Elliot, Proc. Zool. Soc. Lond., 1877, p. 505—Columbia River to Chile and Buenos Aires (monog.); Sennett, Bull. U. S. Geol. Geogr. Surv. Terr., 4, p. 56, 1878—Brownsville, lower Rio Grande, Texas (habits, nest and eggs descr.); Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 90, 1884—Rio Salado and Tandil, Buenos Aires.

Ibis brevirostris Peale, U. S. Expl. Exped., 8, p. 219, 1848—Rio Rimac, Lima, Peru (type formerly in U. S. National Museum;=young).¹

Ibis chilensis (Sturm MS.) Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, No. 21 (for Nov. 24), p. 993, 1856—California and Chile (diag.).²

Ibis chalconota Burmeister, Journ. Orn., 8, p. 265, 1860—Mendoza and Pampa; idem, Reise La Plata St., 2, p. 511, 1861—Mendoza and Paraná.

Ibis thalassinus Ridgway, Amer. Natur., 8, No. 2, p. 110, Feb., 1874—"Pacific coast of America, from California to Chili; western portion of the Great Basin (Humboldt River)" (no type designated).

Falcinellus igneus (not *Numenius igneus* S. G. Gmelin) Durnford, Ibis, 1876, p. 162—neighborhood of Buenos Aires; idem, l.c., 1877, p. 189—Prov. Buenos Aires (Baradéro, April); Reed, Anal. Univ. Chile, 49, p. 561, 1877—Laguna de Cauquenes, Colchagua, Chile (breeding); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—lagoons of the pampa

¹ According to Wetmore and Zimmer (in litt.), the type has been lost. It is not in the U. S. National Museum, nor is it listed by Stone and Bangs among Peale's specimens now preserved in the collections at Philadelphia and Cambridge respectively. Cassin (U. S. Expl. Exp., Mamm. Orn., p. 304, 1853) refers it to *P. guaraua* auct., and in the absence of the type we are compelled to accept his identification, although it *might* have been a young *P. ridgwayi*, for the two species are not certainly separable in juvenile plumage.

² Bonaparte states that he received from California numerous specimens, "à large capistrum blanc, à bec rougeâtre depuis la base" of a species common in Chile, which bears at Frankfurt the name *Ibis chilensis* Sturm, and in other collections the unpublished term "*albifacies*." The birds referred to by Bonaparte are doubtless the three from Chile listed as *P. guaraua* by Hartert (Kat. Vogels. Mus. Senckenb. Ges., p. 206, 1891), but what has become of those from California we are unable to say.

south to the Rio Colorado; White, Proc. Zool. Soc. Lond., 1882, p. 625—Punta Lara, Buenos Aires.

Falcinellus thalassinus Ridgway, Rep. U. S. Geol. Expl. Fortieth Paral., 4, p. 615, 1877—Humboldt River, Nevada; Elliot, Proc. Zool. Soc. Lond., 1877, p. 507—Pacific coast of America from California to Chile and "Straits of Magellan" (monog.;=immature).

Plegadis guaraua Gibson, Ibis, 1880, p. 160—Cape San Antonio, Buenos Aires; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 171, 1886—Laguna de Epatlan, Puebla (Dec.), and Laguna de Rosario, Tlaxcala (Jan.), Mexico; Brewster, Auk, 3, p. 481, 1886—Lake Washington, Florida (breeding); Withington, Ibis, 1888, p. 471—Lomas de Zamora, Buenos Aires; Sclater and Hudson, Arg. Orn., 2, p. 109, 1889—Argentina (habits); Holland, Ibis, 1890, p. 425—Est. Espartillar, Buenos Aires; Kerr, l.c., 1892, p. 145—Fortín Page, lower Pilcomayo River; Holland, l.c., 1892, p. 205—Est. Espartillar, Buenos Aires (resident); Cherrie, Anal. Inst. Fís.-Geog. Mus. Nac. Costa Rica, 4, p. 146, 1893—El Pózo de Térraba, Costa Rica; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Chile; Holland, Ibis, 1896, p. 318—Santa Elena (near Media Luna), Buenos Aires (breeding in November); Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 31, 1897—Caiza, Tarija, Bolivia; Sharpe, Cat. Bds. Brit. Mus., 26, pp. 34, 266, 1898 (monog.); Albert, Anal. Univ. Chile, 104, p. 996, 1899—Chile (monog.); Ihering, Rev. Mus. Paul., 3, p. 384, 1899—São Paulo; Kerr, Ibis, 1901, p. 233—Paraguayan Chaco; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 194, 1902—Mexico (numerous localities) and South America; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 211, 1902—Rio Salí and Lagunas de Malvinas, Tucumán; Lönnberg, Ibis, 1903, pp. 444, 447, 461—Argentina (Quinta and Moreno, Jujuy) and Bolivia (Carapari and Tatarenda, Tarija); Baer, Ornith., 12, p. 230, 1904—Santa Ana, Tucumán; Ihering, Cat. Faun. Braz., 1, p. 62, 1907—Iguapé, São Paulo; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 227, 1910 (range in Argentina); Carriker, Ann. Carnegie Mus., 6, p. 426, 1910—El Pózo de Térraba, Costa Rica; Grant, Ibis, 1911, p. 340—Los Ynglases, Ajó, Buenos Aires, and Tebicuarí, Paraguay; idem, l.c., 1912, p. 276 (winter plumage descr.); Scott and Sharpe, Rep. Princet. Univ. Exped., Patagonia, 2, Orn., p. 355, 1912—Patagonia (descr.); Sanzin, El Hornero, 1, p. 148, 1918—Jocolí, Mendoza; Gibson, Ibis, 1919, p. 529—Cape San Antonio, Buenos Aires (nesting habits); Tremoleras, El Hornero, 2, p. 15, 1920—Uruguay (Canelones, Treinta y Tres, Cerro Largo); Daguerre, l.c., 2, p. 264, 1922—Rosas, Buenos Aires; Serié and Smyth, l.c., 3, p. 42, 1923—Santa Elena, Entre Ríos; Giacomelli, l.c., p. 79, 1923—La Rioja; Pereyra, l.c., p. 163, 1923—Zelaya, Buenos Aires; Wilson, l.c., p. 354, 1926—Venado Tuerto, Santa Fé; Wetmore, Bull. U. S. Nat. Mus., 133, p. 65, 1926—Buenos Aires (Berazategui, Lavalle, Santo Domingo, etc.), Chaco (Las Palmas), Formosa, Mendoza (Tunuyán), and Uruguay (San Vicente) (crit.); idem, Univ. Calif. Pub. Zool., 24, p. 414, 1926—Valcheta Creek, Rio Negro (crit.); Bent, Bull. U. S. Nat. Mus., 135, p. 52, 1926 (life hist.); Friedmann, Bull. Mus. Comp. Zool., 68, p. 152, 1927—Saladero M. Cabal, Santa Fé; Grinnell, Univ. Calif. Pub. Zool., 32, p. 80, 1928—Lower California; Naumburg, Bull. Amer. Mus. N. H., 60, p. 87, 1930—Agua Blanca de Corumbá, Matto Grosso; Castellanos, El Hornero, 4, p. 384, 1931—Rio

Gualeguaychú, Entre Ríos, and Las Lagunas, Córdoba; van Rossem, Bull. Mus. Comp. Zool., 77, p. 428, 1934—Jesus Maria, Chihuahua, Mexico; Oberholser, Bull. Dept. Conserv. State Louisiana, 28, p. 79, 1938—coastal region of southern Louisiana (breeding); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 88, 1938—Lake Olomega, El Salvador (transient).

Plegadis falcinellus Gibson, Ibis, 1880, p. 155—Cape San Antonio, Buenos Aires (Dec. to March); Barrows, Auk, 1, p. 272, 1884—Concepción del Uruguay, Entre Ríos (resident); Jaffuel and Pirion, Rev. Chil. Hist. Nat., 31, p. 112, 1927—Marga-Marga, Chile.

Plegadis falcinellus guaraua Hartert and Venturi, Nov. Zool., 16, p. 248, 1909—Barracas al Sud, Buenos Aires, and Laguna de Malvinas, Tucumán; Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 70, 1930—Fortín Esteros, Tarija, Bolivia; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 308, 1932—Chile; Pinto, Rev. Mus. Paul., 22, p. 44, 1938—São Paulo (Iguapé, Rio Pinheiros) and La Plata; Philippi, Bol. Mus. Nac. Santiago, 16, p. 50, 1938—Chacalluta, Tacna (Aug.), and Rio Paicavi, Arauco (Jan.), Chile.

Egatheus guaraua Delacour, Ibis, 1923, p. 140—Rio Apure, Venezuela.

Plegadis (falcinellus?) guaraua Peters, Bds. World, 1, p. 138, 1931 (range).

Plegadis mexicanus (not of Gmelin, see note 2, page 265) van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 42, 1945—Sonora (status, distr.).

Range.—Breeds in North America, from Oregon and Utah south to Mexico (exact limit undetermined), east occasionally to Louisiana (Cameron Parish, Lake Charles, Lake Arthur) and Florida (Lake Washington); and again locally in Venezuela (Rio Apure), Bolivia, Chile, southern Brazil (from Minas Geraes and Matto Grosso to Rio Grande do Sul), Uruguay, Paraguay, and Argentina south to the Rio Negro; casual in British Columbia, Washington, Costa Rica (a single record from El Pózo de Térraba), and Peru (one record from Rio Rimac, Lima).¹

Field Museum Collection.—50: Utah (Box Elder County, 3; California (Los Banos, 2; Pacific Beach, 6); Arizona (Calabasas, 1); Texas (Cameron County, 5; Brownsville, 9); Mexico (Todos Santos, Lower California, 1; Mazatlán, Sinaloa, 1; Altamira, Tamaulipas, 2; Tampico, 1); Paraguay, Chaco (Islapoi=Villa Militar, 3); Bolivia, Cochabamba (Vacas, 1; Colomi, 7); Argentina (Concepción, Tucumán, 7; Quilines, Buenos Aires, 1).

**Plegadis ridgwayi* (Allen).² RIDGWAY'S IBIS.

¹The record from "Straits of Magellan (Capt. King)" is open to doubt, while the claimed occurrence of "*P. guaraua*" in French Guiana (cf. Berlepsch, Nov. Zool., 15, p. 301, 1908—ex "Buffon"—Brisson) refers to the Limpkin.

²*Plegadis ridgwayi* (Allen) differs from the other members of the genus by shorter, stouter tarsus with the frontal scutellae irregular; darker, deep chestnut

Falcinellus ridgwayi Allen, Bull. Mus. Comp. Zool., 3, Nos. 15-16, p. 355, July, 1876—Moho, Conima, and Vilquechico, Lake Titicaca, Peru (cotypes in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 179, 1930); Elliot, Proc. Zool. Soc. Lond., 1877, p. 506—Peru (monog.); Taczanowski, Orn. Pér., 3, p. 416, 1886—Peru (Junín, Lake Titicaca, etc.); Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 218, 1909—Argentina (Volcan, Jujuy) and Bolivia (Lake Titicaca).

Ibis ordi (not of Bonaparte) Tschudi, Arch. Naturg., 10, (1), p. 311, 1844—Peru; idem, Unters. Faun. Peru., Orn., p. 298, 1846—puna zone of Peru.

Ibis falcinellus (not *Tantalus falcinellus* Linnaeus) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 156—Tungasuca, Cuzco, Peru.

Falcinellus ordi Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 562—Junín, Peru.

Plegadis ridgwayi Sharpe, Cat. Bds. Brit. Mus., 26, p. 37, 1898—Peru (Tungasuca, Langui, Junín) and Bolivia; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1902, (2), p. 47—Baños and Ingapirca, Junín, Peru; iidem, Ornith., 13, p. 131, 1906—Puno, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 51, 1921—Huaracundo, Urubamba, Peru; Peters, Bds. World, 1, p. 138, 1931 (range); Morrison, Ibis, 1939, pp. 465, 647—Santa Inez, Huancavelica, and Lake Junín, Peru.

Egatheus ridgwayi Dabbene, Bol. Soc. Physis, 1, p. 260, 1913—Volcan, Jujuy; Chubb, Ibis, 1919, p. 271—El Cabrada, Chuquisaca, Bolivia.

Range.—Puna zone of Peru (from Junín southward), Bolivia, and northwestern Argentina (Salta and Jujuy).

Field Museum Collection.—9: Peru (Junín, Junín, 1); Bolivia (Viacha, La Paz, 1; Vacas, Cochabamba, 3; Colomi, Cochabamba, 4).

Subfamily PLATALEINAE. Spoonbills

Genus PLATALEA Linnaeus

Platalea Linnaeus, Syst. Nat., ed. 10, 1, p. 139, 1758—type, by subs. desig. (Gray, List Gen. Bds., p. 67, 1840), *Platalea leucorodia* Linnaeus.

Platalea leucorodia leucorodia Linnaeus. SPOONBILL.

Platalea Leucorodia Linnaeus, Syst. Nat., ed. 10, 1, p. 139, 1758—based on Fauna Svec., No. 87, Europe.

Platalea leucorodia leucorodia Hørring and Salomonsen, Medd. Grøn., 131, p. 58, fig. 4, 1941—Itivdlek, Julianehaab District, Greenland (Oct. 4, 1936).

Range.—Breeds locally in Holland, southern Russia, southern Spain, Rumania, Balkan countries, Transcaucasia and Asia Minor. Winters in Africa. One record for Greenland.

brown rather than rich chestnut head and upper neck; dark metallic green back; metallic green lesser wing coverts with bronze purple reflections; violet-blackish, instead of chestnut, lower neck and remaining under parts except the reddish tibial feathers.

Genus AJAIA Reichenbach

Ajaia Reichenbach, Av. Syst. Nat., p. xvi, "1852" (=1853)—type, by orig. desig., *Ajaia rosea* Reichenbach=*Platalea ajaia* Linnaeus.

Mystrotrhamphus Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 313, 1890—substitute name for *Ajaia* Reichenbach.

**Ajaia ajaia* (Linnaeus). ROSEATE SPOONBILL.

Platalea ajaia Linnaeus, Syst. Nat., 10th ed., 1, p. 140, 1758—based on "Platea incarnata" Sloane (Voy. Jamaica, 2, p. 316—salt ponds of Jamaica) and "Aiaia" Marcgrave (Hist. Nat. Bras., p. 204—Rio São Francisco, eastern Brazil);¹ Wied, Beitr. Naturg. Bras., 4, (2), p. 668, 1833—Prov. Rio de Janeiro (Goaytacases) and Bahía; Fraser, Proc. Zool. Soc. Lond., 11, p. 117, 1843—south of Valparaiso, Chile; Tschudi, Unters. Faun. Peru., Orn., p. 298, 1846—Peru; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 755, 1849—coastal rivers and Takutu River; Burmeister, Syst. Uebers. Th. Bras., 3, p. 427, 1856—Ilha do Santa Catharina, Brazil; idem, Journ. Orn., 8, p. 265, 1860—Paraná and Mendoza, Argentina; Abbott, Ibis, 1861, p. 157—near Kidney Cove, Falkland Islands (July, 1860); Léotaud, Ois. Trinidad, p. 438, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 200—lower Ucayali River, Peru; Sclater, l.c., 1867, p. 339—Chile; Sclater and Salvin, l.c., 1868, p. 145—Conchitas, Buenos Aires; Philippi, Anal. Univ. Chile, 31, p. 274, 1868—provinces of Santiago and Colchagua (Hacienda de Larmahue), Chile; Pelzeln, Orn. Bras., 3, p. 304, 1870—Rio de Janeiro (Sapitiba), Paraná (Rio do Boraxudo), Matto Grosso (Cuyabá, Villa Maria, Caiçara, Rio Guaporé nas Laranjeiras), Amazonas (Forte do Rio Branco), and Pará (Cajútuba); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 22—Minas Geraes (Rio das Velhas, Rio São Francisco, etc.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 306—lower Rio Ucayali and Santa Cruz, Peru; Gundlach, Journ. Orn., 23, p. 311, 1875—Cuba (breeding; habits); Allen, Bull. Essex Inst., 8, p. 82, 1876—Anjos, Marajó, Brazil; Durnford, Ibis, 1877, p. 190—Prov. Buenos Aires (winter); Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 746—Santa Lucia, Tumbes, Peru; Sennett, Bull. U. S. Geol. Geog. Surv. Terr., 4, p. 58, 1878—lower Rio Grande, Texas; Gibson, Ibis, 1880, p. 156—Cape San Antonio, Buenos Aires (Sept. to April); Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 90, 1884—Rio Salado, Tandil, and Arroyo Tandileufú, Buenos Aires; Barrows, Auk, 1, p. 272, 1884—Bahía Blanca, Buenos Aires; Taczanowski, Orn. Pér., 3, p. 412, 1886 (Peruvian localities); Berlepsch, Journ. Orn., 35, p. 33, 1887—Rio Pilcomayo, Paraguay; Goeldi, Ibis, 1897, p. 163—Lago Grande do Amapá, Pará, Brazil; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 190, 1901—Mexico to Panama (Veraguas); Lönnberg, Ibis, 1903, p. 461—Tatarenda, Tarija, Bolivia; Berlepsch, Nov. Zool., 15, p. 301, 1908—Cayenne; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 92, 1910—near Sambaiba, Rio São Francisco, Bahia.

¹ Eastern Brazil (=Rio São Francisco) (ex Marcgrave) given as restricted type locality by Berlepsch, Nov. Zool., 15, p. 301, 1908.

- Platalea aiāia* Lesson, Voy. Coquille, Zool., 1, (1), p. 267, 1828—between Payta and Colán, Piura, Peru.
- Platea mexicana* Gambel, Journ. Acad. Nat. Sci. Phila., (n.s.), 1, (3), p. 222, July, 1849—substitute name for *Platalea ajaja* Linnaeus.
- Ajaja rosea* Reichenbach, Av. Syst. Nat., p. xvi, "1852" (=1853)—new name for *Platalea ajaja* Linnaeus; Nutting, Proc. U. S. Nat. Mus., 5, p. 407, 1882—La Palma de Nicoya, Costa Rica; idem, l.c., 6, p. 379, 1883—San Juan del Sur, Nicaragua; Sclater and Hudson, Arg. Orn., 2, p. 114, 1889—Argentina; Holland, Ibis, 1890, p. 425—Est. Espartillar, Buenos Aires; Kerr, l.c., 1892, p. 145—lower Rio Pilcomayo; Holland, l.c., p. 205—Est. Espartillar; Aplin, l.c., 1894, p. 199—Rio Negro, Uruguay; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 31, 1897—Caiza, Bolivia; Kerr, Ibis, 1901, p. 233—Villa Concepción, Paraguay; Grant, l.c., 1911, p. 341—Buenos Aires (Los Yngleses; Los Violetas, Monsalvo) and Paraguay (Tebicuarí); Gibson, l.c., 1919, p. 535—Cape San Antonio, Buenos Aires (breeding; habits).
- Ajai(j)a ajaja* Sharpe, Cat. Bds. Brit. Mus., 26, p. 52, 1898 (monog.); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 210, 1902—Concepción and Famailá, Tucumán; Hellmayr, Nov. Zool., 13, p. 49, 1906—Caroni River, Trinidad; Hagmann, Zool. Jahrb. (Syst.), 26, p. 48, 1907—Caviana (breeding) and Mexiana, Brazil; Ihering, Cat. Faun. Braz., 1, p. 62, 1907—Iguapé, São Paulo; Hellmayr, Nov. Zool., 15, p. 100, 1908—Rio Araguayá, Goyás, Brazil; Hartert and Venturi, l.c., 16, p. 248, 1909—Barracas al Sud and San Vicente, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 227, 1910 (range in Argentina); Carriker, Ann. Carnegie Mus., 6, p. 427, 1910—Bolson, Palo Verde de Guanacaste, and Bebedéro, Costa Rica; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 361, 1912—Ensenada, Buenos Aires (descr.); Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 193, 1913—Isla Plata, Manimo River, Venezuela; Sneath, Bol. Mus. Goeldi, 8, p. 102, 1914—Salvaterra and Marajó (Pindobal, Pacoval), Pará, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 360, 1916—Orinoco Valley (from the delta region to the mouth of the Apure River); Todd, Ann. Carnegie Mus., 10, p. 188, 1916—Los Indios, Isle of Pines, Cuba; Chapman, Bull. Amer. Mus. N. H., 36, p. 228, 1917—Cali, Cauca, Colombia; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 32, 1918—Braamspunt, Surinam; Tremoleras, El Hornero, 2, p. 15, 1920—Uruguay (Canelones, San José, Florida, Maldonado, Treinta y Tres, Cerro Largo); Todd and Carriker, Ann. Carnegie Mus., 14, p. 139, 1922—Nenguangue and Punto Caimán, Colombia; Delacour, Ibis, 1923, p. 141—Calabozo, Venezuela; Bennett, l.c., 1926, p. 324—near Stanley, Falkland Islands; Wetmore, Bull. U. S. Nat. Mus., 133, p. 65, 1926—Paraguay (west of Puerto Pinasco), Buenos Aires, and Uruguay (crit.); Bent, l.c., 135, p. 13, 1926 (life hist.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 79, 1928—Colorado Delta, Lower California; Naumburg, Bull. Amer. Mus. N. H., 60, p. 87, 1930—Matto Grosso; Peters, Bds. World, 1, p. 140, 1931 (range); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 93, 1931—Hispaniola (breeding); Griscom, Bull. Amer. Mus. N. H., 64, p. 138, 1932—Guatemala (Ocos, Lake Yzabal); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 310, 1932—central provinces of Chile (Val-

paraiso, Santiago, Colchagua); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 298, 1932—Honduras (Puerto Castilla, Tela); Belcher and Smooker, Ibis, 1934, p. 583—Trinidad and Tobago; Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 45, 1938—Maranhão (Bôa Vista), Bahia (Cidade da Barra), Minas Geraes (Pirapora), São Paulo (Iguapé, Porto Epitacio, Tabatinguára), and Rio Grande do Sul (Itaquy); Oberholser, Bull. Dept. Conserv. Louisiana, 28, p. 81, 1938—Louisiana (breeding); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 89, 1938—El Salvador; Maslowski and Kock, Nat. Hist., New York, 45, p. 108, 1940 (general habits); Bull, Eisenmann and Komorowski, Auk, 61, p. 475, 1944—South Carolina; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 44, 1945—El Bení (Bresta; Orion), Bolivia; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 43, 1945—Sonora (distr.).

Range.—Breeds in the southern United States (Gulf states and Florida), Bahama Islands (Great Inagua), Cuba, (?)Jamaica, Hispaniola (rare), and from Mexico south to Chile, Argentina (south to Córdoba and Buenos Aires), and Uruguay; casual in various parts of the United States, Straits of Magellan, and Falkland Islands (three records).

Field Museum Collection.—44: Texas (Brownsville, 3; Corpus Christi, 2; Aransas County, 4; Victoria County, 2; Bloomington, Victoria County, 2); Florida (St. John's River, 1; Tampa, 1; Cape Sable, 3; Saint Augustine, 1; Sarasota County, 2); Bahama Islands (Inagua, 8); Mexico (Tampico, Tamaulipas, 2; Sagarterra, Tabasco, 2); El Salvador (Laguna Olomega, San Miguel, 1); Dutch West Indies (Aruba, 1); Venezuela (Margarita Island, 1); British Guiana (Buxton, 1); Bolivia (Rio Surutu, Santa Cruz, 4); Paraguay (200 km. west of Puerto Casado, 2); Argentina (near Moreno, Buenos Aires, 1).

Suborder PHOENICOPTERI

Family PHOENICOPTERIDAE. Flamingos

Genus PHOENICOPTERUS Linnaeus

Phoenicopterus Linnaeus, Syst. Nat., 10th ed., 1, p. 139, 1758—type, by monotypy, *Phoenicopterus ruber* Linnaeus.

Phoenicorodias G. R. Gray, Ibis, (n.s.), 5, pp. 441, 443, Oct., 1869—type, by monotypy, *Phoenicopterus ruber* Linnaeus.

**Phoenicopterus ruber ruber* Linnaeus. AMERICAN FLAMINGO.

Phoenicopterus ruber Linnaeus, Syst. Nat., 10th ed., 1, p. 139, 1758—based on various references, the diagnosis being evidently taken from the colored plate of "The Flamingo" Catesby, Nat. Hist. Carolina, 1, p. 73, pl. 73;

"they breed on the coasts of Cuba and the Bahamas" (ex Catesby);¹ Cabanis, in Schomburgk, *Reisen Brit. Guiana*, 3, "1848," p. 761, 1849—coast and Bird Island (visitant); March, *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 65—Jamaica (visitant); Gray, *Ibis*, 1869, p. 443, pl. 15, fig. 7 (head)—Bahama Islands, Florida, Mexico, Jamaica, Cuba, and Santo Domingo (crit.); Pelzeln, *Orn. Bras.*, 3, p. 318, 1870—Praia de Cajútuba, Pará, Brazil (March 3); Gundlach, *Journ. Orn.*, 23, p. 368, 1875—Cuba; Reichenow, *l.c.*, 25, p. 229, 1877 (diag.); Gundlach, *l.c.*, 26, p. 190, 1878—Puerto Rico (Boqueron and salt-marsh of the south coast); Boucard, *Proc. Zool. Soc. Lond.*, 1883, p. 458—Rio Lagartos, Yucatan; Salvin, *Ibis*, 1885, p. 186—Cozumel Island; Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 9, 1895 (monog.); Ridgway, *Proc. U. S. Nat. Mus.*, 19, p. 608, 1897—James and Charles Islands, Galápagos Archipelago (crit., meas.); Rothschild and Hartert, *Nov. Zool.*, 6, p. 182, 1899—Albemarle, Charles, and James Islands, Galápagos Archipelago (crit.); Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 196, 1902—Yucatan; Hartert, *Nov. Zool.*, 9, p. 306, 1902—Bonaire (breeding) and Aruba (visitant); Chapman, *Bull. Amer. Mus. N. H.*, 21, pp. 53–77, 1905—Bahama Islands (life hist.); Ihering, *Cat. Faun. Braz.*, 1, p. 71, 1907 (range); Lowe, *Ibis*, 1907, p. 550—Margarita Island, Venezuela; Cory, *Field Mus. Nat. Hist., Orn. Ser.*, 1, pp. 215, 218, 1909—Los Roques and Orchilla, Caribbean Sea; Todd, *Ann. Carnegie Mus.*, 7, p. 409, 1911—Great Inagua, Bahama Islands; Sneath, *Bol. Mus. Goeldi*, 8, p. 112, 1914—Island of Caviana and Macapá, Pará, Brazil; Chubb, *Bds. Brit. Guiana*, 1, p. 185, 1916—Waini Creek (breeding), Barima River, and Marooka; Bent, *Bull. U. S. Nat. Mus.*, 135, p. 1, 1926 (life hist.); Wetmore, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 305, 1927—Puerto Rico (Boqueron), Vieques, Culebra, St. Croix, and St. Thomas (formerly); Peters, *Bds. World*, 1, p. 141, 1931 (range); Bradlee, *Proc. Bost. Soc. N. H.*, 39, p. 308, 1931—Bermuda Islands (accidental visitor); Wetmore and Swales, *Bull. U. S. Nat. Mus.*, 155, p. 94, 1931—Hispaniola (locally resident); Swarth, *Occ. Pap. Calif. Acad. Sci.*, 18, p. 45, 1931—Galápagos Islands; Danforth, *Auk*, 55, p. 667, 1938—El Faro de Cabo Roja, Puerto Rico.

Phoenicopterus bahamensis Lesson, *Traité d'Orn.*, p. 589, 1831—based on "*Phoenicopterus bahamensis*" Catesby, *Nat. Hist. Carolina*, 1, p. 73, [pl. 73]; "l'Amérique du nord."

Phoenicopterus americanus Swainson, *Nat. Hist. Classif. Bds.*, 2, p. 364, July, 1837—based on *Ph. ruber* Wilson, *Amer. Orn.*, 8, [p. 45], pl. 66, fig. 4; on the southern frontier of the United States, peninsula of East Florida, etc.

Phoenicopterus glyphorhynchus G. R. Gray, *Ibis*, (n.s.), 5, No. 20, p. 442, pl. 14, fig. 5, Oct., 1869—Galápagos Islands (type in British Museum; cf. Salvin, *Trans. Zool. Soc. Lond.*, 9, p. 498, 1876; crit.).

Phoenicopterus sp. inc. Hartert, *Ibis*, 1893, pp. 307, 335—Aruba and Bonaire Islands.

Phoenicopterus ruber ruber Pinto, *Rev. Mus. Paul.*, 22, p. 46, 1937—estuary of Amazon (Pará).

¹ Berlepsch (*Nov. Zool.*, 15, p. 312, 1908) designates Bahama Islands (ex Catesby) as type locality.

Range.—Breeding locally in the Bahama Islands, Cuba, Hispaniola, Yucatan, on islands in the Caribbean Sea (Bonaire; Los Roques) and (?) on the coasts of Guiana, and on the Galápagos Islands;¹ formerly on the Florida Keys; occasional visitor to the estuary of the Amazon River, Brazil (Caviana Island; Macapá; Praia de Cajútuba, Pará).

Field Museum Collection.—9: Bahama Islands (Abaco, 1; Inagua, 3; unspecified, 3); Cuba (unspecified, 1); British Guiana (Buxton, 1).

***Phoenicopterus ruber chilensis** Molina. CHILEAN FLAMINGO.

Phoenicopterus chilensis Molina,² Sagg. Stor. Nat. Chile, pp. 242, 344, 1782—Chile; Poeppig, in Froriep's Notiz. Geb. Natur- und Heilkunde, No. 529 (=25, No. 1), p. 8, 1829—Andes of Chile (descr.); Fraser, Proc. Zool. Soc. Lond., 11, p. 117, 1843—southern provinces of Chile; Bibra, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 5, p. 131, 1853—northern Chile; Reichenow, Journ. Orn., 25, p. 228, 1877—Chile (diag.); Salvadori, Cat. Bds. Brit. Mus., 27, p. 16, 1895—Chile and Chubut (monog.); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Famaillá, Cruz-alta, and Valderrama, Tucumán; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1902, (2), p. 53—Ingapirca, Junín, Peru (egg, descr.); iidem, Ornith., 13, p. 131, 1906—Puno, Peru; Ihering, Cat. Faun. Braz., 1, p. 71, 1907—Rio Grande do Sul (range); Hartert and Venturi, Nov. Zool., 16, p. 245, 1909—Salado, Est. San Martín Monte, and Barracas al Sud, Buenos Aires; Dabbene, l.c., 18, p. 234, 1910 (range in Argentina); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 403, 1912—Posa de la Reina (50 miles north of Punta Arenas), Patagonia; Sanzin, El Hornero, 1, p. 148, 1918—Zocolf, Mendoza; Chubb, Ibis, 1919, p. 274—Caylloma, Arequipa, Peru; Tremoleras, El Hornero, 2, p. 16, 1920—Canelones and Rocha, Uruguay; Dabbene, l.c., p. 134, 1920—San Julián, Santa Cruz, Patagonia (breeding); Daguerre, l.c., 2, p. 264, 1922—Rosas, Buenos Aires; Peters, Bull. Mus. Comp. Zool., 65, p. 300, 1923—Neluan and Laguna Blanca, Rio Negro; Chapman, Bull. Amer. Mus. N. H., 55, p. 209, 1926—delta of the Túmbez River, Peru; Wilson, El Hornero, 3, p. 354, 1926—Venado Tuerto, Santa Fé; Wetmore, Bull. U. S. Nat. Mus., 133, p. 67, 1926—Prov. of Buenos Aires and Uruguay (San Vicente, Rocha); idem, Univ. Calif. Pub. Zool., 24, p. 414, 1927—Paja Alta and Valcheta, Rio Negro; Friedmann, Bull. Mus. Comp. Zool., 68, p. 152, 1927—Ajó River, Buenos Aires; Peters, Bds. World, 1, p. 141, 1931 (range).

*Phoenicopterus ignipalliatu*s d'Orbigny and I. Geoffroy St.-Hilaire, Ann. Sci. Nat., 17, pp. 454, 455, 1829—"commun dans la province de Buénos Ayres jusqu'à la Bahia Blanca, extrêmement rare à Corrientes" (type in Paris Museum); iidem, Mag. Zool., 2, cl. 2, pl. 2, text [p. 2], 1832—Buenos

¹ It is now established that birds from the Galápagos (*glyphorhynchus*) cannot be separated.

² The description is erroneous in so far as the remiges are called "white" instead of black, doubtless a pen-slip.

Aires, Corrientes, Patagonia, and Chile (Santiago); Tschudi, Arch. Naturg., 10, (1), p. 313, 1844—Peru; idem, Unters. Faun. Peru., Orn., p. 304, 1846—Peru; Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 441, 1847—Chile; Cassin, in Gilliss, U. S. Astr. Exp., 2, p. 198, 1855—Rio Maule, Chile; Burmeister, Syst. Uebers. Th. Bras., 3, p. 430, 1856 (descr.); idem, Journ. Orn., 8, p. 265, 1860—Mendoza and Paraná; Pelzeln, Reise Novara, Zool., 1, Vögel, p. 136, 1865—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, pp. 334, 339—Chile; Philippi, Anal. Univ. Chile, 31, p. 279, 1868—Cordilleras of Chile; Sclater and Salvin, Ibis, 1868, p. 189—Gregory Bay, Straits of Magellan; idem, Proc. Zool. Soc. Lond., 1868, p. 145—Conchitas, Buenos Aires; Gray, Ibis, 1869, p. 442, pl. 14, fig. 4 (head)—Chile (crit.); Burmeister, Proc. Zool. Soc. Lond., 1872, p. 364—Mendoza and Buenos Aires; Hudson and Sclater, l.c., p. 549—Rio Negro, Patagonia; Taczanowski, l.c., 1874, p. 562—Junín, Peru; idem, l.c., 1877, p. 330—delta of the Rio Túmbez, Peru; Reed, Anal. Univ. Chile, 49, p. 561, 1877—Cauquenes, Colchagua, Chile; Durnford, Ibis, 1877, p. 41—Chubut Valley; idem, l.c., 1878, p. 400—Lake Colguapé and Rio Sengel, Chubut; Philippi, Arch. Naturg., 45, p. 160, 1879—source of the Rio Maule, Chile (eggs descr.); Gibson, Ibis, 1880, p. 156—Cape San Antonio, Buenos Aires; Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 52, 1881—Carhué (Lag. Epecuen), Puán (Lag. de Marra-Có), Salinas Chicas, etc., Buenos Aires; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 91, 1884—Rio Salado, Buenos Aires; Barrows, Auk, 1, p. 272, 1884—Puán, Buenos Aires; Rahmer, Journ. Orn., 35, pl. 2, fig. 2 (head), 1887—Chile; Philippi, Ornith., 4, p. 160, 1888—Antofagasta, Chile; Sclater and Hudson, Arg. Orn., 2, p. 117, 1889—Argentina (habits); Holland, Ibis, 1890, p. 425; 1892, p. 206—Est. Espartillar, Buenos Aires; Frenzel, Journ. Orn., 39, p. 124, 1891—lagoons and salt marshes of Córdoba; Aplin, Ibis, 1894, p. 199—Maldonado, Uruguay; Reed, Anal. Univ. Chile, 93, p. 207, 1896—southern Chile; Albert, l.c., 108, p. 557, 1901—Chile (monog.); Grant, Ibis, 1911, p. 342—Los Ynglases, Ajó, Buenos Aires; Gibson, l.c., 1920, p. 1—Cape San Antonio, Buenos Aires.

Phoenicopterus ruber chilensis Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 311, 1932—twenty miles east of San Pedro, Antofagasta, Chile (range); Pinto, Rev. Mus. Paul., 22, p. 46, 1938 (range).

Range.—Southern South America from Peru on the west and extreme southern Brazil (Rio Grande do Sul) on the east south to Tierra del Fuego.

Field Museum Collection.—8: Peru (Cailloma, Arequipa, 2; Pico-tani, Puno, 2); Bolivia (Esperanza, Pacajes, La Paz, 2); Chile (San Pedro, Antofagasta, 1); Argentina (Abra Pampa, Jujuy, 1).

Genus PHOENICOPARRUS Bonaparte

Phoenicoparrus Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 992, 1856—type, by orig. design., *Phoenicopterus andinus* Philippi.

Lipocentrus Sundevall, Meth. Nat. Av. Disp. Tent., p. 145, 1872—substitute name for *Phoenicoparrus* Bonaparte.

Phoenicoparra Stejneger, in *Riverside Nat. Hist.*, 4, p. 154, 1885—emendation for *Phoenicoparrus Bonaparte*.

****Phoenicoparrus andinus* (R. A. Philippi). ANDEAN FLAMINGO.**

Phoenicopterus andinus Philippi, *Anal. Univ. Chile*, Aug., 1854, p. 337—salt lake below Altos de Pingo Pingo, Antofagasta, Chile (type in Museo Nacional, Santiago de Chile; cf. Gigoux and Looser, *Bol. Mus. Nac. Santiago*, 13, p. 23, fig. 10, 1930); idem, *Arch. Naturg.*, 21, (1), p. 12, 1855 (German version of orig. descr.); idem, *Reise Wüste Atacama*, pp. 57, 164, pls. 4, 5, 1860—near Tilopozo, Salar de Atacama, Antofagasta; Sclater, *Proc. Zool. Soc. Lond.*, 1867, p. 334, 339—part, “Cordilleras of Copiapó”; Philippi, *Anal. Univ. Chile*, 31, p. 279, 1868—Atacama; Burmeister, *Proc. Zool. Soc. Lond.*, 1872, p. 364—northwestern extremity of Argentina; Leybold, *Excurs. Pamp. Argent.*, p. 96, 1873—Salar de Ola, Atacama (eggs descr.); Reichenow, *Journ. Orn.*, 25, p. 229, 1877—Chile (in part); Philippi, *Arch. Naturg.*, 45, (1), p. 160, 1879—Atacama (eggs descr.); Sclater, *Proc. Zool. Soc. Lond.*, 1886, p. 399—Huasco, Tarapacá, Chile (eggs descr.); Rahmer, *Journ. Orn.*, 35, p. 161, 1887—Maricunga (east of Copiapó), Atacama, to Cancosa, Tarapacá; Philippi, *Ornis*, 4, p. 160, 1888—Antofagasta; Sclater and Hudson, *Arg. Orn.*, 2, p. 119, 1889—Argentina; Sclater, *Proc. Zool. Soc. Lond.*, 1891, p. 136—salt-marshes of “Canchosa” (=Cancosa, Tarapacá, Chile; (?)Frenzel, *Journ. Orn.*, 39, p. 125, 1891—near Córdoba (sight record); Reed, *Anal. Univ. Chile*, 93, p. 207, 1896—Atacama; Lane, *Ibis*, 1897, p. 189—Huasco and Cancosa, Tarapacá; Philippi, *Anal. Mus. Nac. Chile*, 15, p. 74, pls. 33, fig. 3 (bill), 34, 1902—Bolivia to Copiapó; Allen, *Auk*, 38, p. 342, 1921—Lake Poopó, Bolivia.

Phoenicoparrus andinus Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 21, 1895—Huasco and Cancosa, Chile; Albert, *Anal. Univ. Chile*, 108, p. 560, 1901—northern Chile (monog.); Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 209, 1902—Quebrada de las Lagunas and Cumbres Calchaquies, Tucumán; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 235, 1910—same localities; Peters, *Bds. World*, 1, p. 141, 1931 (range); Budin, *El Hornero*, 4, p. 405, 1931—Laguna Colorado, Jujuy; Hellmayr, *Field Mus. Nat. Hist.*, *Zool. Ser.*, 19, p. 312, 1932—central Tarapacá to Atacama, Chile, and Esperanza (Sajama), Bolivia.

Range.—Puna zone of southwestern Peru (Salinas, Arequipa), northwestern Bolivia (Lake Poopó and Esperanza, Sajama, Dept. Oruro), northern Chile (central Tarapacá to Atacama), and northwestern Argentina (provinces of Jujuy, Tucumán, and Los Andes).¹

Field Museum Collection.—1: Peru (Salinas, Arequipa, 1).

***Phoenicoparrus jamesi* (Sclater).² JAMES'S FLAMINGO.**

¹ In addition to a series from Tarapacá (Huasco, Cancosa), we have examined specimens secured by Otto Garlepp at Esperanza, Sajama, Dept. Oruro, Bolivia. The sight record from “Córdoba” needs confirmation by specimens.

² *Phoenicoparrus jamesi* (Sclater), though related to *P. andinus*, may be distinguished by decidedly inferior size and considerably smaller as well as differently colored bill. The black terminal portion is much less extensive, and is

Phoenicopterus jamesi Sclater, Proc. Zool. Soc. Lond. for June, 1886, p. 399, pl. 36—Sitani, at the foot of the Volcano "Tsluga" (=Isluga), Tarapacá, Chile (type in coll. of Mrs. Berkeley James, probably at the Oaks, near Carshalton, Surrey); Rahmer, Anal. Univ. Chile, 69, (1a secc.), p. 753, 1886—foot of Volcan Isluga; idem, Journ. Orn., 35, p. 160, pl. 2, fig. 1, 1887—salt lake at the foot of Volcan Isluga, Tarapacá; Cabanis, l.c., 37, p. 76, 1889—"Arica," Tacna, Chile; Reed, Anal. Univ. Chile, 93, p. 207, 1896—Tarapacá; Philippi, Anal. Mus. Nac. Chile, 15, p. 74, pl. 33, figs. 1, 2, 1902—Tarapacá; Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 222, 1909—Abrapampa, Jujuy.

Phoenicopterus andinus (not of Philippi) Philippi, Anal. Univ. Chile, 1854, p. 338—part, Tarapacá (coll. Bollaert); idem, Arch. Naturg., 21, (1), p. 12, 1855—part, Tarapacá (coll. Bollaert); Sclater, Proc. Zool. Soc. Lond., 1867, p. 334—part, Tarapacá (coll. Bollaert); Gray, Ibis, 1869, p. 443, pl. 15, figs. 9, 10—"Peruvian Andes"—Parinacota Lagoon, Tarapacá (descr. of Bollaert's spec.).

Phoenicoparrus jamesi Salvadori, Cat. Bds. Brit. Mus., 27, p. 22, 1895—Parinacota and Sitani, Tarapacá; Albert, Anal. Univ. Chile, 108, p. 563, 1901—Tarapacá (monog.); Berlepsch and Stolzmann, Ornis, 13, p. 131, 1906—Puno, Lake Titicaca, Peru; Peters, Bds. World, 1, p. 142, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 312, 1932—northern Tarapacá, Chile (char., range).

Range.—Puna zone of southern Peru (Puno, Lake Titicaca), extreme northern Chile (northern Tarapacá), western Bolivia (Oruro), and northwestern Argentina (Abrapampa, Jujuy).

Order ANSERIFORMES

Family ANHIMIDAE. Screamers

Genus ANHIMA Brisson

Anhima Brisson, Orn., 1, p. 48; 5, p. 518, 1760—type, by tautonymy, "*Anhima*" = *Palamedea cornuta* Linnaeus.

Palamedea Linnaeus, Syst. Nat., 12th ed., 1, p. 232, 1766—type, by subs. desig. (Gray, List Gen. Subgen. Bds., p. 71, 1840), *Palamedea cornuta* Linnaeus.

**Anhima cornuta* (Linnaeus). HORNED SCREAMER.

succeeded by an orange yellow area occupying the whole basal portion, while the narrow rim at the base of the forehead, the lores, and the naked skin around the eye are carmine red. There is, besides, a red spot terminating the orange yellow at the front of the upper mandible. The external secondaries and scapulars are bright rosy-red and elongated into filiform plumes, extending about two inches beyond the tips of the primaries; the legs and feet are dark brick-red instead of pale yellowish; the naked loreal space is wider and differently shaped.

This bird appears to be specifically distinct from *P. andinus*, both having been found in western Bolivia and northwestern Argentina. We have examined three specimens from Tarapacá, Chile, and a very large series from Bolivia, Department of Oruro (Esperanza and Sajama).

Palamedea cornuta Linnaeus, Syst. Nat., 12th ed., 1, p. 232, 1766—based chiefly on Marcgrave's "Anhima" (Hist. Nat. Bras., p. 215) and Brisson's "Kamichy" (Orn., 5, p. 518, Cayenne); "Brasilia, Guiana;"¹ Wied, Beitr. Naturg. Bras., 4, (2), p. 585, 1833—Rio Belmonte, Bahia, Brazil (habits); Schomburgk, Reisen Brit. Guiana, 2, p. 457, 1848—Asecota River; idem, l.c., 3, p. 751, 1849; Gervais, in Castelnau, Expéd. Amér. Sud, Zool., 1, 2ème mém., p. 74, pl. 15, figs. 1-5, 1855 (osteol.); Des Murs, l.c., Ois., p. 85, 1856—Lac des Perles and Miranda, Matto Grosso; Burmeister, Syst. Uebers. Th. Bras., 3, p. 396, 1856 (descr.); Schlegel, Mus. Pays-Bas, livr. 7, Ralli, p. 72, 1865—Guiana; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 200—upper Rio Ucayali, Peru; Léotaud, Ois. Trinidad, p. 488, 1866—Trinidad; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 22—Rio das Velhas, Minas Geraes; Pelzeln, Orn. Bras., 3, p. 313, 1870—São Paulo (Ypanemá), Matto Grosso (Engenho do Cap Gama, Rio Guaporé), and Amazonas (Cachoeira da Bananeira, Rio Madeira; Cara-raucú, Rio Amazonas); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 304—upper Rio Ucayali and lakes on the Rio Huallaga, Peru; Salvadori, Cat. Bds. Brit. Mus., 27, p. 3, 1895—upper Rio Ucayali, Peru, and "Balzar Mts.," Ecuador (monog.); Allen, Bull. Amer. Mus. N. H., 2, p. 110, 1899—lower Rio Beni, Bolivia; Ihering, Rev. Mus. Paul., 3, p. 422, 1899—São Paulo; idem, Cat. Faun. Braz., 1, p. 78, 1907—Itapura, São Paulo; Hellmayr, Nov. Zool., 15, p. 102, 1908—Rio Araguaya, Goyáz; Berlepsch, l.c., p. 312, 1908—Cayenne; Hellmayr, l.c., 17, p. 426, 1910—Cachoeira da Bananeira, Rio Madeira; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 96, 1910—Remanso de Coco, Rio Parnahyba, Maranhão; Sneath, Bol. Mus. Goeldi, 8, p. 112, 1914—Rio Maracanã and Peixe-Boi, Pará; Chubb, Bds. Brit. Guiana, 1, p. 182, 1916—Abary River; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 366, 1916—Las Barrancas, Orinoco Delta, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 232, 1917—near Cali, Cauca, Colombia; Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 44, 1922—lower Catatumbo River, Zulia, Venezuela; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 233, 1925—Lagõa do Parnaguá and Rio Parnahyba, Piahy; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 153, 1928—Rio Madeira, Pará, Brazil.

Palamedea bispinosa Humboldt, Rec. d'Observ. Zool. Anat. Comp., 1, fasc. 1, p. 5, 1805—banks of the Cauca River, Colombia (based on "Le Kamichi de Buffon" [Hist. Nat. Ois., 7, p. 335]).

Anhima cornuta Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 194, 1913—Manimo River, Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 209, 1926—Ecuador; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 498, 1929—Rio Parnahyba, Piahy and Maranhão; Zimmer, l.c., 17, p. 243, 1930—San Enrique, lower Rio Ucayali, Peru; Naumburg, Bull. Amer. Mus. N. H., 60, p. 96, 1930—Matto Grosso; Peters, Bds. World, 1, p. 142, 1931 (range); Belcher and Smooker, Ibis, 1934, p. 583—Nariva Swamp, Trinidad (formerly); Pinto, Rev. Mus. Paul., 20, p. 48, 1936—Inhúmas, Goyáz; idem, l.c., 22, p. 47, 1938—São Paulo (Itapura), Minas Geraes

¹ Eastern Brazil (ex Marcgrave) designated as type locality by Hellmayr (Nov. Zool., 15, p. 102, 1908).

(Rio Pandeiro, Pirapora), Goyáz (Inhúmas), and Matto Grosso (Coxim); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 44, 1945—Puerto Salinas, El Beni, Bolivia.

Range.—Tropical South America from Colombia (Cauca Valley), Ecuador (one record from Balzar), Venezuela,¹ eastern Peru and the Guianas south through Amazonia to central-eastern Bolivia (Rio Surutu), Matto Grosso, and São Paulo.

Field Museum Collection.—4: Venezuela (lower Catatumbo River, Zulia, 1); British Guiana (unspecified, 1); Peru (San Enrique, Ucayali River, Loreto, 1); Bolivia (Rio Surutu, Santa Cruz, 1).

Genus *CHAUNA* Illiger²

Chauna Illiger, Prodr. Syst. Mam. Av., p. 253, 1811—type, by monotypy, *Parra Chavaria* Linnaeus.

Opistolophus Vieillot, Anal. Nouv. Orn. Elém., pp. 60, 70, 1816—type, *Parra Chavaria* Linnaeus.

Chaja Oken, Lehrb. Naturg., 3, (2), p. "939" (=639), 1816—type, by monotypy, *Chaja torquata* Oken.

Ischyornis Reichenbach, Av. Syst. Nat., p. xxi, "1851" (=1852)—type, by orig. desig., *Chauna derbiana* G. R. Gray.

Ischyornis Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 598, 1856—emendation of *Ischyornis* Reichenbach.

**Chauna chavaria* (Linnaeus). NORTHERN SCREAMER.

Parra Chavaria Linnaeus, Syst. Nat., 12th ed., 1, p. 260, 1766—lakes near Rio Sinú, south of Cartagena, Colombia.

Palamedea chavaria Geoffroy, Bull. Sci. Soc. Phil. Paris, No. 7, p. 50, 1797—Rio Sinú, Colombia (crit.).

Opistolopus (sic) *fidelis* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 6, p. 206, 1816—based on *Parra Chavaria* (Latham ex) Linnaeus, Syst. Nat., 12th ed., 1, p. 260, 1766; Rio Sinú, Colombia.³

Chauna derbiana Gray and Mitchell, Gen. Bds., 3, p. [591], pl. 160, 1846—no locality specified; Sclater, Proc. Zool. Soc. Lond., 1864, p. 75 (the type, in coll. of Lord Derby [now in the Liverpool Museum], said to be from "Petén, Guatemala"); Moore, l.c., 1866, p. 368 (type a cage-bird, locality erroneous); Sclater, l.c., 1866, p. 369—northern littoral of Colombia (crit.); idem, l.c., 1866, p. 417—"San Fernando, Trinidad" (crit.); idem, l.c., 1871, p. 102—"Santa Marta."

¹ Formerly on the island of Trinidad.

² *Chavaria* Rafinesque (Anal. Nat., p. 70, 1815), quoted by certain authors, is a nomen nudum without standing.

³ Azara's account, likewise quoted by Vieillot, refers to *Chauna torquata* (Oken).

Chauna chavaria Sclater, Proc. Zool. Soc. Lond., 1863, p. 377—Dekke River, near Cartagena, Colombia (habits); Salvadori, Cat. Bds. Brit. Mus., 27, p. 4, 1895—Venezuela and Colombia (Cartagena); Chapman, Bull. Amer. Mus. N. H., 36, p. 232, 1917—Magdalena River, Colombia; Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 44, 1922—Encontrados, Zulia, Venezuela; Darlington, Bull. Mus. Comp. Zool., 71, p. 363, 1931—Aracataca and Tucurínca rivers, Magdalena, Colombia; Peters, Bds. World, 1, p. 142, 1931 (range).

Chauna nigricollis Sclater, Proc. Zool. Soc. Lond., 1864, p. 75, pl. 11—Dekke River, near Cartagena, Colombia (type in Zoological Gardens, London, now in British Museum); idem, l.c., 1866, p. 369 (crit.; = *C. derbiana*).

Palamedea derbyana Schlegel, Mus. Pays-Bas, livr. 7, Ralli, p. 72, 1865—"Bogotá."

Range.—Tropical zone of northern Colombia (from the lower Magdalena west to Cartagena, Rio Dekke, Rio Sinú, etc.) and north-western Venezuela (Zulia).¹

Field Museum Collection.—5: Colombia (unspecified, 1); Venezuela (Encontrados, Zulia, 4).

**Chauna torquata* (Oken). SOUTHERN SCREAMER.

Chaja torquata Oken, Lehrb. Naturg., 3, (2), p. "939" (= 639), 1816—based on "Chaja" Azara, No. 341; "in Paragai, um Plata" = Paraguay and banks of the La Plata River.

Opisthophus fidelis (not of Vieillot, 1816) Vieillot and Oudart, Galerie Ois., 2, p. 156, pl. 262, ca. 1825 (synon. in part).

Palamedea chavaria (not *Parra chavaria* Linnaeus) Temminck, Nouv. Rec. Pl. Col., livr. 37, pl. 219, Aug. 30, 1823—Brazil; Wied, Beitr. Naturg. Bras., 4, (2), p. 584 (in text), 1833—Rio Grande do Sul; Burmeister, Syst. Uebers. Th. Bras., 3, p. 397, 1856—southern Brazil; idem, Journ. Orn., 8, p. 262, 1860—Paraná, Uruguay, and other rivers; Schlegel, Mus. Pays-Bas, livr. 7, Ralli, p. 72, 1865—São Paulo and "Chile" (errore); Sternberg, Journ. Orn., 17, p. 277, 1869—Buenos Aires (habits).

Palamedia (sic) *cristata* (not of Linnaeus, 1766) Swainson, Nat. Hist. Classif. Bds., 2, p. 351, 1837—based on *Palamedea chavaria* Temminck, Nouv. Rec. Pl. Col., pl. 219, 1823; Brazil.

Chauna chavaria Sclater, Proc. Zool. Soc. Lond., 1864, p. 75—southern Brazil and Paraguay (diag.); idem, l.c., 1866, p. 370—same localities; idem and Salvin, l.c., 1868, p. 145—Conchitas, Buenos Aires; Pelzeln, Orn. Bras., 3, p. 314, 1870—Cuyabá, Villa Maria, Rio de Cabaçal, Villa Bella, and Rio Guaporé, Matto Grosso; Durnford, Ibis, 1876, p. 162—Buenos Aires; idem, l.c., 1877, p. 190—Baradero, Buenos Aires (nest and eggs); idem, l.c., 1878, p. 63—Buenos Aires; Gibson, l.c., 1880, p. 165—Cape San Antonio, Buenos Aires (breeding habits); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., 1, p. 53, 1881—between Olovarris and Lavalle, Buenos Aires; White, Proc. Zool. Soc. Lond., 1882, p. 625—Punta Lara,

¹ The reported occurrence in Trinidad has not been confirmed.

- Buenos Aires; Barrows, *Auk*, **1**, p. 272, 1884—Concepción del Uruguay, Entre Ríos; Holmberg, *Act. Acad. Nac. Cienc. Córdoba*, **5**, p. 88, 1884—Buenos Aires (Ayacucho to Tandil, Rio Salado, etc.); Dagleish, *Proc. Roy. Phys. Soc. Edin.*, **10**, p. 85, 1889—Est. Itaño, south of Asunción, Paraguay; Holland, *Ibis*, 1890, pp. 425, 427—Est. Espartillar, Buenos Aires; Frenzel, *Journ. Orn.*, **39**, p. 125, 1891—Córdoba; Kerr, *Ibis*, 1892, p. 146—lower Rio Pilcomayo; Holland, *l.c.*, 1892, p. 206—Est. Espartillar, Buenos Aires; Aplin, *l.c.*, 1894, p. 200—Rio Negro, Uruguay; Gibson, *l.c.*, 1920, p. 2—Cape San Antonio, Buenos Aires (habits).
- Chauna cristata* Salvadori, *Cat. Bds. Brit. Mus.*, **27**, p. 6, 1895 (monog.); Ihering, *Rev. Mus. Paul.*, **3**, p. 422, 1899—São Paulo; Kerr, *Ibis*, 1901, p. 233—Concepción and Chaco, Paraguay; Lillo, *Anal. Mus. Nac. Buenos Aires*, **8**, p. 209, 1902—Lules and Alto de las Salinas, Tucumán; Lönnberg, *Ibis*, 1903, p. 464—Tatarenda, Tarija, Bolivia; Ihering, *Cat. Faun. Braz.*, **1**, p. 78, 1907 (range); Hartert and Venturi, *Növ. Zool.*, **16**, p. 245, 1909—Buenos Aires (La Plata, Barracas al Sud, Est. San Martín Monte) and Entre Ríos (La Soledad); Dabbene, *Anal. Mus. Nac. Buenos Aires*, **18**, p. 234, 1910 (range in Argentina); Grant, *Ibis*, 1911, p. 342—Los Yngleses, Ajó, Buenos Aires (eggs descr.); Ménégau, *Rev. Franç. d'Orn.*, **5**, p. 26, 1917—Corumbá, Matto Grosso.
- Chauna torquata* Richmond, *Proc. U. S. Nat. Mus.*, **35**, p. 597, 1908 (crit.); Hellmayr, *Verh. Orn. Ges. Bay.*, **13**, p. 200, 1917 (nomencl.); Tremoleras, *El Hornero*, **2**, p. 16, 1920—Uruguay (Canelones, Maldonado, Minas, Rocha, Treinte y Tres, Cerro Largo, Flores); Daguerra, *l.c.*, **2**, p. 264, 1922—Rosas, Buenos Aires; Serié and Smyth, *l.c.*, **3**, p. 43, 1923—Santa Elena, Entre Ríos; Giacomelli, *l.c.*, p. 79, 1923—La Rioja; Wetmore, *Bull. U. S. Nat. Mus.*, **133**, p. 67, 1926—Chaco (Riacho Pilaga, Puerto Pinasco, etc.), Buenos Aires (Lavalle), and Uruguay; Wilson, *El Hornero*, **3**, p. 354, 1926—Venado Tuerto, Santa Fé; Pereyra, *l.c.*, **4**, p. 25, 1927—Islas del Rio Luján, Buenos Aires; Friedmann, *Bull. Mus. Comp. Zool.*, **68**, p. 153, 1927—La Noria, Santa Fé (habits); Naumburg, *Bull. Amer. Mus. N. H.*, **60**, p. 96, 1930—Rio São Lourenço, Matto Grosso; Laubmann, *Wiss. Erg. Deuts. Gran Chaco Exp.*, *Vögel*, p. 51, 1930—Lapango, Formosa; Peters, *Bds. World*, **1**, p. 142, 1931 (range); Stone and Roberts, *Proc. Acad. Nat. Sci. Phila.*, **86**, p. 370, 1934—Descalvados, Matto Grosso; Pinto, *Rev. Mus. Paul.*, **22**, p. 47, 1938—Matto Grosso (São Luiz de Caures, Caceres, Corumbá, Rio Piquiry) and Argentina (Saladillo); Pereyra, *El Hornero*, **7**, p. 378, 1940 (notes); MacDonagh, *Notas Mus. La Plata, Zool.*, **5**, p. 31, 2 pls., 1940 (habits); Gyldenstolpe, *Svensk. Vetensk. Akad. Handl.*, (3), **23**, p. 45, 1945—El Beni (Bresta; San Lorenzo), Bolivia.
- Chauna salvadorii* Brabourne and Chubb, *Bds. S. Amer.*, **1**, p. 53, Dec., 1912—new name for *Palamedia cristata* Swainson, *Nat. Hist. Classif. Bds.*, **2**, p. 351, 1837; Marelli, *El Hornero*, **1**, p. 77, 1918—San Pedro, near Curuzú Cuatiá, Corrientes; Dabbene, *l.c.*, p. 93, 1918—Isla Martín García, Buenos Aires; Sanzin, *l.c.*, p. 148, 1918—Potrerillo, Mendoza; Renard, *l.c.*, **2**, p. 59, 1920—Cañuelas, Buenos Aires.

Range.—Southern Brazil, from Matto Grosso and western São Paulo to Rio Grande do Sul; eastern Bolivia; Paraguay; Uruguay;

northern Argentina south to provinces of Mendoza, Córdoba, and Buenos Aires.

Field Museum Collection.—9: Bolivia (Buena Vista, Santa Cruz, 3); Paraguay (25 km. east of Rosario, 2); Argentina (Tres Pozos, Salta, 1; Concepción, Tucumán, 1; Buenos Aires, Buenos Aires, 2).

Suborder ANSERES

Family ANATIDAE.¹ Ducks, Geese, and Swans

Subfamily CYGNINAE. Swans

Genus CYGNUS Bechstein

Cygnus Bechstein, Orn. Taschenb., 2, p. 404, note, 1803—type, by monotypy, *Anas olor* Gmelin.

Olor Wagler, Isis, col. 1234, 1832—type, by subs. desig., *Anas cygnus* Linnaeus.

Cygnus Temminck, Man. d'Orn., 2nd ed., 4, p. 526, 1840—type, by monotypy, *Cygnus musicus* Bechstein.

Sthenelus Stejneger, Proc. U. S. Nat. Mus., 5, p. 185, 1882—type, by monotypy, *Anas melancorypha* Molina.

Sthenelides Stejneger, in Kingsley Stand. Nat. Hist., 4, p. 143, 1885—emendation.

Clangocygnus Oberholser, Emu, 8, p. 3, 1908—type, by monotypy, *Cygnus buccinator* Richardson.

Euolor Mathews and Iredale, Austr. Av. Rec., 3, p. 117, 1917—type, by orig. desig., *Anas olor* Gmelin.

Cygnus cygnus cygnus (Linnaeus). WHOOPER SWAN.

Anas Cygnus Linnaeus, Syst. Nat., ed. 10, 1, p. 122, 1758—"in Europa, America septentrionali"—Sweden.

Cygnus cygnus Wilke, Auk, 61, p. 655, 1944—St. Paul Island, Pribilof Islands (one record).

Range.—Northern Europe and Asia. Accidental on Pribilof Islands (one record).

**Cygnus cygnus islandicus* C. L. Brehm. ICELAND WHOOPER SWAN.

Cygnus Islandicus C. L. Brehm, Handb. Naturg. Vog. Deutschl., p. 832, 1831—Iceland (type not extant).

Cygnus musicus (not of Bechstein) Winge, Medd. Grøn., 21, p. 81, 1898—southern Greenland.

¹ Some radical innovations in the grouping of the Anatidae have recently been suggested by Delacour and Mayr (Wilson Bull., 57, pp. 1-55, 1945).

Cygnus cygnus Bent, Bull. U. S. Nat. Mus., **130**, p. 278, 1925 (life hist.); Hørring and Salomonsen, Medd. Grøn., **131**, (5), p. 11, 1941 (Greenland records).

Cygnus cygnus islandicus Peters, Bds. World, **1**, p. 143, 1931 (range); Salomonsen, Medd. Grøn., **93**, (6), p. 13, 1935—Sukkertoppen and Nassak, Greenland (also other Greenland records).

Cygnus cygnus (islandicus?) Bird and Bird, Ibis, 1941, p. 133—northeastern Greenland (meas.).

Range.—Formerly bred in southern and eastern Greenland. Now probably confined to Iceland.

Field Museum Collection.—1: Greenland (Sukkertoppen, 1).

****Cygnus columbianus* (Ord). WHISTLING SWAN.**

Anas Columbianus Ord, in Guthrie's Geog., 2nd Am. ed., **2**, p. 319, 1815—The Dalles, Oregon, ex Lewis and Clark Exp., **2**, p. 192, 1814.

(*Cygnus*) *Americanus* Sharpless, Doughty's Cab. Nat. Hist., **1**, No. 8, p. 185, 1830—North America.

Olor columbianus Turner, Contr. Nat. Hist. Alaska, **2**, p. 144, 1886—Yukon District (nesting); Nelson, Nat. Hist. Coll. Alaska, **3**, p. 91, 1887—St. Michaels (nesting); Fleming, Auk, **25**, p. 306, 1908 (destruction at Niagara Falls); idem, l.c., **29**, p. 445, 1912 (further destruction); Grinnell, Bryant and Storer, Game Bds. Calif., p. 256, 1918 (habits, etc. California); Conover, Auk, **43**, p. 180, 1926—Hooper Bay, Alaska (nesting).

Cygnus columbianus Salvadori, Cat. Bds. Brit. Mus., **27**, p. 32, 1895—Corpus Christi, Texas; Bent, Bull. U. S. Nat. Mus., **130**, p. 281, 1925 (life hist.); Bailey, Condor, **27**, p. 206, 1925—Prince of Wales, Alaska (nesting); Peters, Bds. World, **1**, p. 144, 1931 (range); Sutton, Mem. Carnegie Mus., (2), **12**, sec. 2, p. 25, pl. 12, 1932—Southampton Island (nesting); Moffitt, Condor, **41**, p. 93, 1939 (distrib. in California); Porsild, Canad. Field Nat., **57**, p. 21, 1943—Mackenzie Delta (breeding); Gabrielson, Auk, **61**, p. 114, 1944—Bristol Bay, Alaska (nesting); Soper, l.c., **63**, p. 16, 1946—Baffin Island (nesting).

Range.—North America, breeding chiefly north of the Arctic Circle from the Alaska Peninsula (Bristol Bay), St. Lawrence Island and Point Barrow east to Hudson Bay (Southampton Island). Winters principally along the Atlantic and Pacific coasts from Chesapeake Bay to Currituck Sound and southern Alaska to California. In the interior during migration.

Field Museum Collection.—17: Alaska (Chipp River, near Barrow, 1; Nome, 1; Bethel, 1); Oregon (Portland, 2); North Dakota (Grand Harbor, 1; Towner County, 1); Minnesota (100 miles north of Duluth, 1); Iowa (Knoxville, 1); Illinois (Orland Park, 1); Michigan (Custer, 1); Indiana (Vera Cruz, 1); Maryland (Chesapeake Bay, 1);

Virginia (Back Bay, 2); North Carolina (Currituck County, 1); Texas (Corpus Christi, 1).

Conover Collection.—5: Alaska (Chipp River, near Barrow, 2); North Dakota (Grafton, 1); North Carolina, Currituck Sound (Seagull, 1; Waterlily, 1).

**Cygnus buccinator* Richardson. TRUMPETER SWAN.

Cygnus buccinator Richardson, in Swainson and Richardson, *Fauna Bor. Amer.*, 2, p. 464, 1831 (1832)—Hudson Bay; Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 33, 1895 (descr.); Fleming, *Condor*, 21, p. 124, 1919 (comp. meas. juv. *C. buccinator* and *C. columbianus*); Bent, *Bull. U. S. Nat. Mus.*, 130, p. 293, 1925 (life hist.); Brooks, *Condor*, 28, p. 129, 1926 (status); Peters, *Bds. World*, 1, p. 144, 1931 (range); Cottam and Knappen, *Auk*, 56, p. 142, 1939 (food); Chapman, *l.c.*, 59, p. 100, 1942—British Columbia (wintering notes and conservation); Dambach, *Wilson Bull.*, 56, pp. 178, 220, 1944 (conservation).

Cygnus Passmori Hincks, *Journ. Linn. Soc. Lond.*, 8, *Zool.*, pp. 1, 5, 1864—Toronto (location of type not stated); Murie, *Proc. Zool. Soc. Lond.*, 1867, p. 8 (crit.).

Olor buccinator Nelson, *Nat. Hist. Coll. Alaska*, 3, p. 93, 1887—Fort Yukon, Alaska (one record, ex Dall); Lano, *Auk*, 13, p. 78, 1896—western Minnesota; Coale, *l.c.*, 32, p. 82, pls. 7–10, 1915 (status); Bowles, *Condor*, 18, p. 171, 1916—Washington; Grinnell, Bryant and Storer, *Game Bds. Calif.*, p. 253, 1918—(life hist. California); Henninger, *Auk*, 36, p. 564, 1919—Ohio (overlooked record); Skinner, *Condor*, 22, p. 72, 1920—Yellowstone Park (breeding); Edson, *l.c.*, 28, p. 43, 1926—state of Washington (records).

Range.—Formerly bred throughout the interior of North America from James Bay and Alaska (Fort Yukon) south to Indiana, Missouri and Nebraska. Now known to breed only in Alberta, British Columbia, Montana, and Wyoming (Yellowstone Park). Formerly wintered from the central Mississippi Valley to the Gulf of Mexico. Now winters from west-central British Columbia (Skeena River) south to the Gulf of Mexico and southern California.

Field Museum Collection.—4: Montana (Upper Stillwater Lake, 1; unspecified, 1); Illinois (Lacon, 2).¹

Conover Collection.—1: North Dakota (unspecified, 1).

Cygnus olor (Gmelin). MUTE SWAN.

Anas olor Gmelin, *Syst. Nat.*, 1, (2), p. 502, 1789—Russia (cf. Oberholser, *Emu*, 8, p. 9, 1908).

Cygnus olor Peters, *Bds. World*, 1, p. 144, 1931 (range).

Sthenelides olor Urner, *Auk*, 49, p. 213, 1932 (naturalized in New Jersey).

¹ Captive birds.

Range.—Extralimital. Breeds in southern Scandinavia, Denmark, east, central and southern Russia, lower Danube Valley, Asia Minor, Persia, and east through Turkestan to Mongolia. Winters in northern Africa, Black Sea, northwestern India and Korea. Naturalized in Long Island and the lower Hudson Valley. Strays to the coast of New Jersey.

**Cygnus melancoryphus*¹ (Molina). BLACK-NECKED SWAN.

*Anas melancorypha*¹ Molina, Sagg. Stor. Nat. Chile, pp. 234, 344, 1782—Chile.

Anas nigricollis Gmelin, Syst. Nat., 1, (2), p. 502, 1789—Falkland Islands, La Plata River, and Straits of Magellan.

Anas melanocephala Gmelin, Syst. Nat., 1, (2), p. 502, 1789—Chile (based on Molina).

Cygnus nigricollis Germain, Proc. Bost. Soc. N. H., 7, p. 315, 1860—Chile (nesting dates); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 53, 1881—Choele-choel and Rio Negro; Sclater and Hudson, Arg. Orn., 2, p. 124, pl. 18, 1889—pampas, Prov. of Buenos Aires and Patagonia; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 185, 1891—Skirting Water, Magellan Straits; Crawshay, Bds. Tierra del Fuego, p. 90, 1907—Useless Bay, Tierra del Fuego.

Cygnus melancoryphus Salvadori, Cat. Bds. Brit. Mus., 27, p. 39, 1895—Chile (Rio Pilmaiquen and Hugh Bay), Straits of Magellan, Falkland Islands; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 408, 1912 (gen. acc.); Peters, Bull. Mus. Comp. Zool., 65, p. 300, 1923—Huanuluan and Neluan (breeding), Rio Negro; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 314, 1932—Casa Richards, Rio Nirehuau, Llanquihue, Chile; Casares, El Hornero, 5, p. 146, pl. 2, fig. 5, distrib. map, 1933 (range and habits); idem, l.c., 8, p. 525, 1944—San Juan, Argentina (nesting habits).

Cygnus melancoryphus Ihering, Rev. Mus. Paul., 3, p. 390, (1893), 1899—Iguapé, São Paulo; idem, Ann. Est. Rio Grande do Sul, 16, p. 143, 1899—Pelotas, Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 206, 1902—Cruz Alta, Tucumán; Ihering, As Aves do Brazil, p. 71, 1907—Iguapé, São Paulo, and Rio Grande do Sul.

Cygnus melancoryphus Wetmore, Bull. U. S. Nat. Mus., 133, p. 69, 1926—Uruguay (San Vicente, Rocha) and Argentina (Lavalle, Buenos Aires; General Roca, Rio Negro); idem, Univ. Calif. Pub. Zool., 24, p. 415, 1926—Valcheta, Rio Negro; Peters, Bds. World, 1, p. 144, 1931 (range).

Range.—Southern Brazil (Iguapé, São Paulo, and Rio Grande do Sul), Paraguay, Uruguay (San Vicente, Rocha), Falkland Islands, Argentina and Chile south to Tierra del Fuego (Useless Bay).

Conover Collection.—5: Chile (Casa Richards, Rio Nirehuau, Aysen, 5).

¹ *Melancorypha* on page 234, but correctly spelled on page 344.

Subfamily ANSERINAE. Geese

Genus CHEN Boie

Chen Boie, Isis, 10, col. 563, 1822—type, by monotypy, *Anser hyperboreus* Pallas.

Chionochea Reichenbach, Av. Syst. Nat., p. ix, 1852—type, by monotypy, *Anser hyperboreus* Pallas.

Exanthemopsis Elliot, Bds. N. Amer., 2, (9), pl. 44, 1868—type, by monotypy, *Anser rossii* Cassin.

**Chen caerulescens* (Linnaeus). BLUE GOOSE.

Anas caerulescens Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—based on "Blue-winged Goose" Edwards, Nat. Hist. Bds., 3, p. 152, pl. 152, Hudson Bay.

Chen caerulescens Salvadori, Cat. Bds. Brit. Mus., 27, p. 82, 1895—Canada (Repulse Bay) and Texas (Corpus Christi); Grinnell, Condor, 22, p. 76, 1920—Gridley, Butte County, California; Bent, Bull. U. S. Nat. Mus., 130, p. 178, 1925 (life hist.); Soper, Canad. Field Nat., 44, p. 1, 1930—Bowman Bay, off Fox Basin, southwest Baffin Island (nesting); idem, The Blue Goose, Dept. Int., N. W. Terr. and Yukon Branch, pp. 1-64, col. pl., 1930 (monog.); Sutton, Auk, 48, p. 335, 1931—breeding ground on Southampton Island (account of hybridization with *Chen hyperborea*); Peters, Bds. World, 1, p. 146, 1931 (range); McIlhenny, Auk, 49, p. 279, pls. 9-11, 1932 (migr. dates, habits in winter home); Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 51, pls. 12, 24, fig. 2, 1932—Cape Kendall, Bay of God's Mercy, Southampton Island (nesting); Cottam, Auk, 52, p. 432, 1935 (records for eastern United States; food habits); Taverner, Canad. Field Nat., 54, p. 129 (in text), 1940—Perry River, Queen Maud Gulf, 102° W. long. (nesting); Manning, Auk, 59, p. 158, pl. 7, 1942—Southampton and Baffin Islands (breeding colonies; disc. specific status); Soper, Proc. Bost. Soc. N. H., 42, p. 121, pls. 15-25, 1942 (life hist.); Bray, Auk, 60, p. 510, 1943—Bay of God's Mercy, Southampton Island (breeding); Du Mont, l.c., 60, p. 109, 1943 (small numbers wintering on Atlantic coast 1941-42); Manning, l.c., 61, p. 147, 1944—Southampton Island (breeding at 63° 35' N. lat. 84° 15' W. long.); Soper, l.c., 63, p. 20, 1946—Bowman Bay, Baffin Island (breeding).

Range.—Known to breed on southwestern Baffin Island (Bowman Bay), Southampton Island (Bay of God's Mercy) and in the vicinity of the Perry River, Queen Maud Gulf, 102° W. long. Migrates chiefly down the Mississippi Valley, wintering mainly on Gulf coast of Louisiana. Straggler elsewhere.

Field Museum Collection.—19: Baffin Island (Camp Kungovik, 3); Massachusetts (Cape Cod, 2); Minnesota (Steele County, 1); Illinois (Lacon, 1); North Dakota (Lac aux Morts, 2; Towner County, 2); Iowa (Keokuk, 1); Louisiana (Cameron Parish, 1; Grand Chenier, 3); Texas (Skidmore, 1; High Island, Galveston County, 2).

Conover Collection.—7: Manitoba (Regent, 3); Louisiana (Vermilion Bay, 4).

***Chen hyperborea** (Pallas). LESSER SNOW GOOSE.

Anser hyperboreus Pallas, Spic. Zoöl., fasc. 6, p. 31, 1769—northeastern Siberia.

Anas nivalis Forster, Phil. Trans., 62, p. 413, 1772—Severn River, southwest Hudson Bay.

Anser albatus Cassin, Proc. Acad. Nat. Sci. Phila., p. 41, 1856—no type specified.¹

Chen hyperborea Turner, Contr. Nat. Hist. Alaska, 2, p. 138, 1886—St. Michaels (spring migr. only); Nelson, Nat. Hist. Coll. Alaska, 3, p. 82, 1887—St. Michaels (migr. only); Peters, Bds. World, 1, p. 146, 1931 (range); Tcherniakofsky, L'Ois. Rev. Franc. d'Orn., 9, p. 338, 1939—Cape Hope, East Greenland; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 43, 1945—Colorado River Delta, Sonora, Mexico.

Chen nivalis Salvadori, Cat. Bds. Brit. Mus., 27, p. 86, 1895—part, spec. a-d, arctic regions east of Mackenzie River and Mississippi Valley.

Chen hyperboreus Salvadori, Cat. Bds. Brit. Mus., 27, p. 84, 1895—Yokohama, Corpus Christi, and Chicago (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 201, 1903—part, northeast Asia, Alaska, Pacific coast to Mississippi Valley, and Guanajuato, Mexico; Alphéraky, Geese of Eur. and Asia, p. 12, pls. 1, 22, 1905 (range in Siberia).

Chen hyperboreus hyperboreus Grinnell, Bryant and Storer, Game Bds. Calif., p. 210, 1918 (life hist. California).

Chen hyperborea hyperborea Bent, Bull. U. S. Nat. Mus., 130, p. 164, 1925 (life hist.); Sutton, Auk, 48, p. 349, 1931 (breeding on Southampton Island; hybridism with *Chen caerulescens*); idem, Mem. Carnegie Mus., 12, (2), sec. 2, p. 44, pl. 12, 1932—Southampton Island (nesting); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 20, 1933—Chipp River, near Barrow, Alaska (nesting); Manning, Auk, 59, p. 158, pl. 7, 1942—Southampton and Baffin Islands (breeding habits; disc. spec. status); Porsild, Canad. Field Nat., 57, p. 22, 1943—Mackenzie Delta (breeding); Bray, Auk, 60, p. 509, 1943—Bay of God's Mercy, Southampton Island (breeding); Manning, l.c., 61, p. 146, 1944—Bear Cove, 63° 35' N. lat.—84° 15' W. long., Southampton Island (breeding); Soper, l.c., 63, p. 18, 1946—Bowman Bay, Baffin Island (breeding).

Anser caerulescens caerulescens Salomonsen, Medd. Grønln., 92, (5), p. 9, 1933—Greenland records (considers *hyperborea* as color phase); idem, l.c., 93, (6), p. 12, 1935—Scoresby Sound, East Greenland.

Range.—Breeds in arctic North America from western Alaska (Point Barrow) east to Southampton Island and Baffin Land and on the islands to the north. Probably also breeds in northeastern Siberia (Chukchi Peninsula). Migrates south in winter on the coast

¹ Described from four specimens bought in the Philadelphia market and now in the Academy of Natural Sciences of Philadelphia and a specimen from Oregon now in the U. S. National Museum.

of Asia to Japan and throughout temperate North America, but casual east of the Mississippi Valley. Winters from California, Texas, and Louisiana south to central Mexico (Tamaulipas and Jalisco). Occasional straggler to Greenland.

Field Museum Collection.—31: Alaska (Barrow, 2; Chipp River, near Barrow, 1 downy; Sledge Island, 1); Saskatchewan (Lake Johnston, 1); Montana (Columbia Falls, 1); Nevada (Lake Tahoe, 1); California (Los Banos, 5; near San Francisco, 1; Red Bluff, 1; Colusa, 2); Texas (Rockport, 1); North Dakota (Cando, 2; Towner County, 4; Lac aux Morts, 4); Kansas (Pierceville, 1); Illinois (Adams County, 1); Louisiana (Vermilion Bay, 1); North Carolina (Pea Island, Dare County, 1).

Conover Collection.—4: Alberta (Tofield, 1); South Dakota (Kingsbury County, 1); Louisiana (Vermilion Bay, 1); Illinois (Henry, 1).

**Chen atlantica* Kennard. GREATER SNOW GOOSE.

Chen atlantica Kennard, Proc. New Eng. Zool. Cl., 9, p. 93, 1927—Princess Anne Club, Back Bay, Princess Anne County, Virginia (type in the collection of F. H. Kennard, Museum of Comparative Zoology, Cambridge, Massachusetts); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 306, 1927—Puerto Rico(?); Peters, Bds. World, 1, p. 146, 1931 (range).

Chen nivalis (not of Forster) Salvadori, Cat. Bds. Brit. Mus., 27, p. 86, 1895 (Atlantic coast, only).

Chen hyperborea nivalis Dionne, Ois. Prov. Quebec, p. 109, 1906—St. Joachim, Ile d'Orleans and Loups Marins, Quebec.

Chen hyperboreus nivalis Gibson, Auk, 39, p. 359, 1922—Five Glacier Valley, northern Greenland (breeding); Bent, Bull. U. S. Nat. Mus., 130, p. 173, 1925 (life hist.).

Chen hyperborea atlantica Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 50, 1932—Pond's Inlet, Navy Board Inlet and Bylot Island, northeast Baffin Island; White and Lewis, Auk, 54, p. 440, 1937 (probable nesting, northeast Baffin Island; migr., eastern Canada); Déry, Rep. Prov. Soc. Nat. Hist. Quebec, p. 120, 2 maps, 1938 (fall migr.); Nichols, l.c., p. 132, 1938—New Jersey; Howard, Auk, 57, p. 523, 1940 (winter range); Fremont, Lewis and Lincoln, l.c., 59, p. 301, 1942 (1940 southward migr.); Adams, l.c., 61, p. 639, 1944—Quebec (occurrence before 1870).

Anser caerulescens atlantica Salomonsen, Medd. Grøn., 92, (5), p. 10, 1933—Thule and Inglefield gulf, northwest Greenland (breeding).

Range.—Breeds in northern Greenland (McCormick and North Star Bays) and probably also in Ellesmere Land and perhaps northeast Baffin Island. Migrates across the Labrador Peninsula to the Gulf of St. Lawrence, and from there across New England to its wintering grounds on the Atlantic coasts of Maryland, Virginia and

North Carolina, from Chesapeake Bay to Core Sound. Puerto Rico(?).

Field Museum Collection.—16: Labrador (unspecified, 1); Quebec (Isle aux Grues, 1; Cap Tourmente, 1; St. Joachim de Montmorency, 3; Beaupré, 3); Virginia (Back Bay, 2); North Carolina, Dare County (Bodie Island, 2; Pea Island, 3).

Conover Collection.—4: Quebec (St. Joachim de Montmorency, 4).

***Chen rossii** (Cassin). ROSS'S GOOSE.

Anser rossii Cassin, Proc. Acad. Nat. Sci. Phila., p. 73, 1861—Great Slave Lake (type in U. S. National Museum).

Chen rossii Salvadori, Cat. Bds. Brit. Mus., 27, p. 88, 1895—San Joaquin Fall, San Francisco and Stockton, California (full bibliog.); Grinnell, Bryant and Storer, Game Bds. Calif., p. 125, 1918 (habits in California); Taverner, Canad. Field Nat., 54, p. 127, 1940—Perry River, Queen Maud Gulf, 102° W. long. (nesting; eggs); idem, Auk, 58, p. 92, 1941—Perry River, Northwest Terr. (nesting); Cartwright, Chicago Nat., 4, p. 67, map, 1941—Perry River, Queen Maud Gulf (breeding); idem, Frontiers, Phila., 5, p. 103, 1941; Soper, Trans. Roy. Canad. Inst., 24, p. 33, 1942—Peace River and Athabaska Delta (migrant).

Exanthemops rossii Bent, Bull. U. S. Nat. Mus., 130, p. 185, 1925 (life hist.).

Chen rossii Peters, Bds. World, 1, p. 146, 1931 (range).

Range.—Known to breed only on the Perry River, Queen Maud Gulf, 102° W. long. Migrates through Alberta and Montana to its wintering grounds in the interior valleys of California (Sacramento and San Joaquin). Casual elsewhere.

Field Museum Collection.—17: British Columbia (Frazer River, 1); California (Rio Vista, Solano County, 10; Antioch, 1; Colusa, 3; Los Banos, 1; Merced County, 1).

Conover Collection.—5: Alberta (Tofield, 2); California (Willows, Glenn County, 3).

Genus **ANSER**¹ Brisson

Anser Brisson, Orn., 1, p. 58; 6, p. 261, 1760—type, by tautonymy, "*Anser*" = *Anas anser* Linnaeus.

Marilochen Reichenbach, Av. Syst. Nat., p. ix, 1852—type, by monotypy, "*brevirostris*" (? = *Anser brevirostris* C. L. Brehm).

***Anser albifrons albifrons** (Scopoli). WHITE-FRONTED GOOSE.

Branta albifrons Scopoli, Annus I. Hist. Nat., p. 69, 1769—no locality given, probably northern Italy (type in coll. of F. A. Turriani).

¹ *Anser fabalis fabalis* (Latham) has been dropped from the American list because the Greenland records are invalid (cf. Jourdain, Auk, 50, p. 202, 1933).

Anser frontalis Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 762, 1858—"interior of North America" (Selkirk Settlement and Fort Thorn)¹ (=young).

Anser albifrons gambeli(lli) (not *Anser gambelli* Hartlaub) Turner, Contr. Nat. Hist. Alaska, 2, p. 138, 1886—Yukon Delta (breeding); Nelson, Nat. Hist. Coll. Alaska, 3, p. 83, 1887—Alaska shore of Bering Sea and Arctic coast at Point Barrow (nesting; descr. pullus); Bryant, Condor, 16, p. 95, 1914 (albino); Grinnell, Bryant and Storer, Game Bds. Calif., p. 218, 1918 (life hist. California), p. 219, footnote (dist. chars.); Bailey, Condor, 27, p. 202, 1925—Wainwright, Alaska (nesting); Conover, Auk, 43, p. 173, 1926—Hooper Bay, Alaska (nesting; weights; meas.); Løppenthin, Medd. Grøn., 91, (6), p. 39, 1932—Greenland (no breeding record); Salomonsen, l.c., 93, (6), p. 11, 1935—Angmagalik, eastern Greenland.

Anser albifrons Salvadori, Cat. Bds. Brit. Mus., 27, p. 92, 1895—part, Greenland (descr.).

Anser gambeli (not *Anser gambelli* Hartlaub) Salvadori, Cat. Bds. Brit. Mus., 27, p. 95, 1895—part, specs. a, e-q (range); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 202, 1903—Mexico (various localities), Cuba.

Anser albifrons albifrons Swarth and Bryant, Univ. Calif. Pub. Zool., 17, p. 215 (in text), 1917 (disc. of difference from *gambelli*); Bent, Bull. U. S. Nat. Mus., 130, p. 189, 1925 (life hist.); Bailey, Condor, 30, p. 164, 1928 (breeding range, disc.); Peters, Bds. World, 1, p. 147, 1931 (range); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 20, 1933—Barrow, Alaska (breeding); Bray, Auk, 60, p. 512, 1943 (no evidence of its breeding east of Coronation Gulf); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 44, 1945—Tobari Bay, Sonora, Mexico (Nov. 25).

Anser albifrons subsp. Porsild, Canad. Field Nat., 57, p. 22, 1943—Mackenzie Delta (breeding).

Range.—In Arctic America breeds from Point Dall, Bering Sea, north and east to the Anderson River; also on the west coast of Greenland between 62° and 72° N. lat. Winters mainly west of the Mississippi River from southern British Columbia and southern Illinois south to Jalisco, Mexico, and the Gulf coast. Occasional on the Atlantic coast. Also found throughout Europe and Asia.

Field Museum Collection.—35: Alaska (Barrow, 6; Nome, 1; Yukon Delta, 1); Greenland (Sukkertoppen, 1); British Columbia (Vancouver, 1); California (Solano County, 3; Colusa County, 7; Merced County, 2; Sutter County, 2; Glenn County, 1); Montana (Flathead County, 1); North Dakota (Nelson County, 2; Towner County, 1; Ramsey County, 2); Nebraska (Lincoln, 1); Texas (Cameron County, 2); Massachusetts (Norfolk County, 1).

¹ No type seems to have been designated but one of the two specimens mentioned in the original description is in the Academy of Natural Sciences of Philadelphia (cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899 [1900], p. 23).

Conover Collection.—15: Alaska (Chipp River, Barrow, 4; Hooper Bay, Bering Sea, 6; Igiak Bay, Bering Sea, 1); California (Planada, Merced County, 3; Butte Creek, Sutter County, 1).

**Anser albifrons gambelli* Hartlaub.¹ TULE GOOSE.

Anser Gambelli Hartlaub, Rev. Mag. Zool., (2), 4, p. 7, 1852—Texas and southern United States (cotypes supposed to be in Berlin Museum);² McAtee, Auk, 61, p. 294, 1944 (tax. disc.).

Anser gambeli Salvadori, Cat. Bds. Brit. Mus., 27, p. 95, 1895—part, (?)Arctic coast east of Fort Anderson, (?)Repulse Bay (descr.); McAtee, Auk, 61, p. 294, 1944 (tax. disc.).

Anser albifrons gambeli Swarth and Bryant, Univ. Calif. Publ. Zool., 17, p. 215 (in text), 1917 (dist. chars.); Grinnell, Bryant and Storer, Game Bds. Calif., p. 219 (footnote), 1918 (dist. chars.); Moffitt, Condor, 28, p. 241 (in text), 1926—California (wintering notes); Bailey, l.c., 30, p. 164 (in text), 1928 (dist. chars.; probable breeding range).

Anser albifrons gambelli Bent, Bull. U. S. Nat. Mus., 130, p. 196, 1925 (life hist.); Peters, Bds. World, 1, p. 147, 1931 (range).

Anser gambelli Kuroda, Condor, 31, p. 173, 1929—Arctic coast east of Fort Anderson (disc. on validity of type, etc.); McAtee, Auk, 61, p. 294, 1944 (tax. disc.).

Range.—Breeding range unknown, but probably Arctic America somewhere east of the Mackenzie Delta (?south of Queen Maud Gulf). Winters, as far as now known, only in the Sacramento Valley, California, but probably occurs in other parts of the central valleys of that state.

Field Museum Collection.—1: California (Butte Creek, Sutter County, 1).

Conover Collection.—1: California (Pierce, Solano County, 1).

¹ *Anser albifrons gambelli* Hartlaub: Our knowledge of the characters of this race is very unsatisfactory. Swarth and Bryant say it differs from typical *albifrons* by its darker coloration, yellow eyelids, greater number of tail feathers, and larger size. However, Bailey and Kuroda, in articles in the *Condor*, have shown that yellow eyelids also are found in specimens of the typical race and that the number of tail feathers is variable. The junior author has examined western Alaska breeding specimens of *A. a. albifrons* which are as dark as examples of *gambelli* from California, and Hartert (Vög. Pal. Fauna, 2, pp. 1281–1282) states that European examples of this goose are variable in coloration. It would seem, therefore, that the only reliable character is size. Even here the published figures for the two races show such an overlapping as to lead to the belief that some of the smaller supposed examples of *gambelli* are really specimens of the typical race, misidentified perhaps because of their dark coloration, yellow eyelids, or more numerous tail feathers. An adult and an immature male of *gambelli* examined have wings of 450–452, culmens of 58–61, tarsi of 81–82 and middle toes (without claws) of 82–81 mm., respectively. Seven males of typical *albifrons* give maximum measurements of wing 425, culmen 54, tarsus 77 and middle toe (without claw) of 78 mm. No females of the larger race have been available.

² From Kuroda's remarks (Condor, 31, p. 173, 1929) it would seem that the supposed cotypes in the Berlin Museum are not the specimens used by Hartlaub in describing this race.

Anser anser (Linnaeus). GRAY-LAG GOOSE.

Anas Anser Linnaeus, Syst. Nat., 10th ed., 1, p. 123, 1758—primarily based on Fauna Svec., No. 90; restricted type locality, Sweden.

Anser ferus Salvadori, Cat. Bds. Brit. Mus., 27, p. 89, 1895 (descr., full bibliog.).

Anser anser Pell, Auk, 50, p. 208, 1933—Housatonic River, Lenox, Massachusetts.

Range.—Extralimital. Europe and Asia south in winter to northwestern Africa, northwestern India and China. One feral(?) example taken at Lenox, Massachusetts.

Anser brachyrhynchus Baillon. PINK-FOOTED GOOSE.

Anser Brachyrhynchus Baillon, Mém. Soc. R. d'Emul. d'Abbeville, p. 74, 1833—Abbeville on the lower Somme, France (location of type not stated, but apparently in coll. of L. A. F. Baillon).

Anser brachyrhynchus Salvadori, Cat. Bds. Brit. Mus., 27, p. 103, 1895 (descr., full bibliog.); Bent, Bull. U. S. Nat. Mus., 130, p. 200, 1925—eastern Greenland, Massachusetts (Essex County), (life hist.); Brooks, Auk, 42, p. 265, 1925—Essex County, Massachusetts; Congreve and Freme, Ibis, 1930, pp. 204–210—Iceland (breeding); Løppenthin, Medd. Grøn., 91, No. 6, p. 33, 1932—northeastern Greenland (breeding; crit.); Pedersen, l.c., 100, No. 11, pp. 6, 14, 1934—Loch Tyne, Wollaston Vorland, and Hochstetters Vorland, northeastern Greenland (breeding); Cottam and Knappen, Auk, 56, p. 146, 1939 (food); Tcherniakofsky, L'Ois. Rev. Franc. d'Orn., 9, p. 337, 1939—Walrus Bay, Scoresby Sound, Hurry Inlet, and Constable Point (breeding colony), eastern Greenland; Bird and Bird, Ibis, 1941, p. 133—northeastern Greenland (breeding).

Range.—Breeds in Iceland, Spitzbergen, eastern Greenland and possibly Franz Josef Land and the Kola Peninsula. Winters in northwestern Europe. One accidental record for Essex County, Massachusetts.

Genus **PHILACTE** Bannister

Philacte Bannister, Proc. Acad. Nat. Sci. Phila., 1870, p. 131—type, by monotypy, *Anas canagica* Sewastianov.

***Philacte canagica** (Sewastianov). EMPEROR GOOSE.

Anas canagica Sewastianov, Nov. Act. Acad. Sci. Imp. St. Pétersb.; 13, p. 349, pl. 10, 1802—Kanaga Island, Aleutian Islands.

Philacte canagica Turner, Contr. Nat. Hist. Alaska, 2, p. 142, 1886—Cook's Inlet, Alaska Peninsula and Aleutian Islands to St. Lawrence Island; Nelson, Nat. Hist. Coll. Alaska, 3, p. 89, pl. 4, 1887—Bering Strait to Aleutian Islands (life hist.); Salvadori, Cat. Bds. Brit. Mus., 27, p. 109, 1895—St. Michaels, Ugashik, Yukon Delta and Aleutian Islands, Alaska;

Fannin, Auk, 12, p. 76, 1895—Vancouver Island; Loomis, l.c., 18, p. 105, 1901—Gridley, Butte County, California; Henshaw, l.c., 20, p. 164, 1903—Kalapana, Hawaii; Alphéraky, Geese Eur. and Asia, p. 20, pls. 2, 22, 1905—Chukchi Peninsula (River Anadyr), Kamchatka (River Uka) and Commander Islands; Bryant, Condor, 16, p. 92, 1914—Solano, Colusa, Stanislaus and Merced counties, California; idem, l.c., 17, p. 58, 1915—Yolo County, California; Grinnell, Bryant and Storer, Game Bds. Calif., p. 243, 1918 (California records, descr., habits); Walker, Condor, 23, p. 65, 1921—Tillamook County, Oregon; Bent, Bull. U. S. Nat. Mus., 130, p. 263, 1925 (life hist.); Bailey, Condor, 27, p. 205, 1925—St. Lawrence Island, Cape Prince of Wales (nesting); Conover, Auk, 43, p. 177, pl. 687, 1926—Hooper Bay, Alaska (nesting, plumage, migration, descr. downy young); Jewett, Condor, 28, p. 41, 1926—Tillamook County, Oregon; Grinnell, l.c., 33, p. 38, 1931—Humboldt Bay and Shasta County, California; Zerlang and Fraser, l.c., 33, p. 74, 1931—Humboldt Bay, California; Peters, Bds. World, 1, p. 149, 1931 (range); Beck, Condor, 36, p. 114, 1934—Glenn County, California; Swarth, Pac. Coast Avifauna, 22, p. 19, 1934—Nunivak Island (migrant); Cottam and Knappen, Auk, 56, p. 143, 1939 (stomach analysis); Orr, Condor, 46, p. 90, 1944—California; Sutton and Wilson, l.c., 48, p. 85, 1946—Attu Island, Aleutian Islands (wintering).

Range.—Breeds on the west coast of Alaska from Kotzebue Sound south to the mouth of the Kuskokwim River, on St. Lawrence Island, and on the northeast coast of Siberia from East Cape west to the Chukchi Peninsula. Winters in the Aleutian Islands, east along the Alaska Peninsula to Bristol Bay and in Asia on the Commander Islands and Kamchatka (River Uka). Casually south to California.

Field Museum Collection.—14: Alaska (Barrow, 2; Port Safety, 1; Wainwright, 1; Carter City, 1; mouth of Yukon River, 2; mouth of Kuskokwim River, 2; (?) St. George Island, Pribilof Islands, 2; Pavlof Bay, Alaska Peninsula, 2; unspecified, 1).

Conover Collection.—16: Alaska (Wales, Seward Peninsula, 2; Hooper Bay, Bering Sea, 12; Kashunuk River, Bering Sea, 1; Pavlof Bay, Alaska Peninsula, 1).

Genus BRANTA Scopoli

Branta Scopoli, Annus I. Hist. Nat., p. 67, 1769—type, by subs. desig. (Allen, Bull. Amer. Mus. N. H., 24, p. 32, 1907), *Anas bernicla* Linnaeus.

Bernicla Boie, Isis, 1822, pp. 563, 883—type, by subs. desig. (Stephens, Gen. Zool., 12, (2), p. 45, 1824), *Anas bernicla* Linnaeus.

Leucopareia Reichenbach, Av. Syst. Nat., p. ix, 1852—type, by monotypy, *Anas leucopsis* Bechstein.

Rufibrenta Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 648, 1856—type, by monotypy, *Anser ruficollis* Pallas.

Leucoblepharon (not *Leucoblephara* Lafresnaye, 1840) Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 763, 1858—type, by subs. desig. (Salvadori, Cat. Bds. Brit. Mus., 27, p. 111, 1895), *Anas canadensis* Linnaeus.

Brenthus Sundevall, Meth. Nat. Av. Disp. Tent., p. 145, 1873—emendation for *Branta* Scopoli.

Plocas Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 342, 1890—substitute name for *Rufibrenta* Bonaparte.

****Branta bernicla hrota* (O. F. Müller). LIGHT-BELLIED BRANT.**

Anas hrota O. F. Müller, Zool. Dan. Prodr., p. 14, 1776—based on “Hrota” Olafsen and Povelsen, Reise Island, p. 667; Iceland.

Bernicla pallida C. L. Brehm, Vogelfang, p. 368, 1855—“wanders from Greenland to Iceland” (no type extant).

Branta bernicla (not *Anas bernicla* Linnaeus) Salvadori, Cat. Bds. Brit. Mus., 27, p. 119, 1895—part, Spitzbergen, Greenland, and Arctic America.

“*Branta bernicla leucogaster*”¹ Thayer, Auk, 22, p. 408, 1905—Ellsmereland (nesting).

Branta bernicla glaucogaster (not *B. glaucogaster* C. L. Brehm)² Bryant, Condor, 16, p. 183, 1914—Arcata Bay, Humboldt County, California; Grinnell, Bryant and Storer, Game Bds. Calif., p. 241, 1918 (one record California).

Branta bernicla americana Stechow, Münchener Mediz. Wochenschrift, 7a, p. 517, 1923—northern North America.

Branta bernicla bernicla Bent, Bull. U. S. Nat. Mus., 130, p. 237, 1925 (disc. races, life hist.).

Branta bernicla hrota Peters, Bds. World, 1, p. 149, 1931 (range); Phillips, Auk, 49, p. 445, 1932—Chatham, Mass. (fluctuations 1863–1932); Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 41, 1932—Prairie Point and Cape Low, Southampton Island (rare, nesting); Jourdain, Ibis, 1936, p. 202 (crit.); Bird and Bird, l.c., pp. 605–608 (crit.); Jourdain, l.c., p. 829 (crit., range); Lewis, Auk, 54, p. 73, 1937 (migr.); Harrison, Condor, 44, p. 130, 1942—Siskiyou County, California; Bray, Auk, 60, p. 509, 1943—Bay of God’s Mercy, Southampton Island (breeding); Soper, l.c., 63, p. 18, 1946—Bowman Bay, Baffin Island (nesting).

Range.—Breeds on Spitzbergen, Franz Josef Land, both coasts of Greenland south to about 70° N. lat., and in Arctic America from about 100° W. long. east and south to Southampton Island. Winters chiefly on the Atlantic coast of North America from New Jersey to North Carolina, also on the coast of northwestern Europe. Very rare straggler to the interior of North America.

Field Museum Collection.—16: North Dakota (Stump Lake, Nelson County, 1); Massachusetts (Monomoy Island, 3; Chatham, 1;

¹ Probably lapsus for *glaucogaster*.

² *Bernicla glaucogaster* Brehm (Handb. Naturg. Vög. Deutschl., p. 849, 1831) migrates from the far north in the fall to the “German shores of the Baltic Sea” (no type extant).

Falmouth, 1); Connecticut (Stratford, 2; West Haven, 1; Stony Creek, 1); North Carolina (Pea Island, Dare County, 6).

Conover Collection.—10: Greenland (Godthaab, 1); Massachusetts (Monomoy Island, 4); North Carolina (Hatteras, Pamlico Sound, 5).

****Branta bernicla nigricans* (Lawrence). BLACK BRANT.**

Anser nigricans Lawrence, Ann. Lyc. Nat. Hist. N. Y., 4, p. 171, pl. 12, 1846—Egg Harbor, New Jersey (type in coll. of Geo. H. Lawrence, now in the American Museum of Natural History, New York).

Branta nigricans Turner, Contr. Nat. Hist. Alaska, 2, p. 141, 1886—St. Michaels (migr. only); Nelson, Nat. Hist. Coll. Alaska, 3, p. 87, 1887 (migr.); Salvadori, Cat. Bds. Brit. Mus., 27, p. 123, 1895—Alaska (Point Barrow; St. Michaels), Liverpool Bay, Vancouver Island, California (San Diego); Fay, Auk, 27, p. 336, 1910 (Atlantic coast records); Grinnell, Bryant and Storer, Game Bds. Calif., p. 237, 1918 (life hist. California); Bailey, Condor, 27, p. 203, 1925—Icy Cape, Alaska (fall migr.); Conover, Auk, 43, p. 177, 1926—Hooper Bay, Alaska (migr.; weights); Bailey, Brower and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 20, 1933—Barrow, Alaska (nesting); Porsild, Canad. Field Nat., 57, p. 22, 1943—deltas of Mackenzie, Anderson and Kiyaruk rivers (nesting).

Branta bernicla nigricans Alphéraky, Geese Eur. and Asia, p. 162, pl. 18, 1905 (range in Asia); Bent, Bull. U. S. Nat. Mus., 130, p. 249, 1925 (life hist.); Peters, Bds. World, 1, p. 149, 1931 (range); Cope, California Fish and Game, 26, p. 390, 1940—San Quentin Bay, Lower California.

Range.—Breeds on the coast and islands of Arctic America from Coronation Gulf westward to Point Hope, Alaska, and on the Arctic coast of Siberia west to the New Siberian Islands and the Taimyr Peninsula. Winters on the west coast of America from Vancouver Island south to Lower California, and in Asia south to Japan and northern China.

Field Museum Collection.—21: Alaska (Barrow, 6; Nome, 1; Pavlof Bay, 1; Sledge Island, 2); Washington (King County, Puget Sound, 1); California (Tomales Bay, 3; Point Reyes, 1; Pacific Beach, 1; Eureka, 3); Mexico (Natividad Island, Lower California, 2).

Conover Collection.—15: Alaska (Point Barrow, 6; Chipp River, Barrow, 1; Hooper Bay, Bering Sea, 4); Oregon (Netarts, Tillamook County, 1); California (Tomales Bay, Marin County, 3).

***Branta leucopsis* (Bechstein). BARNACLE GOOSE.**

Anas leucopsis Bechstein, Orn. Taschenb., 2, p. 424, 1803—Germany; Winge, Medd. Grøn., 21, p. 122, 1898—Greenland; Manniche, l.c., 45, No. 1, p. 107, 1910—Stormkap, Greenland (breeding).

Branta leucopsis Salvadori, Cat. Bds. Brit. Mus., 27, p. 117, 1895 (descr., full bibliog.); Bent, Bull. U. S. Nat. Mus., 130, p. 258, 1925—northeast

Greenland (breeding), Labrador (James Bay), Massachusetts, Long Island, North Carolina, and Vermont (life hist.); Batchelder, Auk, 43, p. 88, 1926—Pea Island, Dare County, North Carolina; Taverner, l.c., 44, p. 221, 1927—Baffin Island; Soper, Bull. Nat. Mus. Canada, No. 53, p. 103, 1928—Amadjuak Bay, Baffin Island; Peters, Bds. World, 1, p. 150, 1931 (range); Aldrich, Auk, 49, p. 460, 1932—Port Clinton, Ohio; Løppen-thin, Medd. Grøn., 91, No. 6, p. 40, 1932—northeastern Greenland (meas., eggs, etc.); Pedersen, l.c., 100, No. 11, pp. 6, 16, 1934—north-eastern Greenland (breeding habits); Cottam and Knappen, Auk, 56, p. 143, 1939 (stomach contents of some American specimens); Tcherniakofsky, L'Ois. Rev. Franç. Orn., 9, p. 336, 1939—Cape Hope, eastern Greenland; Bird and Bird, Ibis, 1941, p. 136—Myggbukta, eastern Greenland (breeding); Hørring and Salomonsen, Medd. Grøn., 131, No. 5, p. 13, 1941—Akúnâq, Egedesminde, Greenland.

Leucopareia leucopsis Alphéraky, Geese Eur. and Asia, p. 171, pls. 20, 24, 1905—southern Greenland (breeding and migrant).

Range.—Breeds in northeastern Greenland (Scoresby Land, Trekones, Young Inlet, etc.), Spitzbergen, and Novaya Zemlya. Winters on the coasts of the British Isles, North and Baltic Seas. Occurs on migration in western Greenland and rarely in eastern North America.

**Branta leucopareia leucopareia* (Brandt).¹ TUNDRA GOOSE.

Anser leucopareius Brandt, Bull. Sci. Acad. Sci. St. Petersb., 1, p. 37, pl. 2, figs. 1, 2, 1836—Unalaska, Aleutian Islands (type in Leningrad Museum).

¹*Branta leucopareia leucopareia* (Brandt) is a small goose with the bill relatively short in proportion to its height as in *minima* and *hutchinsii*. Its under parts are rather dark, perhaps slightly more so than in *B. c. parvipes*, and it tends to have a white collar separating the black of the neck from the grayish brown body.

The Tundra Goose was described by Brandt from a specimen taken in the Aleutian Islands. The plate and description are of a small goose with a short, high bill, a dark breast (but not so brown as in *minima*) and a white collar at base of neck. The original description (translation) reads: "Body grayish brown, feathers whitish bordered. Black head and neck except for a white spot on each side and a very narrow white ring defining the neck." The length of wing is given as 1' 3" 9''' (=400.05 mm.) and the length of bill to forehead as 1" 6''' (=38.1 mm.). A. H. Clark (Proc. U. S. Nat. Mus., 38, p. 47, 1911) gives the wing measurements of four breeding specimens which he took on Agattu Island, but unfortunately lost before he could make them into skins, as 14.90, 15.75, 16.12 and 15.25 inches (378.5, 400, 409.5 and 387 mm.), respectively. We have examined two males from Agattu with wings (flat) of 400 (worn) and 407 and culmens of 37 and 39 mm. A female from Attu measures wing (worn) 365, culmen 34 mm. In coloration this latter bird is considerably darker on the breast than those from Agattu but has not the chocolate brown tinge of *minima* and the culmen is a little too long for that form. Fourteen examples from the vicinity of Point Barrow, Alaska, do not differ in either color or measurements from the birds from Agattu.

From the above measurements and descriptions of birds from the Aleutian Islands, it is apparent that Sutton (Mem. Carnegie Mus., 12, (2), sec. 2, p. 31, 1932) was wrong in using the name *leucopareia* for the medium-sized geese from Southampton Island with culmens measuring from 41 to 48 mm. Through the courtesy of the Carnegie Museum two of these specimens have been examined. The color of their under parts is about the same as in the birds from Agattu but

- Branta canadensis minima* (not *Branta minima* Ridgway) Turner, Contr. Nat. Hist. Alaska, 2, p. 139, 1886—part, Aleutian Islands (nesting); Bent, Bull. U. S. Nat. Mus., 130, p. 231, 1925—part, Aleutian Islands; Peters, Bds. World, 1, p. 150, 1931—part, Aleutian Islands.
- Branta canadensis hutchinsii* (not *Anser hutchinsii* Richardson) Turner, Contr. Nat. Hist. Alaska, 2, p. 139, 1886—part, Aleutian Islands (nesting); Peters, Bds. World, 1, p. 150, 1931—part, northern Alaska; Clark, Proc. U. S. Nat. Mus., 38, p. 47, 1911—Aleutian Islands (Attu, not breeding; Agattu, breeding by thousands and wing measurements of four specimens).
- Branta hutchinsi* Salvadori, Cat. Bds. Brit. Mus., 27, p. 114, 1895—part (bibliog.); Brooks, Ibis, 1926, p. 343—part (smaller, darker and shorter-billed examples).
- Branta canadensis* (not *Anas canadensis* Linnaeus) (?)Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 203, 1903—part, Mexico (Durango, Guadalupe).
- Branta canadensis hutchinsi* Swarth, Univ. Calif. Publ. Zool., 12, p. 2, 1913—part (smaller and darker individuals; disc.); Grinnell, Bryant and Storer, Game Bds. Calif., p. 230, 1918—part, smaller examples; Figgins, Auk, 37, p. 94, 1920 (disc.); Swarth, i.c., 37, p. 268, 1920 (disc.); Bent, Bull. U. S. Nat. Mus., 130, p. 223, 1925—part, Aleutian Islands and northwestern Arctic coast (life hist.); Conover, Auk, 43, p. 174, 1926—Hooper Bay, Alaska (distinct from *minima*).
- Branta canadensis leucopareia* Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 34, 1931—part, (?)Alaska (Barter Island), Victoria Island (Walker Bay); Moffitt, Condor, 41, p. 164, 1939—part, California; (?)Porsild,

they are larger and have a long and relatively much flatter bill, similar in shape and proportions to that of typical *canadensis* and distinctly different from the short, high culmen of the Aleutian geese. The Southampton Island birds appear to belong to the form *B. c. parvipes*. Taverner (Ann. Rep. Nat. Mus. Canada for 1929, p. 34, 1931) seems, from the drawing showing the form of the bill of his *leucopareia* (p. 32, fig. 1, No. 4496), to have fallen into the same error, although from its dimensions the classification of his Barter Island specimen appears to be correct.

Specimens of *leucopareia* from their breeding grounds on the Aleutians and about Point Barrow have wings from 378 to 410 (males) and 365 to 410 mm. (females). Culmens run from 34 to 39 (males) and 32 to 38.5 mm. (females). However, there are seven specimens in Field Museum with considerably greater wing length, but with the short, relatively high bill of this form. All appear to be migrants. One was taken on the Queen Charlotte Islands (wing 428, culmen 38) and the other six in California (wings 458, 439, 427, 425, 433, 428; culmens 39, 38, 38, 38, 35, 38 mm., respectively). These are rather puzzling specimens, but it may be that in the eastern part of the Alaska Peninsula the geese of this form run larger, intergrading with *B. l. occidentalis*.

The specific status of this goose is very puzzling. Its downy young (from Barrow) are exactly like those of *minima*, much lighter above than *occidentalis*, and very different from *hutchinsii* and the races of *canadensis*. It does not appear to be conspecific with the Cackling Goose, however, as according to our present meager knowledge the breeding ranges apparently overlap. The two have been given separate specific status, therefore, until further research increases our understanding of these puzzling birds.

Additional material examined.—Alaska: Attu Island, 1; Agattu Island, 2; vicinity of Point Barrow, 10 adults, 5 downies.

Canad. Field Nat., 57, p. 22, 1943—Mackenzie Delta (breeding); Aldrich, Wilson Bull., 58, p. 98, 1946—part (meas.; disc.).

Range.—Known to breed on the Aleutian Islands (Agattu) and on the Arctic coast about Point Barrow probably east at least to the Mackenzie Delta. Also probably nests some miles back from the coast around the lakes in the *interior* of the tundra lying between the Yukon and Kuskokwim rivers and on the Alaska Peninsula, where it may intergrade with *occidentalis*. Migrates through the western United States, wintering from northern Washington and eastern Texas south to northern Mexico.

Field Museum Collection.—27: Alaska (Point Barrow, 2; Collinson Point, 1; St. Michaels, 1; Pavlof Bay, 2; Seward Peninsula, 1); British Columbia (Graham Island, Queen Charlotte Islands, 1; Sulu Island, 1); California (Rio Vista, Solano County, 4; Ryer Island, Solano County, 2; Sutter County, 2; Los Banos, Merced County, 1; Colusa, Colusa County, 3; San Francisco County, 2); Texas, Cameron County (Padre Island, 1; Brownsville, 2; unspecified, 1).

Conover Collection.—6: Alaska (Point Barrow, 1; Hooper Bay, Bering Sea, 1); California (Planada, Merced County, 4).

**Branta leucopareia occidentalis* (Baird).¹ WEST COAST GOOSE.

Bernicla occidentalis Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 766 (in text), 1858—Port Townsend, Washington (type in U. S. National Museum).

Branta occidentalis Salvadori, Cat. Bds. Brit. Mus., 27, p. 115, 1895—part, "northwest coast of America, north to Sitka."

Branta canadensis occidentalis Swarth, Univ. Calif. Publ. Zool., 12, p. 5, 1913 (disc.); Brooks, Condor, 16, p. 123 (in text), 1914 (disc., range);

¹*Branta leucopareia occidentalis* (Baird) can be distinguished from typical *leucopareia* by its larger size and *much darker coloration* as well as its longer and flatter bill. In the southern part of its breeding range (Queen Charlotte Islands) males have wings 451–485, culmens 47–54; females, wings 432–455, culmens 46–50 mm. Farther north these geese appear to run smaller.

The relationship of *occidentalis* is rather confusing. The downy young examined (from Prince William Sound and Admiralty Island) are entirely unlike those of the *canadensis* group but similar to the goslings of *leucopareia* and *minima*. Although the dorsal surface is browner, less olivaceous, they have the same duski-ness about the lores and eyelids and the whiter, less lemon yellow coloration below and on the sides of the face and forehead. The adults, however, have long, relatively flat bills resembling those of the larger races of *canadensis*. Nevertheless, several of the specimens examined (especially a female from Sitka [wing 425, culmen 45] and a female from Prince William Sound [wing 400, culmen 41 mm.]) have long but relatively high bills. In this feature as well as in size and coloration *occidentalis* probably intergrades with *leucopareia* along the Alaska Peninsula.

Additional material examined.—Alaska: Prince William Sound, 3 adults, 1 downy; Admiralty Island, 1 downy; Sitka, 1 adult.

Figgins, Auk, 37, p. 94 (in text), 1920 (not valid race); Swarth, l.c., 37, p. 268 (in text), 1920 (valid race); Figgins, Proc. Colorado Mus. Nat. Hist., 4, No. 3, p. 10, 1922 (status); Bent, Bull. U. S. Nat. Mus., 130, p. 227, 1925 (life hist.); Brooks, Ibis, 1926, p. 345, pl. 7 (dist. chars.; range); Bailey, Auk, 44, p. 190, 1927—southern Alaska (habits); Peters, Bds. World, 1, p. 150, 1931 (range); Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 33, 1931 (dist. chars.; range); Jewett, Condor, 34, p. 136, 1932—Netarts Bay, Salem and Eugene, Oregon; Moffitt, l.c., 39, p. 149 (in text), 1937—Eel River, Crescent City, and Lake Earl, California; Rand, Canad. Field Nat., 57, p. 60, 1943—Stuie and Rivers Inlet, British Columbia (nesting); Aldrich, Wilson Bull., 58, p. 98 (meas.), p. 101 (localities), 1946 (disc.).

Range.—Breeds on the northwest coast and islands of North America from the vicinity of Prince William Sound, Alaska, south to the Queen Charlotte Islands in British Columbia. Mainly resident but a few (probably the most northern breeders) appear to migrate in winter as far south as northwestern California (Del Norte and Humboldt counties).

Field Museum Collection.—10: Alaska (Craig, Prince of Wales Island, 2); British Columbia (Graham Island, Queen Charlotte Islands, 4; Vancouver Island, 2; Swanson's Bay, 1); Oregon (Salem, Marion County, 1).

Conover Collection.—4: British Columbia (Massett, Queen Charlotte Islands, 4).

**Branta minima* Ridgway.¹ CACKLING GOOSE.

Branta minima Ridgway, Proc. U. S. Nat. Mus., 8, p. 22, 1885—Pacific coast of North America=St. Michaels, Alaska (type in U. S. National Museum);

¹*Branta minima* Ridgway is the smallest and darkest of all the so-called Canadian or White-cheeked Geese. Besides its diminutive size it has a very short, high bill. In its dimensions it is nearest to *B. hutchinsii* but is even smaller and can be distinguished from that species by its very dark chocolate brown, rather than buffy gray, breast. From *B. l. occidentalis* it can be told by its much smaller size, much shorter and higher bill and even darker breast. Wing 350–390; culmen 26–30; tarsus 61–72; middle toe without claw 51–58 mm.

The immatures of this species are sometimes confusing because they often are much lighter on the under parts than the adults and are frequently identified as specimens of some of the lighter-breasted forms. As Taverner has pointed out, however, birds of the year can be told by the feathers of the breast, which are soft, narrow and rounded at the ends, not stiff, broad, and with the tips square-cut and paler at the edges.

The downy young of *minima* are very different from those of *B. hutchinsii* and those of all the races of *canadensis* for they are more brownish above and much whiter, less lemon yellow below and on the sides of the face and forehead. The most distinctive character, however, is the duskiness about the lores and eyelids. They differ from the young of *B. l. occidentalis* by their much more olivaceous, less brownish back and whiter, less yellowish under parts.

Additional material examined.—Alaska: Wainwright, 3.

Salvadori, Cat. Bds. Brit. Mus., 27, p. 116, 1895—part, St. Michaels and Kottik, Alaska, and Gray's Harbour, Washington (not Point Barrow or upper Mississippi Valley); Brooks, Ibis, 1926, p. 342, pl. 7 (dist. chars.; range); Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 36, fig. 1, No. 18874 (bill), 1931 (dist. chars.; range).

(?) *Branta canadensis hutchinsii* (not *Anser hutchinsii* Richardson) Turner, Contr. Nat. Hist. Alaska, 2, p. 139, 1886—part, coastal Yukon Delta and coastal lowlands about Cape Romanzoff (nesting); Nelson, Nat. Hist. Coll. Alaska, 3, p. 84, 1887—part, seacoast between Yukon and Kuskokwim rivers (nesting).

Branta canadensis minima Turner, Contr. Nat. Hist. Alaska, 2, p. 139, 1886—part, coast of Yukon District and Bristol Bay (nesting); Nelson, Nat. Hist. Coll. Alaska, 3, pp. 84–86, 1886—part, Alaska coast of Bering Sea (nesting; habits); Swarth, Univ. Calif. Publ. Zool., 12, p. 4, 1913 (disc.); Grinnell, Bryant and Storer, Game Bds. Calif., p. 234, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 130, p. 231, 1925—part, except Aleutian Islands (life hist.); Bailey, Condor, 27, p. 203, 1925—Wainwright, Alaska (specimens examined); Lincoln, l.c., 28, p. 153, figs. 39–41, 1926—part, Alaska (breeding range, except Aleutian Islands and north of Kotzebue Sound; migr. route); Conover, Auk, 43, p. 175, 1926—Hooper Bay, Alaska (nesting; plumage; weights); Peters, Bds. World, 1, p. 150, 1931—part, except Aleutian Islands; Moffitt, Condor, 41, p. 165, 1939—California (distr.).

Bernicla munroii Rothschild, Ann. Mag. Nat. Hist., (6), 10, p. 108, 1892—Kauai, Sandwich Islands (type in Tring Collection, now in the American Museum of Natural History, New York, examined; cf. Hartert, Nov. Zool., 32, p. 273, 1925).

Branta hutchinsii minima Aldrich, Wilson Bull., 58, pp. 98, 101, 1946—localities, except Attu (disc.; meas.).

Range.—Known to breed only on the Bering Sea coast of Alaska between the Yukon and the Kuskokwim rivers, but probably does so in suitable localities from Bering Strait to Bristol Bay and perhaps on Kotzebue Sound. Migrates down the Pacific coast of North America to winter in California, mainly in the Sacramento and San Joaquin valleys; accidental in the Hawaiian Islands (Kauai, March 16, 1891).¹

Field Museum Collection.—22: Alaska (Bethel, 3); British Columbia (Vancouver, 1); California (Sutter County, 1; Rio Vista, Solano County, 2; Ryer Island, Solano County, 2; Colusa, Colusa County, 13).

¹ While *minima* has been reported as breeding about Kotzebue Sound and specimens have been taken as far north as Wainwright, this species and typical *leucopareia* have often been confused. As far as known to us no actual breeding birds have been taken north of the Yukon. The three examples from Wainwright in the Colorado Museum on examination proved to be typical of *minima*. However, they were collected on July 5, were not with eggs or young, and may well have been wanderers from farther south, either birds of the preceding year or some whose nests had been broken up.

Conover Collection.—10: Alaska, Bering Sea (Hooper Bay, 1; Kashunuk Slough, 1; Igiak Bay, 6); California (Planada, Merced County, 2).

**Branta canadensis parvipes* (Cassin).¹ LESSER CANADA GOOSE.

Anser parvipes Cassin, Proc. Acad. Nat. Sci. Phila., 1852, p. 187—Vera Cruz, Mexico (type in the Academy of Natural Sciences of Philadelphia, examined; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 28).

Bernicla Barnstonii Ross,² Canad. Nat., 7, p. 152, 1862—Fort Simpson, Mackenzie River District (type in U. S. National Museum).

Branta hutchinsi (not *Anser hutchinsii* Richardson) Salvadori, Cat. Bds. Brit. Mus., 27, p. 114, 1895—part (bibliog.); Brooks, Ibis, 1926, p. 343, pl. 7—part, larger-sized, longer-billed examples.

(?)*Branta canadensis* (not *Anas canadensis* Linnaeus) Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 203, 1903—part, Mexico (Durango; Guanajuato; Guadalajara).

Branta canadensis hutchinsi Swarth, Univ. Calif. Publ. Zool., 12, p. 2, 1913—larger-sized, longer-billed examples; Grinnell, Bryant and Storer, Game Bds. Calif., p. 230, 1918—part, larger examples; Figgins, Auk, 37, p. 94, 1920 (disc.); Swarth, l.c., 37, p. 94, 1920 (disc.); Bent, Bull. U. S. Nat. Mus., 130, p. 223, 1925—part, Baffin Land, Southampton Island (inland nesting examples), and interior northern North America.

Branta canadensis hutchinsii Peters, Bds. World, 1, p. 150, 1931—part, interior northern North America east to Baffin Land and Southampton Island.

Branta canadensis leucopareia (not *Anser leucopareius* Brandt) Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 34, fig. 1, No. 4496 (bill), 1931—

¹*Branta canadensis parvipes* (Cassin) is a smaller edition of the large races of *canadensis* breeding in the more southern part of the country. Like theirs, the bill is long in proportion to its height. The type is similar to *B. l. leucopareia* in coloration, and its measurements are: culmen 40 (height 20); tarsus 71; middle toe without claw 62, with claw 72 mm. The wings unfortunately have been cut, but in the original description their length is given as 15 inches (381 mm.), although how this measurement was obtained is not stated. Eleven other adult specimens have been examined. They varied greatly in both dimensions and coloration. Wings ranged from 420–430 (males), 415–441 (females); culmens 37–45 and 40–47 mm., respectively. Birds with the longest culmens and shortest wings were from Southampton Island (male, wing 420, culmen 45; female, wing 415, culmen 47 mm.). The coloration of the breast varied from as dark as *leucopareia* (Alaska; Vancouver; Nebraska; Kansas; Southampton Island) to as light as the lightest *moffitti* (California; Texas).

This form, as constituted here, is rather unsatisfactory. The specimens available from the breeding grounds are so few, however, and the variation in the migrants is so great that it is impossible to get a clear picture of the Canadian Geese that nest in the interior of North America from about the 60th parallel north and from central Alaska east to Hudson Bay. When our breeding material is more adequate the Southampton Island birds may prove to be different from those breeding farther west.

Additional material examined.—Mackenzie: north shore Great Bear Lake, 2 (downy).—Southampton Island: Koodlootok River, 2.—Mexico: Vera Cruz, 1 (the type).

²J. W. Aldrich states in a letter that the measurements of the type are: wing 438, exposed culmen 41 mm.

part, except Barter Island, Alaska and Walker Bay, Victoria Island; Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 31, 1932—Southampton Island (nesting habits); Moffitt, Condor, 41, p. 164, 1939—part, California; Bray, Auk, 60, p. 512 (in text), 1943—Southampton Island (nesting).

Branta canadensis parvipes Aldrich, Wilson Bull., 58, pp. 98, 101, 1946 (meas., localities, disc.).

Range.—Breeds throughout the interior of northern North America probably from central Alaska east to Hudson Bay and south to northern British Columbia and Manitoba where it intergrades with *B. c. moffitti* and *B. c. interior*. Known to breed also on Baffin and Southampton Islands. Migrates mostly west of the Mississippi. Winters in the southern United States from California to Louisiana and south to Mexico.

Field Museum Collection.—6: Alaska (Bethel, 1); British Columbia (Vancouver, 1); California (Lassen County, 1; Colusa County, 1); Texas (Padre Island, Cameron County, 1); Kansas (Blue Rapids, Marshall County, 1).

Conover Collection.—3: California (Planada, Merced County, 2); Nebraska (Dad's Lake, Cherry County, 1).

****Branta canadensis moffitti* Aldrich.¹ GREAT BASIN CANADA GOOSE.**

Branta canadensis moffitti Aldrich, Wilson Bull., 58, p. 96, June, 1946—Blue Lake, near Coulee City, Washington (type in U. S. National Museum, Fish and Wildlife Service Collection).

Branta canadensis (not *Anas canadensis* Linnaeus) Salvadori, Cat. Bds. Brit. Mus., 27, p. 112, 1895—part (full bibliog.).

Branta canadensis canadensis Swarth, Univ. Calif. Publ. Zool., 12, p. 2, 1913—part, California specimens; Grinnell, Bryant and Storer, Game Bds. Calif., p. 222, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 130, p. 204, 1925—part, from Saskatchewan and the Dakotas west (life hist.); Brooks, Ibis, 1926, p. 344—part, from Saskatchewan and the Dakotas west; Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 31, 1931—part, British Columbia, Alberta and Saskatchewan; Peters, Bds. World, 1, p. 150, 1931—part, from Saskatchewan and the Dakotas west;

¹*Branta canadensis moffitti* Aldrich: Under parts lighter than in *B. c. interior* but not as light as in *B. c. canadensis*. Upper parts slightly lighter than either *interior* or the typical race *canadensis* and lacking the conspicuous light-colored area on the mantle found in the latter form. Size about the same but very variable.

This is a rather unsatisfactory race, the distinguishing characters standing out fairly clearly only in the specimens from the most westerly part of its range as given (p. 304). The series in Field Museum shows that as one goes west from the Mississippi Valley these geese gradually get lighter on the breast, but that there is great individual variation and that even the California birds are darker than typical *canadensis* from the east coast of North America.

Moffitt, Condor, 33, p. 229, 1931—northeastern California (estimate of nesting pairs); idem, l.c., 41, p. 95, 1939—California (nesting; range).

Range.—Breeds from central British Columbia (except the coastal area and islands), central Alberta (Tofield) and Saskatchewan south to northeastern California, northern Utah (Bear River), northern Colorado and South Dakota (formerly to northeastern Arkansas). Winters from southern British Columbia, northwestern Wyoming (Yellowstone Park) and Arkansas south to California and the Gulf coast.

Field Museum Collection.—7: Washington (Kiona, Benton County, 1); California (Colusa, Colusa County, 1; Bridgeport, Douglas County, 1); Nevada (Washoe Valley, Washoe County, 1); Utah (Brigham, Box Elder County, 1); North Dakota (Towner County, 1; Devil's Lake, Ramsey County, 1).

Conover Collection.—11: Alberta (Beaverhill Lake, Tofield, 1); California (Planada, Merced County, 2); Utah (Brigham, Box Elder County, 6); North Dakota (Grafton, Walsh County, 1); Nebraska (Dad's Lake, Cherry County, 1).

****Branta canadensis interior* Todd.¹ TODD'S CANADA GOOSE.**

Branta canadensis interior Todd, Auk, 55, p. 662, Oct. 4, 1938—Port Harrison, east coast Hudson Bay, northern Quebec (type in Carnegie Museum, Pittsburgh); Aldrich, Wilson Bull., 58, p. 98, 1946 (meas., disc.).

(?)*Bernicla leucolaema* Murray,² Edinb. New Phil. Journ., 9, p. 226, pl. 4, fig. 1, 1859—Hudson Bay (location of type unrecorded).

Branta canadensis (not *Anas canadensis* Linnaeus) Salvadori, Cat. Bds. Brit. Mus., 27, p. 112, 1895—part, except Labrador, Newfoundland, New England and western half of North America; Bent, Bull. U. S. Nat. Mus., 130, p. 204, 1925—part, except Labrador, Newfoundland, New England and western half of North America (life hist.); Brooks, Ibis, 1926, p. 344—part, dark examples (dist. chars., not range); Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 31, 1931—part, Baffin Island, Manitoba, and James Bay; Peters, Bds. World, 1, p. 150, 1931—part, except Labrador,

¹*Branta canadensis interior* Todd: Differs from the typical race by having darker under parts, especially the chest and breast; and by lacking the conspicuous light-colored area on the mantle adjoining the black of the neck. From *B. c. moffitti* it differs by having a darker breast.

²*Bernicla leucolaema* Murray seems to be based on either an aberrant specimen of *Branta canadensis interior* or a hybrid. Dimensions are given as culmen 2.5, wing 19¼, tarsus 3, and middle toe 1½ inches. It is stated to differ from what the describer considers to be *B. canadensis* by having a narrow white border along the base of the upper mandible and more white on the lower eyelid; the space between the rami of the lower mandible white instead of black; the white "cravat" extended downward along the under side of the neck; considerably paler coloring both above and below; and somewhat larger bill. Nothing is known of the present whereabouts of the type.

Newfoundland, New England and western half of North America; Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 30, 1932—Southampton Island (nesting); Soper, Auk, 63, p. 16, 1946—south coast Baffin Island (nesting).

Range.—Breeds from northern Manitoba, Baffin Island and the east side of Hudson Bay south to northern Minnesota and James Bay. Winters from southern Illinois and Chesapeake Bay south to Florida and Louisiana.

Field Museum Collection.—13: Manitoba (Winnipeg, 1); Minnesota (Thief Lake, Marshall County, 1; Owatonna, Steele County, 1); Indiana (Bluffton, Wells County, 1); New York (Rockaway Beach, Queens County, 1); North Carolina (Pea Island, Dare County, 7); Georgia (Roswell, 1).

Conover Collection.—2: North Carolina (Seagull, Currituck County, 2).

**Branta canadensis canadensis* (Linnaeus).¹ EASTERN CANADA GOOSE.

Anas canadensis Linnaeus, Syst. Nat., 10th ed., 1, p. 123, 1758—based on "Canada Goose" Rains, Edwards, etc.; Canada=City of Quebec as suggested by Todd (Auk, 55, p. 661, 1938).

Branta canadensis Salvadori, Cat. Bds. Brit. Mus., 27, p. 112, 1895—part, Labrador, Newfoundland, and Gulf of St. Lawrence (full bibliog.).

Branta canadensis canadensis Bent, Bull. U. S. Nat. Mus., 130, p. 204, 1925—part, Labrador, Newfoundland, and Gulf of St. Lawrence (life hist.); Brooks, Ibis, 1926, p. 344—part, Labrador and Nova Scotia (dist. chars.; range); Lewis, Canad. Field Nat., 44, p. 109, 1930—Bradore Bay, Labrador (breeding); Peters, Bds. World, 1, p. 150, 1931—part, Labrador, Newfoundland, and Atlantic coast; Aldrich, Wilson Bull., 58, pp. 10, 98, 1946 (meas., localities, disc.).

Range.—Breeds in Newfoundland and Labrador east of the Height of Land and on the Magdalen Islands. Winters on the Atlantic coast from Nova Scotia south to Florida.

Field Museum Collection.—6: Quebec (Chateau Rann Sec, 1; Magdalen Islands, 1); Connecticut (Clinton, Middlesex County, 1); North Carolina (Pea Island, Dare County, 3).

Conover Collection.—1: North Carolina (Seagull, Currituck County, 1).

¹*Branta canadensis canadensis* (Linnaeus) can be separated from all the other races by the conspicuous light area on the mantle adjoining the black of the neck. It has an even lighter breast than *moffitti*, some examples being almost a dull white. Wings of specimens examined: 465–495 mm. (males), and 455–465 (females); culmens, 53–59 and 51–54, respectively.

****Branta hutchinsii* (Richardson).¹ RICHARDSON'S GOOSE.**

Anser Hutchinsii Richardson, in Swainson and Richardson, Fauna Bor. Amer., 2, p. 470, pub. Feb. 1832—Melville Peninsula (type, originally in the Edinburgh Museum, probably lost).

Branta hutchinsii Salvadori, Cat. Bds. Brit. Mus., 27, p. 114, 1895—part, smaller light-breasted examples; Taverner, Ann. Rep. Nat. Mus. Canada for 1929, p. 37, 1931 (dist. chars.; range).

Branta canadensis (not *Anas canadensis* Linnaeus) (?)Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 203, 1903—part, Mexico (Guanajuato); Soper, Bull. Nat. Mus. Canada, No. 53, p. 95, 1928—part, southern Baffin Island (male with young only, wing 14.8 in., culmen 1.4 in.).

Branta canadensis hutchinsii Bent, Bull. U. S. Nat. Mus., 130, p. 223, 1925—part, coastal nesting examples on Baffin and Southampton Islands; Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 36, pl. 22, fig. 1, 1932—Southampton Island (nesting); Bray, Auk, 60, p. 509, 1943—Bay of God's Mercy, Southampton Island (nesting); Soper, l.c., 63, p. 17, 1946—southwest coast Baffin Island (nesting).

Branta canadensis hutchinsii Peters, Bds. World, 1, p. 150, 1931—part.

Branta hutchinsii hutchinsii Aldrich, Wilson Bull., 58, pp. 98, 101, 1946 (meas., localities, disc.).

Range.—Breeds on the coasts of the eastern Arctic (Melville Peninsula), Baffin and Southampton Islands. Migrates through the interior, mostly west of the Mississippi and east of the Rocky Mountains. Winters in Texas and Mexico.

Field Museum Collection.—7: North Dakota (Lac aux Morts, Ramsey County, 1; Towner County, 4²); Kansas (Burlington, Coffey County, 1); Texas (Padre Island, Cameron County, 1).

¹*Branta hutchinsii* (Richardson) is a small goose slightly larger than *Branta minima* from which it differs by its much lighter buffy gray breast. Wing, 370–405; culmen, 32–37; tarsus, 61–71; middle toe without claw, 52–58 mm.

This form has been kept as a separate species because on Southampton Island it has been found nesting in close proximity to *Branta canadensis parripes*, from which it differs by its much smaller size, lighter breast and shorter and relatively higher bill.

The nesting habits of the two also differ widely, as this form according to both MacFarlane and Sutton makes its nest in a hollow in the ground on the small islands found in the coastal lakes, while the Lesser Canada Goose lays its eggs on a built-up platform located some distance back from the coast.

It has been suggested that *hutchinsii* and *minima* are conspecific, but this does not seem reasonable because of the great differences in their downy young. The goslings of the eastern bird are similar to those of *B. c. hoffitti*, being bright yellow on the forehead, sides of face (including the lores) and under parts, whereas the young of the Cackling Goose have these parts a dull, yellowish white and the region about the eyes and the lores are dusky. On the upper parts the downies of *hutchinsii* are less brownish, more olivaceous than those of *minima*.

Additional material examined.—Southampton Island: 5 adults, 2 downies.

² One of these specimens is very large for this species, having a wing of 425 and a bill of 38 mm. However, in color, shape, and proportion of bill it is *B. hutchinsii* and not *B. c. parripes*.

Genus CHLOEPHAGA Eyton

- Chloëphaga* Eyton, Monog. Anat., p. 13, 1838—type, by orig. desig., *Anas magellanica* Gmelin=*Anas picta* Gmelin.
- Taenidiestes* Reichenbach, Av. Syst. Nat., p. ix, 1852—type, by monotypy, *Anas antarctica* Gmelin=*Anas hybrida* Molina.
- Oressochen* Bannister, Proc. Acad. Nat. Sci. Phila., p. 131, 1870—type, by monotypy, *Bernicla melanoptera* Gay=*Anser melanopterus* Eyton.
- Chloetrophus* Bannister, Proc. Acad. Nat. Sci. Phila., p. 131, 1870—type, by subs. desig. (Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 361), *Chloëphaga poliocephala* Slater.
- Chloophaga* Sundevall, Meth. Nat. Av. Disp. Tent., p. 145, 1872—emendation of *Chloëphaga* Eyton.
- Taenidiesthes* Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 342, 1890—emendation of *Taenidiestes* Reichenbach.

**Chloëphaga melanoptera* (Eyton). ANDEAN GOOSE.

- Anser melanopterus* Eyton, Monog. Anat., p. 93, 1838—Lake Titicaca (cotype in British Museum); Darwin, Zool. Beagle, 3, p. 134, pl. 50, 1841—Lake Titicaca, Bolivia.
- Anser montana* (not of Gmelin, 1789) Tschudi, Arch. Naturg., 9, (1), p. 390, 1843—Peru (type in Neuchâtel Museum).
- Anser anticola* Tschudi, Arch. Naturg., 10, (1), p. 315, 1844—substitute name for *A. montana* Tschudi, preoccupied.
- Bernicla melanoptera* Taczanowski, Orn. Per., 3, p. 467, 1886—high mountains of Peru; Slater and Hudson, Arg. Orn., 2, p. 122, 1889—Rio Blanco, San Juan, Argentina; Bullock, Rev. Chil. Hist. Nat., 33, p. 205, 1929—Angol, Malleco.
- Chloëphaga melanoptera* Salvadori, Cat. Bds. Brit. Mus., 27, p. 129, 1895—Peru (Pitumarca and Lake Titicaca), Chile (Valparaíso; Cueva Negra, Lake Huasco and Sacaya, Tarapacá; Prov. Colchagua), and Pampas Argentinas; Lane, Ibis, 1897, p. 190—Cueva Negra, Huasco, and Sacaya, Tarapacá (breeding habits); Menegaux, Rev. Franç. d'Orn., 1, p. [137], 1909—Chililaya, Lake Titicaca; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 416, 1912 (not taken); Chubb, Ibis, 1919, p. 275—north of Marca, Ancachs, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 55, 1921—Occobamba Pass, Peru; Peters, Bds. World, 1, p. 151, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 315, 1932 (range in Chile); Casares, El Hornero, 5, p. 291, pl. 3, fig. 9, distr. map, 1934 (range; habits); Morrison, Ibis, 1939, p. 648—Lake Junfín, Peru (breeding dates).

Range.—Highlands of Peru (north to Ancachs and Junín) and Bolivia, south to Malleco, Chile, and Tunuyán, Argentina. In winter it descends to the plains at the foot of the Andes in Chile and Argentina.

Field Museum Collection.—3: Peru (Cailloma, Arequipa, 1); Bolivia (Esperanza, La Paz, 2).

Conover Collection.—8: Bolivia (Esperanza, La Paz, 2; Lago del Cerro Juna, Cochabamba, 3); Argentina (Laguna Blanca, Catamarca, 1; Tunuyán, Mendoza, 2).

**Chloëphaga hybrida hybrida* (Molina). KELP GOOSE.

Anas Hybrida Molina, Sagg. Stor. Nat. Chile, pp. 241, 344, 1782—Chiloé Island.

Anas magellanica Sparrman, Mus. Carls., fasc. 2, pl. 37 (female), 1787—no locality given.

Anas antarctica Gmelin, Syst. Nat., 1, (2), p. 505, 1789—Tierra del Fuego.

Bernicla antarctica Darwin, Zool. Beagle, 3, p. 134, 1841—part, Tierra del Fuego and south coast of Chile, north to Chiloé.

Anas ganta Forster, Descr. Anim. (ed. Lichtenstein), p. 336, 1844—Tierra del Fuego, Insula Novi Anni, and Insula Falklandicus.

Bernicla (Chloëphaga) antarctica Oustalet, Miss. Sci. Cap Horn, 6, p. B. 195, 1891—Tierra del Fuego (Bahía Orange, Skotchwell Bay), Hermit, Burnt, and Horn Islands.

Chloëphaga hybrida Salvadori, Cat. Bds. Brit. Mus., 27, p. 130, 1895—part, spec. a–q, Port Henry, Hermit Island, Cape Horn, Penguin Island, Straits of Magellan; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 418, 1912 (general account); Casares, El Hornero, 5, p. 302, pl. 3, figs. 7–8, distr. map, 1934—part, except Falkland Islands (range; habits); Castellanos, l.c., 6, p. 31, 1935—Isla de los Estados, Tierra del Fuego.

Chloëphaga antarctica Crawshay, Bds. Tierra del Fuego, p. 93, 1907—Whiteside Channel, Tierra del Fuego.

Chloëphaga hybrida hybrida Peters, Bds. World, 1, p. 152, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 316, 1932—Rio Inio, Chiloé Island (juv. plumage); Reynolds, Ibis, 1935, p. 83—Cape Horn Islands; Murphy, Ocean. Bds. S. Amer., 2, p. 942, pl. 59, 1936—Gable Island, Beagle Channel, Straits of Magellan, London Island, Bertrand Island (life hist.).

Range.—Coast of Chile from Corral south to the Straits of Magellan and Tierra del Fuego (Whiteside Channel).

Conover Collection.—12: Chile (Rio Inio, Chiloé Island, 10; Hermit Island, Cape Horn, 2).

Chloëphaga hybrida malvinarum Phillips.¹ FALKLAND ISLAND
KELP GOOSE.

Chloëphaga hybrida malvinarum Phillips, Auk, 33, p. 423, 1916—Port Stephens, West Falkland, Falkland Islands (type in Museum of Comparative Zoology,

¹*Chloëphaga hybrida malvinarum* Phillips is said to differ from the typical race by its larger bill and longer wing, tarsus, and middle toe. The pileum of the females is paler and more grayish, but according to the describer this color may be due to wear.

Cambridge, Mass.); Brooks, Bull. Mus. Comp. Zool., 61, p. 152, 1917—Falkland Islands; Bennett, Ibis, 1926, p. 325—Falkland Islands; Peters, Bds. World, 1, p. 152, 1931 (range); Murphy, Ocean. Bds. S. Amer., 2, p. 945, pl. 59, 1936 (life hist.).

Bernicla antarctica Darwin, Zool. Beagle, 3, p. 134, 1841—part, Falkland Islands.

Chloëphaga hybrida (not *Anas hybrida* Molina) Salvadori, Cat. Bds. Brit. Mus., 27, p. 130, 1895—part, spec. r-w, San Salvador Bay and Berkeley Sound, Falkland Islands; Casares, El Hornero, 5, p. 302, pl. 3, figs. 7-8, distr. map, 1934—part, Falkland Islands.

Range.—Falkland Islands.

***Chloëphaga picta picta** (Gmelin). UPLAND GOOSE.

Anas picta Gmelin, Syst. Nat., 1, (2), p. 504, 1789—based on "Painted Duck" Latham, Gen. Syn. Bds., 3, (2), p. 443, "Staaten-Land"=Staten Island (descr. of male with plain white under parts).

Anas magellanica (not of Sparrman, 1787) Gmelin, Syst. Nat., 1, (2), p. 505, 1789—based on "L'Oie des Terres Magellaniques" Buffon, Hist. Nat. Ois., 9, p. 68, and Daubenton, Pl. Enl., pl. 1006.

Anas leucoptera Gmelin, Syst. Nat., 1, (2), p. 505, 1789—based on "L'Oie des Iles Malouines" Buffon, Hist. Nat. Ois., 9, p. 69, and "White-winged Antarctic Goose" Brown, New Illustr. Zool., pl. 40, etc.; Falkland Islands.

Anser inornatus King, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, p. 15, Jan. 6, 1831—Straits of Magellan (type in British Museum).

Chloëphaga magellanica Darwin, Zool. Beagle, 3, p. 134, 1841—Tierra del Fuego and the Falkland Islands; Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 53, 1881—Laguna de Epecuen (Carhué), the Rio Colorado and Rio Negro; Salvadori, Cat. Bds. Brit. Mus., 27, p. 133, 1895—Chiloé Island, Patagonia (Chubut), San Salvador Bay and Berkeley Sound, Falkland Islands; Blaauw, Ibis, 1904, p. 69 (in text) (plumages of young); Crawshay, Bds. Tierra del Fuego, p. 94, 1907—Tierra del Fuego; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 423, 1912—Coy Inlet and Rio Coy, Patagonia (disc.); Blaauw, Ibis, 1916, p. 483—Tierra del Fuego (rare); Murphy, Auk, 33, p. 276, 1916—South Georgia (introduced).

Bernicla (*Chloëphaga*) *magellanica* Oustalet, Miss. Sci. Cap Horn, 6, p. B. 187, 1891—Tierra del Fuego (Bahía Orange, Edwards Bay) and Elizabeth Island, Straits of Magellan (variation).

Chloëphaga inornata Blaauw, Ibis, 1920, p. 497, pl. 13 (type of *inornatus* King=unbarred form).

Chloëphaga leucoptera Peters, Bull. Mus. Comp. Zool., 65, p. 300, 1923—Huanuluan, Rio Negro (nesting); Wetmore, Univ. Calif. Pub. Zool., 24, p. 415, 1926—Valcheta and Nahuelniyeu, Rio Negro (disc.); Mathews, Discovery Rep., 1, p. 584, 1929—South Georgia (introduced from Falkland Islands); Peters, Bds. World, 1, p. 151, 1931 (range); Casares, El Hornero, 5, p. 295, pl. 3, figs. 1-2, distr. map, 1934 (range; habits).

Chloëphaga picta Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 319, 1932—part, Casa Richards, Rio Nirehuau, Llanquihue, Chile (disc.).

Range.—Southern Argentina¹ from the Rio Negro south to Tierra del Fuego; extreme eastern (Rio Nirehuau), central (Nuble) and southern Chile; the Falkland Islands. Introduced in South Georgia Island.

Conover Collection.—10: Chile (Casa Richards, Rio Nirehuau, Aysen, 8); Argentina (Lago Argentina, Santa Cruz, 2).

***Chloëphaga picta dispar** (Philippi and Landbeck).² BARRED UPLAND GOOSE.

Bernicla dispar Philippi and Landbeck, Anal. Univ. Chile, 21, p. 431, 1862—Chile (type in the National Museum of Natural History, Santiago, Chile); *idem*, Arch. Naturg., 29, (1), p. 190, 1863—Laguna de Cauquenes, Colchagua, Chile; Selater and Hudson, Arg. Orn., 2, p. 123, 1889—southern Buenos Aires Province.

Chloëphaga inornata (not *Anser inornatus* King) Salvadori, Cat. Bds. Brit. Mus., 27, p. 134, 1895—Santiago, Chile; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 432, 1912—Coy Inlet, Patagonia (disc.); Blaauw, Ibis, 1916, p. 482—Porvenir, Tierra del Fuego.

Chloëphaga dispar Blaauw, Ibis, 1904, p. 70 (in text) (plumages of young); Crawshay, Bds. Tierra del Fuego, p. 95, col. pl., 1907—Cheena Creek Settlement, Tierra del Fuego (nesting); Peters, Bds. World, 1, p. 151, 1931 (range); Casares, El Hornero, 5, p. 298, pl. 3, figs. 3–4, distr. map, 1934 (range; habits).

Chloëphaga picta (not *Anas picta* Gmelin) Reynolds, Ibis, 1935, p. 84—Deceit and Wollaston Islands, Cape Horn; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 319, 1932 (in part).

Range.—From southern Argentina (Rivadavia, Chubut) and central Chile (Colchagua) south to Tierra del Fuego.

¹ In Patagonia at least it would seem that this form is more of an inland bird, with *dispar* the prevailing bird nearer the coast.

² *Chloëphaga picta dispar* (Philippi and Landbeck): From our present knowledge it is impossible to decide whether the so-called Barred Upland Goose is a color phase, a subspecies, or perhaps even a full species. However, it would seem that some of the confusion is due to a lack of understanding concerning the plumages of immature males. An examination of the specimens in Field Museum shows that dark rumps and lack of white lateral tail feathers indicate immaturity. In typical *picta* young males have the flank bars duller, narrower, and extending farther onto the sides of the abdomen while the upper chest is very scantily and narrowly barred with dull brown. In *dispar* immatures have the barring of the under parts narrower and extending farther down toward the vent.

It could be possible that *dispar* is a full species having somewhat the same relationship with *picta* that *Chen caerulescens* has with *Chen hyperborea*, where in certain localities both are found flocking together and hybridization is known to occur.

Field Museum Collection.—4: Argentina (Cerro Rivadavia, Chubut, 4).

Conover Collection.—9: Argentina (Rio Gallegos, Santa Cruz, 2; Bella Vista, Santa Cruz, 4; Estancia Viamonte, Tierra del Fuego, 1); Chile (Rio Ciaiike, Magallanes, 1; Porvenir, Tierra del Fuego, 1).

**Chloëphaga poliocephala* Sclater. ASHY-HEADED GOOSE.

Chloëphaga poliocephala (Gray MS.) Sclater, Proc. Zool. Soc. Lond. 25, p. 128, 1857—based on *Bernicla inornata* (not of King) Gray and Mitchell, Gen. Bds., 3, pl. 165, 1844 (type, in the British Museum, from Chiloé Island); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 53, 1881—Epecuen, Rio Colorado and Rio Negro; Salvadori, Cat. Bds. Brit. Mus., 27, p. 137, 1895—Chiloé Island, Rio Negro to Straits of Magellan, Falkland Islands; Crawshay, Bds. Tierra del Fuego, p. 101, 1907—Useless Bay Settlement, Tierra del Fuego; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 439, 1912—Pacific slope of Cordillera in Patagonia; Blaauw, Ibis, 1916, p. 484—Chiloé Island; Bennett, l.c., 1926, p. 326—Falkland Islands; Wetmore, Univ. Calif. Pub. Zool., 24, p. 415, 1926—Rio Chubut and Leleque, Chubut; Peters, Bds. World, 1, p. 151, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 318, 1932—Cautin (Lake Gualletué), Chiloé Island (Rio Inio) and Llanquihue (Casa Richards, Rio Nirehuau), Chile; Casares, El Hornero, 5, p. 301, pl. 3, fig. 6, distr. map, 1934 (range; habits); Reynolds, l.c., 5, p. 350, 1934—Tierra del Fuego; idem, Ibis, 1935, p. 84—Grévy, Deceit, Herschel, and Barnevelt Islands.

Bernicla chiloensis Philippi and Landbeck, Anal. Univ. Chile, 21, p. 434, 1862—Chiloé Island and Valdivia (type in the National Museum of Natural History, Santiago, Chile); idem, Arch. Naturg., 29, (1), p. 195, 1863 (German version of orig. descr.).

Bernicla poliocephala Sclater and Hudson, Arg. Orn., 2, p. 124, 1889—Rio Negro and pampas of Buenos Aires.

Bernicla (Chloëphaga) poliocephala Oustalet, Miss. Sci. Cap Horn, 6, p. B. 192, 1891—Tierra del Fuego (Bahía Orange, Ushuaia, Picton Island, etc.).

Range.—From the Rio Negro in southern Argentina and Cautin (Lake Gualletué) in Chile, south to the Straits of Magellan and Tierra del Fuego; Falkland Islands.

Field Museum Collection.—6: Chile (Lake Gualletué, Cautin, 2; Cucao, Chiloé Island, 3); Argentina (Lago Yerwin, Tierra del Fuego, 1).

Conover Collection.—13: Chile (Lake Todos Santos, Peulla, 2; Rio Inio, Chiloé Island, 1; Casa Richards, Rio Nirehuau, Aysen, 6); Argentina (Lago Argentina, Santa Cruz, 2; Lago Yerwin, Tierra del Fuego, 2).

***Chloëphaga rubidiceps** Sclater. RUDDY-HEADED GOOSE.

Chloëphaga rubidiceps Sclater, Proc. Zool. Soc. Lond., 28, p. 387, pl. 173, 1860—Falkland Islands (type in the British Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 136, 1895—Falkland Islands; Crawshay, Bds. of Tierra del Fuego, p. 99, 1907—Useless Bay Settlement and San Sebastian Settlement, Tierra del Fuego (nesting); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 229, 1910—Isla Malvinas, Patagonia; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 437, 1912 (not taken); Brooks, Bull. Mus. Comp. Zool., 61, p. 154, 1917—Darwin, Speadwell Island, San Carlos and Port Stephens, Falkland Islands; Bennett, Ibis, 1926, p. 326—Falkland Islands; Peters, Bds. World, 1, p. 151, 1931 (range); Marelli, El Hornero, 5, p. 194, 1933—Bahía Blanca; Casares, l.c., p. 301, pl. 3, fig. 5, distr. map, 1934 (range; habits).

Chloëphaga rubiniceps (errore) Eyton, Syn. Anat., p. 26, 1869—Falkland Islands.

Range.—Falkland Islands and Tierra del Fuego. North occasionally in winter to the Province of Buenos Aires (Rio Salado), Argentina.

Conover Collection.—1: Argentina (Province of Buenos Aires, 1).

Subfamily DENDROCYGNINAE. Tree Ducks

Genus DENDROCYGNA Swainson

Dendrocygna Swainson, Classif. Bds., 2, p. 365, 1837—type, by subs. desig. (Eyton, Monog. Anat., p. 28, 1838), *Anas arcuata* Horsfield.

Leptotarsis (Gould MS.) Eyton, Monog. Anat., p. 29, 1838—type, by monotypy, *Leptotarsis eytoni* Eyton.

Dendrocygna Sclater, Proc. Zool. Soc. Lond., 1880, p. 508—emendation.

Ctenanas Mathews, Austr. Av. Rec., 2, p. 90, 1915 (new name for *Leptotarsis* Eyton, preoccupied by *Leptotarsus* Guérin).

***Dendrocygna bicolor** (Vieillot). FULVOUS TREE DUCK.

Anas fulva (not of Meuschen, 1787) Gmelin, Syst. Nat., 1, (2), p. 530, 1789—based on “Quapachcanauhtli” Hernandez, Hist. Av. Nov. Hisp., p. 52; Mexico.

Anas bicolor Vieillot, Nouv. Dict. Hist. Nat., nouv. ed., 5, p. 136, 1816—based on “Pato roxo y negro” Azara, No. 436, Paraguay and Buenos Aires.

Anas virgata Wied, Reise Bras., 1, p. 322 (footnote), 1820—mouth of Rio Obu, Rio Grande de Belmonte, Minaes Geraes, Brazil (cotypes in the American Museum of Natural History, New York).

Dendrocygna fulva Taczanowski, Orn. Per., 3, p. 470, 1886—Moyobamba (ex Raimondi); Sclater and Hudson, Arg. Orn., 2, p. 126, 1889—Rio Plata and Buenos Aires; Salvadori, Cat. Bds. Brit. Mus., 27, p. 149, 1895 (full bibliog.); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—Rio Grande do Sul; Barnhart, Condor, 3, p. 67, 1901 (nesting in Cali-

fornia); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán (ex Burmeister); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 204, 1903—Mexico (Mayo and Yaqui rivers, Sonora; Mazatlán, Sinaloa; San Blas, Tepic; El Salto, San Luis Potosí; City of Mexico); Hartert and Venturi, Nov. Zool., 16, p. 242, 1909—Est. San Martino Monte and Barracas al Sud, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 230, 1910—Salta (Orán), Chaco, Buenos Aires (Barracas al Sud); Marelli, El Hornero, 1, p. 76, 1918—Curuzú Cuatiá, Corrientes.

Dendrocygna bicolor Chapman, Bull. Amer. Mus. Nat. Hist., 36, p. 233, 1917—Cali and La Herrera, Colombia; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 246, 1918 (life hist. California); Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 45, 1922—Lagunillas, Zulia, Venezuela; Phillips, Nat. Hist. Ducks, 1, p. 128, pls. 12–13, distr. map 12, 1922 (monog.); Dickey and van Rossem, Condor, 25, p. 39, 1923—Buena Vista Lake, California (nesting); Bent, Bull. U. S. Nat. Mus., 130, p. 272, 1925 (life hist.); Chapman, Bull. Amer. Mus. Nat. Hist., 55, p. 210, 1926—Chone, Ecuador; Phillips, Nat. Hist. Ducks, 4, p. 308, 1926 (nesting habits; juv. plumage); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 321, 1932—accidental in provinces of O'Higgins and Colchagua, Chile.

Dendrocygna bicolor helva Wetmore and Peters,¹ Proc. Biol. Soc. Wash., 35, p. 42, 1922—Unlucky Lake, San Diego County, California (type in the United States National Museum); Phillips, Nat. Hist. Ducks, 1, p. 129 (in text), 1922 (not valid); Peters, Bds. World, 1, p. 153, 1931 (range); Carroll, Auk, 49, p. 343, 1932 (range in Texas); Musselman, l.c., 52, p. 444, 1935—Marion County, Missouri; Hasbrouck, l.c., 61, p. 305, 1944—Louisiana (spring abundance); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 44, 1945—Sonora (Colorado Delta; Guaymas; Tobarí Bay).

Dendrocygna bicolor bicolor Wetmore, Bull. U. S. Nat. Mus., 133, p. 71, 1926—Lavelle, Buenos Aires; Naumburg, Bull. Amer. Mus. Nat. Hist., 60, p. 98, 1930—Agua Blanca de Corumbá, Matto Grosso; Peters, Bds. World, 1, p. 153, 1931 (range); Casares, El Hornero, 6, p. 5, pl. 1, fig. 2, distr. map, 1935 (range; habits); Pinto, Rev. Mus. Paul., 22, p. 49, 1938—Pará and São Paulo (Ypiranga).

Dendrocygna bicolor fulva Lynch, Auk, 60, p. 100, 1943—Louisiana (nesting; habits).

¹ *Dendrocygna bicolor helva* Wetmore and Peters is said to differ from the typical race by the lighter and brighter color of the under surface, paler crown, and smaller, narrower bill. The series in Field Museum does not show any consistent differences in coloration between birds from the United States and those from South America. Friedmann (Condor, 49, p. 193, 1947) has also upheld the distinctness of this race, but solely on the basis of its smaller and narrower bill, which he says is always more than 20 mm. in width in the typical form and less than that in *helva*. The specimens in Field Museum do not bear out his statement. It is true that all the North American specimens have rather narrow bills (one male from Texas measures 20 mm.), but eight (Colombia, 3 males, one female; Venezuela, one female; Paraguay, 3 females) out of twelve of our South American specimens also have bills under his minimum measurement for the typical race. In addition, one of two males from Paraguay has a bill which just reaches that figure. The race, therefore, seems unworthy of recognition.

Range.—Found in the Americas in three separate regions. In the northernmost, breeds locally from southern Louisiana (Lake Catharine) and southeastern Texas west to southern California (Merced County and Buena Vista Lake), north to central Nevada (Washoe Lake), and south to central Mexico (Jalisco and Valley of Mexico). In winter wanders northward in California to the Sacramento Valley (Marysville), Marin County (Inverness), and southward to Guerrero and Chiapas, Mexico. The other two regions are in South America, where this duck is found from Colombia (Cali and La Herrera) east to the Guianas and Trinidad and south to Peru (Moyobamba and Lake Junín); and from Pará, Brazil, southward through Paraguay and the Paraguayan Chaco to northwestern Argentina (Salta and Tucumán) and south to the province of Buenos Aires. Accidental in Cuba¹ and central Chile (O'Higgins and Colchagua). Also inhabits Africa and India.

Field Museum Collection.—15: California (Madero County, 1; San Diego County, 2); Texas (Brownsville, 8); Louisiana (Calcasieu Parish, 2); Venezuela (Rio Aurare, Zulia, 1); British Guiana (Belfield, 1).

Conover Collection.—17: California (Buena Vista Lake, Kern County, 6); Texas (Brownsville, 1); Colombia (Santander, Cauca, 1; Jamundi, Valle, 3); Venezuela (Lagunillas, Zulia, 1); Paraguay (Chaco, 200 km. west of Puerto Casado, 5).

****Dendrocygna autumnalis autumnalis* (Linnaeus).² BLACK-BELLIED TREE DUCK.**

Anas autumnalis Linnaeus, Syst. Nat., 10th ed., 1, p. 127, 1758—based on "Red-billed Whistling Duck" Edwards, Nat. Hist. Bds., 4, p. 194, pl. 194, 1751—West Indies.

¹ Bond (in litt.).

² According to Friedmann (Condor, 49, p. 189, 1947), the name *Anas autumnalis* Linnaeus cannot be used for the form of Black-bellied Tree Duck found in southern Texas and Central America. The Linnaean name is based entirely on the "Red-billed Whistling Duck" of Edwards (Nat. Hist. Bds., 4, p. 194, pl. 194, 1751), who stated that the specimen he describes and figures was brought from the West Indies. Friedmann maintains that a specimen in the United States National Museum from Anasco, Puerto Rico, "upholds Edwards' description in most specifications" and is similar to specimens from eastern Panama, northern Colombia and the Rio Cogollo, Perija, western Venezuela, but that it is entirely different from birds from Texas and Central America.

We cannot agree with Friedmann's statements. Edwards' description reads "The neck, breast and back are of a dull Red or Brick-Colour, light on the breast and darker on the back. . . . The whole belly and thighs are black, but where the red on the breast and the black on the belly unite, these blended colours form a dusky ash colour." (Italics ours.) The plate agrees with the description except that the band of "dusky ash colour" between the black of the belly and the red of the breast

Dendrocygna autumnalis Salvadori, Cat. Bds. Brit. Mus., 27, p. 159, 1895—Texas, Mexico, Guatemala, Cozumel Island, Costa Rica, and Panama (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 205, 1903—Mexico to Panama; Carriker, Ann. Carnegie Mus., 6, p. 435, 1910—Palo Verde and Bebedéro, Costa Rica; Bryant, Condor, 16, p. 94, 1914—Imperial Valley, California; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 251, 1918—Imperial Valley, California (only record); Phillips, Nat. Hist. Ducks, 1, p. 157, pls. 11, 13, distr. map 15, 1922 (monog.); Bent, Bull. U. S. Nat. Mus., 130, p. 269, 1925 (life hist.); Moyer, Auk, 48, p. 258, 1931—La Salle, Illinois; Griscom, Bull. Amer. Mus. Nat. Hist., 64, p. 144, 1932—Ocos and Hacienda California, Guatemala; Vorhies, Condor, 47, p. 82, 1945—Tucson, Arizona.

Dendrocygna autumnalis autumnalis Peters, Bds. World, 1, p. 153, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—western half of Panama (intergrading with *discolor*); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 89, 1938—San Sebastián and Lake Olomega, San Salvador (habits); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 45, 1945—Tesiá, Sonora (June).

Dendrocygna autumnalis discolor (not *Dendrocygna discolor* Sclater and Salvin) Griscom, Bull. Mus. Comp. Zool., 72, p. 312, 1932—Permé, Darien, Panama (intermediate); idem, l.c., 78, p. 296, 1935—Permé, Darien, Panama.

Dendrocygna autumnalis fulgens Friedmann,¹ Condor, 49, p. 190, Sept. 12, 1947—Lomita Ranch, Texas (type in the United States National Museum).

Dendrocygna autumnalis lucida Friedmann,¹ Condor, 49, p. 191, Sept. 12, 1947—Tres Zapotes, Vera Cruz, Mexico (type in the United States National Museum).

is very ill-defined. Through the kindness of Dr. Friedmann we have examined the specimen from Puerto Rico in the National Museum. It has a buffy ash mantle, with the dividing line between it and the red back sharply defined. The color of the breast and lower neck is similar to many specimens in fresh plumage from Brazil and Bolivia, the red on these parts being much less in extent than in several examples from Ceará, Brazil, in the junior author's collection. In other words, it is a normal example of *D. a. discolor* Sclater and Salvin, as are three other West Indian specimens (Puerto Rico, 1; St. Vincent, 2) that have been examined. It does not in the least resemble Edwards' description or plate.

The Black-bellied Tree Ducks inhabiting northern South America, from eastern Panama to western Venezuela, to whom Friedmann would assign the name *autumnalis*, are intermediates between the Central and South American forms. While it is true that several specimens from this region (notably two from Perija, Venezuela) in Field Museum could be said to agree with Edwards' description and plate, so do others from Texas, Mexico (Tampico), San Salvador, Costa Rica and eastern Panama (Port Baldia). While these latter examples are typical *autumnalis* (not of Friedmann) in other respects, at the junction with the black belly the under parts are buffy grayish, this color gradually shading into the dull reddish of the upper breast. We take these specimens to be young birds not yet in full plumage.

Therefore, since some examples from Texas and Central America agree with Edwards' description as well as if not better than others from northern South America, we cannot agree with Friedmann's suggested change in nomenclature, which confuses the situation instead of clarifying it.

¹ Friedmann has separated the Black-bellied Tree Ducks inhabiting the region from extreme southern Texas to Altamira, Tamaulipas, from those found in the

Range.—From extreme southern Texas (lower Rio Grande Valley) and Sonora (Camoá), Mexico, south through Central America to eastern Panama (Permé and Port Obaldia,¹ Darien), where it intergrades with *D. a. discolor*.

Field Museum Collection.—16: Texas (Padre Island, 1; Brownsville, 7); Mexico (Camoá, Sonora, 1; Tampico, Tamaulipas, 2; San Felipe, Yucatan, 1); El Salvador (San Sebastian, La Paz, 1; Laguna Olomega, San Miguel, 1); Costa Rica, Guanacaste (Bebedero, 1; Ballena, 1).

Conover Collection.—12: Mexico (Camoá, Sonora, 2); Costa Rica (Bebedero, Guanacaste, 8); Panama (Port Obaldia, Darien, 2).

****Dendrocygna autumnalis discolor* Sclater and Salvin. GRAY-BREASTED TREE DUCK.**

Dendrocygna discolor Sclater and Salvin, Nomencl. Av. Neotrop., pp. 129, 161, 1873—"Venezuela, Guiana et Brasilia" (type, from Maroni River, Surinam, in British Museum); Taczanowski, Orn. Per., 3, p. 469, 1886—Rio Ucayali and Moyobamba; Salvadori, Cat. Bds. Brit. Mus., 27, p. 161, 1895—British Guiana (Rio Rupununi), Surinam (Maroni River), Brazil (Rio Paraná), Ecuador (Balzar), Peru (upper Ucayali) (full bibliog.); idem, Boll. Mus. Zool. Torino, 15, No. 379, p. 16, 1900—Carandasinho, Matto Grosso; Clark, Proc. Bost. Soc. N. H., 32, p. 238, 1905—Barbados, St. Vincent, and Grenadines (Mustique); Hagmann, Zool. Jahrb. (Syst.), 26, p. 56, 1907—Marajó, Caviana, and Mexiana, Brazil (breeding); Dabbene, Bol. Soc. Physis, 1, p. 533, 1915—Tres Pozos, Salta; Chubb, Bds. Brit. Guiana, 1, p. 190, 1916—Pomeroon, Albany, and Rupununi rivers, British Guiana; Cherrie, Sci. Bull., Mus. Brooklyn Inst., 2, p. 373, 1916—Orinoco region (common); Chapman, Bull. Amer. Mus. N. H., 36, p. 233, 1917—Cali, Colombia; Phillips, Nat. Hist. Ducks, 1, p. 163, pl. 11, distr. map 16, 1922 (monog.); Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 45, 1922—Rio Cogollo and Lagunillas, Zulia, Venezuela; Todd and Carriker, Ann. Carnegie Mus., 14, p. 140, 1922—Fundación and Tierra Nueva, Santa Marta, Colombia; Delacour, Ibis, 1923, p. 143—Guarico and Apuré, Venezuela (common); Chapman, Bull. Amer. Mus. N. H., 55, p. 210, 1926—Chone and Santa Rosa, Ecuador; Darlington, Bull. Mus. Comp. Zool., 71, p. 364, 1931—Ciénaga, Magdalena, Colombia.

remainder of Central America (western and southern Mexico to Panama). The more northern bird, *fulgens*, is said to have a dark brown belly as against a deep black one in the more southern form, *lucida*. From an examination of the specimens in Field Museum it appears that this deep black coloration of the abdomen is a question of age and freshness of plumage, not of geography. We have birds from Texas with just as deep black bellies as any from Costa Rica, and Costa Rican examples with as brown bellies as any from Texas.

¹ While specimens from this locality show unmistakable signs of intergradation with the South American form, *discolor*, they are nearer in coloration to typical *autumnalis*.

Dendrocygna autumnalis (not *Anas autumnalis* Linnaeus) Pelzeln, Orn. Bras., 3, p. 320, 1870—São Paulo (Porto do Rio Parana), Matto Grosso (Caicara), and Amazonas (Barra do Rio Negro; Forte do Rio Branco).

Dendrocygna autumnalis discolor Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 499, 1929—Brazil (Varzea Formosa, Ceará, and Ibiapaba, Piauh); Naumburg, Bull. Amer. Mus. N. H., 60, p. 78, 1930 (range); Peters, Bds. World, 1, p. 153, 1931 (range); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 370, 1934—Descalvados, Matto Grosso; Casares, El Hornero, 6, p. 8, pl. 1, fig. 3, distr. map, 1935—Tucumán (Concepción) and Pilcomayo (range; habits); Pinto, Rev. Mus. Paul., 22, p. 49, 1938—Pará (Lago Cuipeva), Maranhão (Primeira Cruz), Bahía (Barra do Rio Grande), and Minas Geraes (Marianna, Pirapora), Brazil; Danforth, Auk, 55, p. 668, 1938—Anasco, Puerto Rico; Griscom and Greenway, Bull. Mus. Comp. Zool., 88, (3), p. 109, 1941—Pinhy, Caxiricatuba and Santarem, Pará, Brazil; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 45, 1945—Bresta, El Beni, Bolivia.

Range.—From northwestern Colombia (Cali) south on the west coast to Ecuador (Arenillas, El Oro) and east of the Andes south through Venezuela, the Guianas, Brazil, Bolivia, and Paraguay to northwestern Argentina (Tucumán, Salta, and Pilcomayo). Also found in Trinidad and occasionally on some of the Greater and Lesser Antilles.¹ Intergrades with typical *autumnalis* in eastern Panama.

Field Museum Collection.—17: Colombia (unspecified, 1); British Guiana (Mahaica Creek, 2); Dutch Guiana (Mot Kreek, 2); Brazil (Manacapuru, Amazonas, 1; Quixada, Ceará, 2); Bolivia (Buena Vista, Santa Cruz, 9).

Conover Collection.—33: Colombia (upper Rio Baudo, Choco, 1; Jamundi, Valle, 1); Venezuela (Rio Cogollo, Perija, 6); Ecuador (Arenillas, El Oro, 1); Brazil (Manacapuru, Amazonas, 5; Caxiricatuba, Pará, 2; Varzea Formosa, Ceará, 3; Ibiapaba, Piauh, 1); Bolivia (Buena Vista, Santa Cruz, 8); Paraguay (Molinasque, Carayao, 2; Orloff, Chaco, 3).

**Dendrocygna arborea* (Linnaeus). BLACK-BILLED TREE DUCK.

Anas arborea Linnaeus, Syst. Nat., 10th ed., 1, p. 128, 1758—based chiefly on "The Black-billed Whistling Duck" Edwards, Nat. Hist. Bds., 4, p. 193, pl. 193; West Indies; Jamaica (ex Sloane, Voy. Jamaica, 2, p. 324).

Anas jacquini Gmelin, Syst. Nat., 1, (2), p. 536, 1788—based on "Succé" Jacquin, Beytr. Gesch. Vögel, p. 5, 1784; Island of San Domingo.

Anas Succé Bonnaterre, Tabl. Enc. Meth., Orn., 1, livr. 47, p. 134, 1791—based on "Succé" Jacquin, Beytr. Gesch. Vögel, p. 5, 1784; Island of San Domingo.

¹ Additional specimens examined.—Puerto Rico, 2; St. Vincent, Lesser Antilles, 2.

Dendrocygna arborea Salvadori, Cat. Bds. Brit. Mus., 27, p. 162, 1895—Virgin Gorda, Cuba, and Jamaica (full bibliog.); Phillips, Nat. Hist. Ducks, 1, p. 168, pl. 14, distr. map 17, 1922 (monog.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, (3), p. 307, 1927—Puerto Rico, St. Croix and Virgin Gorda; Peters, Bds. World, 1, p. 154, 1931 (range); Wetmore, Bull. U. S. Nat. Mus., 155, p. 98, 1931—Hispaniola (numerous localities); Bond, Bds. West Indies, p. 39, 1936 (range).

Dendrocygna arborea Blaauw, Ibis, 1912, p. 657, text fig. 13 (descr. downy).

Range.—Bahama Islands (Andros, Great Inagua, etc.), Greater Antilles, Virgin Islands and northern Lesser Antilles (Barbuda, Guadeloupe, Martinique, and Barbados).

Field Museum Collection.—15: Bahama Islands (unspecified, 1; Andros Island, 2; Inagua Island, 3); Dominican Republic (Samaná, Samaná, 4; Santo Domingo, Santo Domingo, 1); Virgin Islands (Virgin Gorda, 4).

Conover Collection.—14: Cuba (Siguanea, Isle of Pines, 1; San Cristobal, Pinar del Rio, 5); Hispaniola (Lac Assuei, Haiti, 1); Virgin Islands (St. Croix, 7).

****Dendrocygna viduata* (Linnaeus). WHITE-FACED TREE DUCK.**

Anas viduata Linnaeus, Syst. Nat., 12th ed., 1, p. 205, 1766—Carthagená, Colombia.

Dendrocygna viduata Pelzeln, Orn. Bras., 3, p. 319, 1870—São Paulo (Rio Paraná), Matto Grosso (Cuyabá, Caicara), and Amazonas (Forte do Rio Branco); Taczanowski, Orn. Per., 3, p. 471, 1886—lower Ucayali (ex Bartlett), between Lurin and Chorillos (ex Tschudi); Sclater and Hudson, Arg. Orn., 2, p. 128, 1889—Rio Plata; Salvadori, Cat. Bds. Brit. Mus., 27, p. 145, 1895 (full bibliog.); Ihering, Rev. Mus. Paul., 3, p. 392, (1898), 1899—Estado do São Paulo; idem, Ann. Est. Rio Grande do Sul, 16, p. 143, 1899—São Lourenço, Rio Grande do Sul; Kerr, Ibis, 1901, p. 233—Villa Concepción and Riacho Verde, Paraguayan Chaco; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán (ex Burmeister); Hartert and Venturi, Nov. Zool., 16, p. 242, 1909—Mocoví, Chaco; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 230, 1910—Tucumán, Chaco, Córdoba, Buenos Aires; Carriker, Ann. Carnegie Mus., 6, p. 434, 1910—Bebedéro, Costa Rica; Grinnell, Auk, 30, p. 110, 1913—New Jersey; Chubb, Bds. Brit. Guiana, 1, p. 189, 1916—upper Takutu Mountains, great Savannas, Annai, Rupununi and Abary rivers; Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 45, 1922—Mérida, Venezuela; Phillips, Nat. Hist. Ducks, 1, p. 117, pl. 11, distr. map 11, 1922 (monog.); Daguerre, El Hornero, 2, p. 265, 1922—Rosas, Buenos Aires; Delacour, Ibis, 1923, p. 143—Guarico and Apure, Venezuela (common); Wetmore, Bull. U. S. Nat. Mus., 133, p. 72, 1926—Puerto Pinasco, Paraguay; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 499, 1929—Piahy; Laubmann, Gran Chaco Exped., Vögel, p. 50, 1930—Formosa (San José; Yunca Viejo), Bolivia (Santa Cruz); Naumburg, Bull. Amer. Mus. N. H.,

60, p. 98, 1930—Bocaina de Descalvado, Fazenda do São João, and Rio Cuyabá, Matto Grosso; Peters, Bds. World, 1, p. 153, 1931 (range); Wetmore, Bull. U. S. Nat. Mus., 155, p. 97, 1931—Haina, Hispaniola (rare); Stone and Roberts, Proc. Acad. Nat. Sci. Phila., 86, p. 370, 1934—Descalvados, Matto Grosso; Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—Canal Zone, Panama; Casares, El Hornero, 6, p. 3, pl. 1, fig. 1, distr. map, 1935 (range; habits); Pinto, Rev. Mus. Paul., 22, p. 48, 1938—Bahía (Barra do Rio Grande), Minas Geraes (Pirapora), Goyáz (Inhumas), Matto Grosso (Caceras), and Rio Grande do Sul (Itaquy); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 45, 1945—Bresta, El Beni, Bolivia.

Range.—From Costa Rica (Bebedero), south through Panama (Canal Zone), Colombia (Cartagena, Bogotá), Venezuela (Mérida), Bolivia (Santa Cruz), and Paraguay to Argentina (Jujuy, Tucumán, Formosa, Córdoba, Buenos Aires) and Uruguay. Occasionally in Cuba and Hispaniola (Haina), Greater Antilles. Also found in tropical Africa.

Field Museum Collection.—20: Costa Rica (Bebedero, Guanacaste, 4); Colombia (“Bogotá,” 2; Rio Sinio, 1; Monteria, 1); Venezuela (Lake Valencia, Aragua, 2); British Guiana (unspecified, 1); Brazil (Bõa Vista, Rio Branco, Amazonas, 3; Municipio de Luis, São Paulo, 1; Vaccaria, Matto Grosso, 5).

Conover Collection.—31: Costa Rica (Bebedero, Guanacaste, 5); Venezuela (Mérida, 1); Brazil (Manacapuru, Amazonas, 2); Bolivia (Buena Vista, Santa Cruz, 3); Paraguay (Molinasque, 1; Horqueta, 3; Chaco, 200 km. west of Puerto Casado, 10; Laguna General Diaz, Chaco, 1; 60 km. east of Orloff, Chaco, 4); Argentina (Buenos Aires, 1).

Subfamily ANATINAE. Shoal-water Ducks

Genus NEOCHEN Oberholser

Neochen Oberholser, Journ. Wash. Acad. Sci., 8, p. 571, 1918—type, by orig. desig. and monotypy, *Anser jubatus* Spix.

**Neochen jubata* (Spix). ORINOCO GOOSE.

Anser jubatus Spix, Av. Bras., 2, p. 84, pl. 108, 1825—“Ad ripam fl. Solimoëns in insula Praya das Onças” (cotypes in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 716, 1906).

Anser polycomos Lesson, Traité d’Orn., p. 627, 1831—“Brazil” (type, from Cayenne, in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 67, 1929).

Chenalopez jubatus(a) Pelzeln, Orn. Bras., 3, p. 319, 1870—Matto Grosso (Caicara, Villa Bella) and Amazonas (Rio Guaporé; Barra do Rio Negro);

Taczanowski, Orn. Per., 3, p. 468, 1886—lower Ucayali, Santa Cruz; Salvadori, Cat. Bds. Brit. Mus., 27, p. 169, 1895—Peruvian Amazonas, Bolivia, Brazil; Lönnberg, Ibis, 1903, p. 464—Tatarenda, Bolivian Chaco; Haggmann, Zool. Jahrb. (Syst.), 26, p. 56, 1907—Mexiana Island, Brazil.

Alopochen jubatus Ihering, Rev. Mus. Paul., 5, p. 283, 1902—Iguapé, São Paulo; idem, Cat. Faun. Braz., 1, p. 71, 1907—Iguapé, São Paulo and Amazonas; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 230, 1910—Orán, Salta; Cherrie, Sci. Bull., Mus. Brooklyn Inst., 2, p. 373, 1916—Orinoco region (nesting habits); Phillips, Nat. Hist. Ducks, 1, p. 200, pl. 15, distr. map 21, 1922 (monog.).

Alopochen jubata Chubb, Bds. Brit. Guiana, 1, p. 192, 1916—lower Takutu River; Delacour, Ibis, 1923, p. 143—Rio Apure and Portuguesa, Venezuela; Naumburg, Bull. Amer. Mus. N. H., 60, p. 99, 1930 (range).

Neochen jubata Peters, Bds. World, 1, p. 154, 1931 (range); Pinto, Rev. Mus. Paul., 22, p. 50, 1938—Iguapé, São Paulo; Dugand, Caldasia, 1, p. 54, 1941—Rio Meta, Colombia; Griscom and Greenway, Bull. Mus. Comp. Zool., 88, (3), p. 109, 1941—Santarem, Brazil; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 23, p. 46, 1945—Orion, El Beni, Bolivia.

Neochen jubatus Casares, El Hornero, 5, p. 155, pl. 2, fig. 2, distr. map, 1933 (range; habits).

Range.—Found locally throughout the Orinoco and Amazon basins, the Guianas, southern Brazil (São Paulo, Matto Grosso), Bolivia (Santa Cruz and the Chaco), and northern Argentina (Salta).

Field Museum Collection.—2: Bolivia (Rio Surutu, Santa Cruz, 2).

Conover Collection.—6: Brazil (Labrea, Rio Purus, 1); Bolivia, Santa Cruz (Buena Vista, 1; Rio Yapacini, 3; Nueva Moka, 1).

Genus SARKIDIORNIS Eyton

Sarkidiornis Eyton, Monog. Anat., p. 20, 1838—type, by orig. desig., *Anser melanotos* Pennant.

**Sarkidiornis sylvicola* Ihering and Ihering. SOUTH AMERICAN COMB DUCK.

Anas carunculata (not of Vieillot, 1816) Lichtenstein, Abhandl. Akad. Wiss. Berlin, Phys. Kl., for 1816-17, p. 176, 1819—based on "Ipecati Apoa" Marcgrave, Hist. Nat. Bras., p. 218, and Azara, No. 428 (Paraguay).

Sarkidiornis sylvicola Ihering and Ihering, Cat. Faun. Braz., 1, p. 72, 1907—new name for *Anas carunculata* Lichtenstein, preoccupied (Iguapé, São Paulo, and Buenos Aires, Argentina); iidem, l.c., p. 408, 1907—Primeira Cruz, Maranhão; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 228, 1910—Tucumán, Salta, Pilcomayo, Buenos Aires (Barracas al Sud); Pennard, Auk, 36, p. 564, 1919—east coast of British Guiana; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 498, 1929—lower Parnahyba; Naumburg, Bull. Amer. Mus. N. H., 60, p. 98, 1930—range in Brazil;

Pinto, Rev. Mus. Paul., 22, p. 50, 1938—Primeira Cruz, Maranhão (range in Brazil).

Sarkidiornis regia (not *Anas regia* Molina) Pelzeln, Orn. Bras., 3, p. 319, 1870—Rio de Janeiro (Sapitiba), Matto Grosso (Caicara), and Amazonas (Barra do Rio Negro).

Sarcidiornis carunculata Sclater and Hudson, Arg. Orn., 2, p. 128, 1889—Tucumán; Salvadori, Cat. Bds. Brit. Mus., 27, p. 59, 1895 (full bibliog.); Kerr, Ibis, 1901, p. 233—Paraguayan Chaco; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán (ex Burmeister); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 96, 1910—Rio São Francisco, near Sambaiba, Bahía, Brazil; Phillips, Nat. Hist. Ducks, 1, p. 77, pl. 5, distr. map 4, 1922 (monog.); Morrison, Ibis, 1939, p. 648—Ucaqui, Junín, Peru.

Sarcidiornis sylvicola Crandall, Auk, 36, p. 419, 1919—Barcelona, Venezuela.

Sarkidiornis carunculata Peters, Bds. World, 1, p. 155, 1931 (range); Casares, El Hornero, 5, p. 154, pl. 2, fig. 1, distr. map, 1933 (range; habits); Lehmann, Caldasia, 2, p. 407, 1944—Cali, Colombia; Borrero, l.c., 3, p. 230, 1944—Boyaca, Colombia.

Range.—Found locally in South America east of the Andes from northern Venezuela (Barcelona) south through the Guianas to Paraguay (Chaco) and northern Argentina (Tucumán, Salta, Pilcomayo, and Buenos Aires). Also west of the Andes in Colombia (Cali, Boyaca). One record for Ucaqui, Junín, Peru.

Conover Collection.—6: Colombia (Cali, Valle, 1; Santander, Cauca, 1); Paraguay, Chaco (100 km. east of Orloff, 1; 170–195 km. west of Puerto Casado, 2; Rio Pilcomayo, 15 miles west of Rio Paraguay, 1).

Genus CAIRINA Fleming

Cairina Fleming, Phil. Zool., 2, p. 260, 1822—type, by monotypy, *Anas moschata* Linnaeus.

Moschatus (subgenus) Lesson, Man. d'Orn., 2, p. 416, 1828—type, by orig. desig., *Anas moschata* Linnaeus.

Gymnathus (subgenus) Nuttall, Man. Orn., 2, p. 403, 1834—type, by monotypy, *Anas moschata* Linnaeus.

Hyonetta Sundevall, Meth. nat. Av. disp. Tent., p. 146, 1872—new name for *Cairina* Fleming, 1822.

**Cairina moschata* (Linnaeus).¹ MUSCOVY DUCK.

Anas moschata Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—"India" (Brazil substituted by Berlepsch and Hartert, Nov. Zool., 9, p. 131, 1902).

¹ *Anas iopareia* Philippi (Arch. Naturg., 26, (1), p. 24, 1860—Chile) is *Cairina moschata* × *Anas domestica* (cf. Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 315, 1932).

- Anas regia* Molina, Sagg. Stor. Nat. Chile, pp. 234, 344, 1782—"Chile."
- Cairina sylvestris* Stephens, in Shaw's Gen. Zool., 12, (2), p. 79, pl. 46, 1824—South America.
- Cairina moschata* Pelzeln, Orn. Bras., 3, p. 320, 1870—São Paulo (Itararé, Ypanemá) and Matto Grosso (Nos Puritis, Caiçara); Taczanowski, Orn. Per., 3, p. 472, 1886—between Lurin and Chorillos, Rio Ucayali (ex Tschudi), Rio Huallaga (ex Bartlett) and Pebas (ex Hauxwell); Sclater and Hudson, Arg. Orn., 2, p. 129, 1889—Buenos Aires; Salvadori, Cat. Bds. Brit. Mus., 27, p. 51, 1895 (descr.); Ihering, Rev. Mus. Paul., 3, p. 391, (1898) 1899—São Paulo; idem, Ann. Est. Rio Grande do Sul, 16, p. 143, 1899—Mundo Novo, Rio Camaquã and Pedras Brancas, Rio Grande do Sul; Kerr, Ibis, 1901, p. 233—Paraguayan Chaco (Villa Concepción; Caraya Vuelta; Riacho Verde); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán (Tucumán and La Ramada); Lönnberg, Ibis, 1903, p. 465—Tatarenda, Bolivian Chaco; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 198, 1903—Mexico (Mazatlán, Presidio) to Panama (Laguna de Pita); Hagmann, Zool. Jahrb. (Syst.), 26, p. 54, 1907—Mexiana Island, Brazil (breeding, habits); Hartert and Venturi, Nov. Zool., 16, p. 242, 1909—Barracas al Sud, Buenos Aires; Carriker, Ann. Carnegie Mus., 6, p. 434, 1910—Costa Rica (Bolson, Palo Verde, Bebedéro, Bagaces, Miravalles); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 228, 1910—Tucumán, Salta (Orán), Chaco; Sneath, Bol. Mus. Goeldi, 8, p. 114, 1914—Marajó (Magoary) and Cunani, Brazil; Chubb, Bds. Brit. Guiana, 1, p. 186, 1916—British Guiana (Abary, Berbice, Yuruani and Cotinga rivers; Annai; Rupununi savannas; Roraima; Mora Passage); Cherrie, Sci. Bull., Mus. Brooklyn Inst., 2, p. 372, 1916—Venezuela (Las Barrancas; San Feliz River); Chapman, Bull. Amer. Mus. N. H., 36, p. 233, 1917—Rio Frio, Colombia; Chubb, Ibis, 1919, p. 274—Charuplaya, Bolivia; Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 44, 1922—Lagunillas, Zulia, Venezuela; Phillips, Nat. Hist. Ducks, 1, p. 57, pl. 3, distr. map 2, 1922 (monog.); Wetmore, Bull. U. S. Nat. Mus., 133, p. 70, 1926—Paraguay (Puerto Pinasco) and Argentina (Riacho Pilago, Formosa); Chapman, Bull. Amer. Mus. N. H., 55, p. 209, 1926—Ecuador (Yaguachi and headwaters of Santa Rosa River); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 498, 1929—Brazil (Piauhy); Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 49, 1930—Mis. Tacaaglê, Formosa, and San Ramón, Santa Cruz, Bolivia; Naumburg, Bull. Amer. Mus. N. H., 60, p. 97, 1930 (range in South America); Peters, Bds. World, 1, p. 155, 1931 (range); Griscom, Bull. Amer. Mus. N. H., 64, p. 144, 1932—Hacienda California, Guatemala; Casares, El Hornero, 5, p. 146, pl. 2, fig. 4, distr. map, 1933 (range; habits); Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—Panama; Pinto, Rev. Mus. Paul., 22, p. 51, 1938—São Paulo (Rio Grande, Itapura), Paraná (Jacarézinho), Matto Grosso (Rio Pardo, Porto Sapé, Rio Paraná, Coxim), and Goyáz (Rio das Almas); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 91, 1938—San Salvador (Lake Olomega, San Sebastián, Colima); Gyldenstolpe, Svensk. Vetensk. Akad. Handl., (3), 22, p. 24, 1945—Rio Juruá (João Pessôa; Igarapé do Gordão), Brazil; idem, l.c., 23, p. 46, 1945—El Beni (Puerto Salinas; Bresta; Orion), Bolivia.

Range.—From Mexico (Mazatlán and central Tamaulipas) south through Central and South America to western Peru (near Lurin), eastern Bolivia, and northern Argentina (Tucumán, Formosa, Santa Fé, and Buenos Aires). Mostly found in the tropics. The records from the highlands of Peru and the Rio Negro, Argentina, probably are of feral domesticated stock.

Field Museum Collection.—11: Mexico (Apatzingan, Michoacan, 1; Alvarado, Vera Cruz, 1); British Guiana (Itabu Creek, 2; Phantom Falls, Courantyne, 2; unspecified, 2); Dutch Guiana (Paramaribo, 1); Bolivia (Rio Surutu, Santa Cruz, 1); Paraguay (45 km. west of Puerto Rosario, 1).

Conover Collection.—26: Mexico, Sinaloa (Rio las Canas, 1; Chele, 3); Costa Rica, Guanacaste (Miravalles, 1; Bebedero, 2); Colombia (Sautata, Rio Atrato, 2); Venezuela (Lagunillas, Zulia, 1); Brazil (Labrea, Rio Purus, 2; Canutama, Rio Purus, 1; Lago Cuipeua, Pará, 1; Caxiricatuba, Rio Tapajoz, 2; Resacca, Rio Capim, 2; Tomé-assu, Rio Acara, 1); Bolivia, Santa Cruz (Buena Vista, 1; Rio Ichilo, 1; Rio Surutu, 1); Paraguay (Capitan Bado, Cerro Amambay, 1; Puerto Rosario, 1; Orloff, Chaco, 2).

Genus COSCOROBA Reichenbach

Coscoroba Reichenbach, Av. Syst. Nat., p. x, 1852, (1853)—type, by orig. desig. and tautonymy, *Anser candidus* Vieillot=*Anas Coscoroba* Molina.

Pseudolor G. R. Gray, Cat. Gen. Subgen. Bds., p. 122, 1855—type, by orig. desig., *Anas Coscoroba* Molina.

Pseudocynus Sundevall, Meth. nat. Av. disp. Tent., p. 147, 1872—type, by monotypy, *Anas Coscoroba* Molina.

**Coscoroba coscoroba* (Molina). COSCOROBA SWAN.

Anas Coscoroba Molina, Sagg. Stor. Nat. Chile, pp. 234, 344, 1782—Chile.

Anser candidus Vieillot, Nouv. Diet. Hist. Nat., nouv. ed., 23, p. 331, 1816—based on "Ganso blanco" Azara, Apunt. Hist. Nat. Páx., 3, p. 406, No. 426; Paraguay and lagoons of La Plata River.

Cygnus anatoides King, Proc. Comm. Sci. Corr. Zool. Soc. Lond., 1, p. 15, pub. Jan. 16, 1831—"southern South America" (type in Eyton Collection, now in British Museum).

Coscoroba chionis (Illiger MS.) Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 648, 1856—new name for *Anas coscoroba* "Gmelin"=Molina.

Cygnus coscoroba Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 53, 1881—pampa lake of Rio Negro.

Coscoroba candida Selater and Hudson, Arg. Orn., 2, p. 126, 1889—Patagonia; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 143, 1899—Rio Grande

do Sul; Salvadori, Cat. Bds. Brit. Mus., 27, p. 42, 1895—Chile, Buenos Aires, Falkland Islands; Crawshay, Bds. Tierra del Fuego, p. 92, 1907—Gente Grande Lagoons, Tierra del Fuego; Blaauw, Notes Leyden Mus., 35, p. 50, pl. 1, 1912 (pullus).

Coscoroba coscoroba Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán and Famailla, Tucumán; Ihering, Cat. Faun. Braz., 1, p. 72, 1907—Rio Grande do Sul; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 413, 1912 (gen. acc.); Wetmore, Bull. U. S. Nat. Mus., 133, p. 73, 1926—Lavalle, Buenos Aires and San Vicente, Uruguay; idem, Univ. Calif. Pub. Zool., 24, p. 416, 1926—Valcheta, Rio Negro, Argentina; Peters, Bds. World, 1, p. 156, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 315, 1932 (distr. in Chile); Casares, El Hornero, 5, p. 146, pl. 2, fig. 4, distr. map, 1933 (range; habits).

Range.—Extreme southern Brazil (Rio Grande do Sul), Uruguay (San Vicente), Paraguay (including the Chaco), all of Argentina, Chile, Tierra del Fuego (Gente Grande Lagoons), and the Falkland Islands.

Conover Collection.—10: Paraguay, Chaco (20 km. east of Islapoi, 1; 100 km. east of Orloff, 8); Argentina (Arroyo del Saladillo, Buenos Aires, 1).

Genus CASARCA Bonaparte

Casarca Bonaparte, Comp. List Bds. Eur. N. Amer., p. 56, 1838—type, by monotypy and tautonymy, *Anas rutila* Pallas=*Anas casarca* Linnaeus=*Anas ferruginea* Pallas.

Nettalopex Heine, Nomencl. Mus. Hein. Orn., p. 343, 1890—substitute name for *Casarca*.

Casarca ferruginea (Pallas). RUDDY SHELDRAKE.

Anas ferruginea Pallas, in Vroeg's Cat., Adumbr., p. 5, 1764—no type locality given=Tartary.

Casarca rutila Salvadori, Cat. Bds. Brit. Mus., 27, p. 177, 1895 (descr., full bibliog.).

Tadorna casarca Winge, Medd. Grønland, 21, p. 81, 1898—Greenland (three records).

Casarca ferruginea G. B. Grinnell, Auk, 36, p. 561, 1919—Barnegat Bay, New Jersey, and Currituck Sound, North Carolina(?); Bent, Bull. U. S. Nat. Mus., 126, p. 130, 1923—straggles to Greenland; Peters, Bds. World, 1, p. 156, 1931 (range).

Range.—Extralimital. Breeds from southeastern Europe and central Asia east to Manchuria and China and south to the Tibetan plateau, Iran, and rarely to Algeria and Morocco. Winters over most of its breeding range, in Japan, and south to Formosa, Ceylon,

India, southern Arabia, Ethiopia, Algeria and Morocco. A straggler to Greenland, and one record from New Jersey (Barnegat Bay).¹

Genus TADORNA Boie

Tadorna Boie, Tageb. Reise Norwegen, pp. 140, 351, before May, 1822—type, by tautonymy, *Tadorna familiaris* Boie=*Anas tadorna* Linnaeus (cf. Ibis, 1939, p. 522).

Vulpanser Keyserling and Blasius, Wirbelth. Eur., pp. lxxxiv, 225, 1840—type, by monotypy, *Vulpanser tadorna* (Linnaeus).

Tadorna tadorna (Linnaeus). COMMON SHELDRAKE.

Anas tadorna Linnaeus, Syst. Nat., 10th ed., 1, p. 122, 1758—based principally on Fauna Svec., No. 93; "in Europae maritimis"=Gotland, Sweden (ex Fauna Svec.).

Tadorna cornuta Salvadori, Cat. Bds. Brit. Mus., 27, p. 171, 1895 (full bibliog.).

Tadorna tadorna Morse, Bull. Essex County Orn. Cl., p. 68, 1921—Ipswich Bay, off Annisquam, Massachusetts; Bent, Bull. U. S. Nat. Mus., 126, p. 132 (life hist.); Peters, Bds. World, 1, p. 157, 1931 (range); McAtee, Auk, 61, p. 148, 1944—supposed North Carolina record.

Tadorna casarca (not *Anas casarca* Linnaeus) Forbush, Auk, 39, p. 104, 1922—Ipswich Bay, Essex County, Massachusetts.

Range.—Extralimital. Temperate and southern portions of Europe and Asia, breeding in the northern and wintering in the southern parts of its range. A record for Massachusetts and (?)another for North Carolina.

Genus ANAS Linnaeus

Anas Linnaeus, Syst. Nat., 10th ed., 1, p. 122, 1758—type, by subs. desig. (Lesson, Man. d'Orn., 2, p. 417, 1828), *Anas boschas* Linnaeus=*Anas platyrhynchos* Linnaeus.

Boschas Swainson, Fauna Bor.-Amer., 2, "1831," p. 442, pub. Feb., 1832—type, by tautonymy, *Anas boschas* Linnaeus=*Anas platyrhynchos* Linnaeus.

Lophonetta Riley, Proc. Biol. Soc. Wash., 27, p. 100, 1914—type, by orig. desig., *Anas cristata* Gmelin=*Anas specularioides* King.

Specularis Boetticher, Anz. Orn. Ges. Bay., 2, No. 1, p. 14, March 10, 1929—type, by orig. desig., *Anas specularis* King.

**Anas platyrhynchos platyrhynchos* Linnaeus. MALLARD.

Anas platyrhynchos Linnaeus, Syst. Nat., 10th ed., 1, p. 125, 1758—based primarily on Fauna Svec., No. 103; Europe, restricted type locality,

¹ In 1916 a single specimen, possibly an escaped captive, was taken in Barnegat Bay, New Jersey, and identified by Dr. Witmer Stone. Another example was supposed to have been taken at Waterlily, North Carolina (Auk, 36, p. 561, 1919) in 1886, but the evidence, to say the least, is very circumstantial.

Sweden; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 92, 1918 (life hist. California); Conover, Auk, 43, p. 164, 1926—Hooper Bay, Alaska (nesting); Robertson, Condor, 30, p. 321, 1928 (returns from bandings at Moiese, Montana).

Anas boschas Linnaeus, Syst. Nat., 12th ed., 1, p. 205, 1766—Europe; Turner, Contr. Nat. Hist. Alaska, 2, p. 131, 1886—Yukon, Aleutian Islands (wintering); Nelson, Nat. Hist. Coll. Alaska, 3, p. 67, 1887—St. Michael (nesting); Salvadori, Cat. Bds. Brit. Mus., 27, p. 189, 1895—part, except Greenland (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 207, 1903—Mexico (Hermosillo, Sonora; Rio San Pedro; Mazatlán; Guadalajara; Valley of Mexico; Jalapa), Panama, West Indies; Bigelow, Auk, 24, p. 382, 1907 (hybrids in Museum of Comparative Zoology, Cambridge, Mass.); Phillips, Nat. Hist. Ducks, 2, p. 3, pl. 20, distr. map 28, 1923 (monog.).

Anas (Boschas) domestica Swainson and Richardson, Faun. Bor.-Amer., 2, p. 442, 1832—Saskatchewan River.

Anas platyrhyncha Bent, Bull. U. S. Nat. Mus., 126, p. 34, 1923 (life hist.).

Anas platyrhynchos platyrhynchos Peters, Bds. World, 1, p. 159, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—Canal Zone, Panama (2 records); Porsild, Canad. Field Nat., 57, p. 22, 1943—Mackenzie Delta (nesting); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 45, 1945—Sonora, Mexico (status).

Anas boschas × *Nettion carolinensis* Stone, Auk, 20, p. 209, 1903.

Range.—Largely in northern portion of the northern hemisphere. In North America breeds from the Aleutian Islands, northern Alaska (Kotzebue Sound), the Mackenzie Delta, and the west shore of Hudson Bay (Churchill) south to northern Lower California (San Pedro Mártir Mountains), southern New Mexico, central Missouri, southern Ohio, and northern Virginia (upper James River). Winters mainly from the Aleutian Islands, central Utah, Colorado, Missouri, central Illinois, and Chesapeake Bay, south to southern Mexico (Jalapa and Colima), the Gulf coast and Florida. Wanders occasionally to Panama and Grenada, and in favorable localities small groups winter as far north as central Alaska.

Field Museum Collection.—45: Yukon Territory (Carcross, 3); British Columbia (Okanagan, 3); Alberta (Walsh, 1); Saskatchewan (Prince Albert, 2); California (Colusa, 1; Corona, 1); Wyoming (Laramie, 1); North Dakota (Towner County, 2; Ramsey County, 3; Nelson County, 4); South Dakota (Harrison, 1); Iowa (Burlington, 1); Arkansas (Winslow, 1); Wisconsin (Washington County, 1; Beaver Dam, 1); Illinois (Worth, 4; Browning, 2; Henry, 1; Sparland, 3; Quincy, 1); Indiana (Starke County, 1); Connecticut (Quinnipiac Marshes, 3; North Haven, 1; New Haven County, 1); Maryland (Chesapeake Bay, 2).

Conover Collection.—39: Alaska (Igiak Bay, Bering Sea, 1); British Columbia (Comox, Vancouver Island, 8); Alberta (Tofield, 2; Edmonton, 3; Camrose, 4); Manitoba (Indian Bay, Shoal Lake, 1); Utah (Brigham, 5); Wyoming (Du Bois, Fremont County, 1); South Dakota (Eden, 5); Illinois (Henry, 8); Louisiana (Calcasieu Parish, 1).

**Anas platyrhynchos conboschas* C. L. Brehm.¹ GREENLAND MALLARD.

Anas conboschas C. L. Brehm, Handb. Naturg. Vog. Deutschl., p. 865, 1831—Greenland (type not extant).

Anas boschas (not of Linnaeus) Salvadori, Cat. Bds. Brit. Mus., 27, p. 189, 1895—part, Greenland.

Anas boschas Winge, Medd. Grøn., 21, p. 78, 1898—Greenland.

Anas boschas spilogaster Schiöler, Vidensk. Medd. Naturhist. Foren., Kjøbenhavn, 1905, pp. 127, 144, pls. 2-4—Greenland (type in Copenhagen Museum).

Anas platyrhyncha conboschas Hartert, Vögel Palaearkt. Fauna, 2, p. 1312, 1920 (dist. chars.; range); Bertelsen, Medd. Grøn., 91, No. 4, p. 6, 1932 (range in western Greenland).

Anas boschas conboschas Phillips, Nat. Hist. Ducks, 2, p. 43, 1923 (dist. char.).

Anas platyrhyncha conboschas Nicholson, Ibis, 1930, p. 395—Greenland (breeding; field notes).

Anas platyrhynchos conboschas Peters, Bds. World, 1, p. 159, 1931 (range).

Range.—Resident in Greenland. Breeds north to Upernavik on the west coast, and to Angmagsalik on the east.

Conover Collection.—1: Greenland (Godthaab, 1).

**Anas rubripes* Brewster. BLACK DUCK.

Anas obscura (not of Linnaeus, 1761) Gmelin, Syst. Nat., 1, (2), p. 541, 1789—based on "Dusky Duck" Pennant, Arct. Zool., 2, p. 564, and Latham, Gen. Syn. Bds., 3, (2), p. 545, New York; Salvadori, Cat. Bds. Brit. Mus., 27, p. 201, 1895—New Brunswick, Nova Scotia (Halifax), Connecticut (New Haven), Bermuda Islands (Peniston's Pond) (full bibliog.).

Anas obscura rubripes Brewster, Auk, 19, p. 184, 1902—shore of Lake Umbagog (New Hampshire shore), (type in collection of William Brewster, now in the Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 183, 1930).

¹*Anas platyrhynchos conboschas* C. L. Brehm differs from the typical race in the male sex by having the upper surface generally grayer, less brown; the vermiculations on the scapulars duller, less evident; the gray and white vermiculations of the under side coarser; the center of the abdomen darker; and the tips of the red breast feathers nearly always marked with good-sized dark spots or cross bands. Females are said to have the upper side grayer and the under side strongly spotted, similar to young of the typical race.

Anas rubripes tristis Brewster,¹ Auk, 26, p. 176, 1909—new name for *Anas obscura* Gmelin, preoccupied; Townsend, l.c., 29, p. 177 (in text), 1912 (disc.); Oberholser, l.c., 34, p. 194, 1917 (dist. chars.; range); Bent, Bull. U. S. Nat. Mus., 126, p. 50, 1923 (life hist.); Phillips, Nat. Hist. Ducks, 2, p. 88, 1923 (dist. chars.; range); Peters, Bds. World, 1, p. 161, 1931 (range).

Anas rubripes rubripes Dwight, Auk, 26, p. 422, 1909 (disc.); Brewster, Auk, 27, p. 323, 1910 (disc.); Oberholser, l.c., 34, p. 193, 1917 (dist. chars.; range); idem, l.c., 35, p. 350, 1918—Minto, Walsh County, North Dakota; Bent, Bull. U. S. Nat. Mus., 126, p. 64, 1923 (life hist.); Phillips, Nat. Hist. Ducks, 2, p. 88, 1923 (dist. chars.; range); Peters, Bds. World, 1, p. 161, 1931 (range).

Anas tristis Phillips, Auk, 29, p. 299, 1912 (disc.).

Anas rubripes Phillips, Nat. Hist. Ducks, 2, p. 68, pl. 23, distr. map 31, 1923 (monog.); Cartwright, Canad. Field Nat., 55, p. 78, 1941—western Canadian records; Pirnie, Papers Mich. Acad. Sci., 26, p. 251, 1941 (migration of birds banded in Michigan); Shortt, Wilson Bull., 55, p. 1, col. pl., 1943 (disc. of supposed northern race; colors of bill and legs due to age); Soper, Auk, 63, p. 20, 1946—southwestern Baffin Island.

Range.—Breeds in eastern North America from the west coast of Hudson Bay (Fort Churchill) and northern Labrador south to northwestern Iowa (Spirit Lake), northern Illinois, northern Ohio, and North Carolina (Pamlico Sound). Winters from southern Wisconsin, northern Ohio, central New York and the coast of Nova Scotia (Chignecto Bay) south to central Florida and the Gulf coast as far west as Corpus Christi, Texas. Of late years has been gradually extending its range westward.

Field Museum Collection.—44: Wisconsin (Horicon Marsh, Washington County, 1); Illinois (Henry, 3; unspecified, 1); Ontario (Long Point Club, Lake Erie, 2); Quebec (Magdalen Islands, 4); Newfoundland (Hopedale, 1); Maine (Lincoln, 2); Massachusetts (Duxbury, 3; West Yarmouth, 1); New Hampshire (Holderness, 1); Connecticut (Stony Creek, 1; Hamden, 3; North Haven, 2; Guilford, 1; East Haven, 1; West Haven, 4; New Haven, 1); North Carolina, Dare County (Pea Island, 8; Bodie Island, 2); Florida (Banana River, 1; Amelia Island, 1).

Conover Collection.—24: South Dakota (Eden, 1); Illinois (Henry, 11); Michigan (Augusta, 1); Ontario (Bradley's Marsh, Kent County, 3); Quebec (St. Anne de la Perade, 1); Nova Scotia (Wolf-

¹ The characters that have been given for this race by different ornithologists seem mostly to be due to age or individual variation. Some of its most enthusiastic proponents have admitted that there were probably more intermediates that could not be classified than typical examples of both alleged subspecies. Like females of *Anas platyrhynchos*, this species seems to be quite variable in coloration.

ville, 4); North Carolina (Seagull, Currituck Sound, 2); Florida (Homosassa Springs, Citrus County, 1).

**Anas fulvigula* Ridgway. FLORIDA BLACK DUCK.

Anas obscura var. *fulvigula* Ridgway, Amer. Nat., 8, p. 111, 1874—St. John's River, Florida (type in U. S. National Museum).

Anas maculosa Sennett,¹ Auk, 6, p. 263, 1889—Nueces Bay, Texas (cotypes in the American Museum of Natural History, New York); Salvadori, Cat. Bds. Brit. Mus., 27, p. 203, 1895—San Antonio and Corpus Christi, Texas (full bibliog.).

Anas fulvigula Salvadori, Cat. Bds. Brit. Mus., 27, p. 202, 1895—Lake Hichpoochee, Florida (full bibliog.); Phillips, Nat. Hist. Ducks, 2, p. 60, pl. 22, distr. map 30, 1923 (monog.).

Anas fulvigula maculosa Phillips, Auk, 29, p. 297, 1912 (not distinct); idem, l.c., 33, p. 432, 1916 (distinct); Bent, Bull. U. S. Nat. Mus., 126, p. 72, 1923 (life hist.); Peters, Bds. World, 1, p. 161, 1931 (range).

Anas fulvigula fulvigula Bent, Bull. U. S. Nat. Mus., 126, p. 68, 1923 (life hist.); Peters, Bds. World, 1, p. 161, 1931 (range).

Range.—Florida, mainly in the southern portion, from the St. John's River on the east to St. Mark's on the west, and the Gulf coast from Louisiana to the Mexican border. Possibly also the Gulf coast of Alabama and Mississippi. Accidental as far north as Colorado (Loveland).²

Field Museum Collection.—36: Texas (Brownsville, 10; Nueces County, 2; Corpus Christi, 3; Padre Island, Cameron County, 1); Louisiana (Grand Chenier, Cameron Parish, 2); Florida (unspecified, 2; Canaveral Club, Brevard County, 1; Tampa, 1; Indian River, 1; Persimmon Hammock, Brevard County, 2; Lake Okeechobee, 1; Kissimmee River, 1; Lake Kissimmee, 1; Indian Prairie, Glades County, 2; Bassenger, 1; Naples, 3; East River, near Everglades, 1; Orlando, 1).

Conover Collection.—9: Texas (Laguna Larga, Kleberg County, 1; Eagle Lake, Wharton County, 1); Louisiana (Vermilion Bay, 1; Cameron Parish, 1); Florida (Lake Okeechobee, 1; Glades County, 1; Indian Prairie, Okeechobee County, 3).

¹ Specimens from Louisiana and Texas do not seem to differ enough from Florida examples to justify recognition of this race. While Florida birds have a tendency toward unstreaked cheeks, this character is not very constant and appears in many of the western specimens. The black spot at the base of the bill, very evident in eighteen out of nineteen Florida examples, is plainly present in five out of seventeen from Louisiana and Texas and faintly indicated in others.

² Specimen in Colorado Museum of Natural History, Denver.

***Anas diazi** Ridgway. MEXICAN BLACK DUCK.

Anas diazi Ridgway, Auk, 3, p. 332, 1886—San Ysidro, Puebla, Mexico (type in collection of the Mexican Geographical and Exploring Commission, National Museum of Mexico); Salvadori, Cat. Bds. Brit. Mus., 27, p. 204, 1895—Puebla, Mexico (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 208, 1903—Laguna del Rosario, Tlaxcala, and San Ysidro, Puebla; Phillips, Auk, 29, p. 296 (in text), pl. 15, 1912 (disc. plum. and char.); idem, Nat. Hist. Ducks, 2, p. 55, pl. 22, distr. map 29, 1923 (monog.).

(?) *Anas aberti* (not of Ridgway) Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 208, 1903—part, Mexico (Tepic, Valley of Mexico, Guanajuato, Guadalajara).

Anas novimexicana Huber,¹ Auk, 37, p. 273, 1920—Rio Grande, west of Las Cruces, Dona Ana County, New Mexico (type in collection of Wharton Huber); Bent, Bull. U. S. Nat. Mus., 126, p. 48, 1923 (life hist.).

Anas diazi novimexicana Conover, Auk, 39, p. 412, 1922—Dad's Lake, Cherry County, Nebraska; Phillips, Nat. Hist. Ducks, 2, p. 56, 1923 (disc.); Peters, Bds. World, 1, p. 161, 1931 (range); Lindsey, Auk, 63, p. 483, pls. 12-13, 1946 (nesting notes, New Mexico).

Anas diazi diazi Peters, Bds. World, 1, p. 161, 1931 (range).

Range.—From the upper Rio Grande Valley in New Mexico (Albuquerque) south through the highlands of Mexico (Chihuahua, Durango, Jalisco, Guanajuato, Michoacan, Valley of Mexico) to the state of Puebla. Wanders north occasionally to Iowa, Nebraska, and Colorado.

Field Museum Collection.—3: Mexico (Babicora, Chihuahua, 3).

Conover Collection.—8: Nebraska (Dad's Lake, Cherry County, 1); New Mexico (Hot Springs, Sierra County, 1; Hidalgo County, 2); Mexico (Patos, Durango, 4).

Anas wyvilliana Sclater. HAWAIIAN DUCK.

Anas wyvilliana Sclater, Proc. Zool. Soc. Lond., 1878, p. 350—Hawaiian Islands (type in the British Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 196, 1895 (full bibliog.); Phillips, Nat. Hist. Ducks, 2, p. 44, pl. 21, 1923 (monog.).

Anas aberti Ridgway, Proc. U. S. Nat. Mus., 1, p. 250, 1878—Mazatlán, Mexico (type in U. S. National Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 204, 1895 (full bibliog.); Phillips, Nat. Hist. Ducks, 2, p. 47 (in text), 1923 (disc. of type).

Range.—Extralimital. One specimen taken at Mazatlán, Mexico.

¹ As in the other two species of American Black Ducks, there is great variation in plumage. From the series examined, however, all of it would seem to be either individual or due to age or season and not to locality.

Additional material examined.—Colorado: Henderson, 1.—New Mexico: Las Cruces, 6.—Mexico: Ocotlan, Jalisco, 1; Patzcuaro, Michoacan, 1; Lerma, Mexico, 5; Ixtacalco, Mexico, 1; near Mexico City, 4.

****Anas specularis* King. SPECTACLED DUCK.**

Anas specularis King, Zool. Journ., 4, p. 98, 1828—Straits of Magellan (type in British Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 215, 1895—Rio Pilmaiquen, central Chile, and Straits of Magellan (full bibliog.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 230, 1910—Lago General Paz, Chubut; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 443, 1912—Rio Negro, Argentina; Peters, Bull. Mus. Comp. Zool., 65, p. 301, 1923—Lake Nahuel Huapi and Huanuluan, Rio Negro, Argentina; Phillips, Nat. Hist. Ducks, 2, p. 129, pl. 26, distr. map 38, 1923 (monog.); idem, l.c., 4, p. 314, 1926 (habits); Wetmore, Univ. Calif. Pub. Zool., 24, p. 416, pl. 12, 1926—Bariloche, Rio Negro, Argentina; Peters, Bds. World, 1, p. 165, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 322, 1932—Chile (Llanquihue [Balseo, junction Rios Simpson and Mañuales; Estancia Aisen, Rio Coihaique; Casa Richards, Rio Nirehuau]; Cautin [Huilfo, Temuco]); Reynolds, El Hornero, 5, p. 350, 1934—Spion Kop, Tierra del Fuego; Casares, l.c., 6, p. 14, pl. 1, fig. 6, distr. map, 1935—Neuquen (Lago Trafal, Chos-Malal and Collon-Cura), Rio Negro (Lago Nahuel-Huapi), Santa Cruz (Lago Argentina).

Anas chalcoptera Kittlitz, Mém. Acad. Sci. St. Pétersb. (sav. étr.), 2, p. 471, pl. 5, 1835—Valparaiso, Chile (type in Leningrad Museum; cf. Chrostowski, Ann. Zool. Mus. Pol. Hist. Nat., 1, p. 20, 1921).

Range.—Chilean and Argentine slopes of the Andes from about 35° S. lat.¹ to the Straits of Magellan. North in winter to the vicinity of Valparaiso, Chile.

Field Museum Collection.—3: Chile (Cucaco, Chiloé Island, 3).

Conover Collection.—13: Chile (Temuco, 1; Estancia Aysen, Rio Coihaique, Aysen, 6; Casa Richards, Rio Nirehuau, Aysen, 3; Balseo, junction Rios Simpson and Mañuales, Aysen, 2); Argentina (Bella Vista, Santa Cruz, 1).

****Anas specularioides alticola* Ménégau.² BOLIVIAN CRESTED DUCK.**

Anas cristata alticola Ménégau, Bull. Soc. Phil. Paris, (10), 1, p. 224, 1909—Lake Poopo, Oruro, Bolivia (type in Paris Museum); idem, Rev. Franc. d'Orn., 1, p. [137], 1909—Lake Poopo; Chapman, Bull. U. S. Nat. Mus., 117, p. 55, 1921—Cedrobamba, Peru; Phillips, Nat. Hist. Ducks, 2, p. 137, 1923 (dist. char.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 243, 1930—Huánuco Viejo, Peru (disc. *cristata* and *alticola*); Hellmayr, l.c., 19, p. 324, 1932—near San Pedro, Antofagasta, Chile; Casares, El

¹ Dr. Philippi (in litt.) found this duck breeding in the Cordillera de Chillan, Province of Nuble, Chile. The nests were found on islands in swift rivers and contained four or five eggs.

² *Anas specularioides alticola* Ménégau: Under side more uniform, with a rather washed out appearance; spotting of breast almost obsolete; light dull grayish color of forehead extending higher toward crown; chin and throat slightly more buffy. Size larger, wings of adult males over 280 mm.

Hornero, 6, p. 17, pl. 1, fig. 8, 1935—Laguna Grande, Calchaquíes, Tucumán; Philippi, Bol. Mus. Nac. Santiago, 16, p. 58, 1937—Laguna de Parinacota, Tarapacá, Chile; Morrison, Ibis, 1939, p. 466—Huancavelica, Peru; Philippi, Pub. Ofic. No. 12 del Jardín Zool. Nac. Chile, p. 17, 1939—Chile (Tarapacá, Coquimbo, Santiago), Argentina (Salta, Jujuy).

Anas cristata (not of Gmelin) Taczanowski, Orn. Per., 3, p. 473, 1886—Lake Junín (ex Jelski), central Peru (ex Whitely); Salvadori, Cat. Bds. Brit. Mus., 27, p. 216, 1895—part, Salinas and Tinta, Peru; Chubb, Ibis, 1919, p. 275—Aricoma Lake, Puno, Peru; Phillips, Nat. Hist. Ducks, 2, p. 132, distr. map 39, 1923—part, Peru, Bolivia, and northern Chile (monog.).

Anas specularioides alticola Peters, Bds. World, 1, p. 165, 1931 (range); Morrison, Ibis, 1939, pp. 466, 648—Lira, Huancavelica and Lake Junín, Peru (breeding dates).

Range.—Highland lakes in the Andes from Huánuco, Peru, south through Bolivia to the Province of Santiago, Chile, and San Juan, Argentina. Occasionally in winter to the central valley of Chile.

Field Museum Collection.—14: Peru (Junín, Junín, 4; Huánuco Viejo, Huánuco, 1; Salinas, Arequipa, 1); Bolivia (Esperanza, La Paz, 7; San Benito, Cochabamba, 1).

Conover Collection.—18: Peru (Huánuco Viejo, Huánuco, 2; Picotani, Puno, 2); Bolivia (Esperanza, La Paz, 4; Mount Sajama, Oruro, 1; Cerro San Benito, Cochabamba, 2; Laguna de Taxara, Tarija, 2); Chile (San Pedro, Antofagasta, 5).

****Anas specularioides specularioides* King.¹ CRESTED DUCK.**

Anas cristata (not of J. B. Fischer, 1778) Gmelin, Syst. Nat., 1, (2), p. 540, 1789—based on "Crested Duck" Latham, Gen. Syn. Bds., 3, (2), p. 543, Staten Island; Germain, Proc. Bost. Soc. N. H., 7, p. 314, 1860—Chile (nesting habits); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 199, 1891—Bahía Orange, Tierra del Fuego; Salvadori, Cat. Bds. Brit. Mus., 27, p. 216, 1895—part, central Chile to Straits of Magellan and Falkland Islands (full bibliog.); Crawshay, Bds. Tierra del Fuego, p. 102, col. pl., 1907—Useless Bay Settlement; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 446, 1912—Mount Tigre, Patagonia; Brooks, Bull. Mus. Comp. Zool., 61, p. 154, 1917—San Carlos, Falkland Islands; Phillips, Nat. Hist. Ducks, 2, p. 132, pl. 26, distr. map 39, 1923—part, Chile, Argentina, Falkland Islands (monog.); Bennett, Ibis, 1926, p. 326—Falkland Islands.

Anas specularioides King, Zool. Journ., 4, p. 98, July, 1828—Straits of Magellan (type [or cotype] in Edinburgh Museum; cf. Stenhouse, Nov. Zool., 35, p. 274, 1930).

¹ This species is a very aberrant member of the genus and from the coloration and pattern of its downy young is probably more closely related to the Shel-drakes (cf. Delacour and Mayr, Wilson Bull., 57, p. 15, 1945).

Anas pyrrhogastra Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur., 16, Suppl., p. 119, pl. 25, 1834—Maipo, Santiago, Chile (type in Berlin Museum).

Dafila pyrogaster Eyton, Monog. Anat., p. 113, 1838—Chile.

Anas lophyra Forster, Descr. Anim. (ed. Lichtenstein), p. 340, 1844—Magellan Straits.

Anas cristata cristata Phillips, Nat. Hist. Ducks, 2, p. 136, 1923 (dist. char.); Peters, Bull. Mus. Comp. Zool., 65, p. 301, 1923—Huanuluan and Neluan, Rio Negro; Wetmore, Univ. Calif. Pub. Zool., 24, p. 416, 1926—Lago Carilaufquen, Rio Negro; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 324, 1932—Arroyo Verde, Chubut, near Chilean boundary; Casares, El Hornero, 6, p. 16, pl. 1, fig. 7, distr. map, 1935 (range; habits); Philippi, Pub. Ofic. No. 12 del Jardin Zool. Nac. Chile, p. 17, 1939—Chile (Nirehuau, Aysen; Magallanes).

Anas specularioides specularioides Peters, Bds. World, 1, p. 165, 1931 (range).

Range.—From central Chile (Colchagua) and west central Argentina (Mendoza) south to Tierra del Fuego; Falkland Islands.

Field Museum Collection.—2: Argentina (Rivadavia, Chubut, 1); Chile (North Arm Station, Rio Ciaike, 1).

Conover Collection.—9: Argentina (Arroyo Verde, Chubut, 6; Rio Gallegos, Santa Cruz, 1; Deseado, Santa Cruz, 1; Estancia Cullen, Tierra del Fuego, 1).

Genus QUERQUEDULA Stephens

Querquedula Stephens, in Shaw's Gen. Zool., 12, (2), p. 142, 1824—type, by tautonymy, *Anas circia* Linnaeus=*Anas querquedula* Linnaeus.

Cyanopterus (not of Haliday, 1835) Eyton, Monog. Anat., p. 38, 1838—type, by orig. desig., *Anas rafflesii* King=*Anas cyanoptera* Vieillot.

**Querquedula discors* (Linnaeus). BLUE-WINGED TEAL.

Anas discors Linnaeus, Syst. Nat., 12th ed., 1, p. 205, 1766—based chiefly on "The White-Face Teal" Catesby, Nat. Hist. Carolina, 1, p. 100, pl. 100; North America=Carolina; Phillips, Nat. Hist. Ducks, 2, p. 373, pl. 43, distr. map 62, 1923 (monog.); Peters, Bds. World, 1, p. 162, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 297, 1935—Panama.

Cyanopterus inornatus Gosse, Bds. Jamaica, p. 402, 1847—Spanish Town, Jamaica (descr. of female; type in British Museum).¹

Querquedula discors Salvadori, Cat. Bds. Brit. Mus., 27, p. 299, 1895—Bermuda, Jamaica, St. Vincent, Grenada, Mexico, Guatemala, Veragua, etc.; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 215, 1903—West Indies, Mexico, British Honduras, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, and Trinidad; Carriker, Ann. Carnegie Mus., 6,

¹ Specimen hⁿ, adult female, Jamaica, P. H. Gosse, though not indicated as such, is doubtless the type.

p. 436, 1910—San José, Azahar de Cartago, Tenorio, Las Concovas, and Guápiles, Costa Rica; Chubb, Bds. Brit. Guiana, 1, p. 195, 1916—Abaré River, Rupununi savannas, and Cotinga River, British Guiana; Chapman, Bull. Amer. Mus. N. H., 36, p. 233, 1917—Cali and Puerto Valdivia, Colombia; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 120, 1918 (life hist. California); Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 46, 1922—Rio Cogollo, Zulia, Venezuela; Bent, Bull. U. S. Nat. Mus., 126, p. 111, 1923 (life hist.); Chapman, Bull. Amer. Mus. N. H., 55, p. 210, 1926—Esmeraldas, Chone, and Lago San Pablo, Ecuador; Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 311, 1927—Puerto Rico; Peters, Bull. Mus. Comp. Zool., 71, p. 307, 1931—Changuinola, Almirante Bay, Panama; Moffitt, Condor, 33, p. 247, 1931—California (nesting); Griscom, Bull. Mus. Comp. Zool., 72, p. 312, 1932—Obaldia, Darien, Panama; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 93, 1938—Puerto del Triunfo and Lake Olomega, El Salvador; Wetmore, Proc. U. S. Nat. Mus., 87, p. 183, 1939—Independencia, Venezuela; idem, Auk, 59, p. 104, 1942—Monte Christi, Dominican Republic; Soper, Trans. Roy. Canad. Inst., 24, p. 35, 1942—southern Wood Buffalo Park; Borrero, Caldasia, 3, p. 409, 1945—Sabana de Bogotá (abundant).

Querquedula discors albinucha Kennard,¹ Auk, 36, p. 459, pl. 17, 1919—Grand Chenier, Cameron Parish, Louisiana (type in collection of F. H. Kennard, now in Museum of Comparative Zoology, Cambridge, Mass.); Arthur, l.c., 37, p. 126, 1920 (not valid).

Querquedula discors discors Darlington, Bull. Mus. Comp. Zool., 71, p. 364, 1931—Ciénaga, Magdalena, Colombia (Nov. 10 and March 9).

Range.—Breeds mainly in central North America east of the Rocky Mountains from Great Slave Lake and Lake Winnipeg south to New Mexico, Louisiana, and southwestern Indiana. Known to breed sparingly west of the Rocky Mountains from central British Columbia (Lac la Hache and Cariboo) south to Oregon, Nevada, and probably California (southern San Joaquin Valley); also casually from the Gulf of St. Lawrence (Magdalen Islands) and New Brunswick (St. John County) south to central Ohio and southern West Virginia. Winters from southern California, Texas, Louisiana, and South Carolina south to Peru (Lake Junín) on the west and Cayenne on the east; also in the Bahama Islands and Greater and Lesser Antilles.

Field Museum Collection.—60: Alberta (Many Island Lake, 1); Saskatchewan (Maple Creek, 1); North Dakota (Stump Lake, 8; Towner County, 8); New Mexico (Carrizozo, 1); Texas (Brownsville, 1); Iowa (Burlington, 1); Wisconsin (Beaver Dam, 1); Illinois (Worth, 2); Ohio (Columbus, 1; Licking Reservoir, 1); Connecticut

¹*Querquedula discors albinucha* Kennard: The characters of this alleged race are due to individual variation.

(West Haven, 1; Guilford, 1; Lyme, 1; New Haven County, 1; North Haven, 3; Westville, 1); North Carolina (Brodie Island, Dare County, 6); Florida (Banana River, 6); Bahama Islands (Andros, 2); Virgin Islands (St. Croix, 2); Mexico (Tampico, 1); Guatemala (San Cristobal, 2; Lake Atitlan, 1); El Salvador (Puerto del Triunfo, 1); Costa Rica (Ballena, Guanacaste, 3); Colombia (unspecified, 2).

Conover Collection.—28: Alberta (Edmonton, 4; Tofield, 2); South Dakota (Eden, 2); Nebraska (Wood Lake, 2); Illinois (Wheaton, 3; Warrenville, 2; Henry, 1); Texas (Corpus Christi, 2); Venezuela (Rio Cogollo, Perija, 1); Colombia (Popayán, Cauca, 2); Ecuador (Antisana, 1; Latacunga, 2; Iliniza, Pichincha, 2; Chigchi Cocha, Pichincha, 1; Lago San Pablo, Imbabura, 1).

**Querquedula cyanoptera cyanoptera* (Vieillot). CINNAMON
TEAL.

Anas cyanoptera Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 5, p. 104, 1816—based on "Pato alas azules" Azara, *Apunt. Hist. Nat. Páx.*, 3, p. 437, No. 434, La Plata River and Buenos Aires; Phillips, *Nat. Hist. Ducks*, 2, p. 390, pl. 43, distr. map 63, 1923 (monog.).

Anas rafflesii King, *Zool. Journ.*, 4, No. 13, p. 97, Suppl., pl. 29, July, 1828—Magellan Straits (type in British Museum).¹

Querquedula caerulata "Eyton" Fraser, *Proc. Zool. Soc. Lond.*, 11, p. 118, 1843—"found in lakes and rivers" (of Chile) (new name for *Anas rafflesii* "Vig."=King).

Querquedula cyanoptera Doering, in Roca, *Inf. Ofic. Exp. Rio Negro, Zool.*, p. 53, 1881—common south to Rio Colorado; Oustalet, *Miss. Sci. Cap Horn*, 6, p. 203, 1891—Suzanne Cove, Patagonia (June); Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 303, 1895 (full bibliog.); Ihering, *Ann. Est. Rio Grande do Sul*, 16, p. 145, 1899—Rio Grande do Sul; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 208, 1902—Quebrada de Lules, Tucumán; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 3, p. 217, 1903—Sonora, Sinaloa, Vera Cruz, rivers and lagoons of both coasts of Mexico; Brewster, *Auk*, 24, p. 154, 1907 (records in South Atlantic states not valid); Rhoads, *l.c.*, p. 436, 1907 (a valid Florida record); Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, Orn., p. 472, 1912 (gen. account); Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 234, 1917—Cali, Palmira, Colombia; Grinnell, Bryant, and Storer, *Game Bds. Calif.*, p. 123, 1918 (life hist. California); Oberholser, *Auk*, 35, p. 476, 1918—Cherry Lake, Kidder County, North Dakota; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 141, 1922 (sight record, Santa Marta); Bent, *Bull. U. S. Nat. Mus.*, 126, p. 122, 1923 (life hist.); Phillips, *Nat. Hist. Ducks*, 2, p. 390, pl. 43, distr. map 63, 1923 (monog.); Peters, *Bull. Mus. Comp. Zool.*, 65, p. 302,

¹ Spec. s', female, Straits of Magellan, Captain King, is, without much doubt, the type.

1923—Huanuluan, Rio Negro (not common); Wetmore, Univ. Calif. Pub. Zool., 24, p. 417, 1926—Valcheta, Rio Negro; idem, Bull. U. S. Nat. Mus., 133, p. 80, 1926—Lavalle, Carhué, General Roca, and Tunuyán, Argentina; Chapman, Bull. Amer. Mus. N. H., 55, p. 211, 1926—La Carolina, Quito, Ecuador.

Anas cyanoptera cyanoptera Phillips, Nat. Hist. Ducks, 2, p. 401, 1923 (dist. chars.; range); Peters, Bds. World, 1, p. 162, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 296, 1935—Canal Zone (one record), Panama; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 46, 1945—Sonora (distr.).

Querquedula cyanoptera cyanoptera Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 331, 1932—Talcaguano, Cauquenes, near Santiago, and Casa Richards, Llanquihue, Chile; Borrero, Caudasia, 3, p. 409, 1945—Sabana de Bogotá (resident).

Range.—In western North America breeds from southern British Columbia (Okanagan) and western Montana (Missoula County) south to northern Lower California (San Rafael Valley) and northern Mexico (Chihuahua) and from the Pacific coast east to eastern Wyoming (Lake Como), southwestern Kansas (Meade County) and south central Texas (Marathon). Winters from central California (Stockton), southern Arizona (Tucson), central New Mexico and southern Texas south to south central Mexico (Michoacan and Vera Cruz) and probably sparingly through Central America to Colombia and perhaps Ecuador.

In southern South America it is found from central Chile (Coquimbo), western Argentina (Tunuyán), Paraguay, and southern Brazil (Rio Grande do Sul) south to the Straits of Magellan; Falkland Islands. Occurs regularly in Colombia (Cali) and Ecuador (near Quito), but whether as resident or migrant from North America is not known.¹

Field Museum Collection.—26: California (Witch Creek, 3; Redlands, 3; Thermal, 1; Los Banos, 2; Lakeside, 1; Playa del Rey, 2; Mount Pinos, 1; Riverside, 2); Nevada (Carson City, 1); Utah (Salt Lake County, 1); Colorado (Larimer County, 2); Arizona (Tucson, 2); New Mexico (Fort Bayard, 1; Albuquerque, 1); Texas (Skidmore, 2); Colombia (unspecified, 1).

Conover Collection.—45: Utah (Brigham, Box Elder County, 16); California (Buena Vista Lake, 4; Yermo, 6; Playa del Rey, 4);

¹ A letter from Mr. F. C. Lincoln has informed the junior author that a Cinnamon Teal banded at Burns, Oregon, on September 27, 1938, was recovered on April 8, 1939, on the Magdalena River near Sitio Nuevo, Magdalena, Colombia. However, no other returns from birds banded in North America have been received from farther south than Jalisco and Vera Cruz, Mexico.

Colombia (Puerto Tejada, Cauca, 4); Ecuador (Lago San Pablo, Imbabura, 2); Argentina (Tunuyán, Mendoza, 2; Cambaceres, Buenos Aires, 2); Chile (Province of Santiago, 2; Casa Richards, Rio Nirehuau, Aysen, 3).

**Querquedula cyanoptera orinomus* Oberholser.¹ ANDEAN CINNAMON TEAL.

Querquedula orinomus Oberholser, Proc. Biol. Soc. Wash., 19, p. 93, 1906—"Puna" (=Puno), Lake Titicaca, alt. 12,250 feet, Peru (type in U. S. National Museum).

Querquedula cyanoptera (not *Anas cyanoptera* Vieillot) Taczanowski, Orn. Per., 3, p. 474, 1886—Chorillos (ex Jelski), Santa Lucia (ex Stolzmann), Laguna de Tungasuca (ex Whately).

Anas cyanoptera orinomus Phillips, Nat. Hist. Ducks, 2, p. 401, 1923 (dist. chars.; range); Peters, Bds. World, 1, p. 162, 1931 (range).

Querquedula cyanoptera orinomus Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 332, 1932—Sacaya and Sitani, Tarapacá, Chile.

Range.—Puna zone of the Andes from Lake Titicaca, Peru, south through Bolivia to Antofagasta, Chile.

Conover Collection.—5: Peru, Puno (Puno, 1; Lake Titicaca, 1; Puerto Arturo, 3).

Genus SPATULA Boie

Spatula Boie, Isis, col. 564, 1822—type, by monotypy, *Anas clypeata* Linnaeus.

Rhynchaspis (Leach MS.) Stephens, in Shaw's Gen. Zool., 12, (2), p. 114, 1824—type, by subs. desig. (Eyton, Monog. Anat., p. 40, 1838), *Anas clypeata* Linnaeus.

Spathulea Fleming, Brit. Anim., p. 123, 1828—type, by orig. desig., *Anas clypeata* Linnaeus.

Clypeata Lesson, Man. d'Orn., 2, p. 416, 1828—type, by orig. desig., *Anas clypeata* Linnaeus.

**Spatula clypeata* (Linnaeus). SHOVELLER.

Anas clypeata Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—based chiefly on Fauna Svec., No. 102; coast of Europe=southern Sweden (ex Fauna Svec.).

Anas mexicana Gmelin, Syst. Nat., 1, (2), p. 519, 1788—based on "Le Souchet du Mexique" Brisson, Orn., 6, p. 337 (ex "Yacapatlahoac" Hernandez, Hist. Anim. Nov. Hisp., p. 42); Mexico.

¹*Querquedula cyanoptera orinomus* Oberholser differs from the typical race by being considerably larger. The color differences spoken of by the describer do not seem to hold in a series. Wings in the highland race measure 215–226 (males), 205–223 (females) as against 180–206 in typical *cyanoptera*.

Spatula clypeata Turner, Contr. Nat. Hist. Alaska, 2, p. 133, 1886—St. Michaels (rare); Nelson, Nat. Hist. Coll. Alaska, 3, p. 69, 1887—Kotzebue Sound to mouth of Kuskoquim River (breeding sparingly); Salvadori, Cat. Bds. Brit. Mus., 27, p. 307, 1895—British Columbia to Medellin, Colombia (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 218, 1903—Mexico, Guatemala, Costa Rica, and West Indies; Deane, Auk, 22, p. 408, 1905 (an albino brood); Carriker, Ann. Carnegie Mus., 6, p. 436, 1910—Las Concovas, Costa Rica; Swarth, Condor, 17, p. 115, 1915 (hybrid with *Querquedula*); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 129, 1918 (life hist. California); McAtee, Auk, 39, p. 380, 1922 (food habits); Bent, Bull. U. S. Nat. Mus., 126, p. 135, 1923 (life hist.); Phillips, Nat. Hist. Ducks, 3, p. 10, pl. 47, distr. map 67, 1925 (monog.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, (3), p. 312, 1927—Puerto Rico and St. Thomas; Peters, Bds. World, 1, p. 169, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 297, 1935—Divalá, Chiriquí, Panama (one record); Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., p. 94, 1938 (uncommon in El Salvador); Soper, Trans. Roy. Canad. Inst., 24, p. 36, 1942—Peace River and Athabaska marshes; Porsild, Canad. Field Nat., 57, p. 23, 1943—Mackenzie Delta (fairly rare breeder); Borrero, Caldasia, 3, (12), p. 230, 1944—Savanna de Bogotá, Colombia (Oct., Nov., March); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 48, 1945—Sonora (distr.); Borrero, Caldasia, 3, p. 409, 1945—Sabana de Bogotá.

Range.—Northern hemisphere. In North America breeds from Kotzebue Sound, Mackenzie Delta, and lakes Athabaska and Winnipeg south to central California, northern New Mexico, Kansas, and Indiana. Winters from Puget Sound, the lower Mississippi Valley, and Chesapeake Bay south to Honduras, Greater Antilles (Cuba, Puerto Rico, Jamaica) and Lesser Antilles (St. Thomas, Barbados, Trinidad); occasionally to Panama and Colombia (Sabana de Bogotá).

Field Museum Collection.—58: Alberta (Beaverhill Lake, 1; Many Island Lake, 1); Saskatchewan (Hay Creek, 4; Prince Albert, 2); North Dakota (Stump Lake, 4; Towner County, 7; Nelson County, 2); South Dakota (Harrison, 2); Colorado (New Castle, 1); California (Corona, 3; Colusa, 2; Witch Creek, 1; Pacific Beach, 1); Texas (Padre Island, 1); Wisconsin (Beaver Dam, 1); Illinois (Cook County, 1; Sparland, 1); Iowa (Burlington, 1); Indiana (English Lake, 2); Louisiana (Grand Chenier, Cameron Parish, 2); Connecticut (Quinnipiac Marshes, New Haven County, 1); New York (Albion, 1); North Carolina (Bodie Island, Dare County, 6); Florida (Anclote, 1; Banana River, 7); Colombia (unspecified, 2).

Conover Collection.—35: Alberta (Tofield, 2); California (Santa Ana River, Riverside County, 1; Yermo, 1); Utah (Brigham, 13); Wyoming (Dubois, Fremont County, 1); Texas (Norias, Kenedy

County, 1); Nebraska (Wood Lake, 3); South Dakota (Eden, Marshall County, 1); Illinois (Wheaton, 5; Warrenville, 1; Henry, 6).

**Spatula platalea* (Vieillot). RED SHOVELLER.

Anas platalea Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 157, 1816—based on "Pato espátala" Azara, Apunt. Hist. Nat. Páx., 3, p. 427, No. 431; Buenos Aires and Paraguay.

Anas jaspidea Vieillot,¹ Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 162, 1816—based on description of male ducks in Azara, Apunt. Hist. Nat. Páx., 3, p. 439; Rio de la Plata.

Rynchaspis maculatus (Gould MS.) Jardine and Selby, Ill. Orn., 3, (10), pl. 147, 1835—South America (type from the Rio Plata, cf. Gould, in Darwin's Zool. Beagle, 3, p. 135, 1841).

Rynchaspis maculatus Gould, in Darwin's Zool. Beagle, 3, p. 135, 1841—Rio Plata.

Dafila caesio-scapula Reichenbach, Vollst. Naturg. Schwimmvög., Natatores, pl. 51, fig. [180], between 1845 and 1848—no locality (type in Dresden Museum).

Dafila caesioscapulata Bibra, Denks. Math.-naturw. Kl. Akad. Wiss. Wien, 5, p. 131, 1853—lakes around Santiago.

Spatula platalea Taczanowski, Orn. Per., 3, p. 480, 1886—Laguna de Tungasuca (ex Whately); Sclater and Hudson, Arg. Orn., 2, p. 136, 1889 (range); Salvadori, Cat. Bds. Brit. Mus., 27, p. 316, 1895—Chile (Tarapacá, Rio Bueno, Rio Pilmaiquen, and Santiago), Argentina (Mendoza, Conchitas, and Moreno, Buenos Aires), Sandy Point, Straits of Magellan and Falkland Islands; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 145, 1899—Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Famaillá, Tucumán; Lönnberg, Ibis, 1903, pp. 447, 453—Jujuy (Moreno and Abra Pampa) and Bolivia (San Luis, near Tarija); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 477, 1912—Rio Coy, Patagonia; Peters, Bull. Mus. Comp. Zool., 65, p. 303, 1923—western Rio Negro (locally common); Phillips, Nat. Hist. Ducks, 3, p. 36, pl. 48, distr. map 69, 1925 (monog.); Wetmore, Bull. U. S. Nat. Mus., 133, p. 81, 1926—Lavalle, Buenos Aires; idem, Univ. Calif. Pub. Zool., 24, p. 418, 1926—Valcheta Creek, Rio Negro; Peters, Bds. World, 1, p. 169, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 333, 1932—Casa Richards, Rio Nirehuau, Llanquihue, Chile; Casares, El Hornero, 6, p. 10, pl. 1, figs. 4–5, distr. map, 1935 (range; habits).

Range.—From southern Peru (Tungasuca), northern Chile (Tarapacá), Bolivia (Desaguadero River and the Chaco), Paraguay, and southern Brazil (Rio Grande do Sul) south to the Straits of Magellan and northern Tierra del Fuego; Falkland Islands.

¹ Salvadori lists *Anas jaspidea* Vieillot in the synonymy of *Querquedula cyanoptera* with a question mark. There is not much doubt, however, from the description, "head and upper neck brown spotted with black, rest of the neck and sides of the body a clear russet sprinkled with round black spots," that it refers to the male of the Red Shoveller.

Field Museum Collection.—2: Argentina (Concepción, Tucumán, 1; Los Ingleses, Buenos Aires, 1).

Conover Collection.—9: Argentina (Concepción, Tucumán, 2; Cambaceres, Buenos Aires, 2); Chile (Laguna de Vichuquen, Tacna, 1; Laguna Salinas, Santiago, 1; Casa Richards, Rio Nirehuau, Aysen, 3).

Genus CHAULELASMUS Bonaparte

Chaulelasmus Bonaparte, Geog. and Comp. List, p. 56, 1838—type, by monotypy, *Anas strepera* Linnaeus.

Ktinorhynchus Eyton, Monog. Anat., p. 137, preface, p. 2, 1838—type, by monotypy, *Anas strepera* Linnaeus.

Ctenorhynchus Agassiz, Nomencl. Zool., Ind. Univ., p. 198, 1846 (emendation).

Chauliodus (not of Bloch, 1901) Swainson, Journ. Roy. Inst. Great Britain, 2, p. 19, 1831—type, "the well known Gadwall Duck"=*Anas strepera* Linnaeus.

Chauliodous Olphe-Gaillard, Contr. Faun. Orn. Eur. Occ., 1, (4), p. 49, 1888 (emendation).

**Chaulelasmus streperus* (Linnaeus). GADWALL.

Anas strepera Linnaeus, Syst. Nat., 10th ed., 1, p. 125, 1758—based chiefly on Fauna Svec., No. 101; "in Europae aquis dulcibus;" restricted type locality, Sweden; Turner, Contr. Nat. Hist. Alaska, 2, p. 131, 1886—Unalaska Island and Yukon Delta; Phillips, Nat. Hist. Ducks, 2, p. 138, pl. 27, distr. map 40, 1923 (monog.).

Anas cinerea S. G. Gmelin, Reise Russl., 2, p. 184, t. 17, (male), 1774—southern Russia.

Anas (*Chauliodus*) *strepera* Swainson and Richardson, Faun. Bor.-Amer., 2, p. 440, 1831—North America.

Chaulelasmus americanus "Gray," Brehm, Vogelfang, p. 374, 1855—North America.

Chaulelasmus streperus Salvadori, Cat. Bds. Brit. Mus., 27, p. 221, 1895—Bering Straits, Vancouver Island, Oregon, Nevada, Texas, California and Mexico (Presidio and Zacatecas); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 209, 1903—Mexico (Sonora, Chihuahua, Sinaloa, Valley of Mexico and Vera Cruz) and West Indies; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 103, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 77, 1923 (life hist.); Peters, Bds. World, 1, p. 168, 1931 (range); Dixon, Fauna Nat. Parks U. S., 3, p. 33, 1938—Mount McKinley National Park, Alaska (breeding); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 48, 1945—Sonora (distr.).

Range.—Temperate regions of the northern hemisphere. In North America breeds from central Alaska (Mount McKinley), central Alberta (Lesser Slave Lake), and Hudson Bay (Churchill)

south to southern California (Riverside County), northwestern New Mexico (Lake Burford), southwestern Kansas and southern Wisconsin (Lake Koshkonong). Winters from southern British Columbia, Colorado, southern Illinois, and Chesapeake Bay south to southern Lower California (San José del Cabo), south central Mexico (Guadalajara), Florida, and rarely the West Indies.

Field Museum Collection.—35: British Columbia (Okanagan, 2); Alberta (Many Island Lake, 2); Saskatchewan (Lake Johnston, 2; Maple Creek, 2; Quill Lake, 1); North Dakota (Stump Lake, 3; Nelson County, 1; Towner County, 6); Iowa (Rockwell City, 1); California (Colusa, 2); Arizona (Tucson, 2); Texas (Brownsville, 1; Padre Island, 1); Connecticut (Norfolk, 1; Quinnipiac Marshes, New Haven County, 1; North Haven, 1); North Carolina (Bodie Island, Dare County, 1); Florida (Banana River, 3; unspecified, 1); Mexico (Tampico, Tamaulipas, 1).

Conover Collection.—25: Alberta (Tofield, 2; Camrose, 1; Edmonton, 2); Utah (Brigham, 7); Nebraska (Wood Lake, 5); Illinois (Henry, 6); North Carolina (Seagull, Currituck Sound, 1); Mexico (Patos, Durango, 1).

Genus MARECA Stephens

Mareca Stephens, in Shaw's Gen. Zool., 12, (2), p. 130, 1824—type, by subs. desig. (Eyton, Monog. Anat., p. 33, 1838), *Mareca fistularis* Stephens=*Anas penelope* Linnaeus.

Penelops Kaup, Skizz. Entw. Gesch. Nat. Syst. Europ. Thierw., p. 31, 1829—type, by monotypy, *Anas "penelops"*=*Anas penelope* Linnaeus.

**Mareca penelope* (Linnaeus). EUROPEAN WIDGEON.

Anas Penelope Linnaeus, Syst. Nat., 10th ed., 1, p. 126, 1758—based chiefly on Fauna Svec., No. 105; Europe, restricted type locality, Sweden (ex Fauna Svec.).

Anas penelope Deane, Auk, 12, p. 292, 1895—English Lake, Indiana (third record); idem, l.c., 16, p. 270, 1899—English Lake, Indiana; Herrick, l.c., 19, p. 284, 1902—Munroe Marsh, Michigan; Phillips, Nat. Hist. Ducks, 2, p. 167, pl. 29, distr. map 42, 1923 (monog.); Hørring and Salomonsen, Medd. Grønland, 131, (5), p. 9, 1941—Greenland records.

Mareca penelope Salvadori, Cat. Bds. Brit. Mus., 27, p. 227, 1895—Newfoundland (full bibliog.); Deane, Auk, 20, p. 303, 1903—Ohio, Michigan, Indiana; idem, l.c., 28, p. 254, 1911—Illinois, Wisconsin; Fuertes, l.c., 32, p. 367, 1915—Virginia, North Carolina; Nichols and Griscom, l.c., 33, p. 75, 1916—Long Island; Griscom, l.c., p. 320, 1916—New York;

Palmer, Condor, p. 187, 1918 (complete Pacific Coast records); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 111, 1918 (life hist. California); Phillips, Auk, 37, p. 288, 1920 (Massachusetts records); Widmann, l.c., 39, p. 250, 1922—Texas; Walker, Condor, 25, p. 70, 1923—Oregon; Bent, Bull. U. S. Nat. Mus., 126, p. 86, 1923 (life hist.); Jewett, Condor, 26, p. 32, 1924—Oregon; Stone, Auk, 41, p. 338, 1924—North Carolina; Bailey, Condor, 27, p. 168, 1925—King Island, Alaska; Lewy, Auk, 47, p. 552, 1930—Wolf Lake, Illinois; Peters, Bds. World, 1, p. 168, 1931 (range); Huber, Auk, 48, p. 256, 1931—Georgia; Abbott, Condor, 35, p. 204, 1933—Descanso, Lower California; Norton, Auk, 50, p. 354, 1933—Maine; Lynch, l.c., 52, p. 78, 1934—Rhode Island; McClanahan, l.c., 54, p. 532, 1937 (all Florida records); Cottam and Knappen, l.c., 56, p. 146, 1939 (food habits in North America); Cutler, l.c., 58, p. 570, 1941—Leipsic, Delaware; Hasbrouck, l.c., 61, p. 93, 1944 (disc. of hist. in North America and possibility of breeding); Cooke, Bird Banding, 16, p. 124, 1945 (seven records of Iceland birds recovered in eastern North America, pointing to more or less regular migration from there).

Anas penelops (sic) Winge, Medd. Grøn., 21, p. 77, 1899—Greenland.

Range.—Europe and Asia south in winter to northern Africa and India. Found frequently in autumn and winter on the Atlantic coast of North America from New England to Florida, and there are numerous instances of its occurrence throughout the interior, on the Pacific coast, and in Alaska; casual in Greenland.

Field Museum Collection.—3: Alaska (Bering Sea, 1); California (Brawley, Imperial County, 1); Connecticut (Grove Beach, 1).

Conover Collection.—1: British Columbia (Comox, Vancouver Island, 1).

***Mareca americana** (Gmelin). BALDPATE.

Anas americana Gmelin, Syst. Nat., 1, (2), p. 526, 1789—based on "Le Canard jensen, de la Louisiane" Daubenton, Pl. Enl., pl. 955, and "American Wigeon" Pennant, Arct. Zool., 2, p. 567 (New York), Louisiana and New York; Turner, Contr. Nat. Hist. Alaska, 2, p. 131, 1886—St. Michaels; Nelson, Nat. Hist. Coll. Alaska, 3, p. 68, 1887—St. Michaels (breeding); Phillips, Nat. Hist. Ducks, 2, p. 189, pl. 29, distr. map 43, 1923 (monog.).

Mareca americana Salvadori, Cat. Bds. Brit. Mus., 27, p. 233, 1895—North America, Mexico, Guatemala (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 210, 1903—Mexico, Guatemala, and Trinidad; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 106, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 89, 1923 (life hist.); Conover, Auk, 43, p. 164, 1926—Hooper Bay, Alaska; Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, (3), p. 308, 1927—Puerto Rico (Cartagena Lagoon) and Virgin Islands (St. Thomas; St. Croix); Peters, Bds. World, 1, p. 168, 1931 (range); Griscom, Bull. Mus. Comp. Zool.,

78, p. 297, 1935—Canal Zone, Panama (one record); Soper, Trans. Roy. Canad. Inst., 24, p. 34, 1942—Wood Buffalo Park; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 47, 1945—Sonora (distr.); Borrero, Caldasia, 3, p. 407, 1945—Sabana de Bogotá, Colombia.

Range.—Breeds from the Yukon and Mackenzie valleys east to Hudson Bay and south to eastern Oregon, northern Utah, South Dakota, and formerly southern Wisconsin and northern Indiana. Winters from British Columbia, the central Mississippi Valley, and Maryland south to Costa Rica, rarely to Panama (one record), Colombia (Sabana de Bogotá), and the West Indies.

Field Museum Collection.—47: Alaska (Bethel, 2); British Columbia (Okanagan, 1); Saskatchewan (Maple Creek, 3; Lake Johnston, 1); Quebec (Isle aux Rheaux, 1); Oregon (Prineville, 1; Salem, 2; Tillamook, 1; Burns, 1); California (Eureka, 1; Witch Creek, 1; Wasco, 1; San Diego County, 1); Utah (Bear River Marshes, 1); Arizona (Tucson, 1); Texas (Cameron County, 2); North Dakota (Stump Lake, 1; Towner County, 2; Rolette County, 1); Iowa (Cedar Rapids, 1); Kansas (Pierceville, 1); Illinois (Sparland, 1; Canton, 1); Massachusetts (Barnstable County, 2); Connecticut (Branford, 1; North Haven, 3; West Haven, 1; Grove Beach, 1; Clinton, 1; Quinnipiac Marshes, 1); Virginia (unspecified, 1); North Carolina (Pea Island, Dare County, 2); Florida (Banana River, 3; Canaveral Club, Brevard County, 1); Colombia (unspecified, 1).

Conover Collection.—33: Alaska (Alaktak River, near Barrow, 1; Hooper Bay, Bering Sea, 1); Yukon Territory (Marsh Lake, 1); British Columbia (Comox, Vancouver Island, 6); Alberta (Camrose, 2; Tofield, 3); Manitoba (Churchill, 4); Nebraska (Wood Lake, 4); Illinois (Wheaton, 1; Henry, 8); North Carolina (Seagull, Currituck Sound, 2).

**Mareca sibilatrix* (Poeppig). CHILOE WIDGEON.

Anas sibilatrix Poeppig, in Froriep's Notiz. Geb. Natur.- und Heilkunde, No. 529 (=25, No. 1), p. 10, July, 1829—Talcaguano, Concepción, Chile (location of type not stated); Phillips, Nat. Hist. Ducks, 2, p. 203, pl. 29, distr. map 44, 1923 (monog.).

Anas chiloensis King, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, p. 15, Jan. 6, 1831—"in insula Chiloé" (type apparently lost).

Anas parvirostris Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 35, p. 43, 1841—based on "Pato pico pequeño" Azara, Apunt. Hist. Nat. Páx., 3, p. 434, No. 432, Buenos Aires.

Mareca sibilatrix Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 54, 1881—Rio Sauce (Chico), Rio Colorado and Rio Negro; Sclater and

Hudson, Arg. Orn., 2, p. 135, 1889 (range); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 210, 1891—Rio Gallegos, Santa Cruz, Patagonia; Salvadori, Cat. Bds. Brit. Mus., 27, p. 236, 1895—Montevideo, Buenos Aires, Falkland Islands, and Chile; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—Rio Grande do Sul; Crawshay, Bds. Tierra del Fuego, p. 104, 1907—San Sebastián Settlement and Useless Bay, Tierra del Fuego; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 450, 1912—Rio Coy, Patagonia; Peters, Bull. Mus. Comp. Zool., 65, p. 302, 1923—western Rio Negro (common); Wetmore, Univ. Calif. Pub. Zool., 24, p. 417, 1926—Valcheta, Rio Negro; idem, Bull. U. S. Nat. Mus., 133, p. 80, 1926—Cape San Antonio, Carhué and General Roca, Argentina; Wilson, El Hornero, 3, p. 354, 1926—southern Santa Fé (nesting); Aravena, l.c., 4, p. 154, 1928 (food); Peters, Bds. World, 1, p. 168, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 325, 1932—Cucaco, Chiloé Island and Casa Richards, Rio Nirehuau, Llanquihue, Chile; Casares, El Hornero, 7, p. 347, pl. 3, fig. 8, distr. map, 1940 (range; habits).

Range.—Southern South America from northern Chile (Coquimbo), northern Argentina (Tucumán), Paraguay, and southern Brazil (Rio Grande do Sul) south to Tierra del Fuego (San Sebastián Settlement and Useless Bay); Falkland Islands. Found in the northern part of its range only in winter.

Field Museum Collection.—3: Chile (Cucaco, Chiloé Island, 1; Riesco Island, Magallanes, 1); Argentina (Rio Neuquen, Neuquen, 1).

Conover Collection.—19: Chile (Batuco, Santiago, 2; Galvarino, Cautin, 2; Cucaco, Chiloé Island, 8; Casa Richards, Rio Nirehuau, Aysen, 4); Argentina (Province Buenos Aires, 1; Chos Malal, Neuquen, 2).

Genus EUNETTA Bonaparte

Eunetta Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 650, 1856—type, by subs. desig., *Anas falcata* Pallas.

Eunetta falcata (Georgi). FALCATED TEAL.

Anas falcata Georgi, Bemerk. Reise Russ. Reich., 1, p. 167, 1775—Asiatic Russia; Phillips, Nat. Hist. Ducks, 2, p. 159, pl. 28, distr. map 41, 1923—St. George, Pribilof Islands (monog.).

Eunetta falcata Salvadori, Cat. Bds. Brit. Mus., 27, p. 218, 1895 (full bibliog.); Hanna, Auk, 37, p. 250, 1920—St. George, Pribilof Islands; Bent, Bull. U. S. Nat. Mus., 126, p. 75, 1923—St. George, Pribilof Islands (life hist.); Brooks, Murrelet, 13, p. 92, 1932—Swan Lake, British Columbia.

Range.—Extralimital. Northeastern Asia. Rare straggler to Alaska (Pribilof Islands) and British Columbia (Swan Lake).

Genus **NETTION** Kaup

- Nettion* Kaup, Skizz. Entw. Gesch. Nat. Syst. Europ. Thierw., pp. 95, 196, 1829—type, by monotypy (p. 196), *Anas crecca* Linnaeus.
- Sibirionetta* Boetticher, Anz. Orn. Ges. Bay., 2, p. 11, 1929—type, by orig. desig., *Anas formosa* Georgi.
- Amazonetta* Boetticher, Anz. Orn. Ges. Bay., 2, p. 12, 1929—type, by orig. desig., *Anas brasiliensis* Gmelin.
- Aizopsis* Delacour, L'Oiseau, 6, p. 376, 1936—type, by orig. desig., *Anas brasiliensis* Gmelin.
- Callonetta* Delacour, L'Oiseau, 6, p. 369, 1936—type, by orig. desig., *Anas leucophrys* Vieillot.
- Dafilonettion* Boetticher, Anz. Orn. Ges. Bay., 2, p. 406, 1937—type, by orig. desig., *Anas flavirostris* Vieillot.

Nettion crecca crecca (Linnaeus). EUROPEAN TEAL.

- Anas Crecca* Linnaeus, Syst. Nat., 10th ed., 1, p. 126, 1758—based chiefly on Fauna Svec., No. 109; Europe, restricted type locality, Sweden.
- Anas crecca* Turner, Contr. Nat. Hist. Alaska, 2, p. 132, 1886—Aktha Island, Aleutian Islands (June 28); Phillips, Nat. Hist. Ducks, 2, p. 211, pl. 31, distr. map 45, 1923 (breeding in California [?]; North American records).
- Nettion crecca* Salvadori, Cat. Bds. Brit. Mus., 27, p. 243, 1895 (full bibliog.); Brewster, Auk, 18, p. 135, 1901—Massachusetts; Brock, l.c., 24, p. 94, 1907—Maine; Norton, l.c., 28, p. 255, 1911—Maine; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 119, 1918 (one supposed record); Preble and McAtee, N. Amer. Fauna, 46, p. 45, 1923—St. Paul, Pribilof Islands, (May 4, Sept. 20); Bent, Bull. U. S. Nat. Mus., 126, p. 98, 1923 (life hist.); Huber, Auk, 44, p. 95, 1927—North Carolina; Griscom, l.c., 49, p. 79, 1932—Massachusetts; Edwards, l.c., p. 460, 1932—New Jersey; Kuerzi, l.c., 50, p. 429, 1933—Long Island; Stone, l.c., 51, p. 227, 1934—South Carolina; Swarth, Pac. Coast Avifauna, 22, p. 20, 1934—Akutan Island; Murray, Auk, 53, p. 208, 1936—Virginia; Cruickshank, l.c., p. 321, 1936—New York (rather regular migrant); Cottam and Knappen, l.c., 56, p. 149, 1939 (food of, in North America); Gabrielson, l.c., 61, p. 116, 1944—Aleutian Islands.
- Nettion crecca crecca* Schioler, Dansk. Fugle, 2, p. 44, 1926—eastern and western Greenland (accidental).
- Anas crecca crecca* Peters, Bds. World, 1, p. 164, 1931 (range); Hørring and Salomonsen, Medd. Grønln., 131, (5), p. 5, 1941—Greenland records.

Range.—Widely distributed throughout Europe and Asia. Breeds in North America on the Aleutian Islands east to Unalaska and possibly on the Pribilof Islands (St. Paul Island). Has been recorded fairly regularly in winter on the Atlantic coast from Labrador to South Carolina. Several records for western and eastern Greenland.

***Nettion crecca carolinense** (Gmelin). AMERICAN GREEN-WINGED TEAL.

Anas carolinensis Gmelin, Syst. Nat., 1, (2), p. 533, 1789—based on "American Teal" Pennant, Aret. Zool., 2, p. 569, and Latham, Gen. Syn. Bds., 3, (2), p. 554, Carolina to Hudson Bay=South Carolina; Turner, Contr. Nat. Hist. Alaska, 2, p. 132, 1886—Alaska (common); Nelson, Nat. Hist. Coll. Alaska, 3, p. 68, 1887—St. Michaels (breeding); Phillips, Nat. Hist. Ducks, 2, p. 231, pl. 31, distr. map 46, 1923 (monog.); Beatty, Auk, 61, p. 654, 1944—St. Croix, Virgin Islands; van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 46, 1945—Sonora (distr.); Peters and Burleigh, Auk, 62, p. 564, 1945—Newfoundland (rather common nester).

Anas migratoria Bartram, Travels, p. 295, 1791—Pennsylvania.

Anas sylvatica Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 167, 1816—North America between Hudson Bay and Louisiana.

Querquedula Americana (not *Anas americana* Gmelin) Brehm,¹ Handb. Naturg. Vög. Deuts., p. 887, 1831—near New York (type in Tring Collection; cf. Hartert, Nov. Zool., 25, p. 47, 1918).

Querquedula Groenlandica Brehm,¹ Handb. Naturg. Vög. Deuts., p. 887, 1831—Greenland (type in Tring Collection, now in the American Museum of Natural History, New York; cf. Hartert, Nov. Zool., 25, p. 47, 1918).

Nettion carolinense Salvadori, Cat. Bds. Brit. Mus., 27, p. 250, 1895—Canada, United States, and Mexico (Hermosillo, Sonora; Presidio and Zacatecas); Johnson, Auk, 32, p. 469, pls. 27–29, 1915 (four-winged specimen); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 113, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 102, 1923 (life hist.); Conover, Auk, 43, p. 164, 1926—Hooper Bay, Alaska (nesting); McIlhenny, l.c., 51, p. 331, 1934 (longevity, at least eight years); Forsild, Canad. Field Nat., 57, p. 23, 1943—Mackenzie Delta (breeding); Peters, Bird Banding, Boston, 15, p. 72, 1944 (banded in California, recovered in Labrador).

Anas crecca var. *carolinensis* Winge, Medd. Grøn., 21, p. 76, 1898—Greenland (crit.).

Nettium carolinense Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 212; 1903—Mexico (Sonora, Chihuahua, Sinaloa, Guadalajara, Valley of Mexico, and Vera Cruz), Honduras (Aloor River), West Indies.

Nettion crecca carolinensis Schioler, Dansk. Fugle, 2, p. 44, 1926—Greenland.

Anas crecca carolinensis Peters, Bds. World, 1, p. 164, 1931 (range); Hørring and Salomonsen, Medd. Grøn., 131, (5), p. 7, 1941—Greenland records.

Range.—Breeds from northern Alaska (Kotzebue Sound), northern Mackenzie (Fort Anderson), Great Slave Lake, north-eastern Manitoba (Churchill), and James Bay south to central California (Tulare Lake), northern New Mexico, northern Nebraska (Cherry County), southern Minnesota, and rarely to the Gulf of St. Lawrence. Winters from southern British Columbia, Arizona,

¹ Nomen nudum in Isis, 1830, p. 998.

New Mexico, Arkansas, and Chesapeake Bay south to British Honduras, the Gulf coast, and the Lesser Antilles; accidental in Bermuda (several records) and southern Greenland.

Field Museum Collection.—58: Alaska (Cape Nome, 1; St. Michaels, 1); British Columbia (Okanagan, 2); Alberta (Many Island Lake, 1); Saskatchewan (Prince Albert, 1; Maple Creek, 1); Ontario (Point Rowan, 1); North Dakota (Towner County, 2; Eddy County, 1; Ramsey County, 2; Rolette County, 1); California (Wasco, 1; Redlands, 1; Red Bluff, 1; Corona, 1; Santa Ana River, 4; Los Banos, 1; San Clemente Island, 1); Arizona (Bobocomari River, 1); Texas (El Saug, Willacy County, 1; Corpus Christi, 1; Tivoli, 1); Kansas (Garden City, 2); Wisconsin (Beaver Dam, 2; Horicon Marsh, Washington County, 1); Illinois (Ravinia, 1; Chicago, 1; Putnam, 2; Worth, 2; Henry, 1); Indiana (Liverpool, 1); Quebec (Beaupré, 1; Magdalen Islands, 1); New Hampshire (Seabrook, 1); Connecticut (New Haven County, 5; Clinton, 2); New York (Rockland County, 1); Georgia (Chatham County, 1); Florida (Banana River, 3; Enterprise, 1); Mexico (Bustillos, Chihuahua, 1).

Conover Collection.—26: Alaska (near Barrow, 2); Alberta (Tofield, 1); Wyoming (Du Bois, Fremont County, 1); Utah (Brigham, 11); South Dakota (Eden, 1); Nebraska (Wood Lake, 3); Illinois (Wheaton, 1; Henry, 5); North Carolina (Seagull, Currituck Sound, 1).

Nettion formosum (Georgi). BAIKAL TEAL.

Anas formosa Georgi, Bemerck. Reise Russ. Reich, 1, p. 168, 1775—Lake Baikal.

Nettion formosum Salvadori, Cat. Bds. Brit. Mus., 27, p. 240, 1895 (full bibliog.); Bailey, Condor, 26, p. 195, 1924—Wainwright, Alaska; Moffitt, l.c., 34, p. 193, 1932—Brentwood, Contra Costa County, California; Swarth, l.c., p. 259, 1932 (above record probably a captive); Bailey, Auk, 50, p. 97, 1933—King Island, Alaska; Gabrielson, l.c., 58, p. 400, 1941—Savoonga, St. Lawrence Island, Alaska.

Range.—Extralimital. Northeastern Asia. Straggler to western North America (Alaska, three records; California, one doubtful record).

***Nettion brasiliense** (Gmelin). BRAZILIAN TEAL.

Anas brasiliensis Gmelin, Syst. Nat., 1, (2), p. 517, 1789—based on "Mareca alia species" Marcgrave, Hist. Nat. Bras., p. 214, northeastern Brazil; Phillips, Nat. Hist. Ducks, 2, p. 295, pl. 39, distr. map 55, 1923 (monog.); Peters, Bds. World, 1, p. 165, 1931 (range); Dugand, Caudasia, 1, p. 54, 1941—Llanos del Meta, Colombia; Griscom and Greenway, Bull. Mus.

- Comp. Zool., 88, p. 109, 1941—Rio Capim, Rio Acara, Rio Tapajoz, near Obidos, Brazil; Gyldenstolpe, Svensk. Vetensk. Akad. Handl., 23, p. 46, 1945—El Beni, Bolivia (Reyes; Bresta).
- Anas mareca* Bonnaterra, Tabl. Enc. Meth., Orn., 1, livr. 38, p. 152, 1790—based on "Mareca alia species" Marcgrave, Hist. Nat. Bras., p. 214; Brazil.
- Anas ipecutiri* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 120, 1816—based on "Ipecutiri" Azara, Apunt. Hist. Nat. Páx., 3, p. 445, No. 437; Paraguay.
- Anas paturi* Spix, Av. Spec. Nov. Bras., 2, p. 85, fig. 109, 1825—Rio São Francisco, Bahia, Brazil (type in Munich Museum; cf. Hellmayr, Abhandl. Math.-phys. Kl. Bayr. Akad. Wiss., 22, p. 717, 1906).
- Querquedula erythrorhyncha* (not *Anas erythrorhyncha* Gmelin) "Spix" Eyton, Monog. Anat., p. 127, 1838—South America; Darwin, Zool. Beagle, 3, p. 135, 1841—Buenos Aires and (?) Straits of Magellan.
- Querquedula novae hispaniae* (not *Anas novae hispaniae* Gmelin) Reichenbach, Vollst. Naturg. Schwimmvögel, pl. 110, figs. 981–982, 1845 (or later)—no locality stated (type in Dresden Museum).
- Querquedula brasiliensis* Sclater and Hudson, Arg. Orn., 2, p. 133, 1889—Buenos Aires and La Plata; Hartert and Venturi, Nov. Zool., 16, p. 242, 1909—Barracas al Sud, Buenos Aires.
- Nettion brasiliense* Salvadori, Cat. Bds. Brit. Mus., 27, p. 266, 1895—New Granada (vicinity of Bogotá), British Guiana (Annai), Brazil (Bahia and Pelotas, Rio Grande do Sul), Bolivia (Salinas), Monte Video, and Buenos Aires; Ihering, Rev. Mus. Paul., 3, p. 393, (1898) 1899—São Paulo; idem, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—Mundo Nova, Rio Grande, Rio Camaquã and Pedras Brancas, Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Tucumán (ex Burmeister); Berlepsch and Hartert, Nov. Zool., 9, p. 131, 1902—Quiribana de Caicara, Orinoco River, Venezuela; Lönnberg, Ibis, 1903, p. 465—Tatarenda, Bolivian Chaco; Sneath, Bol. Mus. Goeldi, 8, p. 116, 1914—Pará and Marajó, Brazil; Chubb, Bds. Brit. Guiana, 1, p. 193, 1916—British Guiana (upper Takutu Mountains and Annai); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 373, 1916—Venezuela (Altagracia; Caicara); Wetmore, Bull. U. S. Nat. Mus., 133, p. 79, 1926—Uruguay (Rio Negro) and Paraguay (Puerto Pinasco); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 499, 1929—Primeira Cruz, Maranhão; Naumburg, Bull. Amer. Mus. N. H., 60, p. 99, 1930 (range); Pinto, Rev. Mus. Paul., 17, (2), p. 718, 1932—Aquidauana, Matto Grosso; idem, l.c., 22, p. 53, 1938—São Paulo (Ypiranga, Olympia, Itatiba), Minas Geraes (Pirapora), Rio Grande do Sul (Novo Hamburgo), Matto Grosso (Aquidauana), Goyás (Inhúmas, Rio das Almas), and Bahia (Barra do Rio Grande); Casares, El Hornero, 7, p. 339, pl. 3, fig. 5, 1940—Entre Ríos, Corrientes, Buenos Aires (Ajó).
- Nettion brasiliense* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 231, 1910—Tucumán, Salta (Orán), Chaco.
- Nettion brasiliensis* Daguerre, El Hornero, 2, p. 265, 1922—Rosas, Buenos Aires; Wilson, l.c., 3, p. 355, 1926—Santa Fé (rare).

Amazonetta brasiliensis Laubmann, Wiss. Erg. Deuts. Gran Chaco Exp., Vögel, p. 50, 1930—Tacaaglé, Tapikiolé, and Lapango, Formosa.

Amazonetta vittata Derscheid, Bull. Brit. Orn. Cl., 58, p. 60, Feb. 5, 1938—described from live birds in the possession of Dr. J. M. Derscheid; Zimmer and Mayr, Auk, 60, p. 250, 1943 (=dark phase of *Nettion brasiliense*).

Range.—South America east of the Andes from eastern Colombia, the Orinoco Basin (and probably Lake Maracaibo) and British Guiana south through Brazil, Bolivia, Paraguay, and Uruguay to northern Argentina (Tucumán, Córdoba, Formosa, Buenos Aires).

Field Museum Collection.—32: British Guiana (unspecified, 1); Brazil (Bõa Vista, Amazonas, 2; Quixada, Ceará, 4; São Marcello, Bahía, 1; Queimadas, Bahía, 1; Vaccaria, Matto Grosso, 10); Uruguay (Passo Correntino on Rio Negro, 1); Bolivia, Santa Cruz (Buena Vista, 8; Nueva Moka, 2; San Carlos, 2).

Conover Collection.—36: Brazil (Lago Javary, Pará, 4; Pinhel, Pará, 3; Aveiro, Pará, 6; Obidos, Pará, 1; Primeira Cruz, Maranhão, 1; Vaccaria, Matto Grosso, 4); Bolivia (Buena Vista, Santa Cruz, 2); Paraguay (Borja, 1; Molinasque, 5; Horqueta, 2; Chaco, 265 km. west of Puerto Casado, 2; 60 km. east of Orloff, Chaco, 1; Laguna General Diaz, 3); Argentina (Isla Ella, Delta Rio Parana, 1).

**Nettion leucophrys* (Vieillot). RING-NECKED TEAL.

Anas torquata (not of Gmelin, 1774) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 110, 1816—based on "Pato collar negro" Azara, Apunt. Hist. Nat. Páx., 3, p. 452, No. 441; Paraguay (descr. of male).

Anas leucophrys Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 156, 1816—based on "Pato ceja blanca" Azara, Apunt. Hist. Nat. Páx., 3, p. 453, No. 442; Paraguay (descr. of female); Phillips, Nat. Hist. Ducks, 2, p. 302, pl. 39, distr. map 56, 1923 (monog.); Peters, Bds. World, 1, p. 165, 1931 (range).

Querquedula manillensis (not *Anas manillensis* Gmelin) Eyton, Monog. Anat., p. 125, 1838—"inhabits the Manillas" (type in Liverpool Museum).

"*Anas rubidoptera* Dubois, Orn. Gal., p. 90, pl. 57 (male and female), 1839."¹

Anas rhodopus Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 35, p. 45, 1841—based on Azara, Nos. 441, 442; Paraguay.

Querquedula torquata Selater and Hudson, Arg. Orn., 2, p. 132, 1889—Buenos Aires; Kerr, Ibis, 1901, p. 234—Waikthlatingmayalwa, Paraguayan Chaco; Hartert and Venturi, Nov. Zool., 16, p. 243, 1909—Barracas al Sud, Buenos Aires.

Nettion torquatum Salvadori, Cat. Bds. Brit. Mus., 27, p. 268, 1895—Buenos Aires; idem, Boll. Mus. Zool. Torino, 12, No. 292, p. 32, 1897—Caiza, Tarija, Bolivia; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—

¹ This work has not been accessible to the authors.

Rio Grande, Rio Grande do Sul; Salvadori, *Boll. Mus. Zool. Torino*, 15, No. 378, p. 16, 1900—Urucúm, Matto Grosso, Brazil; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 207, 1902—"Tucumán en el Manantial"; Lönnberg, *Ibis*, 1903, p. 465—Tatarenda, Bolivian Chaco.

Nettion torquatum Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 231, 1910—Tucumán; Pereyra, *El Hornero*, 3, p. 164, 1923—La Region Riberena, Buenos Aires.

Nettion leucophrys Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 78, 1926—Puerto Pinasco, Paraguayan Chaco; Casares, *El Hornero*, 7, p. 343, pl. 3, figs. 2-3, distr. map, 1940—Córdoba and Buenos Aires (range; habits).

Range.—South America from southern Bolivia (Tarija), southwestern Matto Grosso (Urucúm) and Rio Grande do Sul, Brazil, south through Paraguay and Uruguay to northern Argentina (Tucumán, Córdoba, and Buenos Aires).

Conover Collection.—27: Paraguay, Chaco (Orloff, 8; 83 km. west of Puerto Casado, 2; 195-265 km. west of Puerto Casado, 16); Argentina (Miraflores, Orán, Salta, 1).

****Nettion andium altipetens* Conover.¹ MERIDA TEAL.**

Nettion andium altipetens Conover, *Proc. Biol. Soc. Wash.*, 54, p. 143, Sept. 30, 1941—Páramo San Antonio, Culata Mountains, alt. 12,000 ft., Mérida, Venezuela (type in the Conover Collection, Field Museum of Natural History, Chicago).

Nettion andium (not *Querquedula andium* Sclater and Salvin) Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 263, 1895—part, spec. g, Venezuela (Sierra Nevada of Mérida); Osgood and Conover, *Field Mus. Nat. Hist.*, Zool. Ser., 12, p. 46, 1922—Culata Mountains, Mérida, Venezuela.

Anas andium Phillips, *Nat. Hist. Ducks*, 2, p. 285, pl. 37, distr. map 53, 1923—part, Venezuela and northeastern Andes, Colombia (monog.); Peters, *Bds. World*, 1, p. 166, 1931—part, Venezuela and northeastern Andes, Colombia.

Range.—Páramo zone in the Andes of western Venezuela (Cordillera of Mérida) and the eastern Andes of Colombia (Boyacá), south at least to Bogotá.

Field Museum Collection.—1: Venezuela (Culata, Mérida, 1).

¹*Nettion andium altipetens* Conover: Differs from *N. a. andium* by lacking, or having only faintly indicated, the strong metallic bronze reflection seen in certain lights in the speculum of the typical race. Differs also by having a generally lighter appearance, the upper back, scapulars and tertials being browner, less blackish green, with grayer, less buffy edges. The head and neck are less heavily speckled and barred with dusky, and the chest is less heavily blotched with the same color.

Additional material examined.—Venezuela, Mérida: La Culata, 4; San Antonio, 1; Mérida, 3; Quintero, 3; Conejos, 1; Páramo de Santo Domingo, 3.—Colombia: Lagunillas, Boyacá, 2.

Conover Collection.—8: Venezuela (Culata Mountains, 3; Páramo Frias, 4; Teta de Niquitao, 1).

***Nettion andium andium** (Selater and Salvin). ANDEAN TEAL.

Querquedula andium Selater and Salvin, Nomencl. Av. Neotrop., p. 162, 1873—high Ecuador between Riobamba and Mocha (type in British Museum).

Nettion andium Salvadori, Cat. Bds. Brit. Mus., 27, p. 263, 1895—part, spec. a-f, Ecuador (between Riobamba and Mocha, Sical, and Rio Blanco); Chapman, Bull. Amer. Mus. N. H., 36, p. 233, 1917—Santa Isabel, Colombia; idem, l.c., 55, p. 210, 1926—Ecuador (Papallacta, Antisana, Urbina, Antisanilla, and Bestión).

Nettion andium Chubb, Ibis, 1919, p. 275—Sinche, Guaranda, Ecuador.

Anas andium Phillips, Nat. Hist. Ducks, 2, p. 285, pl. 37, distr. map 53, 1923—part, Colombia (except northeastern Andes) and Ecuador (monog.); Peters, Bds. World, 1, p. 166, 1931—part, Colombia (except northeastern Andes) and Ecuador.

Range.—Páramo zone in the central Andes (and perhaps the southeastern Andes) of Colombia and the Andes of Ecuador.

Field Museum Collection.—4: Ecuador (Llanganate, Tungurahua, 4).

Conover Collection.—14: Colombia (Paramo de Puracé, Cauca, 6; Palatera, Cauca, 1; Cumbal, Narino, 1); Ecuador (Antisana, Pichincha, 3; Ilinesa, Pichincha, 1; Mount Cotopaxi, 2).¹

***Nettion flavirostre oxypterus** (Meyen). SHARP-WINGED TEAL.

Anas oxyptera Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur., 16, Suppl., p. 121, pl. 26, 1834—eastern slope of the south Peruvian Andes toward Lake Titicaca (type in Berlin Museum); Phillips, Nat. Hist. Ducks, 2, p. 279, pl. 37, distr. map 52, 1923 (monog.).

Querquedula angustirostris Philippi and Landbeck, Anal. Univ. Chile, 21, p. 439, Nov., 1862—Laguna "Cucullata," Tacna=Laguna de Chacalluta on coast 15 km. north of Arica² (type in National Museum of Natural History, Santiago, Chile); idem, Arch. Naturg., 29, (1), p. 202, 1863 (German version of orig. descr.).

Querquedula oxyptera Taczanowski, Orn. Per., 3, p. 477, 1886—Lake Titicaca (ex Meyen), Lake Junín (ex Jelski), Arequipa (ex Whitely), near Tacna (ex Frobeen), Cutervo (ex Stolzmann).

Nettion oxypterus Salvadori, Cat. Bds. Brit. Mus., 27, p. 262, 1895—Peru (Tinta, Salinas and Laguna de Lanjui), Chile (Cueva negra, Sacayá, Sitani, and Huasco, Prov. Tarapacá); Ménégau, Rev. Franç. d'Orn., 1,

¹ Additional material examined.—Colombia: Santa Isabel, Quindio Andes, 1.

² Cf. Philippi, Rev. Chil. Hist. Nat., 41, p. 210, 1937.

- p. [137], 1909—Pazna Bastide, Lake Poopo; Chapman, Bull. U. S. Nat. Mus., 117, p. 55, 1921—Occobamba Pass, Peru.
- Nettion flavirostre* Lönnerberg, Ibis, 1903, p. 447—puna of Jujuy.
- Nettion oxypterum* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 231, 1910—Salta and Jujuy.
- Nettion flavirostris oxypterum* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 244, 1930—Huánuco Viejo, Peru.
- Anas flavirostris oxyptera* Peters, Bds. World, 1, p. 166, 1931 (range); Morrison, Ibis, 1939, pp. 467, 649—Huancavelica and Lake Junín (Ucaqui), Peru.
- Nettion flavirostre oxypterum* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 327, 1932 (dist. in Chile); Philippi, Rev. Chil. Hist. Nat., 41, p. 210, 1937—Punta del Cobre, Rio Copiapó, 40 km. from coast at Caldera; Casares, El Hornero, 7, p. 336, pl. 3, fig. 1, distr. map, 1940—Salta and Jujuy.

Range.—The Puna zone of the Andes from northern Peru (Cutervo) south through western Bolivia to Antofagasta, Chile, and northern Argentina (Jujuy, Salta, and Catamarca).

Field Museum Collection.—29: Peru (Huánuco Viejo, Huánuco, 1; Cailloma, Arequipa, 3); Bolivia (Esperanza, La Paz, 6; Vacas, Cochabamba, 14; Colomi, Cochabamba, 2; Incachacha, Cochabamba, 2); Chile (Chungara, Tarapacá, 1).

Conover Collection.—33: Peru (Huánuco Viejo, Huánuco, 2; Junín, Junín, 2; Puno, Puno, 1; Chucuito, Puno, 1; Sorapa, Puno, 1; Juli, Puno, 1; Puerto Arturo, Puno, 2; Occomani, Puno, 2); Bolivia (Esperanza, La Paz, 4; Vacas, Cochabamba, 4; Tiraque, Cochabamba, 8; Laguna de Taxara, Tarija, 2); Chile (Rio Loa, Antofagasta, 1); Argentina (Laguna Blanca, Catamarca, 2).

****Nettion flavirostre flavirostre* (Vieillot). YELLOW-BILLED TEAL.**

- Anas flavirostris* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 107, 1816—based on "Pato pico amarillo y negro" Azara, Apunt. Hist. Nat. Páx., 3, p. 448, No. 439; Buenos Aires; Phillips, Nat. Hist. Ducks, 2, p. 273, pl. 37, distr. map 51, 1923 (monog.).
- Anas creccoides* King, Zool. Journ., 4, No. 13, p. 99, July, 1828—Straits of Magellan (type in the British Museum).
- Querquedula creccoides* Gould, in Darwin, Zool. Beagle, 3, p. 135, 1841—Rio Plata and Straits of Magellan.
- Anas azarae* Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 35, p. 27, 1841—based on Azara, No. 439; Buenos Aires.
- Querquedula flavirostris* Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 54, 1881—Rio Colorado and Rio Negro; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 175, 1885—Taquara, Rio Grande do Sul; Oustalet, Miss. Sci. Cap Horn, 6, p. B. 205, 1891—Patagonia (Santa Cruz), Straits of Magellan (Eden, Port Famine), and Tierra del Fuego (Bahía Orange);

Crawshay, Bds. Tierra del Fuego, p. 107, 1907—Rio McClelland Settlements; Housse, Rev. Chil. Hist. Nat., 28, p. 54, 1924—Isla la Mocha, Chile (nesting).

Nettion flavirostre Salvadori, Cat. Bds. Brit. Mus., 27, p. 261, 1895—Chile, Patagonia, Straits of Magellan, Hermit Island, Falkland Islands, and Buenos Aires; idem, Boll. Mus. Zool. Torino, 12, No. 292, p. 31, 1897—Cara-huassi, Salta; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—Mundo Nova, Rio Grande and Rio Camaquã, Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Lules, Tucumán; Peters, Bull. Mus. Comp. Zool., 65, p. 302, 1923—Huanuluan, Maquinchao and Neluan, Rio Negro; Wetmore, Bull. U. S. Nat. Mus., 133, p. 77, 1926—Argentina (Buenos Aires, Tunuyán, and Rio Negro), Uruguay (Carrasco) (nesting habits); idem, Univ. Calif. Pub. Zool., 24, p. 417, 1926—Valcheta, Rio Negro.

Nettion flavirostre Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 456, 1912—Mount Tigre and Rio Coy, Patagonia; Dabbene, El Hornero, 1, p. 111, 1918—Ajó and Juancho, Buenos Aires (nesting habits); Serié and C. H. Smyth, l.c., 3, p. 43, 1923—Santa Elena, Entre Ríos.

Anas flavirostris flavirostris Peters, Bds. World, 1, p. 166, 1931 (range).

Nettion flavirostre flavirostre Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 326, 1932—Chiloé Island (Cucao, Rio Inio, Lago Huillinco), Aysen (Rio Nirehuau), Chile; Casares, El Hornero, 7, p. 331, pl. 3, fig. 4, distr. map, 1940 (range; habits).

Range.—The southern part of South America from central Chile (Santiago), northwestern Argentina (Salta, Tucumán) and extreme southern Brazil (Rio Grande do Sul) south to Tierra del Fuego; Falkland Islands.

Field Museum Collection.—1: Uruguay (San Vicente de Castillos, Rocha, 1).

Conover Collection.—18: Chile (Lautaro, Cautin, 2; Lago Huillinco, Chiloé, 1; Cucao, Chiloé, 5; Rio Inio, Chiloé, 5; Casa Richards, Rio Nirehuau, Aysen, 2); Argentina (Tunuyán, Mendoza, 2; Collon Cura, Neuquen, 1).

Genus PUNANETTA¹ Bonaparte

Punanetta Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 649, 1856—type, by monotypy, "*leucogenys* Tsch[ud]i] (*A. puna* Lichtenstein)."

Adelonetta Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 346, 1890—new name for *Punanetta* Bonaparte.

¹ The two species included in this genus have generally been put in the genus *Querquedula* along with the three species *querquedula*, *discors*, and *cyanoptera*. However, as has been pointed out by Phillips, Delacour, Mayr, and others, *versi-*

***Punanetta versicolor versicolor** (Vieillot). GRAY TEAL.

Anas versicolor Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 109, 1816—based on "Pato pico de tres colores" Azara, Apunt. Hist. Nat. Páx., 3, p. 450, No. 440, Paraguay; Phillips, Nat. Hist. Ducks, 2, p. 402, pl. 44, distr. map 64, 1923—part, north of 40° S. lat. (monog.).

Anas maculirostris Lichtenstein, Verz. Doubl. Zool. Mus. Berlin, p. 84, 1823—Montevideo, Uruguay (type in Berlin Museum).

Anas muralis Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 35, p. 42, 1841—based on "Pato pico de tres colores" Azara, No. 440; Paraguay.

Querquedula versicolor Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 54, 1881—Rio Colorado and Rio Negro; Salvadori, Cat. Bds. Brit. Mus., 27, p. 291, 1895—part, Montevideo, Buenos Aires, Chile (full bibliog.); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 145, 1899—Pedras Blancas and Rio Camaquam, Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Tucumán (Lules and Famaila); Peters, Bull. Mus. Comp. Zool., 65, p. 302, 1923—western Rio Negro; Serié and C. H. Smyth, El Hornero, 3, p. 43, 1923—Santa Elena, Entre Ríos.

Querquedula versicolor versicolor Wetmore, Bull. U. S. Nat. Mus., 133, p. 81, 1926—Lavalle and Los Yngleses, Buenos Aires; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 330, 1932—part, central provinces of Chile.

Anas versicolor versicolor Peters, Bds. World, 1, p. 165, 1931—part, from about 40° S. lat. northward.

Range.—From the central provinces of Chile (Santiago), the Bolivian Chaco, Paraguay, and southern Brazil (Rio Grande do Sul) south to about 40° S. lat.

Conover Collection.—5: Argentina (Cambaceres, Buenos Aires, 5).

***Punanetta versicolor fretensis** (King).¹ SOUTHERN GRAY TEAL.

color and *puna* have little in common with the other three. The downy young lack all trace of the yellow tint found in the young of the genus *Querquedula* as restricted in this work and resemble more closely those of *Dafila acuta* and *Dafila spinicauda*. The males of *versicolor* (and without much doubt those of the closely related *puna*) have an expansion of the trachea (cf. Phillips, Nat. Hist. Ducks, 2, p. 405, 1923) lacking in *discors*, etc. The bills of both species also are much deeper and heavier.

¹ As stated by Wetmore (Bull. U. S. Nat. Mus., 133, p. 81, 1926) and Morrison (Ibis, 1940, p. 253), specimens from the southern part of Chile and Argentina and the Falkland Islands are very different from birds taken farther north. The southern birds, *Punanetta versicolor fretensis* (King), are darker, the light barrings to the feathers of the mantle being narrower and the dark barrings of the upper tail coverts, flanks, abdomen, and under tail coverts much wider, while the chest and breast are more heavily spotted. They are also considerably larger, with wings of males running from 204–219 mm. (against 180–197) and culmen 49–52 (against 43–45), while a female has a wing of 210 (against 186) and a culmen of 49 (against 40–41).

Anas frenensis King, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, p. 15, pub. Jan. 16, 1831—Magellan Straits (type probably in British Museum).¹

Querquedula versicolor (not *Anas versicolor* Vieillot) Oustalet, Miss. Sci. Cap Horn, 6, p. 207, 1891—Suzanne Cove, Patagonia (June); Salvadori, Cat. Bds. Brit. Mus., 27, p. 291, 1895—part, Straits of Magellan, Falkland Islands; Crawshay, Bds. Tierra del Fuego, p. 109, 1907—Useless Bay Settlement; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 468, 1912—Arroyo Eke, Rio Chico.

Anas versicolor Phillips, Nat. Hist. Ducks, 2, p. 402, distr. map 64, 1923—part, south of 40° S. lat. and the Falkland Islands.

Querquedula versicolor fretensis Wetmore, Bull. U. S. Nat. Mus., 133, p. 81 (in text), 1926—Gregory Bay, Straits of Magellan (dist. char.); Morrison, Ibis, 1940, p. 253—Aysen (Rio Nirehuau), Chubut (Valle del Lago Blanco), Tierra del Fuego, and Falkland Islands (dist. chars.).

Anas versicolor versicolor Peters, Bds. World, 1, p. 165, 1931—part, from about 40° S. lat. to Tierra del Fuego and Falkland Islands.

Querquedula versicolor versicolor Wetmore, Univ. Calif. Pub. Zool., 24, p. 417, 1926—Arroyo Las Bayas, Rio Negro; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 330, 1932—part, Casa Richards, Rio Nirehuau, Llanquihue (Straits of Magellan).

Range.—Chile and Argentina from about 40° S. lat. to Tierra del Fuego; the Falkland Islands.

Conover Collection.—12: Argentina (Huanuluan, Rio Negro, 1); Chile (Casa Richards, Rio Nirehuau, Aysen, 11).

**Punanetta puna* (Tschudi).² PUNA TEAL.

Anas Puna (Lichtenstein MS.) Tschudi, Arch. Naturg., 10, (1), p. 315, 1844—Peru=Dept. Junín (type in Berlin Museum).

Punanetta leucogenys "Tsch." (errore) Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 649, 1856—based on *Anas Puna* (Lichtenstein MS.) Tschudi, Arch. Naturg., 10, (1), p. 315, 1844—Peru.

Querquedula puna Sclater and Salvin, Exotic Orn., p. 197, pl. 99, 1869—Tungasuca, Peru; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 554—Junín; idem, Orn. Per., 3, p. 478, 1886—Lake Junín (ex Jelski), Tungasuca, Cuzco (ex Whitely); Salvadori, Cat. Bds. Brit. Mus., 27, p. 293, 1895—Peru (Yunoca, Laguna de Tungasuca, and Laguna de Tangui) and Chile (Prov. Tarapacá) (full bibliog.); Ménégau, Rev. Franç. d'Orn., 1, p. [137], 1909—Lake Titicaca.

¹ Spec. g, Straits of Magellan, presented by the Admiralty, is probably the type described by King.

² *Punanetta puna* (Tschudi): Males differ from *Punanetta versicolor versicolor* by having the crown of the head blacker; the sides of face and throat purer white; the mantle and upper back duller, the dark blotchings being much lighter and the light barrings less distinct; the rump uniform brown gray with no light barrings; the upper tail coverts with the dark markings duller and the light markings reduced to vermiculations rather than barrings. Below, the dark blotches on the chest and breast are much duller and less numerous, and the dark barrings of the flanks and abdomen much narrower. The bill is plain dark blue. The size is

Anas puna Phillips, Nat. Hist. Ducks, 2, p. 408, pl. 44, distr. map 65, 1923 (monog.).

Anas versicolor puna Peters, Bds. World, 1, p. 165, 1931 (range); Morrison, Ibis, 1939, p. 466—Huancavelica, Peru; idem, l.c., 1939, p. 649—Lake Junín (not race of *versicolor*).

Querquedula versicolor puna Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 330, 1932—20 miles east of San Pedro, Antofagasta (range, Chile).

Range.—Puna zone of the south-central Andes from Lake Junín, Peru, south through Bolivia (Vacas, Cochabamba) to northern Chile (San Pedro, Antofagasta).

Field Museum Collection.—3: Bolivia (Huaqui, La Paz, 2; Vacas, Cochabamba, 1).

Conover Collection.—13: Peru (Cazo Pato, Lake Junín, 2; Puno, Puno, 1; Chucuito, Puno, 2; Puerto Arturo, Puno, 3); Bolivia (Vacas, Cochabamba, 4); Chile (San Pedro, Antofagasta, 1).

Genus DAFILA Leach

Dafila (Leach MS.) Stephens, in Shaw's Gen. Zool., 12, (2), p. 126, 1824—type, by monotypy, *Dafila caudacuta* Stephens=*Anas acuta* Linnaeus.

Trachelonetta Kaup, Skizz. Entw. Gesch. Nat. Syst. Europ. Thierw., p. 115, 1829—type, by monotypy, *Anas acuta* Linnaeus.

Phasianurus Wagler, Isis, col. 1235, 1832—type, by subs. desig. (Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 391), *Anas acuta* Linnaeus.

Paecilonitta Eyton, Monog. Anat., p. 32, 1838—type, by orig. desig., *Anas bahamensis* Linnaeus.

Poecilonitta G. R. Gray, List Gen. Bds., p. 74, 1840—emendation.

Poecilonetta Agassiz, Nomencl. Zool., Aves, p. 61, 1846—emendation.

Daphila "Swainson" Coues, Bds. North West, p. 562, 1874—emendation.

**Dafila acuta* (Linnaeus). PINTAIL.

Anas acuta Linnaeus, Syst. Nat., 10th ed., 1, p. 126, 1758—based chiefly on Fauna Svec., No. 96; Europe, restricted type locality, Sweden; Winge,

larger, wings measuring 219–231 mm. as against 185–197 in typical *versicolor* and 204–219 in *fretensis*.

Females differ from the males by having the mantle duller; the breast more uniform with the dark blotchings fewer and less clearly defined; and the speculum not nearly so bright, the metallic bluish reflection being entirely absent and the green much less brilliant. Wing 215–224 mm. as against 185–186 in typical *versicolor* and 210 in *fretensis*.

While *Punanetta puna* is undoubtedly related rather closely to *Punanetta versicolor*, because of the distinct color differences between the two and especially the fact that the female of the Puna Teal differs in plumage from the male (in the Gray Teal the two sexes are the same), it would seem best to separate them specifically. The downy young of the two also are quite different, that of the Gray Teal being much darker above with a much wider dark stripe through the eye and in addition a dusky wash from the gape to below the eye which is lacking in the young of the Puna Teal.

- Medd. Grønln., 21, p. 78, 1898—Greenland; Phillips, Nat. Hist. Ducks, 2, p. 306, pl. 40, distr. map 57, 1923 (monog.).
- Anas tzitzihoa* Vieillot,¹ Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 163, 1816—based on "Tzitzihoa" Hernandez, Hist. Av. Nov. Hisp., p. 35; Mexico.
- Anas caudata* Brehm, Handb. Naturg. Vög. Deuts., p. 869, 1831—North America (no type extant).
- Dafila acuta a. americana* Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 650, 1856—based on *Anas acuta* Wilson, Amer. Orn., 8, p. 72, pl. 63, fig. 3, 1814; North America.
- Dafila acuta* Turner, Contr. Nat. Hist. Alaska, 2, p. 133, 1886—St. Michaels and Unalaska Island; Nelson, Nat. Hist. Coll. Alaska, 3, p. 69, 1887—Alaskan coast of Bering Sea (nesting); Salvadori, Cat. Brit. Mus., 27, p. 270, 1895 (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 213, 1903—Mexico (Sonora, Sinaloa, Valley of Mexico, and Vera Cruz), British Honduras, Guatemala, Nicaragua, Costa Rica, Panama, and the Greater Antilles; Carriker, Ann. Carnegie Mus., 6, p. 435, 1910—Azahar de Cartago and Las Concovas, Costa Rica; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 134, 1918 (life hist. California); Conover, Auk, 43, p. 164, 1926—Hooper Bay, Alaska (common breeder); Hørring and Salomonsen, Medd. Grønln., 131, (5), p. 8, 1941—Greenland (*tzitzihoa* a doubtful race).
- Dafila acuta tzitzihoa* Bent, Bull. U. S. Nat. Mus., 126, p. 144, 1923 (life hist.); Bailey, Condor, 27, p. 169, 1925—Alaska (range); Lincoln, l.c., 29, p. 115, 1927 (longevity); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 309, 1927—Cartagena Lagoon, Puerto Rico; Lincoln, Condor, 30, p. 359, 1928—Belize, British Honduras; idem, Auk, 59, p. 433, 1942—Cali, Colombia; Wetmore, l.c., 59, p. 104, 1942—Monte Christi, Dominican Republic; Lincoln, Condor, 45, p. 232, 1943—Palmyra Island, Central Pacific (banded in Utah); Porsild, Canad. Field Nat., 57, p. 23, 1943—Mackenzie Delta (breeding); Borrero, Caldasia, 3, p. 410, 1945—Sabana de Bogotá (abundant).
- Anas acuta tzitzihoa* Phillips, Nat. Hist. Ducks, 2, p. 329, 1923 (dist. chars.); Peters, Bds. World, 1, p. 167, 1931 (range); Griscom, Bull. Mus. Comp. Zool., 78, p. 297, 1935—Canal Zone, Panama (one record); Cooke, Bird Banding, 16, p. 125, 1945—Indian Point, Siberia (banded in California); idem, l.c., p. 106, 1945—Bogotá, Colombia (taken Jan. 9, 1944, banded in Texas Oct. 14, 1943); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 47, 1945—Sonora (distr.); Soper, Auk, 63, p. 21, 1946—Foxe Peninsula, Baffin Island.
- Dafila acuta acuta* Bailey, Condor, 27, p. 169, 1925 (range, Alaska).

¹ The American Pintail is supposed to differ from the European and Asiatic bird by its larger size, longer bill and tail, and more greenish speculum. A series of twelve adult males from Europe and Asia give wing measurements of 254–287 (average, 267.4), compared with 261–281 mm. (average, 270.7) for eighteen males from North America. Bills measure 50–56 (average, 51.2) against 50–59 mm. (average, 52.3) and tails 183–193 against 164–195 mm., respectively. As regards the color of the speculum, there appears to be an occasional American bird (two in eighteen) which lacks the bronzy reflection, but the great majority are indistinguishable from European specimens. It would not seem, therefore, that an American race should be recognized.

Anas acuta acuta Bird and Bird, Ibis, 1941, p. 136—Mygglekta, northeastern Greenland (June 20, 1937); Cooke, Bird Banding, 16, p. 125, 1945 (recovery in Quebec of bird banded in Iceland).

Range.—Breeds from the Arctic coast of Alaska and Canada west of Hudson Bay, and James Bay (both coasts), south to southern California (Los Angeles County), northern Colorado (Barr Lake), central Iowa, northern Illinois, and southern Ontario (Rondeau, Lake Erie). Winters from southern British Columbia (Okanagan), Colorado (Barr Lake), Oklahoma, southern Illinois, southern Ohio and Chesapeake Bay south to Panama (one record), Colombia (Cali; Bogotá), and the West Indies; casual in Greenland. Found also in Europe and Asia.

Field Museum Collection.—70: Alaska (Nome, 2; St. Michaels, 3); Alberta (Beaverhill Lake, 1); Saskatchewan (Big Steele Lake, 2); Manitoba (Churchill, 2); Ontario (Long Point Club, 1); Oregon (Prineville, 1; Tillamook Bay, 1); California (Corona, 3; Dos Palos, 1; Eureka, 1; Trinidad, 2); Wyoming (Laramie County, 1); Utah (Bear River Marshes, 1); Colorado (Rocky Ford, 1); Texas (Corpus Christi, 1; Rockport, 1); North Dakota (Towner County, 9; Nelson County, 7; Ramsey County, 1); Arkansas (Fayetteville, 1); Minnesota (Steele County, 1); Wisconsin (Beaver Dam, 1); Illinois (Warsaw, 1); Connecticut (North Haven, 4; West Haven, 1; Quinipiac Marshes, 2); New York (Rockland County, 1); North Carolina, Dare County (Bodie Island, 2; Pea Island, 1); Florida (Jacksonville, 2; St. John's River, 3; Banana River, 3); Colombia (unspecified, 5).

Conover Collection.—32: Alaska (Barrow, 1; Hooper Bay, Bering Sea, 6); Yukon Territory (Marsh Lake, 1); British Columbia (Comox, Vancouver Island, 2); Alberta (Tofield, 2; Edmonton, 1; Camrose, 1); California (Los Banos, 1; Buena Vista Lake, 1); Utah (Brigham, 5); Nebraska (Wood Lake, 3); Illinois (Waukegan, 1; Wheaton, 2; Henry, 3); North Carolina (Seagull, Currituck Sound, 2).

****Dafila spinicauda* (Vieillot). BROWN PINTAIL.**

Anas spinicauda Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 135, 1816—based on "Pato cola aguda" Azara, Apunt. Hist. Nat. Páx., 3, p. 421, No. 429, Buenos Aires; Phillips, Nat. Hist. Ducks, 2, p. 330, pl. 40, distr. map 58, 1923 (monog.); Peters, Bds. World, 1, p. 166, 1931 (range); Morrison, Ibis, 1939, p. 649—Lake Junín, Peru.

Anas oxyura Meyen, Nov. Act. Acad. Caes. Leop.-Carol. Nat. Cur., 16, Suppl., p. 122, 1834—Chile (type in Berlin Museum).

Dafila urophasianus (not *Anas urophasianus* Vigors) Sclater, Proc. Zool. Soc. Lond., 1860, p. 389—Falkland Islands.

Dafila spinicauda Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 54, 1881—junction of Rio Negro and Rio Neuquen; Taczanowski, Orn. Per., 3, p. 481, 1886—Lake Junín (ex Jelski), Tinta and Tangasuca (ex Whitely), Rumucucha (ex Stolzmann); Sclater and Hudson, Arg. Orn., 2, p. 134, 1889 (range); Oustalet, Miss. Sci. Cap Horn, 6, p. B. 209, 1891—Patagonia (Rio Santa Cruz) and Falkland Islands (Edwards Bay); Salvadori, Cat. Bds. Brit. Mus., 27, p. 279, 1895—Peru (Tinta), Chile (Rio Bueno), Uruguay (Montevideo), Falkland Islands; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 144, 1899—Camaquam and Pedras Brancas, Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 207, 1902—Famaila, Tucumán; Crawshay, Bds. Tierra del Fuego, p. 106, 1907—Useless Bay Settlement and Sara Settlement, Tierra del Fuego; Ménégau, Rev. Franç. d'Orn., 1, p. [137], 1909—Rio Pazna, Lake Poopo; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 460, 1912—Mount Tigre, Patagonia; Peters, Bull. Mus. Comp. Zool., 65, p. 302, 1923—western Rio Negro (very common); Wetmore, Univ. Calif. Pub. Zool., 24, p. 417, 1926—Valcheta and Arroyo Seco, Rio Negro; idem, Bull. U. S. Nat. Mus., 133, p. 73, 1926—Argentina (Guaminí and Lavalle, Buenos Aires; General Roca, Rio Negro; Bahía Blanca; Tunuyán, Mendoza) and Uruguay (San Vicente); Chapman, Bull. Amer. Mus. N. H., 55, p. 210, 1926—Lago San Pablo, Ecuador; Lehmann, Caldasia, 2, p. 407, 1944—Páramo do Cumbal, Narino, Colombia.

Paecilonitta spinicauda Bangs, Proc. New Engl. Zool. Cl., 6, p. 88 (in text), 1918 (*Paecilonitta*, not *Dafila*); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 328, 1932—Rio Loa, Antofagasta and Casa Richards, Rio Nirehuau, Llanquihue, Chile.

Paecolinitta (sic) *spinicauda* Bullock, Rev. Chil. Hist. Nat., 39, p. 244, 1935—Isla la Mocha (common resident).

Range.—The Andean highlands from southern Colombia (Narino), and Ecuador south to northern Chile (Tarapacá) and the lowlands of southern South America from north central Chile (Antofagasta), the Bolivian Chaco, and southeastern Brazil (São Paulo; Rio Grande do Sul) south to Tierra del Fuego; Falkland Islands. Probably only summers in the extreme southern part of its range.

Field Museum Collection.—7: Peru (Cajamarca, Cajamarca, 1); Bolivia (Colomi, Cochabamba, 1); Uruguay (San Carlos, Maldonado, 1); Chile (Lago Ranco, Valdivia, 1; Cucao, Chiloé, 2; unspecified, 1).

Conover Collection.—35: Colombia (Cumbal, Narino, 4); Ecuador (Laguna Negra, Salvador, 1; Latacunga, Leon, 1; Antisana, Pichincha, 1; Cerro Puntas, Pichincha, 1; Nudo Sabanilla, Loja, 1; Laguna Mica, Antisana, 1); Peru, Puno (Chucuito, 1; Occomani, 1; Puerto Arturo, 1); Bolivia (Vacas, Cochabamba, 1; Colomi, Cochabamba, 1; Tarija, Tarija, 1); Chile (Rio Loa, Antofagasta, 1; Bucalemu, Santiago, 1; Batuco, Santiago, 1; Lautaro, Cautin, 2; Casa Richards, Rio Nirehuau, Aysen, 8); Argentina (Concepción,

Tucumán, 1; Tunuyán, Mendoza, 2; Cambaceres, Buenos Aires, 2; Chos Malal, Neuquen, 1).

Dafila niceforoi (Wetmore and Borrero).¹ NICEFORO'S PINTAIL.

Anas niceforoi Wetmore and Borrero, *Caldasia*, 4, No. 16, p. 68, pl., May 10, 1946—Laguna de Tota, Boyacá, Colombia, altitude 3,070 meters (type in Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá, Colombia).

Anas rubripes subsp. Lehmann, *Caldasia*, 2, p. 407, 1944—Sabana de Bogotá and Valle de Cauca.

Dafila spinicauda (not of Vieillot) Niceforo, *Caldasia*, 3, p. 370, 1945—Laguna de la Herrera, Sabana de Bogotá.

Range.—Eastern Andes of Colombia (Laguna de Tota and Laguna de Fúquene, Boyacá; the Bogotá savanna and Cundinamarca); also Cali, Valle de Cauca.

Dafila georgica (Gmelin).² SOUTH GEORGIAN TEAL.

Anas georgica Gmelin, *Syst. Nat.*, 1, (2), p. 516, 1789—based on "Georgia Duck" Latham, *Gen. Syn. Bds.*, 3, (2), p. 478; "Georgia australi America," Phillips, *Nat. Hist. Ducks*, 2, p. 281, pl. 37, 1923 (monog.); Peters, *Bds. World*, 1, p. 166, 1931 (range); Murphy, *Ocean. Bds. S. Amer.*, 2, p. 948, 1936—Bay of Isles and Possession Bay, South Georgia (descr.; life hist.).

Anas xanthorhyncha Forster,³ *Descr. Anim.* (ed. Lichtenstein), p. 342, 1844—South Georgia.

Querquedula antarctica Cabanis, *Journ. Orn.*, 36, p. 118, pl. 1, 1888—South Georgia (type in Berlin Museum).

Nettion georgicum Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 264, 1895 (descr.; full bibliog.); Lönnberg, *Svensk. Vetensk. Akad. Handl.*, 40, No. 5, p. 66,

¹ *Dafila niceforoi* (Wetmore and Borrero): Very similar to *Dafila spinicauda* (Vieillot) but coloration much darker throughout. Dark shaft streaks on feathers of sides of face, throat and neck much wider and darker; crown dark fuscous instead of light rufescent brown; speculum dull black without green reflections. Wing 240–242, (female) 226–230.

As pointed out by the describers, the most striking difference is in the bill, which is longer and has the line of the culmen straighter, less convex, and the nail much smaller, both actually and proportionately. The outline of the frontal feathering is rounded instead of pointed and does not reach nearly as far forward. In the specimen examined, the distance between the anterior edge of the frontal feathering and the posterior end of the nostril was about twice that in *spinicauda*, but the feathering was somewhat worn.

While *niceforoi* and *spinicauda* are undoubtedly closely related, as pointed out by Wetmore and Borrero, the differences in the bills appear to indicate that they should be kept specifically distinct. The relationship between the two is probably something like that between *Querquedula versicolor* and *Querquedula puna*.

Material examined.—Colombia: Sabana de Bogotá, 1.

² *Dafila georgica* (Gmelin), autoptically unknown to the authors, is said by Murphy to be more closely related to *D. spinicauda* than to any other duck.

³ Preoccupied by *Anas xanthorhyncha* Forster, l.c., p. 45.

1906 (descr.; breeding); Murphy, Auk, 33, p. 270, 1916 (affinities, monog.); Wilkins, Ibis, 1923, p. 490—South Georgia; Mathews, Discovery Rep., 1, p. 583, 1929—South Georgia (nesting; habits).

Nettion georgicum Bennett, Ibis, 1926, p. 326—South Georgia (resident).

Range.—Island of South Georgia.

**Dafila bahamensis bahamensis* (Linnaeus). BAHAMAN PINTAIL.

Anas bahamensis Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—based on "The Ilathera" Catesby, Nat. Hist. Carolina, 1, p. 93, pl. 93, Bahama Islands; Phillips, Nat. Hist. Ducks, 2, p. 344, pl. 41, distr. map 59, 1923 (monog.); Gromme, Auk, 47, p. 73, 1930—Lake Winneconne, Wisconsin.

Anas ilathera Bonnaterre, Tabl. Enc. Meth., 1, livr. 47, p. 151, 1791—based principally on "The Ilathera" Catesby, Nat. Hist. Carolina, 1, p. 93, pl. 93, Bahama Islands and Brazil.

Anas urophasianus Vigors, Zool. Journ., 4, p. 357, 1829—"Northwest America" (type apparently lost); idem, Zool. Capt. Beechey's Voy., p. 31, pl. 14, 1839.

Phasianurus vigorsii Wagler, Isis, col. 1235, 1832—based on *Anas urophasianus* Vigors, Zool. Journ., 4, p. 357, 1829, "Northwest America."

Poecilonetta bahamensis Salvadori, Cat. Bds. Brit. Mus., 27, p. 282, 1895—part, Antigua, West Indies (full bibliog.); Brooks, Auk, 30, p. 110, 1913—Cape Canaveral, Florida; Chubb, Bds. Brit. Guiana, 1, p. 194, 1916—Abary River; Bent, Bull. U. S. Nat. Mus., 126, p. 156, 1923 (life hist.).

Paecilonitta bahamensis bahamensis Bangs, Proc. New Engl. Zool. Cl., 6, p. 89, 1918 (dist. chars.; range).

Anas bahamensis bahamensis Phillips, Nat. Hist. Ducks, 2, p. 350, 1923 (dist. chars.; range); Peters, Bds. World, 1, p. 167, 1931 (range).

Dafila bahamensis bahamensis Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 309, 1927—Puerto Rico, Culebra, Culebrita and St. Thomas; idem, Bull. U. S. Nat. Mus., 155, p. 101, 1931—Hispaniola (numerous localities); Dugand, Rev. Acad. Colomb. Ciencias, 3, p. 60, 1939—Lower Magdalena, Colombia; idem, Caudasia, 3, No. 13, p. 337, 1945—Barranquilla, Colombia.

Dafila bahamensis Bond, Bds. West Indies, p. 40, 1936—West Indies (range).

Range.—The Bahama Islands, Greater Antilles, Virgin Islands, Colombia (Lower Magdalena Valley), Dutch West Indies (Curaçao), the Guianas, and northeastern Brazil, probably as far south as the Amazon. Accidental in Florida.

Field Museum Collection.—13: Bahama Islands (Caicos Bank, 4; Mathews Town, 3); Hispaniola (Port de Paix, Haiti, 1); Virgin Islands (St. Thomas, 1; St. Croix, 2); British Guiana (unspecified, 2).

Conover Collection.—5: Virgin Islands (St. Croix, 4); Curaçao Island (St. Patrick, 1).

****Dafila bahamensis rubrirostris* (Vieillot).¹ SOUTHERN BAHAMAN PINTAIL.**

Anas rubrirostris Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 5, p. 108, 1816—based on "Pato pico aplomado y roxo" Azara, *Apunt. Hist. Nat. Páx.*, 3, p. 436, No. 433, pampas of Buenos Aires.

Anas fimbriata Merrem, in Ersch and Gruber, *Allg. Encycl. Wissens. Künste*, 35, p. 35, 1841—based on Azara, No. 433, pampas near Buenos Aires.

Dafila urophasianus (not *Anas urophasianus* Vigors) Darwin, *Zool. Beagle*, 3, p. 135, 1841—Bahia Blanca, northern Patagonia.

Dafila Bahamensis (not *Anas bahamensis* Linnaeus) Germain, *Proc. Bost. Soc. N. H.*, 7, p. 314, 1860 (nesting dates in Chile).

Dafila bahamensis Taczanowski, *Proc. Zool. Soc. Lond.*, 1879, p. 243—Tumbez, Peru; Doering, in Roca, *Inf. Ofic. Exp. Rio Negro, Zool.*, p. 54, 1881—Laguna de Carhué; Taczanowski, *Orn. Per.*, 3, p. 482, 1886—Tumbez (ex Stolzmann); Sclater and Hudson, *Arg. Orn.*, 2, p. 135, 1889—Buenos Aires; Hartert and Venturi, *Nov. Zool.*, 16, p. 243, 1909—Barracas al Sud, Buenos Aires.

Poecilonetta bahamensis Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 282, 1895—Brazil (Cajutuba), Buenos Aires, and Chile; Ihering, *Ann. Est. Rio Grande do Sul*, 16, p. 144, 1899—Rio Grande do Sul; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 207, 1902—Tucumán (ex Dinelli); Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, *Orn.*, p. 464, 1912—La Plata and Chascomus, Argentina.

Paecilonitta bahamensis rubrirostris Bangs, *Proc. New Engl. Zool. Cl.*, 6, p. 89, 1918 (dist. char.; range); Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 76, 1926—Carhué, Buenos Aires, Argentina; Hellmayr, *Field Mus. Nat. Hist.*, *Zool. Ser.*, 19, p. 328, 1932 (range in Chile); Philippi, *Bol. Mus. Nac. Santiago*, 16, p. 58, 1937—Chinchorro, Tacna, Chile.

Anas bahamensis Phillips, *Nat. Hist. Ducks*, 2, p. 344, pl. 41, distr. map 59, 1923 (monog.).

Anas bahamensis rubrirostris Phillips, *Nat. Hist. Ducks*, 2, p. 350, 1923 (dist. char.); Peters, *Bds. World*, 1, p. 167, 1931 (range).

Range.—Southeastern Brazil from Bahía south to the province of Buenos Aires, Argentina, and west through Paraguay to eastern Bolivia (Pulquina, Santa Cruz); the central provinces of Chile. Has been taken also on the west coast of Peru from Tumbez to Chorillos.

Field Museum Collection.—3: Bolivia (Pulquina, Santa Cruz, 3).

Conover Collection.—14: Bolivia (Pulquina, Santa Cruz, 5); Paraguay, Chaco (200 km. west of Puerto Casado, 5; 235 km. west on the Riacho Negro, 1; Islapoi, 3).

¹ *Dafila bahamensis rubrirostris* (Vieillot) is much larger than the typical race and perhaps averages slightly darker. Wings of males run 225–231 mm. and females 219–220, as against 205 and 195–198, respectively, in the northern race.

****Dafila bahamensis galapagensis* (Ridgway). GALAPAGOS PINTAIL.**

Paecilonitta Bahamensis (not *Anas bahamensis* Linnaeus) Gould, in Darwin, Zool. Beagle, 3, p. 135, 1841—Galápagos Archipelago.

Poecilonetta galapagensis Ridgway, Proc. U. S. Nat. Mus., 12, p. 115, 1889—Charles Island, Galápagos Islands (type in U. S. National Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 284, 1895—Charles and Indefatigable Islands, Galápagos Islands (full bibliog.).

Anas galapagensis Phillips, Nat. Hist. Ducks, 2, p. 351, pl. 41, 1923 (monog.); Peters, Bds. World, 1, p. 167, 1931 (range).

Paecilonetta galapagensis Swarth, Occ. Pap. Calif. Acad. Sci., 18, p. 45, 1931—Galápagos Islands.

Range.—Galápagos Islands.

Field Museum Collection.—2: Galápagos Islands (Charles Island,

2).

Conover Collection.—2: Galápagos Islands (Charles Island, 2).

Genus AIX Boie

Aix Boie, Isis, 21, col. 329, 1828—type, by subs. desig. (Eyton, Monog. Anat., p. 35, 1838), *Anas sponsa* Linnaeus.

Lampronessa Wagler, Isis, col. 282, 1832—type, by subs. desig. (Salvadori, Cat. Bds. Brit. Mus., 27, p. 72, 1895), *Aex sponsa* Salvadori=*Anas sponsa* Linnaeus.

Aia (errore) Eyton, Monog. Anat., p. 35, 1838—type, by orig. desig., *Aia sponsa* Eyton=*Anas sponsa* Linnaeus.

****Aix sponsa* (Linnaeus). WOOD DUCK.**

Anas sponsa Linnaeus, Syst. Nat., 10th ed., 1, p. 128, 1758—based on "Summer Duck" Catesby, Nat. Hist. Carolina, 1, p. 97, pl. 97, and Edwards, Nat. Hist. Bds., 2, p. 101, pl. 101 (Hudson Bay), "North America"=Carolina (ex Catesby).

Aex sponsa Salvadori, Cat. Bds. Brit. Mus., 27, p. 73, 1895 (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 199, 1903—Cuba, Jamaica, Bermuda, Mexico (Mazatlán, Valley of Mexico).

Aix sponsa Grinnell, Bryant, and Storer, Game Bds. Calif., p. 140, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 158, 1923 (life hist.); Dixon, Condor, 26, p. 41, 1924 (nesting); Miller, Auk, 42, p. 41, 1925 (comp. with *Dendronessa galericulata*); Peters, Bds. World, 1, p. 170, 1931 (range); Bond, Bds. West Indies, p. 41, 1936—Cuba (accidental in Jamaica; doubtful in Hispaniola).

Lampronessa sponsa Phillips, Nat. Hist. Ducks, 3, p. 46, pl. 50, distr. map 72, 1925 (monog.).

Range.—In eastern and central North America breeds from southern Nova Scotia and Lake Winnipeg south to Cuba, Florida,

and south central Texas. On the Pacific coast breeds from British Columbia to California. Winters in the southern half of its breeding area and in Mexico (Mazatlán, Valley of Mexico). Accidental in Bermuda, Jamaica, and perhaps in Hispaniola.

Field Museum Collection.—61: California (Rio Vista, 1); Arkansas (Tillar, 1); Iowa (Hillsboro, 1; Manchester, 1); Minnesota (Lake View, 1); Wisconsin (Alden, 1; Meridean, 1; Beaver Dam, 2); Illinois (Worth, 2; Olive Branch, 2; Sangamon River, 2); Indiana (English Lake, Starke County, 1); Ontario (Coboconk, 2); Maine (Otis, 1); Massachusetts (Randolph, 1; unspecified, 1); Connecticut (New London, 1; Jewett City, 1; East Hartford, 1; Westville, 2; North Haven, 1; Madison, 1; New Haven County, 1; Black Hall, 2; Litchfield, 2; Westchester, 1); New York (Long Island, Queens County, 1; Oneonta, 3); Virginia (unspecified, 1); North Carolina (Raleigh, 2); Georgia (Chatham County, 1); Florida (Bassenger, 3; Mud Lake, Orange County, 1; Orlando, 2; Freshwater Lake, Palm Beach County, 2; St. John's River, 1; Amelia Island, 1; Lake Wekiwa, Orange County, 2; Lake Worth, 1; Loxahatchee Swamp, Palm Beach County, 4); Cuba (unspecified, 2).

Conover Collection.—22: Alberta (Leduc, 3); Ontario (Port Rowan, Norfolk County, 2); Arkansas (Tillar, 1); Illinois (Warrenville, 2; Henry, 11); Florida (Homosassa Springs, Citrus County, 3).

Genus HETERONETTA Salvadori

Heteronetta Salvadori, Atti Soc. Ital. Sci. Nat., 8, p. 374, 1865—type, by orig. desig. and monotypy, *Anas melanocephala* (not of Gmelin) Vieillot=*Anas atricapilla* Merrem.

**Heteronetta atricapilla* (Merrem). BLACK-HEADED DUCK.

Anas melanocephala (not of Gmelin, 1789) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 163, 1816—based on "Pato cabeza negra" Azara, Apunt. Hist. Nat. Páx., 3, p. 447, No. 438, Buenos Aires.

Anas atricapilla Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 35, p. 26, 1841—based on "Pato cabeza negra" Azara, No. 438, Buenos Aires.

Heteronetta melanocephala Sclater and Hudson, Arg. Orn., 2, p. 130, 1889—Alvear, Buenos Aires.

Heteronetta atricapilla Salvadori, Cat. Bds. Brit. Mus., 27, p. 325, 1895—Argentina (Alvear, Buenos Aires, and Mendoza) and Chile (Santiago and Rio Pilmaiquen); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 145, 1899—Rio Grande do Sul; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Famailá, Tucumán; Daguerre, El Hornero, 2, p. 61, 1920 (parasitic

nesting habits); Wilson, *l.c.*, 3, p. 192, 1923 (parasitic nesting habits); Daguerre, *l.c.*, p. 194, 1923 (parasitic nesting habits); Phillips, *Nat. Hist. Ducks*, 3, p. 94, pl. 53, distr. map 76, 1925 (monog.); Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 83, 1926—Los Yngleses and Lavalle, Prov. Buenos Aires (habits); Peters, *Bds. World*, 1, p. 172, 1931 (range); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 19, p. 322, 1932 (distr. in Chile); Friedmann, *Proc. U. S. Nat. Mus.*, 80, (18), p. 1, 1932 (parasitic habits).

Range.—From central Chile (Santiago), northern Argentina (Tucumán), Paraguay (170 km. west of Puerto Casado) and southern Brazil (Rio Grande do Sul), south in Chile to Valdivia (Rio Pilmiquen) and in Argentina to the provinces of San Juan, Mendoza, and Buenos Aires.

Conover Collection.—15: Paraguay, Chaco (170–200 km. west of Puerto Casado, 6; 60 km. east of Orloff, 2; 235 km. west on the Riacho Negro, 2); Argentina (Cambaceres, Buenos Aires, 5).

Subfamily AYTHYINAE. Deep-water Ducks

Genus NETTA Kaup

Netta Kaup, *Skizz. Entw. Gesch. Nat. Syst. Europ. Thierw.*, pp. 102, 196, 1829—type, by monotypy, *Anas rufina* Pallas.

Callichen Brehm, *Isis*, 1830, col. 999—type, by monotypy, *Callichen ruficeps* "Brehm"=*Anas rufina* Pallas.

Mergoides Eyton, *Cat. Brit. Birds*, p. 77, 1836—type, by monotypy, *Mergoides Rufina* (Linnaeus)=*Anas rufina* Pallas.

Netta rufina (Pallas). RUFIOUS-CRESTED DUCK.

Anas rufina Pallas, *Reise Russ. Reichs*, 2, p. 713, 1773—Caspian Sea and lakes of Tartarian Desert.

Netta rufina Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 328, 1895 (full bibliog.); Bent, *Bull. U. S. Nat. Mus.*, 126, p. 171, 1923 (account of supposed capture on Long Island; life hist.); Peters, *Bds. World*, 1, p. 173, 1931 (range).

Range.—Extralimital. Included because a mounted specimen in the Smithsonian Institution, purchased in the Fulton Market, New York, was supposed to have been shot on Long Island.

Genus METOPIANA Bonaparte

Metopiana Bonaparte, *Compt. Rend. Acad. Sci. Paris*, 43, p. 649, 1856—type, by monotypy, *Anas peposaca* Vieillot.

Metopias Heine, in Heine and Reichenow, *Nom. Mus. Orn. Hein.*, p. 347, 1890—type, by monotypy, *Anas peposaca* Vieillot.

***Metopiana peposaca** (Vieillot). ROSY-BILLED DUCK.

Anas peposaca Vieillot, *Nouv. Dict. Hist. Nat.*, nouv. éd., 5, p. 132, 1816—based on "Pato negrizco ala blanca" Azara, *Apunt. Hist. Nat. Páx.*, 3, p. 423, No. 430, Paraguay and Buenos Aires.

Anas melopias Poeppig, in Froriep's *Notiz. Geb. Natur- und Heilkunde*, No. 529 (=25, No. 1), p. 9, 1829—"rarissima in Chile" (location of type not stated).

Metopiana peposaca Sclater and Hudson, *Arg. Orn.*, 2, p. 137, 1889—Paraguay to Patagonia; Salvadori, *Cat. Bds. Brit. Mus.*, 27, p. 332, 1895—Uruguay (Montevideo) and Chile (Santiago and Rio Pilmaiquen); Ihering, *Ann. Est. Rio Grande do Sul*, 16, p. 145, 1899—Jaguarão and Rio Grande, Rio Grande do Sul; Kerr, *Ibis*, 1901, p. 234—Waikthlatingmayalwa, Paraguayan Chaco; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 208, 1902—Famaillá, Tucumán; Scott and Sharpe, *Rep. Princet. Univ. Exped. Patagonia*, 2, *Orn.*, p. 482, 1912—Ensenada, Prov. Buenos Aires, Argentina; Rodriguez, *El Hornero*, 1, p. 185, 1918 (habits); Daguerre, *l.c.*, 2, p. 61, 1920 (nesting habits); Peters, *Bull. Mus. Comp. Zool.*, 65, p. 303, 1923—Huanuluan and Neluan, Rio Negro; Phillips, *Nat. Hist. Ducks*, 3, p. 114, pl. 55, *distr. map* 78, 1925 (monog.); Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 82, 1926—Argentina (Lavalle and Carhué, Prov. Buenos Aires; General Roca, Terr. Rio Negro) and Uruguay (Lazcano, Rocha); Aravena, *El Hornero*, 4, p. 154, 1928 (food); Peters, *Bds. World*, 1, p. 173, 1931 (range); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 19, p. 334, 1932 (*distr. in Chile*); Moffitt, *Auk*, 49, p. 214, 1932 (downy plumage); Casares, *El Hornero*, 7, p. 351, pl. 3, *figs. 6-7*, *distr. map*, 1940 (range; habits).

Range.—From central Chile (Santiago), northern Argentina (Concepción, Tucumán), Paraguay (200 km. west of Puerto Casado), and southern Brazil (Rio Grande do Sul), south in Chile to Valdivia (Rio Valdivia) and in Argentina to the province of Rio Negro (Huanuluan, Neluan, and General Roca).

Field Museum Collection.—5: Argentina (Concepción, Tucumán, 1); Paraguay, Chaco (170 km. west of Puerto Casado, 3); Chile (Yumbel, Concepción, 1).

Conover Collection.—21: Paraguay, Chaco (200 km. west of Puerto Casado, 11; Orloff, 4); Argentina (Concepción, Tucumán, 4; Tunuyán, Mendoza, 1; Cambaceres, Buenos Aires, 1).

Genus AYTHYA Boie

Aythya Boie, *Tagebuch Reise durch Norwegen*, pp. 308, 351, before May, 1822—type, by monotypy, *Aythya marila*=*Anas marila* Linnaeus (cf. *Ibis*, 1939, p. 522).

Nyroca Fleming, *Phil. Zool.*, 2, p. 260, after June 28, 1822—type, by tautonymy, *Anas nyroca* Gùldenstädt.

- Fuligula* Stephens, in Shaw's Gen. Zool., 12, (2), p. 187, 1824—type, by tautonymy, *Anas fuligula* Linnaeus.
- Fulix* Sundevall, Kongl. Vetensk. Akad. Handl., 1835, p. 129, 1836—type, by subs. desig. (Baird, Brewer, and Ridgway, Water Bds. N. Amer., 2, p. 17, 1884), *Anas marila* Linnaeus.
- Marila* Reichenbach, Av. Syst. Nat., p. viii, 1852—type, by tautonymy, *Anas marila* Linnaeus.
- Nettarion* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 790 (in text), 1858—substitute name for *Fulix* Sundevall.
- Aristonetta* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 793 (in text), 1858—type, by orig. desig., *Anas valisneria* Wilson.
- Perissonetta* Oberholser, Proc. Indiana Acad. Sci., 1920, p. 110, 1921—type, by orig. desig. and monotypy, *Anas collaris* Donovan.
- Phaeonetta* (not *Phoeonetta* Stone, 1907) Delacour, L'Oiseau, (n.s.), 6, p. 377, 1936—type, by orig. desig., *Anas erythrophthalma* Wied.
- Phoeoaythia* Delacour, Bull. Brit. Orn. Cl., 57, p. 157, June 30, 1937—new name for *Phaeonetta* Delacour, preoccupied.

**Aythya valisineria* (Wilson). CANVASBACK.

- Anas valisineria* Wilson, Amer. Orn., 8, p. 103, pl. 70, fig. 5, 1814—eastern United States (type apparently lost).
- Anas Vallisneriana* Sabine, App. Frankl. Journ., p. 699, 1823—"waters connected with the Chesapeake."
- Nyroca vallisneria* Salvadori, Cat. Bds. Brit. Mus., 27, p. 342, 1895 (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 221, 1903—Mexico (Mazatlán and Valley of Mexico), Guatemala (Dueñas), and West Indies.
- Aythya vallisneria* Brooks, Auk, 20, p. 278, pl. 10, 1903 (plumage of downy).
- Marila valisineria* Grinnell, Bryant, and Storer, Game Bds. Calif., p. 150, 1918 (life hist. California).
- Aristonetta valisineria* Bent, Bull. U. S. Nat. Mus., 126, p. 189, 1923 (life hist.).
- Nyroca valisneria* Brooks, Ibis, 1924, p. 474 (affinities).
- Nyroca valisineria* Phillips, Nat. Hist. Ducks, 3, p. 121, pls. 56, 57 and 59, distr. map 79, 1925 (monog.); Peters, Bds. World, 1, p. 173, 1931 (range); Hochbaum, The Canvasback on a Prairie Marsh, 1944 (life hist.).

Range.—Breeds from central Alaska (Fort Yukon), central British Columbia (Lac la Hache), Great Slave Lake, and central Manitoba (Lake Manitoba), south to central Oregon, northern Utah, northern New Mexico, and southern Nebraska. Rarely to southern Minnesota (Heron Lake) and southern Wisconsin (Lake Koshkonong). Winters from southern British Columbia, Colorado, northeastern Arkansas, and Chesapeake Bay south to central Mexico, the Gulf coast and Florida. Casually as far north as lakes Erie and Ontario and rarely south to Cuba and Guatemala.

Field Museum Collection.—29: British Columbia (Okanagan, 2); Saskatchewan (Prince Albert, 2; Quill Lake, 1); Quebec (Batucan, 1); North Dakota (Stump Lake, 1; Hope, 3; Towner County, 3; Devil's Lake, 1); Minnesota (Marshall County, 2); Illinois (Warsaw, 1; Meredosia, 1; Henry, 2); Connecticut (West Haven, 2); Virginia (Back Bay, 1; Norfolk, 1); North Carolina (Currituck Sound, 1); California (Pacific Grove, 1; Colusa, 1); Texas (Brownsville, 2).

Conover Collection.—24: Alberta (Tofield, 2; Edmonton, 9); Saskatchewan (Imperial, 1; Simpson, 1); Ontario (St. Clair Flats, 1); Nebraska (Wood Lake, 4); Iowa (Audubon, 1); Illinois (Henry, 3); North Carolina (Seagull, Currituck Sound, 2).

Aythya ferina (Linnaeus). EUROPEAN POCHARD.

Anas ferina Linnaeus, Syst. Nat., 10th ed., 1, p. 126, 1758—based chiefly on Fauna Svec., No. 107; Europe, restr. type locality, Sweden (ex Fauna Svec.).

Marila ferina Evermann, Auk, 30, p. 17, 1913—St. Paul Island, Pribilof group.

Aithya ferina Bent, Bull. U. S. Nat. Mus., 126, p. 185, 1923—St. Paul Island, Pribilof group (life hist.).

Nyroca ferina Brooks, Ibis, 1924, p. 474 (relationship with *A. valisineria* and *A. americana*).

Range.—Extralimital. One record from St. Paul Island, Pribilof group, Bering Sea.

***Aythya americana** (Eyton). REDHEAD.

Fuligula americana Eyton, Monog. Anat., p. 155, 1838—North America.

Nyroca americana Salvadori, Cat. Bds. Brit. Mus., 27, p. 340, 1895 (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 220, 1903—Chihuahua (Boca Grande, Janos and Conalitos rivers), Sinaloa (Mazatlán), Zacatecas, Guanajuato, Valley of Mexico, and Jalisco (Guadalajara), Mexico; Bent, Bull. U. S. Nat. Mus., 126, p. 175, 1923 (life hist.); Brooks, Ibis, 1924, p. 474 (affinities); Phillips, Nat. Hist. Ducks, 3, p. 163, pls. 45, 56, 57, and 59, distr. map 81, 1925 (monog.); Peters, Bds. World, 1, p. 174, 1931 (range); Low, Wilson Bull., 52, p. 153, 1940—Iowa (nesting); Monson, Condor, 46, p. 20, 1944—lower Colorado River, California (nesting); Williams, Auk, 61, p. 251, 1944 (map, migration route from Utah); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 49, 1945—Sonora (distr.).

Marila americana Grinnell, Bryant, and Storer, Game Bds. Calif., p. 146, 1918 (life hist. California); Brooks, Auk, 37, p. 354, 1920 (albinism in females).

Range.—Breeds from central British Columbia (Lac la Hache), northern Alberta (Lake Athabasca), central Saskatchewan, and

south central Manitoba (Lake Winnipegosis) south to southern Arizona (near Yuma), southern California (Los Angeles County), Utah, northern New Mexico, central Nebraska, and Wisconsin (Lake Koshkonong). Winters from southern British Columbia, southern Arizona, northern Texas, Arkansas and Chesapeake Bay south to central Mexico, the Gulf coast, Florida, Cuba and Jamaica.

Field Museum Collection.—32: British Columbia (Okanagan, 2); Manitoba (Lake Winnipegosis, 1); North Dakota (Benson County, 1; Ramsey County, 1; Towner County, 1; Nelson County, 3); California (Point Reyes, 1; Colusa, 2); Colorado (Rocky Ford, 1); Kansas (Burlington, 1); Illinois (unspecified, 2); Connecticut (Branford, 1; Norfolk, 2); North Carolina (Pea Island, Dare County, 12; Currituck Sound, 1).

Conover Collection.—27: Alberta (Tofield, 2; Edmonton, 2); Saskatchewan (Imperial, 3; Simpson, 1); California (Buena Vista Lake, 1); Utah (Brigham, 11); Nebraska (Wood Lake, 3); Illinois (Henry, 1); North Carolina (Seagull, Currituck Sound, 1); Texas (Shamrock Bay, Nueces County, 2).

**Aythya collaris* (Donovan). RING-NECKED DUCK.

Anas collaris Donovan, Brit. Bds., 6, pl. 147 and text, 1809—Lincolnshire, England, from specimen found in Leadenhall Market, London.

Anas rufitorques Ord, ed. Wilson, Amer. Orn., 8, p. 61, 1824—based on *Anas fuligula* (not of Linnaeus) Wilson, Amer. Orn., 8, p. 66, pl. 67, fig. 5, 1814—Delaware River.

Aythya collaris Turner, Contr. Nat. Hist. Alaska, 2, p. 133, 1886—St. Michaels (not common), (?)Attu Island (winter); Brooks, Auk, 20, p. 279, pl. 10, 1903 (plumage of downy); Fisher, Condor, 6, p. 25, 1904—Monte Bello, California; Squires, Auk, 63, p. 600, 1946—New Brunswick (breeding records dating from 1874).

Fuligula collaris Salvadori, Cat. Bds. Brit. Mus., 27, p. 370, 1895 (full bibliog.); Coues, Auk, 14, p. 206, 1897 (on type locality and earlier discovery by Lewis and Clark); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 224, 1903—West Indies, Mexico, Guatemala.

Marila collaris Grinnell, Bryant, and Storer, Game Bds. Calif., p. 164, 1918 (life hist. California); Hollister, Auk, 36, p. 400, 1919 (syst. position); Brooks, l.c., 37, p. 355, 1920 (nearest to *Marila americana*).

Perissonetta collaris Bent, Bull. U. S. Nat. Mus., 126, p. 224, 1923 (life hist.).

Nyroca collaris Phillips, Nat. Hist. Ducks, 3, p. 183, pls. 58, 59, distr. map 82, 1925 (monog.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 313, 1927—Puerto Rico (accidental); Peters, Bds. World, 1, p. 174, 1931 (range); McIlhenny, Auk, 51, p. 330, 1934 (age records); Todd, l.c., 53, p. 440, 1936—Pymatuning Lake, Pennsylvania (breeding); Swanson, l.c., 54, p. 382, 1937 (breeding in Maine); Mendall, l.c., 55,

p. 401, 1938 (breeding range eastern North America); Griscom, l.c., 56, p. 134, 1939 (migr. New England); Peters, l.c., 58, p. 401, 1941—Prince Edward Island and Nova Scotia (breeding); Soper, Trans. Roy. Canad. Inst., 24, p. 37, 1942—Wood Buffalo Park; Wellein, Auk, 60, p. 600, 1943—Quebec (breeding); Gabrielson, l.c., 61, p. 117, 1944—Kenai Peninsula, Alaska (June 11); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 49, 1945—Santa Cruz River, Sonora (Oct.).

Range.—Breeds locally from southern British Columbia (Chilliwack and Cariboo districts), northern Alberta, and Saskatchewan southeastward to Manitoba and south to northern California (Lassen County), northern Utah (Salt Lake County), Arizona (White Mountains), northern Iowa, and southern Wisconsin (Lake Koshkonong). Has recently been found breeding in Quebec, New Brunswick, Prince Edward Island, Nova Scotia, Maine (Piscataquis, Aroostook and Washington counties), and Pennsylvania (Pymatuning Lake). Winters from southern British Columbia, New Mexico, Arkansas and Chesapeake Bay south to Guatemala, the Gulf of Mexico, Florida, and rarely the Greater Antilles.

Field Museum Collection.—21: California (Pacific Grove, 1; Colusa, 3); Texas (Brownsville, 1); North Dakota (Stump Lake, 1; Turtle Mountains, Rolette County, 1); South Dakota (Harrison, 1); Nebraska (Lincoln, 1); Minnesota (Pelican Rapids, Otter Tail County, 1 downy); Wisconsin (Horicon Marsh, Washington County, 1); Iowa (Big Neck, 1); Kansas (Burlington, 1); Connecticut, New Haven County (Quinnipiac Marshes, 3; Lake Saltonstall, 1); Virginia (Back Bay, 2); Georgia (Chatham County, 1); Mississippi (Vancleave, Jackson County, 1).

Conover Collection.—22: Yukon Territory (Marsh Lake, 1); Alberta (Fawcett, 4); North Dakota (Grafton, 1); Nebraska (Wood Lake, 1); Wisconsin (Delavan, 1); Illinois (Wheaton, 1; Henry, 9); Ontario (Kent County, 2); North Carolina (Seagull, Currituck Sound, 1); Florida (Wilson, Brevard County, 1).

**Aythya erythroptalma* (Wied). BROWN POKHARD.

Anas erythroptalma Wied, Beitr. Naturg. Bras., 4, (1), p. 929, 1832—Lagõa do Braço, Villa Belmonte, southern Bahia, Brazil (cotypes in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 269, 1889); Salvadori, Ibis, 1896, p. 99 (disc.).

Fuligula nationi Selater and Salvin, Proc. Zool. Soc. Lond., 1877, p. 522—Lima, Peru (type in British Museum); Taczanowski, Orn. Per., 3, p. 484, 1886—Lima (ex Nation); MacFarlane, Ibis, 1887, p. 203—near Arica (Tacna), Chile, and inside of Mollendo (Arequipa), Peru.

Nyroca nationi Salvadori, Cat. Bds. Brit. Mus., 27, p. 353, 1895—Lima, Peru (full bibliog.); Chubb, Ibis, 1919, p. 276—Eten, Lambayeque, Peru; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 27, 1922—La Carolina, Quito, Ecuador.

Nyroca erythrophthalma Salvadori, Cat. Bds. Brit. Mus., 27, p. 353 (footnote), 1895 (disc., full bibliog.); Phillips, Nat. Hist. Ducks, 3, p. 220, pl. 61, distr. map 86, 1925 (monog.); Peters, Bds. World, 1, p. 175, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 334, 1932—Arica, Tacna, Chile; Borrero, Caldasia, 3, p. 231, 1944—Sabana de Bogotá, Colombia; idem, l.c., p. 409, 1945—Sabana de Bogotá.

Marila nationi Chapman, Bull. Amer. Mus. N. H., 36, p. 235, 1917—Cali marshes, Colombia (crit.); Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 46, 1922—Lagunillas, Zulia, Venezuela.

Range.—Western South America from Venezuela (Lake Maracaibo) to northern Chile (Arica, Tacna). Has been taken twice on the east coast of Brazil (Santa Luzia, Alagôas; Villa Belmonte, Bahía). Also found in central and southern Africa.

Field Museum Collection.—1: Brazil (Santa Luzia, Alagôas, 1).

Conover Collection.—3: Venezuela (Lagunillas, Zulia, 3).

Aythya fuligula (Linnaeus). TUFTED DUCK.

Anas fuligula Linnaeus, Syst. Nat., 10th ed., 1, p. 128, 1758—based mainly on Fauna Svec., No. 99; Europe, restr. type locality, Sweden (ex Fauna Svec.).

Marila fuligula Evermann, Auk, 30, p. 17, 1913—St. Paul Island, Pribilof group.

Fuligula fuligula Bent, Bull. U. S. Nat. Mus., 126, p. 202, 1923—St. Paul Island, Pribilof group (life hist.).

Range.—Extralimital. One record from St. Paul Island, Pribilof group, Bering Sea.

**Aythya marila nearctica* Stejneger.¹ AMERICAN SCAUP DUCK.

Aythya marila nearctica Stejneger, Bull. U. S. Nat. Mus., 29, p. 161, 1885—North America (type in U. S. National Museum); Turner, Contr. Nat. Hist. Alaska, 2, p. 133, 1886—St. Michaels and Aleutian Islands; Nelson, Nat. Hist. Coll. Alaska, 3, p. 71, 1887—mouth of Yukon River to northern Kotzebue Sound; Bishop, Auk, 12, p. 293, 1895 (disc. of subsp. chars.).

(*F. nearctica*) Salvadori, Cat. Bds. Brit. Mus., 27, p. 357, 1895 (full bibliog.).

Fuligula marila (typica) Winge, Medd. Grønln., 21, p. 83, 1898—Nanortalik, Greenland.

¹ *Aythya marila nearctica* Stejneger differs from the typical race by the coarser black barring on the upper parts of the adult males, this being especially noticeable on the scapulars, which are very finely barred in the European birds. From *A. m. mariloides* it differs in the same way and also by its larger size.

- Fuligula marila* (not *Anas marila* Linnaeus) Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 222, 1903—Mazatlán, Mexico;¹ Manniche, Medd. Grønl., 45, No. 1, p. 97, 1910—Stormkap, Greenland (June 21, 1907).
- Marila marila* Grinnell, Bryant, and Storer, Game Bds. Calif., p. 156, 1918 (life hist. California); Conover, Auk, 43, p. 165, 1926—Hooper Bay, Alaska (breeding).
- Fulix marila nearctica* Bent, Bull. U. S. Nat. Mus., 126, p. 207, 1923 (life hist.).
- Nyroca marila* Phillips, Nat. Hist. Ducks, 3, p. 249, pls. 62, 64, distr. map 88, 1925 (monog.); Porsild, Canad. Field Nat., 57, p. 23, 1943—Mackenzie Delta (nesting); (?) Sutton and Wilson, Condor, 48, p. 86, 1946—Attu Island, Aleutian Islands (wintering).
- Nyroca marila nearctica* Phillips, Nat. Hist. Ducks, 3, p. 271, 1925 (dist. chars.; range); Bailey, Condor, 27, p. 170, 1925—Wainwright, Alaska (not nesting); Peters, Bds. World, 1, p. 176, 1931.
- Aythya marila marila* Hørring and Salomonsen, Medd. Grønl., 131, (5), p. 12, 1941—Greenland records.

Range.—Breeds from Cape Prince of Wales, Alaska, and the Aleutian Islands east through the interior of Alaska to the Mackenzie Basin and Lake Athabasca. Probably casually to the west shore of Hudson Bay. Farther south there are scattered records from the interior of western Canada, but most of these, perhaps, belong to *Aythya affinis*. Winters chiefly on the sea coasts of North America from the Aleutian Islands and Maine south to the Mexican border and the Gulf of Mexico. Casually in the interior, especially on the Great Lakes; accidental in Greenland (Nanortalik, Godhavn, Stormkap).

Field Museum Collection.—36: Alaska (Barrow, 1; Nome, 1; Tocatna, 1; Bethel, 1); British Columbia (Okanagan, 3; White Swan Lake, Kootenay Range, 1); Washington (Bainbridge Island, 1; Port Townsend, 1); Quebec (Magdalen Islands, 3); Connecticut (Branford, 1; Stony Creek, 21); North Carolina (Pea Island, Dare County, 1).

Conover Collection.—38: Alaska, Bering Sea (Barrow, 1; Hooper Bay, 4; Igiak Bay, 10); Yukon Territory (Marsh Lake, 4); British Columbia (Queen Charlotte Islands, 1; Comox, Vancouver Island, 9); Alberta (Tofield, 1); Manitoba (Churchill, 1); Illinois (Henry, 4); Connecticut (Branford, 1; Stratford, 2).

**Aythya affinis* (Eyton). LESSER SCAUP DUCK.

Fuligula affinis Eyton, Monog. Anat., p. 157, 1838—North America (type in British Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 360, 1895

¹ This record is very questionable and probably refers to *Aythya affinis*.

(full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 223, 1903—Mexico (Mazatlán and Yucatan), Guatemala, Costa Rica, and Panama.

Fuligula marila var. *affinis* Winge, Medd. Grønl., 21, p. 83, 1898—Greenland (Egedesminde; Julianehaab).

Aythya affinis Brooks, Auk, 20, p. 278, pl. 10, 1903 (plumage, downy young).

Marila affinis Carriker, Ann. Carnegie Mus., 6, p. 437, 1910—San Antonio, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 36, p. 235, 1917—Cali Marshes, Colombia; Grinnell, Bryant, and Storer, Game Bds. Calif., p. 159, 1918 (life hist. California); Brooks, Auk, 37, p. 354, 1920 (variations in plumage).

Fulix affinis Bent, Bull. U. S. Nat. Mus., 126, p. 217, 1923 (life hist.).

Nyroca affinis Phillips, Nat. Hist. Ducks, 3, p. 272, pls. 62, 64, distr. map 89, 1925 (monog.); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 312, 1927—Puerto Rico, St. Thomas and Culebra; Peters, Bull. Mus. Comp. Zool., 71, p. 307, 1931—Cider Creek and Changuinola, Almirante Bay, Panama; idem, Bds. World, 1, p. 176, 1931 (range); McIlhenny, Auk, 51, p. 330, 1934 (age records); Griscom, Bull. Mus. Comp. Zool., 78, p. 297, 1935—Veraguas and Canal Zone, Panama; Dickey and van Rossem, Field Mus. Nat. Hist., Zool. Ser., 23, p. 94, 1938—Lake Olomega and Lake Chanmico, El Salvador; Dixon, Fauna Nat. Parks U. S., 3, p. 35, 1938—Mt. McKinley Nat. Park (breeding); Cruttenden, Auk, 59, p. 304, 1942—Churchill, Manitoba (nesting); Porsild, Canad. Field Nat., 57, p. 23, 1943—Mackenzie Delta (nesting); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 49, 1945—Sonora (distr.); Borrero, Caudasia, 3, p. 408, 1945—Sabana de Bogotá, Colombia.

Range.—Breeds from central Alaska (Fort Yukon; Mount McKinley), the Mackenzie Delta, and Hudson Bay (Churchill) south (east of the Cascades) to Oregon, Utah, northern Iowa, and southern Wisconsin (Lake Koshkonong), but not commonly south of the Canadian border. Winters from southern British Columbia, southeastern Arizona, northeastern Arkansas, southern Illinois, and Chesapeake Bay, south to northern Colombia (Cali Marshes, Sabana de Bogotá) and the Greater and Lesser Antilles; accidental in Greenland (Egedesminde; Julianehaab).

Field Museum Collection.—83: Alaska (Bethel, 1); British Columbia (Okanagan, 1); Saskatchewan (Maple Creek, 1); California (Hyperion, 2; Witch Creek, San Diego County, 1; Rio Vista, 1); Texas (Corpus Christi, 19; Brownsville, 7); North Dakota (Nelson County, 2; Towner County, 6; Stump Lake, 6; Cannonball River, 1; Rolette County, 1; Ramsey County, 3); Arkansas (Winslow, 1); Wisconsin (Milton, 1; Beaver Dam, 2); Illinois (Chicago, 1; Mokenca, 1; Sparland, 1); Ohio (Sandusky, 1); Massachusetts (Duxbury, 1); Connecticut (East Hartford, 1; Stony Creek, 3; Branford, 1);

Quinnipiac Marshes, 1; Guilford, 1); New York (Hindsburgh, 1); North Carolina (Pea Island, Dare County, 2); South Carolina (Mount Pleasant, 1); Florida (Banana River, 2; unspecified, 1; Mary Esther, 2); Bahama Islands (Caicos Bank, 3); Virgin Islands (St. Thomas, 1; Virgin Gorda, 2).

Conover Collection.—23: Yukon Territory (Marsh Lake, 2); Alberta (Tofield, 2; Edmonton, 2); Utah (Brigham, 1); North Dakota (Grafton, 2); Nebraska (Wood Lake, 2); Illinois (Waukegan, 2; Henry, 6); North Carolina (Seagull, Currituck Sound, 4).

Genus TACHYERES Owen

Tachyeres Owen, Trans. Zool. Soc. Lond., 9, p. 254, 1875—type, by monotypy, *Anas brachyptera* Latham.

Tachyeres brachypterus (Latham).¹ FALKLAND ISLAND STEAMER DUCK.

Anas cinerea (not of S. G. Gmelin, 1774) Gmelin, Syst. Nat., 1, (2), p. 506, 1789—based on Pernetty, "Loggerhead Goose" Latham, Gen. Syn. Bds., 3, (2), p. 439, etc., 1785, Falkland Islands (excl. of Staatenland).

Anas brachyptera Latham, Ind. Orn., 2, p. 834, 1790—new name for *Anas cinerea* Gmelin, Falkland Islands.

Tachyeres cinereus Salvadori, Cat. Bds. Brit. Mus., 27, p. 373, 1895—part, Falkland Islands; W. S. Brooks, Bull. Mus. Comp. Zool., 61, p. 155, 1917—part, Falkland Islands (non-flying individuals); Phillips, Ibis, 1917, p. 116—part (non-flying individuals); Wace, El Hornero, 2, p. 201, 1921 (disc.); Phillips, Nat. Hist. Ducks, 3, p. 287, pl. 65 (female of gray phase, red phase and downy young, only), 1925—part, Falkland Islands (non-flying individuals only); Bennett, Ibis, 1926, p. 327—Falkland Islands.

Tachyeres brachyptera Peters, Bds. World, 1, p. 176, 1931—part, Falkland Islands.

¹*Tachyeres brachypterus* (Latham): Differs from the Flying Steamer Duck, *T. patachonicus*, by having a larger and higher bill with a wider, heavier, more hooked nail on the upper mandible; a shorter wing (relatively) with narrower primaries and heavier and longer tarsus and toes. In the male the head is whiter (less grayish), and in the female much darker (more reddish) than in the corresponding sex of *T. patachonicus*.

Differs from the mainland non-flying form, *T. pleneres*, by having a smaller bill, with a narrower, less hooked nail and lighter and shorter tarsus and toes (in these respects *brachypterus* is midway between *patachonicus* and *pleneres*); by having the dusky edgings to the scapulars and flanks darker, more conspicuous; and the feathers of the chest more reddish at base. The male has a whiter head, with a darker and more extensive red throat patch which runs from near the base of the bill to the lower throat (not from below eye to upper throat). The female has a much darker and redder head, neck, and chest.

Murphy gives the dimensions of adults as follows: Males, wing 272–282 (276), culmen 53–60.8 (55.3), tarsus 63.1–67 (65.4), middle toe and claw 96.8 mm.; females, wing 251–274 (261), culmen 52–58.3 (54.8), tarsus 55.2–62.8 (59.5) mm.

Material examined.—Port Stanley, Falkland Islands, 2.

Tachyeres brachypterus Lowe, Ibis, 1934, p. 467, pl. 11—part, Falkland Islands (non-flying individuals) (comp. with *T. patachonicus*); Murphy, Ocean. Bds. S. Amer., 2, p. 964, 1936 (dist. chars.; life hist.).

Range.—Falkland Islands.

**Tachyeres pteneres* (Forster).¹ MAGELLANIC STEAMER DUCK.

Micropterus brachypterus (not *Anas brachyptera* Latham) Darwin, Zool. Beagle, 3, p. 136, 1845 (habits).

Anas pteneres Forster, Descr. Anim., p. 338, 1844—Tierra del Fuego.

Micropterus cinereus (not *Anas cinerea* Gmelin) Germain, Proc. Bost. Soc. N. H., 7, p. 315, 1860—Chiloé (nesting data); Oustalet, Miss. Sci. Cap Horn, 6, p. 212, pl. 4, 1891—Straits of Magellan (Port Churrucha, Molyneux Harbor, Beagle Channel), Staten Island, and Tierra del Fuego (crit., meas.).

"*Micropterus macropterus* Giglioli, Viaggio Magenta, p. 934, 1876."²

Tachyeres cinereus Salvadori, Cat. Bds. Brit. Mus., 27, p. 373, 1895—part, Chile and Straits of Magellan; Nicoll, Ibis, 1904, p. 49—Smythe's Channel, Chile; Crawshaw, Bds. Tierra del Fuego, p. 110, 1907—part (flightless individuals); Blaauw, Notes Leyden Mus., 35, p. 47, 1912—part (non-flying individuals), Smith Channel (dist. chars.); idem, Ibis, 1916, p. 488, pl. 14—Smith Channel and Melinka, Chonos Archipelago, Chile (comp. with *T. patachonicus*); idem, l.c., 1917, p. 274 (disc. chars.); Wace, El Hornero, 2, p. 201, 1921 (disc.); Phillips, Nat. Hist. Ducks, 3, p. 287, pl. 65 (male gray phase only), distr. map 90, 1925—part, except Falkland Islands and interior lakes and rivers (flightless individuals only).

Tachyeres brachyptera (not *Anas brachyptera* Latham) Peters, Bds. World, 1, p. 176, 1931—part, except Andean Lakes and Falkland Islands (flightless individuals only).

¹*Tachyeres pteneres* (Forster): Differs from *T. patachonicus* by having a much heavier, higher bill with a larger, thicker and more hooked nail; a shorter wing with narrower primaries; longer, much heavier tarsus and toes; the dusky edgings to the scapulars and flank feathers lighter, less conspicuous; and the reddish throat patch paler and not so extensive (from below eye to upper neck). In addition the chest feathers of the females are less reddish toward the base.

Differs from *T. brachypterus* by having the bill larger and deeper, with a broader, more hooked nail on the upper mandible; the tarsus and toes longer and somewhat heavier; the dorsal plumage more uniform; and the scapulars and flank feathers with the dark margins less noticeable. In the male the head is grayer (less whitish), the crown darker, and the red of the throat lighter and less extensive (from below eye to upper neck). In the female the head and upper neck are gray with a light reddish patch on the throat (not dark reddish throughout), and the chest is lighter gray with little of the hidden wine color toward the base of the feathers.

Two juvenile examples which are fully feathered except for the primaries lack the reddish throat patch and are a uniform light gray except for the white abdomen and under tail coverts.

Murphy gives the dimensions of adults as follows: males, wing 260–288 (275), culmen 55.2–64.5 (60), tarsus 66–78.6 (71.7) mm.; females, wing 255–271 (263), culmen 53.9–60.7 (58.6), tarsus 63.4–70.6 (66.5) mm.

² This work has not been consulted by the authors.

Tachyeres brachypterus (not *Anas brachyptera* Latham) Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 335, 1932—Chiloé Island (Rio Inio), Guaitecas Islands, Ascension Island (Canal Lagrèze and Melinka); Lowe, Ibis, 1934, p. 467, pl. 11, fig. 2—part, Chile and Straits of Magellan (comp. with *T. patachonicus*); Reynolds, El Hornero, 5, p. 350, 1934—Isla de los Conejos, Tierra del Fuego; Castellanos, l.c., 6, p. 36, 1935—Isla de los Estados, Tierra del Fuego; Reynolds, Ibis, 1935, p. 84—Cape Horn.

Tachyeres pleneres Murphy, Ocean. Bds. S. Amer., 2, p. 957, 1936 (dist. chars.; life hist.); Bullock, Comm. Mus. Concepción, 1, (8), p. 132, 1936—Penco, Chile.

Range.—The coast of southern South America from Concepción, Chile, south and east to the east entrance of the Straits of Magellan; Tierra del Fuego, except the east side from the Straits to Cape San Diego.

Field Museum Collection.—1: Chile (Melinka, Ascensión Island, Chiloé, 1).

Conover Collection.—7: Chile (Rio Inio, Chiloé Island, 4; Ascensión Island, Chiloé, 1; Hermit Island, Cape Horn, 2).

****Tachyeres patachonicus* (King).¹ FLYING STEAMER DUCK.**

Oidemia patachonica King, Zool. Journ., 4, p. 100, July, 1828—Straits of Magellan=western part of the Straits (cf. King, Proc. Comm. Sci. Corresp. Zool. Soc. Lond., 1, p. 15, 1831).²

Micropterus patachonicus Oustalet, Miss. Sci. Cap Horn, 6, p. 229, pl. 5, 1891—Falkland Islands, Tierra del Fuego, and Hermit Island (crit. meas.).

Tachyeres cinereus (not *Anas cinerea* Gmelin) Salvadori, Cat. Bds. Brit. Mus., 27, p. 373, 1895—part; Crawshaw, Bds. Tierra del Fuego, p. 110, 1907—

¹*Tachyeres patachonicus* (King): Differs from both *T. brachypterus* and *T. pleneres* by having a flatter, lighter bill with a much narrower, thinner, less hooked nail on the upper mandible; a longer wing with wider primaries; and shorter, more slender tarsus and toes. The differences enumerated above are greater between *patachonicus* and *pleneres* than between *patachonicus* and *brachypterus*.

From *pleneres*, males differ by being generally darker throughout, with the dusky edgings to the scapulars and flank feathers darker, more conspicuous, and the throat more reddish. Females differ by having the reddish throat patch darker and larger, extending from base of bill to base of neck (not from below eye to upper neck), and by having the dark chest feathers more reddish at base.

From *brachypterus*, males differ by having the head darker, more grayish; females by having the head and upper neck lighter, much less reddish.

A juvenile example not fully fledged is dark gray except for the white abdomen and under tail coverts, but has the reddish patch on the throat, and the feathers of the chest, flanks, and scapulars with dusky edges, giving a scaled appearance.

Murphy gives dimensions of adults as follows: Males, wing 287–316 (300), culmen 48.2–56.8 (52.4), tarsus 55.4–69.3 (60.8), middle toe and claw 90–95.2 (92) mm.; females, wing 276–301 (285), culmen 50–59.3 (52.3), tarsus 50.3–60.7 (56.4), middle toe and claw 80–87 (84.1) mm.

²The type is supposed to be in the Edinburgh Museum (cf. Gibson, Proc. Roy. Phys. Soc. Edin., 4, pp. 185–186, 1877).

part (flying individuals); Blaauw, Notes Leyden Mus., 35, p. 47, 1912—part (flying individuals) (dist. chars.); Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 487, 1912—part, Rio Negro, Patagonia; Wace, El Hornero, 2, p. 201, 1921—Falkland Islands (disc.); Phillips, Nat. Hist. Ducks, 3, p. 287, distr. map 90, 1925—part, red phase; Wetmore, Univ. Calif. Pub. Zool., 24, p. 418, 1926—Lago Fetalaufquen, Chubut.

Tachyeres patachonicus Blaauw, Ibis, 1916, p. 491—northwestern Tierra del Fuego (dist. chars.); Phillips, l.c., 1917, p. 116—part (flying individuals); Bennett, El Hornero, 3, p. 280, 1924—Falkland Islands (dist. chars.); idem, Ibis, 1926, p. 327—Falkland Islands; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 336, 1932—Chile (Llanquihue, junction Rios Simpson and Mañuales) and Argentina (Chubut, Arroyo Verde, near Chilean boundary) (comp. with *T. pteneres*); Reynolds, El Hornero, 5, p. 351, 1934—Yewin, Tierra del Fuego; Lowe, Ibis, 1934, p. 467, pl. 11, fig. 1 (comp. with non-flying species); Reynolds, l.c., 1935, p. 85—Grevy Island, Cape Horn; Murphy, Ocean. Bds. S. Amer., 2, p. 968, 1936 (dist. chars.; life hist.); Morrison, Ibis, 1940, p. 254—Lake Todos los Santos, Rio Peulla, and Laguna de Encanto, Chile.

Tachyeres brachyptera (not *Anas brachyptera* Latham) Peters, Bds. World, 1, p. 176, 1931 (range in part).

Range.—Coasts, rivers, and interior lakes of southern South America from Valdivia, Chile, on the west, and Puerto Deseado, Argentina, on the east, south to Tierra del Fuego; Falkland Islands.

Field Museum Collection.—2: Chile (Rio Ciaiike, Magallanes, 2).

Conover Collection.—9: Chile (Cucaco, Chiloé Island, 1; Balseo, Aysen, 1; Rio Ciaiike, Magallanes, 2); Argentina (Arroyo Verde, Chubut, 4; Rio Gallegos, Santa Cruz, 1).

Genus GLAUCIONETTA Stejneger

Glaucionetta Stejneger, Proc. U. S. Nat. Mus., 8, p. 409, 1885—type, by orig. desig., *Anas clangula* Linnaeus.

**Glaucionetta clangula americana* (Bonaparte).¹ AMERICAN GOLDEN-EYE.

Clangula Americana Bonaparte, Geogr. and Comp. List, p. 58, 1838—based on *Anas clangula* (not Linnaeus) Wilson, Amer. Orn., 8, p. 62, pl. 67, fig. 5, and Audubon, Bds. Amer., pl. 342; America, restr. type locality, eastern United States.

Clangula glaucion (*Clangula americana*) Salvadori, Cat. Bds. Brit. Mus., 27, p. 376, 1895—Alaska (Nulato), Canada (Godbout and Nova Scotia), New York (Lyons Falls and Adirondacks), Massachusetts (Cape Cod), Illinois (Chicago), Bermuda (Peniston's Pond).

¹*Glaucionetta clangula americana* (Bonaparte) differs from the typical race by its larger size and heavier bill.

Clangula clangula americana Brewster, Auk, 17, p. 207, 1900 (nesting and departure of young); Townsend, l.c., 27, p. 177, 1910 (courtship); Brewster, Condor, 13, p. 22, 1911 (courtship); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 167, 1918 (life hist. California); Taverner, Canad. Field Nat., 33, p. 57, figs., 1919 (comp. with *C. islandica*).

Clangula glaucion Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 225, 1903—Mexico (Mazatlán), Cuba.

Glaucionetta clangula americana Townsend, Bull. Essex Co. Orn. Cl., Salem, Mass., (1922), 1923, p. 6 (voice); Bent, Bull. U. S. Nat. Mus., 130, p. 1, 1925 (life hist.); Munro, Trans. Roy. Canad. Inst., 22, (2), p. 298, pl. 2, 1939 (life hist.; dist. chars.); Porsild, Canad. Field Nat., 57, p. 24, 1943—Mackenzie Delta (breeding); Wright, Condor, 46, p. 126, 1944 (feeding on salmon eggs).

Bucephala clangula Phillips, Nat. Hist. Ducks, 3, p. 299, pls. 66, 68 and 69, distr. map 91, 1925—part, America (monog.).

Bucephala clangula americana Phillips, Nat. Hist. Ducks, 3, p. 323, 1925 (dist. chars.); Peters, Bds. World, 1, p. 177, 1931 (range).

Glaucionetta clangula (not *Anas clangula* Linnaeus) Soper, Trans. Roy. Canad. Inst., 24, p. 38, 1942—Wood Buffalo Park; Sutton and Wilson, Condor, 48, p. 86, 1946—Attu Island (wintering).

Range.—Breeds in North America from the limits of heavy timber (Yukon Valley, southern Mackenzie Delta, southern Hudson Bay, and northeast Labrador), south to the northern United States. Winters from the Aleutian Islands, the Canadian border and the Gulf of St. Lawrence south to southern California (San Diego), the Gulf of Mexico and South Carolina; (?)Pribilof Islands (St. Paul Island).¹

Field Museum Collection.—62: Alaska (Tocatna Forks, 2); British Columbia (Victoria, 2; Okanagan, 3); Oregon (Crook County, 1); California (San Rafael, 1; Colusa, 3); Colorado (Larimer County, 1); North Dakota (Nelson County, 3); Iowa (Linn County, 1); Wisconsin (Beaver Dam, 2); Illinois (Waukegan, 1; Sparland, 1); Indiana (Miller, 1); Labrador (Kegashka, 1; Jack Lane's Bay, 5); Nova Scotia (Dartmouth, 1; Cole Harbor, 1); Maine (Lincoln, 1; Magalloway River, 1; Bucksport, 2); Massachusetts (Great Island, 2; Chatham Port, 5; East Marshfield, 1); Connecticut (North Haven, 3; East Haven, 1; Branford, 2; Guilford, 1; Stratford, 1; Woodbridge, 1); New York (Shelter Island, 1; Queens County, 3); North Carolina (Pea Island, Dare County, 6); Florida (Mary Esther, 1).

Conover Collection.—39: Yukon Territory (Marsh Lake, 10); British Columbia (Comox, Vancouver Island, 5); Alberta (Tofield, 4;

¹ A female, taken on St. Paul Island, has been referred, on what would seem to be rather questionable characters, to the typical race inhabiting Europe and Asia (cf. Hanna, Auk, 33, 1916, p. 400).

Leduc, 2); Texas (Corpus Christi, 1); South Dakota (Waubay, 1); Illinois (Waukegan, 3; Henry, 2); Michigan (Augusta, 3); Nova Scotia (Wolfville, 3); Maine (Lincoln, 1); Massachusetts (Plymouth, 1); North Carolina (Waterlily, Currituck Sound, 1; Hatteras, 2).

****Glaucionetta islandica* (Gmelin). BARROW'S GOLDEN-EYE.**

Anas islandica Gmelin, Syst. Nat., 1, (2), p. 541, 1789—based on "Hravn Oend" O. F. Müller, Zool. Dan. Prodr., p. 16, No. 131; Iceland.

Clangula barrovii Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 456, pl. 70, pub. Feb., 1832—Rocky Mountains (type probably in University Museum, Cambridge, England).

Clangula islandica Salvadori, Cat. Bds. Brit. Mus., 27, p. 383, 1895—North America, Canada (Godbout), west side of Rocky Mountains (Alkali Lake), Vancouver Island (Orcas Island), Oregon (Upper Klamath Lake); Winge, Medd. Grøn., 21, p. 90, 1898—Greenland; Munro, Condor, 20, p. 4, 1918—Okanagan Valley, British Columbia (nesting habits); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 173, 1918 (life hist. California); Taverner, Canad. Field Nat., 33, p. 57, figs., 1919 (dist. chars. from *G. c. americana*); Brooks, Auk, 37, p. 356, pls. 15, 16 (fig.), 1920 (dist. char. of females and immatures from *G. c. americana*).

Glaucionetta islandica Brooks, Auk, 20, p. 279, pl. 10, 1903 (pullus); Bent, Bull. U. S. Nat. Mus., 130, p. 14, 1925 (life hist.); Sawyer, Wilson Bull., 40, p. 1, pls., 1928 (courtship); Linsdale, Condor, 35, p. 38, 1933 (dist. char. pullus); Skinner, Wilson Bull., 49, p. 3, 1937 (status in Yellowstone Park); Hasbrouck, Auk, 61, p. 544, 1944 (status in eastern United States); Griscom, l.c., 62, p. 401, 1945 (Massachusetts records).

Bucephala islandica Phillips, Nat. Hist. Ducks, 3, p. 324, pls. 66, 68 and 69, distr. map 92, 1925 (monog.); Peters, Bds. World, 1, p. 177, 1931 (range).

Glaucionetta Islandica Munro, Trans. Roy. Canad. Inst., 22, (2), p. 263, pls. 2-6, 1939 (life hist.; dist. chars.).

Range.—Breeds in the mountains of western North America (including the islands off the coast south to the Canadian boundary) from the Alaska Peninsula south to northern Colorado (Boulder County); in Labrador and in southwestern Greenland (to 70° N.). Winters on the Pacific coast from southern Alaska (Portage Bay) to San Francisco Bay and on the Atlantic coast from the Gulf of St. Lawrence regularly to Maine (Washington County) and occasionally to Long Island; rarely on the open waters of the interior. Resident in Greenland and Iceland.

Field Museum Collection.—17: Alaska (Tocatna, 1; near Ketchikan, 1); British Columbia (Bird Island, 1; Nahmint Bay, 1; Okanagan, 4); Montana (Columbia Falls, 1); Quebec (Bonaventure Island, 2); New Brunswick (Oak Bay, 1); Maine (Bucksport, 1;

Lincoln, 1; unspecified, 1; Bar Harbor, 1); North Carolina (unspecified, 1).

Conover Collection.—23: Yukon Territory (Marsh Lake, 6; headwaters of Rose River, 3); British Columbia (Comox, Vancouver Island, 4; Stuie, Bella Coola area, 4; Okanagan, 3; Hopkins Landing, 3).

Genus BUCEPHALA Baird¹

Bucephala Baird, Rep. Expl. Surv. R. R. Pac., p. 795, 1858—type, by orig. desig., *Anas albeola* Linnaeus.

Charitonetta Stejneger, Bull. U. S. Nat. Mus., 29, p. 163, 1885—type, by orig. desig., *Anas albeola* Linnaeus.

**Bucephala albeola* (Linnaeus).² BUFFLEHEAD DUCK.

Anas Albeola Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—based on the "Little Black and White Duck" Edwards, Nat. Hist. Bds., 2, p. 100, pl. 100, 1747; "America"=Newfoundland (Edwards).

Anas bucephala Linnaeus, Syst. Nat., 12th ed., 1, p. 200 (male), 1766—based on "Buffel's Head Duck" Catesby, Nat. Hist. Carolina, 1, p. 95, pl. 95 (male), 1754; Carolina.

Anas rustica Linnaeus, Syst. Nat., 12th ed., 1, p. 201 (female), 1766—based on "Little Brown Duck" Catesby, Nat. Hist. Carolina, 1, p. 98, pl. 98 (female), 1754; Carolina.

Charitonetta albeola Turner, Contr. Nat. Hist. Alaska, 2, p. 134, 1886—Unalaska (wintering); Nelson, Nat. Hist. Coll. Alaska, 3, p. 72, 1887—interior Alaska; Townsend, Auk, 33, p. 16, 1916 (courtship); Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, (3), p. 314, 1927—Puerto Rico and Cuba (Havana); Soper, Trans. Roy. Canad. Inst., 24, p. 38, 1942—Wood Buffalo Park.

Clangula albeola Salvadori, Cat. Bds. Brit. Mus., 27, p. 385, 1895—Canada (Semiahmoo Bay, Vancouver Island; Fort Reliance, Upper Yukon; Little Musquash Harbour, New Brunswick, etc.); Winge, Medd. Grøn., 21, p. 91, 1898—Greenland (Godhavn; Frederikshaab); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 226, 1903—Mexico (Chihuahua, Tamaulipas, and Guanajuato) and Cuba; Brooks, Auk, 20, p. 279, pl. 10, 1903 (desc. nestling); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 177, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 130, p. 24, 1925 (life hist.); Pearse, Condor, 30, p. 251, 1928 (nuptial display); Linsdale, l.c., 35, p. 38, 1933 (dist. char. nestling).

Bucephala albeola Phillips, Nat. Hist. Ducks, 3, p. 335, pls. 67–69, distr. map 93, 1925 (monog.); Peters, Bds. World, 1, p. 177, 1931 (range); van Rossem,

¹*Bucephala* Baird under the International Rules is not preoccupied by the earlier *Bucephala* Baer, 1827.

²*Bucephala albeola*, besides other characters, has a very different trachea than the two species of the genus *Glaucionetta* Stejneger (vide Miller, Auk, 42, p. 49 [footnote], 1925).

Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 50, 1945—Sonora, Mexico (rare).

Glaucionetta albeola Brooks, Auk, 62, p. 518, 1945 (disc. generic chars.; diving habits).

Range.—Breeds from central Alaska east to the southwest shore of Hudson Bay and south through central British Columbia to northern Montana (casually to northern California, Wyoming, and Iowa) and the Canadian border east to south central Ontario. Winters mainly in the United States from southern Lake Michigan east to Maine and south to northern Florida and the Gulf of Mexico; less commonly to central Mexico and Lower California. On the Pacific coast north in winter to the Commander and Aleutian Islands and the Alaska Peninsula. Accidental in Greenland (Godhavn; Frederikshaab), Puerto Rico and Cuba.

Field Museum Collection.—38: Alaska (Tocatna, 2); Yukon Territory (Marsh Lake, 1); British Columbia (Okanagan, 2; Hope, 2; Carpenters Mountain, 1); Washington (Clallam Bay, 2; Port Townsend, 2); Oregon (Salem, 1); California (Coronado Beach, 1; Pacific Beach, 4); Wisconsin (Beaver Dam, 1); Illinois (Lacon, 1); Massachusetts (East Marshfield, 1); Connecticut (Black Hall, 3; West Haven, 1; Guilford, 1; New Haven County, 1); Virginia (Broadwater Bay, 2); North Carolina, Dare County (Pea Island, 8; Bodie Island, 1).

Conover Collection.—32: Yukon Territory (Marsh Lake, 1; Big Salmon Lake, 2); British Columbia (Comox, Vancouver Island, 6); Alberta (Leduc, 8; Fawcett, 2; Tofield, 1); Oregon (Tillamook Bay, 2); Utah (Brigham, 1); Nebraska (Wood Lake, 3); Illinois (Henry, 3); Massachusetts (Newbury, 1); North Carolina (Poplar Branch, Currituck County, 2).

Genus CLANGULA Leach

Clangula Leach, in Ross, Voy. Disc., App., p. xlvi, 1819—type, by monotypy, *Anas glacialis* Linnaeus=*Anas hyemalis* Linnaeus.

Harelda (Leach, MS.) Stephens in Shaw's Gen. Zool., 12, (2), p. 174, 1824—type, by monotypy, *Anas glacialis* Linnaeus=*Anas hyemalis* Linnaeus.

Pagonetta Kaup, Skizz. Entw.-Gesch. Nat. Syst. Europ. Thierw., pp. 66, 196, 1829—type, by monotypy, *Anas glacialis* Linnaeus=*Anas hyemalis* Linnaeus.

Crymonessa Macgillivray, Man. Brit. Orn., 2, p. 185, 1842—type, by monotypy, *Anas glacialis* Linnaeus=*Anas hyemalis* Linnaeus.

Melonetta Sundevall, Meth. Nat. Av. Disp. Tent., p. 149, 1872—substitute name for *Harelda* Stephens.

**Clangula hyemalis* (Linnaeus). OLD SQUAW DUCK.

Anas hyemalis Linnaeus, Syst. Nat., 10th ed., 1, p. 126, 1758—based principally on Fauna Svec., No. 95; Arctic Europe and America; restr. type locality, northern Sweden (ex Fauna Svec.).

Anas glacialis Linnaeus, Syst. Nat., 12th ed., 1, p. 203, 1766—based on "The Long-tailed Duck" Edwards, Glean. Nat. Hist., 2, p. 146, pl. 280; "insula terrae novae"=Newfoundland.

Anas miclonia Boddaert's Tabl. Pl. Enl., p. 58, 1783—based on "Canard de Miclon" Daubenton, Pl. Enl., pl. 1008 (=male).

Platypus faberi Brehm, Lehrb. Naturg. Eur. Vög., 2, p. 1004, 1824—Greenland and Iceland (type, from Iceland, in Tring Collection [cf. Hartert, Nov. Zool., 25, p. 48, 1918], now in the American Museum of Natural History, New York).

Harelda glacialis Salvadori, Cat. Bds. Brit. Mus., 27, p. 389, 1895—numerous localities (full bibliog.).

Pagonetta glacialis Winge, Medd. Grøn., 21, p. 87, 1898—Greenland; Manniche, l.c., 45, No. 1, p. 97, 1910—northeastern Greenland (breeding).

Clangula hyemalis Turner, Contr. Nat. Hist. Alaska, 2, p. 134, 1886—St. Michaels (nesting), Aleutian Islands (wintering); Nelson, Nat. Hist. Coll. Alaska, 3, p. 72, 1887—Alaska coast of Bering Sea (nesting); MacKay, Auk, 9, p. 330, 1892 (habits in New England); Phillips, Nat. Hist. Ducks, 3, p. 347, pl. 67, distr. map 94, 1925 (monog.); Bent, Bull. U. S. Nat. Mus., 130, p. 32, 1925 (life hist.); Blanchet, Canad. Field Nat., 39, p. 52, 1925—barrens northeast of Great Slave Lake, 64° N.—106° 12' W. (common nester); Conover, Auk, 43, p. 166, 1926—Hooper Bay, Alaska (migration, plumage, nesting); Nicholson, Ibis, 1930, p. 396—Greenland (field notes); Peters, Bds. World, 1, p. 178, 1931 (range); Sutton, Auk, 49, p. 42, 1932 (molt, plumage); idem, Mem. Carnegie Mus., 12, (2), sec. 2, p. 58, 1932—Southampton Island (nesting); Swarth, Pac. Coast Avifauna, 22, p. 21, 1934—Nunivak Island, Alaska (breeding); Salomonsen, Journ. Orn., 89, p. 282, pls. 3, 4, 1941 (molt, plumages); Porsild, Canad. Field Nat., 57, p. 24, 1943—Mackenzie Delta (breeds east and north of); Soper, Auk, 63, p. 21, 1946—Baffin Island (nesting); Sutton and Wilson, Condor, 48, p. 87, 1946—Attu Island (wintering); Murie, l.c., p. 253, 1946—McKinley National Park, Alaska (nesting).

Harelda hyemalis Grinnell, Bryant, and Storer, Game Bds. Calif., p. 181, 1918 (life hist. California).

Range.—Breeds on the coasts and islands of Arctic America from the Aleutian Islands north to Point Barrow and east to northern Hudson Bay and northern Labrador; coasts of Greenland. Also breeds in the interior of northern North America in favorable localities south to about 60° N. Lat. (McKinley National Park, Alaska, and barrens northeast of Great Slave Lake). Winters on the Pacific coast from the Aleutian Islands south to northern California, on the Atlantic from the Gulf of St. Lawrence to Chesapeake Bay and more

rarely to South Carolina; the Great Lakes, and southern Greenland. Also found in northern Europe and Asia.

Field Museum Collection.—81: Alaska (Barrow, 5; Point Hope, 1; St. Lawrence Island, 1; Nome, 3; Bethel, 2; St. Michaels, 4); British Columbia (Saturna Island, 4); Baffin Land (Cumberland Sound, 1); Greenland (Sukkertoppen, west coast, 1; Muskox Fjord, Hudson's Land, east coast, 1); Labrador (Port Manvers, Tikkerradauk, 4); Quebec (Magdalen Islands, 3); Nova Scotia (Halifax, 2); Washington (Port Townsend, 2); North Dakota (Nelson County, 1); Colorado (Larimer County, 1); Illinois (Highland Park, 1; Ravinia, 1; Chicago, 5); Indiana (Miller, Lake County, 2; Kouts, Porter County, 1); Maine (Pine Point, Cumberland County, 3); Massachusetts (Cohasset, 1; Boston Harbor, 1; Buzzard's Bay, 1; Duxbury, 1); Connecticut (Stamford, 4; Guilford, 2; West Haven, 4; New Haven, 7; Stony Creek, New Haven County, 8); New York (Miller Place, Suffolk County, 2); North Carolina (Pea Island, Dare County, 1).

Conover Collection.—43: Alaska (Barrow, 2; Wales, 1; Wainwright, 4; Hooper Bay, Bering Sea, 13; Kashunuk River, Bering Sea, 1); Yukon Territory (Marsh Lake, 1); British Columbia (Comox, Vancouver Island, 8); Manitoba (Churchill, 1); Illinois (Waukegan, 1; Henry, 1); Nova Scotia (Wolfville, 2); Massachusetts (Lanesville, 1; Plymouth, 1); Connecticut (Stratford, 5; Bridgeport, 1).

Genus *HISTRIONICUS* Lesson

Histrionicus Lesson, Man. d'Orn., 2, p. 415, 1828—type, by orig. desig., *Anas histrionica* Linnaeus.

Cosmonessa Kaup, Skizz. Entw.-Gesch. Nat. Syst. Europ. Thierw., p. 46, 1829—type, by virtual monotypy, *Anas histrionica* Linnaeus.

Cosmonetta Kaup, Skizz. Entw.-Gesch. Nat. Syst. Europ. Thierw., p. 196, 1829—emendation.

Phlyaconetta Brandt, Mém. Acad. St. Petersb., (6), Sc. Nat., 6, (6), p. 9, 1849—type, by orig. desig., *Anas histrionica* Linnaeus.

Phlyaconetta Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 798, 1858—emendation.

**Histrionicus histrionicus histrionicus* (Linnaeus). HARLEQUIN DUCK.

Anas histrionica Linnaeus, Syst. Nat., 10th ed., 1, p. 127, 1758—based on "The Dusky and Spotted Duck" Edwards, Nat. Hist. Bds., 2, p. 99, pl. 99 (=male); "America"=Newfoundland (ex Edwards).

Anas minuta Linnaeus, Syst. Nat., 10th ed., 1, p. 127, 1758—based on "Little Brown and White Duck" Edwards, Nat. Hist. Bds., 3, p. 157, pl. 157 (=female); "Canada"=Hudson Bay (ex Edwards).

Cosmonetta histrionica Salvadori, Cat. Bds. Brit. Mus., 27, p. 395, 1895—part, Greenland (Liskenasset), Labrador, Canada (Bay of Fundy, Hudson Bay, Godbout), Maine (Hancock County); Winge, Medd. Grønln., 21, p. 84, 1898—Greenland.

Histrionicus histrionicus Phillips, Nat. Hist. Ducks, 3, p. 367, pl. 70, distr. map 95, 1925—part (monog.).

Histrionicus histrionicus histrionicus Phillips, Nat. Hist. Ducks, 3, p. 382, 1925 (dist. chars.); Bent, Bull. U. S. Nat. Mus., 130, p. 50, 1925 (life hist.); Nicholson, Ibis, 1930, p. 397—Greenland (field notes); Peters, Bds. World, 1, p. 178, 1931 (range); Soper, Auk, 63, p. 21, 1946—southeastern Baffin Island (nesting).

Range.—Breeds in southern Greenland (north to Scoresby Sound on the east and Upernavik on the west coast), southeastern Baffin Island, and probably sparingly in northern Quebec (Lake Manuan), the Labrador Peninsula and perhaps Newfoundland. Winters in southern Greenland and on the Atlantic coast of North America from Newfoundland south to Long Island and casually on the Great Lakes. Resident in Iceland and casual in western Europe.

Field Museum Collection.—20: Greenland (Godthaab, 1); Labrador (Nachvak, 1; Nain, 2; Okkak, 1; Bowdoin Harbor, 4); Newfoundland (Codroy, 1); Nova Scotia (Digby County, 1); New Brunswick (Wolves Island, 2; Grand Manon Island, 1); Maine (Isle au Haut, Knox County, 3; Bangor, 1; unspecified, 2).

Conover Collection.—1: Greenland (Godthaab, 1).

****Histrionicus histrionicus pacificus* W. S. Brooks.¹ PACIFIC HARLEQUIN DUCK.**

Histrionicus histrionicus pacificus W. S. Brooks, Bull. Mus. Comp. Zool., 59, p. 393, 1915—Cape Shipunski, Kamchatka (type in Museum of Comparative Zoology, Cambridge, Mass.); Preble and McAtee, N. Amer. Fauna, 46, p. 51, 1923—Pribilof Islands; Phillips, Nat. Hist. Ducks, 3, p. 383, 1925 (dist. chars.); Bent, Bull. U. S. Nat. Mus., 130, p. 58, 1925 (life hist.); Jewett, Condor, 27, p. 241, 1925—Wallowa River, Oregon (nesting); idem, l.c., 32, p. 128, 1930—Wallowa Mountains, Oregon (nesting); idem, l.c., 33, p. 255, 1931—Mount Hood, Oregon (nesting); Peters, Bds. World, 1, p. 178, 1931 (range); Sutton and Wilson, Condor, 48, p. 87, 1946—Attu Island (wintering).

¹*Histrionicus histrionicus pacificus* W. S. Brooks differs from the typical race by having a much heavier bill. The chestnut stripes on the sides of the crown of the male do not appear to extend quite as far forward, but from the series examined there does not seem to be any difference in coloration nor is the Pacific bird larger, as mentioned by the describer.

Middendorff (Reise Sibirien, 2, (2), pl. 22, fig. 3, 1853) figures a chick of the present form s.n. "*A. histrionis*" L[innaeus], but as he quotes Linnaeus as author and uses *A. histrionica* L. in the text (p. 237), this spelling can only be regarded as a misprint.

Histrionicus histrionicus (not *Anas histrionica* Linnaeus) Turner, Contr. Nat. Hist. Alaska, 2, p. 134, 1886—St. Michaels (rare), Aleutian Islands (abundant); Nelson, Nat. Hist. Coll. Alaska, 3, p. 74, 1887—Unalaska; Clark, Proc. U. S. Nat. Mus., 38, p. 46, 1911—Aleutian Islands (Attu; Agattu; Atka; Unalaska); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 186, 1918 (life hist. California); Phillips, Nat. Hist. Ducks, 3, p. 367, pl. 70, distr. map 95, 1925—part (monog.); Conover, Auk, 43, p. 167, 1926—Point Dall and False Pass, Alaska.

Cosmonetta histrionica Salvadori, Cat. Bds. Brit. Mus., 27, p. 395, 1895—part, Alaska (Kegiktoiwik, St. Michaels), Columbia River, Fort MacPherson, Vancouver Island, St. Juan Island, eastern Asia.

Range.—Breeds in the mountain streams of both the islands and the mainland from the Alaska Peninsula east probably to the Mackenzie Valley and south to central California (west slope of the Sierra Nevada Mountains) and Colorado (Blue River near Breckenridge). Also found in summer on the Aleutian and Pribilof Islands, where it may breed. Winters along the Pacific coast of North America from the Pribilof and Aleutian Islands south to central California (Monterey Bay), and casually in the interior. Found also in eastern Siberia.

Field Museum Collection.—21: Alaska (Nome, 1; Bethel, 2; Kuskokwim River, 1; Tocatna, 1; Saginaw Bay, Kuiu Island, 1; Nulato, 2; Morzhovoi Bay, 3; Seward, 1; Kodiak Island, 1; unspecified, 1); British Columbia, Vancouver Island (James Island, 1; Sidney Island, 1; Comox, 1; Victoria, 3); Washington (Kitsap, Eagle Harbor, 1).

Conover Collection.—18: Alaska (Kootznahoo Inlet, 1); Yukon Territory (Big Salmon Lake, 6); British Columbia, Vancouver Island (Sidney Island, 1; Comox, 8); Washington (Clallam Bay, 1; Fox Island, Pierce County, 1).

Genus SOMATERIA Leach

Somateria Leach, in Ross, Voy. Disc., 2, p. 154, App., p. xlviij, 1819—type, by monotypy, *Anas spectabilis* Linnaeus.

Ganza Merrem, in Ersch and Gruber, Allg. Encycl. Wissens. Künste, 3, p. 471, 1819—based on "Die Eider" (Ganza, Plin. hist. nat., lib. 10, cap. 23); type, by subs. desig., *Somateria mollissima* (cf. Salvadori, Cat. Bds. Brit. Mus., 27, p. 423, 1895).

Platypus Brehm, Lehrb. Nat. Eur. Vög., 2, p. 805, 1824—new name for *Somateria* Leach.

Erionetta Coues, Key N. Amer. Bds., 2nd ed., p. 709, 1884—type, by monotypy, *Anas spectabilis* Linnaeus.

***Somateria mollissima mollissima** (Linnaeus). COMMON EIDER.

Anas mollissima Linnaeus, Syst. Nat., 10th ed., 1, p. 124, 1758—based principally on Fauna Svec., No. 94; "Europa boreali pelagica," restricted type locality, Island of Gothland, Sweden (ex Fauna Svec.).

Somateria Islandica C. L. Brehm, Handb. Naturg. Vög. Deutschl., p. 895, 1831—Iceland (type in Tring Collection [cf. Hartert, Nov. Zool., 25, p. 49, 1918], now in the American Museum of Natural History, New York).

Somateria mollissima Manniche, Medd. Grøn., 45, No. 1, p. 101, 1910—northeastern Greenland (breeding); Phillips, Nat. Hist. Ducks, p. 80, pl. 81, distr. map 101, 1926 (monog.).

Somateria mollissima mollissima Phillips, Nat. Hist. Ducks, 4, p. 111, 1926—part, eastern Greenland (dist. char.); Peters, Bds. World, 1, p. 179, 1931—eastern Greenland.

Somateria mollissima islandica Schiøler, Danm. Fugle, 2, pp. 44, 208, 1926 (char.; range); Nicholson, Ibis, 1930, p. 398—Greenland; Bird and Bird, l.c., 1941, p. 137—northeastern Greenland (crit.; breeding).

Range.—Iceland, Scotland, the coast of northwestern Europe, southern and eastern Greenland.¹

Field Museum Collection.—2: Greenland (Andre's Land, east coast, 2).

***Somateria mollissima borealis** (C. L. Brehm).² NORTHERN EIDER.

Platypus borealis C. L. Brehm, Lehrb. Naturg. Eur. Vög., 2, p. 813, 1824—coast of Baffin Bay and Davis Strait and west coast of Greenland, etc. (no type extant).

Platypus leisleri C. L. Brehm, Ornith., 1, p. 28, 1824—Greenland (type in Tring Collection [cf. Hartert, Nov. Zool., 25, p. 49, 1918], now in the American Museum of Natural History, New York).

(*Somateria borealis*) Salvadori, Cat. Bds. Brit. Mus., 27, p. 428, 1895—Cape Fraser, Dobbin Bay, Franklin Pierce Bay, Ungava, Godbout, Greenland.

Somateria mollissima borealis Chapman, Bull. Amer. Mus. N. H., 12, p. 231, 1899 (plumages; dist. chars.); Visher, Auk, 29, p. 535, 1912—Lake County, South Dakota; Bent, Bull. U. S. Nat. Mus., 130, p. 79, 1925 (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 111, pl. 82, 1926 (dist. char.); Peters, Bds. World, 1, p. 179, 1931 (range); Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, p. 66, 1932—Southampton Island (nesting); Gross, Auk, 54, p. 18, 1937 (weights of birds and eggs); Soper, l.c., 63, p. 22, 1946—Baffin Island (breeding on south coast).

¹ Birds from Iceland, southern and eastern Greenland (*S. m. islandica*) have been distinguished by Schiøler, Millais, and others on account of having on average shorter wings, but the divergency seems too insignificant to be expressed in nomenclature. Cf. Hartert, Vög. Pal. Fauna, pp. 1368, and Ergänz., p. 440.

² This is a rather unsatisfactory race, the one constant character seeming to be the deep yellow color of the bill in the male of *borealis* as against an olive green color in typical *mollissima*.

Somateria mollissima (not *Anas mollissima* Linnaeus) Phillips, Nat. Hist. Ducks, 4, p. 80, pl. 81, distr. map 101, 1926—part (monog.).

Range.—Breeds on the coasts and islands of North America from 100° W. long. north to Ellesmere Island, east to the west coast of Greenland (to 82° N. lat.) and south to Hamilton Inlet, Labrador (but not the shores of Hudson Bay). Winters wherever there is open water from Greenland south to Maine and occasionally Massachusetts. At the south edge of its breeding range intergrades with *S. m. dresseri*.

Field Museum Collection.—28: Greenland (Sukkertoppen, west coast, 5); Northwest Territories (Nachvak, District of Franklin, 1); Labrador (Indian Harbor, 2; Draw Bucket Tickel, 2; Mullen Bay, 1; island off Port Manvers, 1; Hopedale, 9); Quebec (Magdalen Islands, 2); New Brunswick (Orkney, 4); Maine (Eastport, 1).

Conover Collection.—7: Greenland (Nanortalik, 1); Labrador (Red Bay, Straits of Belle Isle, 6).

**Somateria mollissima dresseri* Sharpe. DRESSER'S EIDER.

Somateria Dresseri Sharpe, Ann. Mag. Nat. Hist., (4), 8, p. 51, fig. 2, 1871—North America (location of type not stated).

Somateria dresseri Salvadori, Cat. Bds. Brit. Mus., 27, p. 424, 1895—Bay of Fundy; Norton, Auk, 14, p. 303, 1897 (noteworthy plumages); DeVine, i.c., 26, p. 426, 1909—Chicago, Illinois (im. male).

Somateria mollissima dresseri Beetz, Auk, 33, p. 286, pl. 15, 1916—Gulf of St. Lawrence; Bent, Bull. U. S. Nat. Mus., 130, p. 94, 1925—part, except Hudson and James Bay (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 112, pl. 82, 1926—part, except Hudson and James Bay (dist. char.); Peters, Bds. World, 1, p. 179, 1931—part, except Hudson and James Bay.

Somateria mollissima (not *Anas mollissima* Linnaeus) Phillips, Nat. Hist. Ducks, 4, p. 80, pls. 80, 81, distr. map 101, 1926—part, except Hudson and James Bay (monog.); Gross, Wilson Bull., 56, p. 16, 1944—Maine coast (status).

Range.—Breeds along the Atlantic seacoast from Hamilton Inlet, Labrador, south to Penobscot Bay, Maine. Winters from Newfoundland south to Massachusetts (Nantucket). At the north edge of its range intergrades with *S. m. borealis*.

Field Museum Collection.—26: Labrador (Kegaska, 2; Indian Harbor, 1; Nain, 1); Quebec (Magdalen Islands, 1; St. Andre, 1); Nova Scotia (unspecified, 1); New Brunswick (Wolves Island, Bay of Fundy, 2; Grand Manan, 1); Maine (unspecified, 1); Massachusetts (Monomoy Island, 4; Boston, 1; Nantucket Island, 6; Woods Hole, 1); Rhode Island (Providence, 3).

Conover Collection.—12: Labrador (Battle Harbor, 8); Massachusetts (Monomoy, 3; Pigeon Cove, Essex County, 1).

****Somateria mollissima sedentaria* Snyder.¹ HUDSON BAY EIDER.**

Somateria mollissima sedentaria Snyder, Occ. Pap. Roy. Ont. Mus. Zool., 6, p. 3, May 5, 1941—Churchill, Manitoba (type in Royal Ontario Museum of Zoology, Toronto); Hawksley, Auk, 59, p. 436, 1942—Churchill, Manitoba (nesting).

Somateria mollissima dresseri (not *Somateria dresseri* Sharpe) Bent, Bull. U. S. Nat. Mus., 130, p. 94, 1925—part, Hudson and James Bay (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 112, pl. 82, 1926—part, Hudson and James Bay; Peters, Bds. World, 1, p. 179, 1931—part, Hudson and James Bay.

Somateria mollissima (not *Anas mollissima* Linnaeus) Phillips, Nat. Hist. Ducks, 4, p. 80, pls. 80, 81, distr. map 101, 1926—part, Hudson and James Bay (monog.).

Range.—Breeds on both coasts of Hudson and James Bay, north to Cape Fullerton on the west and Cape Dufferin on the east. Winters in the open waters of the same territory.

Conover Collection.—1: Manitoba (Churchill, 1).

****Somateria mollissima V-nigra* G. R. Gray. PACIFIC EIDER.**

Somateria V-nigra G. R. Gray, Proc. Zool. Soc. Lond., 23, "1855," p. 212, pl. 107, pub. Feb. 2, 1856—Kotzebue Sound (type in British Museum).

Somateria v-nigra Turner, Contr. Nat. Hist. Alaska, 2, p. 136, 1886—Norton Sound to Aliaska Peninsula and Aleutian Islands; Nelson, Nat. Hist. Coll. Alaska, 3, p. 78, pl. 5, fig. 2, 1887—Aleutian Islands to coast east of Point Barrow; Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 470 (summer molts); Clark, Proc. U. S. Nat. Mus., 38, p. 46, 1911—Aleutian Islands (Attu; Agattu); Bailey, Condor, 27, p. 200, 1925 (migr. Alaska); Bent, Bull. U. S. Nat. Mus., 130, p. 102, 1925 (life hist.); Conover, Auk, 43, p. 169, 1926—Hooper Bay, Alaska (migr.; nesting; weights); Porsild, Canad. Field Nat., 57, p. 24, 1943—Mackenzie Delta (breeds on islands and coast to eastward); Gabrielson, Auk, 61, p. 118, 1944—Semidi and Aleutian Islands (breeding).

Somateria v-nigrum Salvadori, Cat. Bds. Brit. Mus., 27, p. 430, 1895—Alaska, Arctic coast east of Fort Anderson.

Somateria mollissima v-nigrum Phillips, Nat. Hist. Ducks, 4, p. 112, pl. 82, 1926 (dist. char.).

¹ *Somateria mollissima sedentaria* Snyder: Like *dresseri* in having the frontal processes of the bill large and rounded terminally, but differs in having the lateral feathering on the sides of the culmen extending only as far as the posterior end of the nostril, in which respect it resembles the race *borealis*. Downy young and females are said to be paler than other races.

Additional material examined.—Manitoba: Churchill, 3.—Hudson Bay: Belcher Islands, 1.

Somateria mollissima (not *Anas mollissima* Linnaeus) Phillips, Nat. Hist. Ducks, 4, p. 80, distr. map 101, 1926—part (monog.); Sutton and Wilson, Condor, 48, p. 87, 1946—Attu Island (wintering).

Somateria mollissima v-nigra Peters, Bds. World, 1, p. 179, 1931 (range).

Range.—In North America breeds along the northwest coast from Kodiak Island and Cook Inlet west to the Aleutian Islands, north to Point Barrow and east to Victoria Island and Coronation Gulf. Winters mainly in the vicinity of the Aleutian Islands and the Alaska Peninsula. Also breeds on the Arctic coasts and islands of northeast Siberia.

Field Museum Collection.—15: Alaska (Barrow, 4; Nome, 5; St. Michaels, 2; St. George Island, 3; unspecified, 1).

Conover Collection.—27: Alaska (Point Barrow, 15; Wainwright, 2; Wales, 1; Hooper Bay, 8; Igiak Bay, 1).

**Somateria spectabilis* (Linnaeus). KING EIDER.

Anas spectabilis Linnaeus, Syst. Nat., 10th ed., 1, p. 123, 1758—based on Rudbeck's unpublished figure of a Swedish specimen¹ and "The Grey-headed Duck" Edwards, Nat. Hist. Bds., 3, p. 154, pl. 154 (Hudson Bay); Canada, Sweden.

Anas beringii Gmelin, Syst. Nat., 1, (2), p. 508, 1789—based on "Bering Duck" Pennant, Arct. Zool., 2, p. 548, and Latham, Gen. Syn. Bds., 3, (2), p. 465; Bering Island.

Platypus altensteinii Brehm, Lehrb. Naturg. Eur. Vög., 2, p. 999, 1824—Greenland (type in Tring Collection [cf. Hartert, Nov. Zool., 25, p. 49, 1918], now in the American Museum of Natural History, New York).

Somateria spectabilis Turner, Contr. Nat. Hist. Alaska, 2, p. 137, 1886—St. Michaels (rare breeder) and Aleutian Islands (wintering); Nelson, Nat. Hist. Coll. Alaska, 3, p. 79, 1887—Unalaska (wintering), St. Michaels (rare) and St. Lawrence Island (common); Salvadori, Cat. Bds. Brit. Mus., 27, p. 432, 1895—Greenland, Canada, Alaska; Winge, Medd. Grøn., 21, p. 108, 1898—Greenland; Chapman, Bull. Amer. Mus. N. H., 12, p. 236, 1899 (plumages); Manniche, Medd. Grøn., 45, No. 1, p. 103, 1910—Storm Kap, Greenland (breeding); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 192, 1918—San Francisco and Suisun Marsh, Solano County; Wilson, Auk, 38, p. 454, 1921—St. Clair River, Michigan; Praeger, l.c., 39, p. 104, 1922—Barry County, Michigan; Hill, Condor, 25, p. 103, 1923—Synuk, Alaska (spring migr.); Bent, Bull. U. S. Nat. Mus., 130, p. 107, 1925 (life hist.); Conover, Auk, 43, p. 171, 1926—Hooper Bay, Alaska (migr.; weights); idem, l.c., p. 171 (footnote), 1926—Marsh Lake, Yukon Territory; Phillips, Nat. Hist. Ducks, 4, p. 114, pls. 80, 81, 82, distr. map 102, 1926 (monog.); Peters, Bds. World, 1, p. 180, 1931 (range); Sutton, Mem. Carnegie Mus., 12, (2), sec. 2, pl. 12, fig. 2, pl. 22, fig. 16, 1932—Southampton Island (nesting); Gromme, Auk, 51, p. 367, 1934—Muskego Lake, Wisconsin; Wheeler, l.c., 54, p. 203, 1937—Henry, Illinois;

¹ Cf. Fauna Svec., p. 40, No. 112, 1746.

Moffitt, Condor, 42, p. 305, 1940—Tomales Bay, California; Bird and Bird, Ibis, 1941, p. 139—Germania Land, Greenland (breeding); Bray, Auk, 60, p. 513, 1943—Melville Peninsula (breeding); Soper, l.c., 63, p. 23, 1946—Baffin Island (breeding on west coast).

Range.—Breeds in North America on the Arctic coasts and islands from St. Lawrence Island north to lat. 76° and east to northern Labrador; both coasts of Greenland north to 82° 30". Winters from the limits of open water south to the Aleutian, Kodiak, and Shumagin Islands on the west and the Gulf of St. Lawrence and Newfoundland on the east; rarely to Massachusetts, Virginia and North Carolina. Frequently on the Great Lakes. One record for California. Found also on the Arctic coasts of Europe and Asia.

Field Museum Collection.—39: Alaska (Barrow, 10; Nome, 10; St. George Island, 1; Unalaska, 1); Labrador (unspecified, 1; Nain, 1); Quebec (Magdalen Islands, 2); Connecticut (Stratford, 4; Milford, 1; West Haven, 2); Virginia (Princess Anne County, 2); North Carolina (Currituck Sound, 1; Pea Island, Dare County, 1); Illinois (Henry, 1); California (unspecified, 1).

Conover Collection.—46: Alaska (Point Barrow, 17; Wainwright, 7; Wales, 9; Hooper Bay, 4); Yukon Territory (Marsh Lake, 1); Greenland (Godthaab, 2); Labrador (Red Bay, Straits of Belle Isle, 2); Maine (Casco Bay, 2); Massachusetts (Barnstable County, 2).

Genus ARCTONETTA Gray

Arctonetta G. R. Gray, Proc. Zool. Soc. Lond., 23, "1855," p. 212, pub. Feb. 5, 1856—type, by monotypy, *Fuligula fischeri* Brandt.

**Arctonetta fischeri* (Brandt). SPECTACLED EIDER.

Fuligula (Lampronetta) fischeri Brandt, Fuligulam Fischeri Novam Avium Speciem, p. 18, pl. 1, 1847—St. Michael, Alaska (type in Leningrad Museum).

Arctonetta fischeri Turner, Contr. Nat. Hist. Alaska, 2, p. 136, 1886—St. Michaels, Bristol Bay, (?)Aleutian Islands (breeding); Nelson, Nat. Hist. Coll. Alaska, 2, p. 76, pl. 5, fig. 1, 1887—Point Barrow (rare breeder) and Norton Sound south to the Kuskokwim (common breeder; nesting habits); Salvadori, Cat. Bds. Brit. Mus., 27, p. 422, 1895—"Northern Sound," St. Michaels, Andreffsky and Stewart's Islands, Alaska; Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 471 (plumages); Buturlin, Condor, 12, p. 46, 1910 (true breeding ground northeast coast of Siberia between 148° and 172° E. long.); Bailey, l.c., 27, p. 199, 1925 (migr.); Bent, Bull. U. S. Nat. Mus., 130, p. 74, 1925 (life hist.); Conover, Auk, 43, p. 168, 1926—Point Dall and Igiak Bay (nesting; migr.; weights); Phillips, Nat. Hist. Ducks, 4, p. 73, pls. 79, 80, 82, distr. map 100, 1926 (monog.);

Peters, Bds. World, 1, p. 180, 1931 (range); Bailey, Brower, and Bishop, Progr. Act. Chicago Acad. Sci., 4, p. 22, 1933—Barrow, Alaska (nests sparingly); Moffitt, Condor, 42, p. 309, 1940—San Benito County, California.

Range.—Breeds on the New Siberian Islands and on the Arctic coast of Siberia from the Yana River to Bering Strait and on the Alaskan coast from Point Barrow east to Barter Island and south to the Kuskokwim River. Very little has been recorded as to the winter range, but it is known to be found on the Pribilof Islands, the Near Islands, and the Aleutian chain. It may also winter in the northern part of Bering Sea.

Field Museum Collection.—20: Alaska (Barrow, 9; Chipp River, near Barrow, 1; Bering Strait, 5; Pikkimikhtalik River, 1; St. Michaels, 1; Yukon Delta, 1; unspecified, 2).

Conover Collection.—37: Alaska (Point Barrow, 12; Chipp River, near Barrow, 2; Icy Cape, 1; Wainwright, 6; Wales, 3; Metlatavik, 1; Hooper Bay, 5; Igiak Bay, 7).

Genus *OIDEMIA* Fleming

Oidemia Fleming, Phil. Zool., 2, p. 260, 1822—type, by subs. desig. (Gray, List Gen. Bds., p. 74, 1840), *Anas nigra* Linnaeus.

OEdemia Strickland, Ann. Mag. Nat. Hist., 7, p. 39, 1841—emendation.

**Oidemia nigra americana* Swainson. AMERICAN SCOTER.

Oidemia Americana Swainson, in Swainson and Richardson, Fauna Bor.-Amer., 2, "1831," p. 450, pub. Feb., 1832—Hudson Bay (type in British Museum).

Anas wilsoni Giebel, Thes. Orn., 1, p. 365, 1872—substitute name for *Oidemia Americana* Swainson.

Oidemia americana Turner, Contr. Nat. Hist. Alaska, 2, p. 137, 1886—St. Michaels, Bristol Bay and Aleutian Islands; Nelson, Nat. Hist. Coll. Alaska, 3, p. 80, 1887—Alaskan coast of Bering Sea (common nester); Dwight, Auk, 31, p. 298, pls. 24–30, 1914 (plumage; molts); De W. Miller, l.c., 33, p. 278 (in text), 1916 (gen. chars.); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 194, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 130, p. 119, 1925 (life hist.); Conover, Auk, 43, p. 172, 1926—Hooper Bay, Alaska (nesting; weights); De W. Miller, Amer. Mus. Nov., 243, p. 2, 1926 (structural comparison); Gabrielson, Auk, 61, p. 119, 1944—Bristol Bay and Mount McKinley National Park, Alaska (breeding).

OEdemia americana Salvadori, Cat. Bds. Brit. Mus., 27, p. 404, 1895—Alaska (St. Michaels, Aleutian Islands), Repulse Bay, Nova Scotia, New York (Lyons Falls), Connecticut (Branford), Illinois (Chicago).

Oidemia nigra americana Phillips, Nat. Hist. Ducks, 4, p. 24, 1926 (dist. chars.); Peters, Bds. World, 1, p. 181, 1931 (range).

Oidemia nigra (not *Anas nigra* Linnaeus) Phillips, Nat. Hist. Ducks, 4, p. 3, pls. 72, 75 and 77, distr. map 96, 1926—part, North America (monog.); Sutton and Wilson, Condor, 48, p. 87, 1946—Attu Island (wintering).

Range.—In North America only known to breed along the west coast of Alaska from Cape Lisburne south to the Alaska Peninsula and on the Aleutian Islands; probably also in Labrador and possibly Newfoundland. Winters on the Pacific coast from the Aleutian Islands to southern California (Santa Barbara Islands), and on the Atlantic coast from Newfoundland to New Jersey; casually on the Great Lakes and on migration in the interior. Found also in north-eastern Asia south to Japan and China.

Field Museum Collection.—19: Alaska (Bethel, 2); British Columbia (Comox, Vancouver Island, 1); Washington (Port Townsend, 1); California (Hyperion, 1); Maine (Duck Island, York County, 1); Massachusetts (Monomoy Island, 7; Cohasset, 1; Brant Rock, Plymouth County, 1); Connecticut (Stony Creek, 1; Branford, 1; West Haven, 2).

Conover Collection.—23: Alaska (Hooper Bay, 7; Igiak Bay, 6); British Columbia (Comox, Vancouver Island, 4); Nebraska (Cherry County, 1); Nova Scotia (Halifax, 1); Massachusetts (Lanesville, 1; Pigeon Cove, 3).

Genus MELANITTA Boie

Melanitta Boie, Isis, col. 564, 1822—type, by subs. desig. (Eyton, Monog. Anat., p. 52, 1838), *Anas fusca* Linnaeus.

Macroramphus Lesson, Man. d'Orn., 2, p. 414, 1828—type, by orig. desig., *Anas perspicillata* Linnaeus.

Pelionetta Kaup, Skizz. Entw.-Gesch. Nat. Syst. Europ. Thierw., pp. 107, 196, 1829—type, by monotypy, *Anas perspicillata* Linnaeus.

Melanonetta Sundevall, Meth. Nat. Av. Disp. Tent., p. 149, 1872—emendation of *Melanitta* Boie.

Phoenonetta Stone, Auk, 24, p. 198, 1907—type, by orig. desig., *Anas fusca* Linnaeus.

**Melanitta fusca* (Linnaeus). VELVET SCOTER.

Anas fusca Linnaeus, Syst. Nat., 10th ed., 1, p. 123, 1758—based primarily on Fauna Svec., No. 106; "Oceano Europaeo," restricted type locality, coast of Sweden.

Oidemia fusca Reinhardt, Vidensk. Medd. Naturhist. Foren. Kjøbenhavn., 1879—80, p. 7, 1879—Godthaab, southern Greenland; Winge, Medd. Grønland, 21, p. 92, 1898—Greenland (Godthaab, May, 1878); Phillips, Nat. Hist. Ducks, 4, p. 26, pl. 75, distr. map 97, 1926—part, Europe (monog.).

Melanitta fusca Bent, Bull. U. S. Nat. Mus., 130, p. 128, 1925 (life hist.).
Oidemia fusca fusca Phillips, Nat. Hist. Ducks, 4, p. 42, 1926 (dist. chars.).
Melanitta fusca fusca Hørring and Salomonsen, Medd. Grønland, 131, (5), p. 12,
 1941—Narssaq, near Godthaab, Greenland.

Range.—Extralimital. Accidental in Greenland.

Field Museum Collection.—1: Greenland (unspecified, 1).

**Melanitta deglandi* (Bonaparte).¹ WHITE-WINGED SCOTER.

Oedemia deglandi Bonaparte, Rev. Crit. Orn. Eur., p. 108, 1850—North America (location of type unrecorded).

Fuligula bimaculata Herbert,² Field Sports, 4th ed., 2, App. F, with fig. (imm.), 1848—Georgian Bay, Lake Huron (no type extant).

Oidemia velvetina Cassin, Proc. Acad. Nat. Sci. Phila., 5, p. 126, Dec., 1850—Egg Harbor, New Jersey (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 23).

Oidemia deglandi Turner, Contr. Nat. Hist. Alaska, 2, p. 137, 1886—St. Michaels and Unalaska Island (one specimen only); Nelson, Nat. Hist. Coll. Alaska, 3, p. 81, 1887—St. Michaels (nesting in small numbers); Dwight, Auk, 31, p. 304, pls. 24–30, 1914 (plumages and molt); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 197, 1918 (life hist. California); Brooks, Auk, 37, p. 366, 1920 (migr. British Columbia).

Oedemia deglandi Salvadori, Cat. Bds. Brit. Mus., 27, p. 409, 1895—Massachusetts, Connecticut (Branford and New Haven), Illinois (Chicago), Great Slave Lake, Fort Simpson, Vancouver Island (full bibliog.).

Oedemia deglandi dixonii W. S. Brooks,³ Bull. Mus. Comp. Zool., 59, p. 393, Sept., 1915—Griffin Point, Arctic Alaska (type in Museum of Comparative Zoology, Cambridge, Mass.).

Oidemia fusca dixonii Hartert, Nov. Zool., 27, p. 146 (in text), 1920 (not valid race); Phillips, Nat. Hist. Ducks, 4, p. 43, 1926 (disc.).

Melanitta deglandi Bent, Bull. U. S. Nat. Mus., 130, p. 131, 1925 (life hist.); De W. Miller, Amer. Mus. Nov., 243, p. 2, 1926 (trachea differs from

¹ Because of the structural differences in their tracheas (De W. Miller, Amer. Mus. Nov., 243, p. 2, 1926), as well as the differences in the feathering at the base of their bills, it would seem best to consider *deglandi* and *fusca* as specifically distinct.

² *Fuligula bimaculata* Herbert appears to be a composite description of the immatures of *Melanitta deglandi* and *M. perspicillata*. While the date of publication is given by Salvadori (Cat. Bds. Brit. Mus., 27, p. 409, 1895) as 1848, this is incorrect, as Herbert himself in his description speaks of the first of these birds having been taken in late September of 1849. The duck was described in Appendix F, which, according to Charles Sheldon (Forest and Stream, 86, p. 912, 1916) and Mitchell van Winkle (Henry William Herbert [Frank Forester], A Bibliography of His Writings, 1832–1858, p. 27), first appeared in the fourth edition, which was published by Stringer and Townsend, New York, and bears the date of 1852.

³ An examination of a good series from both coasts and the interior leads to the conclusion that the differences in the length and shape of bill on which the name *dixonii* is based are merely individual and not geographical variations.

M. fusca); Forsild, *Canad. Field Nat.*, 57, p. 24, 1943—Mackenzie Delta (breeding).

Oidemia fusca (not *Anas fusca* Linnaeus) Phillips, *Nat. Hist. Ducks*, 4, p. 26, pls. 74–75, distr. map 97, 1926—part, North America (monog.).

Oidemia fusca deglandi Phillips, *Nat. Hist. Ducks*, 4, p. 42, 1926 (disc.).

Melanitta fusca deglandi Peters, *Bds. World*, 1, p. 181, 1931 (range); Salomonsen, *Dansk. Ornith. Foren. Tidssk.*, 39, p. 254, 1945—Nugssuaq Peninsula, Umanaq District, western Greenland.

Melanitta fusca dixonii Peters, *Bds. World*, 1, p. 181, 1931 (range).

Range.—North America. Breeds from northwestern Alaska (Kotzebue Sound) and the Mackenzie Delta south to northern British Columbia (Stikine River), central North Dakota (Devils and Stump lakes) and southern Manitoba (Shoal Lake), east to James Bay and perhaps Labrador. Winters mainly on the seacoasts from the Aleutian Islands to Lower California and the Gulf of St. Lawrence to South Carolina. Also found in winter on the Great Lakes, and on migration casually throughout the interior.

Field Museum Collection.—60: Alaska (Bethel, 1); British Columbia (Vancouver, 1; Saturna Island, 1; Okanagan, 1); Washington (Port Townsend, 4); California (Monterey, 2; Pacific Grove, 2; Hyperion, 2; Moss Landing, 2); North Dakota (Stump Lake, Nelson County, 8; Devils Lake, Ramsey County, 1); South Dakota (unspecified, 1); Wisconsin (Beaver Dam, 1; Lake Koshkonong, 1); Illinois (Highland Park, 1; Chicago, 1); Louisiana (Lake Arthur, 1); Nova Scotia (Dartmouth, 1); Massachusetts (Robinson's Hole, 4; Great Island, 1; Duxbury, 2; Gloucester, 1; Brant Rock, 1; Woods Hole, 2); Connecticut (New Haven, 6; West Haven, 1; Stony Creek, 3; Branford, 2; New Haven County, 2; Stamford, 1); New York (Sound Swamp, Suffolk County, 2).

Conover Collection.—34: Yukon Territory (Marsh Lake, 1); British Columbia (Masset, Queen Charlotte Islands, 1; Comox, Vancouver Island, 18); Alberta (Hastings Lake, 2; Tofield, 3; 60 miles southeast of Edmonton, 3); Manitoba (Delta, 1); North Dakota (Grafton, 1); Illinois (Henry, 1); Prince Edward Island (Summerside, 1); Massachusetts (Annisquam, 2).

****Melanitta perspicillata* (Linnaeus). SURF SCOTER.**

Anas perspicillata Linnaeus, *Syst. Nat.*, 10th ed., 1, p. 125, 1758—based on "The Great Black Duck from Hudson's Bay," *Edwards, Nat. Hist. Bds.*, 3, p. 155, pl. 155; Hudson Bay.

Anas latirostris Boddaert, *Tabl. Pl. Enl.*, p. 58, fig. 995, 1783—no type locality.

Pelionetta trowbridgii Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 806, 1858—San Diego, California (type in U. S. National Museum).

Oidemia perspicillata Turner, Contr. Nat. Hist. Alaska, 2, p. 137, 1886—Yukon District, Aleutian Islands; Nelson, Nat. Hist. Coll. Alaska, 3, p. 81, 1887—St. Michaels (not common nester), Aleutian Islands (wintering); Bishop, Auk, 12, p. 295, 1895 (an undescribed plumage); Clark, Proc. U. S. Nat. Mus., 38, p. 46, 1911—Aleutian Islands (Attu; Agattu); Dwight, Auk, 31, p. 302, pls. 24–30, 1914 (plumage and molt); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 201, 1918 (life hist. California); Widman, Auk, 39, p. 250, 1922—St. Louis, Missouri; Phillips, Nat. Hist. Ducks, 4, p. 45, pls. 76–77, distr. map 98, 1926 (monog.).

Oidemia perspicillata Salvadori, Cat. Bds. Brit. Mus., 27, p. 412, 1895—Alaska (Kotzebue Sound, St. Michaels and Pt. Constantine), Canada (Bear Lake, Fort Simpson, Big Island, Repulse Bay, Godbout, Bay of Fundy and Vancouver Island), Massachusetts (Boston and Ipswich Bay), Connecticut (Branford), California (San Diego), Bermuda Islands; Winge, Medd. Grøn., 21, p. 92, 1898—Greenland (Kangerajuk, July; Disco Bay, etc.).

Melanitta perspicillata Bent, Bull. U. S. Nat. Mus., 130, p. 143, 1925 (life hist.); De W. Miller, Amer. Mus. Nov., 243, p. 2, 1926 (shape of trachea); Peters, Bds. World, 1, p. 182, 1931 (range); Dixon, Fauna Nat. Parks U. S., 3, p. 40, 1938—Mount McKinley Park (breeding); Porsild, Canad. Field Nat., 57, p. 24, 1943—Mackenzie Delta (probably breeding); Todd, l.c., p. 79 (in text), 1943—James Bay (breeding); Gabrielson, Auk, 61, p. 119, 1944—Bristol Bay region (breeding); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 50, 1945—Sonora (lat. 28° northward).

Range.—Breeding range uncertain, but probably from about Bristol Bay and Fort Yukon, Alaska, east through the Mackenzie Basin to the Anderson River and south to northern Alberta (Lake Athabasca) and Saskatchewan; also on Hudson Bay (Churchill), James Bay, central Labrador (Lake Petitsikapan), and perhaps in southern Greenland. Winters on the seacoast from the Aleutian Islands to Lower California (San Quintin Bay) and from Nova Scotia to South Carolina; also on the Great Lakes.

Field Museum Collection.—54: Alaska (Collinson Point, 1; Nome, 1; Tocatna, 1); Yukon Territory (Lake La Barge, 1); British Columbia (Comox, Vancouver Island, 1); Washington (Port Townsend, 3); California (Carmel Bay, 1; Trinidad, 2; Monterey, 8; Hyperion, 5; Pacific Grove, 4; Redwood, 1; Pacific Beach, 1); Labrador (Jack Lane's Bay, 1; Zoar, 1); Quebec (Magdalen Islands, 1); Massachusetts (Woods Hole, 1; Brant Rock, 2; West Yarmouth, 1; Cohasset, 1); Rhode Island (Narragansett Bay, 1); Connecticut (New Haven, 2; Branford, 2; West Haven, 2; Guilford, 3; Stony

Creek, 4); New York (Suffolk County, 1); North Carolina (Pea Island, Dare County, 1).

Conover Collection.—29: Alaska (Barrow, 1; Hooper Bay, Bering Sea, 1); Yukon Territory (head of Big Salmon River, 1); British Columbia (Comox, Vancouver Island, 18); California (Anaheim Landing, 1; Point Magie, 1); Prince Edward Island (Summerside, 1); Massachusetts, Essex County (Pigeon Cove, 3; Lanesville, 1); Connecticut (Stratford, 1).

Genus CAMPTORHYNCHUS Bonaparte

Camptorhynchus "Eyton" Bonaparte, Geogr. and Comp. List, p. 58, 1838—type, by monotypy, *Anas labradoria* Gmelin.

Kamptorhynchus Eyton, Monog. Anat., p. 57, 1838—type, by orig. desig., *Fuligula Labradora* Bonaparte.

Camptolaimus G. R. Gray, List Gen. Bds., ed. 2, p. 95, 1841—type, by monotypy, *Anas labradoria* Gmelin.

**Camptorhynchus labradorius* (Gmelin). LABRADOR DUCK.

Anas labradoria Gmelin, Syst. Nat., 1, (2), p. 537, 1789—Arctic America, Connecticut and Labrador.

Anas labradora Latham, Ind. Orn., 2, p. 859, fig. 67, 1790—Labrador.

Fuligula grisea Leib, Journ. Acad. Nat. Sci. Phila., 8, p. 170, 1840—neighborhood of Great Egg Harbour, New Jersey.

Anas labradorica Hall, Canad. Natur. and Geol., 7, p. 427, 1862—Bay of Laprairie, Montreal District; Dutcher, Auk, 11, p. 176, 1894 (Laprairie specimen added to Dutcher collection).

Camptolaimus labradorius Gregg, Amer. Nat., 13, p. 128, 1879—Chemung County, New York (last record); Meyer, Auk, 9, p. 389, 1892 (female in Dresden Museum); Stone, l.c., 10, p. 363, 1893 (adult male added to collection in Academy of Natural Sciences, Philadelphia); Dutcher, l.c., 11, p. 4, 1894 (imm. male in Museum of Natural History Society of Montreal); Gurney, l.c., 14, p. 87, 1897—specimen in Amiens, France.

Camptorhynchus labradorius Dutcher, Auk, 8, p. 201, 1891 (revised list of specimens in North America with historical notes); Brooks, l.c., 29, p. 389, 1912—discovery of juvenal male specimen in Boston Society of Natural History (possess one other); Lloyd, Canad. Field Nat., 34, p. 155, 1920—Dalhousie College, Nova Scotia (male specimen only; female=*Oidemia americana*); Bent, Bull. U. S. Nat. Mus., 130, p. 62, 1925 (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 57, pl. 78, 1926—list of known specimens (monog.); Gladstone, Ibis, 1927, p. 352 (history of a specimen in the Liverpool Museum); Peters, Bds. World, 1, p. 182, 1931 (range); Renshaw, Bd. Notes and News, London, 19, p. 1, pl. 1, 1940 (notes).

Camptolaemus labradorius Salvadori, Cat. Bds. Brit. Mus., 27, p. 416, 1895—North America and Labrador (2 specimens; full bibliog.).

Camptolaimus labradoria Rothschild, Extinct Bds., p. 105, pl. 36, 1907 (syn., list known specimens; gen. account).

Range.—Extinct. Probably bred formerly in Labrador. Recorded in winter from Grand Manan to Chesapeake Bay, but chiefly off Long Island, New York.

Field Museum Collection.—2: Maine (near Calais, 2).

Genus POLYSTICTA Eyton

Polysticta Eyton, Cat. Brit. Bds., p. 58, 1836—type, by monotypy, *Anas stelleri* Pallas.

Eniconetta G. R. Gray, List Gen. Bds., p. 75, 1840—type, by orig. desig., *Anas stelleri* Pallas.

Stelleria Bonaparte (nec *Stellaria*), Nuovi Ann. delle Scienze Nat., Bologna, 8, (2), p. 266, 1842—type, by monotypy, *Stelleria dispar* Bonaparte = *Anas stelleri* Pallas.

Heniconetta Agassiz, Ind. Univ. Nom. Zool., p. 178, 1846—emendation.

**Polysticta stelleri* (Pallas). STELLER'S EIDER.

Anas stelleri Pallas, Spic. Zool., fasc. 6, p. 35, pl. 5, 1769—Kamchatka.

Anas dispar Sparrman, Mus. Carlson, fasc. 1, pls. 7 and 8, 1786—type locality "Ostrogothico" = Ostergotland, Sweden (cf. Hartert, Vog. Pal. Fauna, p. 1363).

Anas Occidua Bonnaterre, Tabl. Enc. Méth., Orn., 1, livr. 47, p. 130, 1791—based on *A. stelleri* Pallas and "Western Duck" Pennant, Arct. Zool., 2, p. 564, pl. 23; Kamtschatka and western part of America.

Eniconetta stelleri Turner, Contr. Nat. Hist. Alaska, 2, p. 135, 1886—Bristol Bay and Aliaska (Alaska Peninsula), Unalaska Island (winter) (descr.); Nelson, Nat. Hist. Coll. Alaska, 3, p. 75, 1887—Alaskan coasts and islands of Bering Sea (nesting); Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 471 (plumages); Rich, Maine Nat., 10, p. 39, 1930—coast of Maine.

Heniconetta stelleri Salvadori, Cat. Bds. Brit. Mus., 27, p. 419, 1895—Norway, Iceland, Alaska.

Somateria dispar Winge, Medd. Grøn., 21, p. 93, 1898—Disco Bay, Greenland (June 15, 1878).

Polysticta stelleri Bent, Bull. U. S. Nat. Mus., 130, p. 67, 1925 (life hist.); Conover, Auk, 43, p. 167, 1926—Alaska (nesting; plumages; weights); Phillips, Nat. Hist. Ducks, 4, p. 64, pls. 79, 80, 82, distr. map 99, 1926 (monog.); Peters, Bds. World, 1, p. 182, 1931 (range); Swarth, Pac. Coast Avifauna, 22, p. 21, 1934 (eclipse plumage).

Range.—Breeds on the coast of Alaska from Unimak Island north to Point Barrow and east to Barter Island; St. Lawrence Island. Winters in the open waters about the Aleutian Islands and the Alaska Peninsula east to the Kenai Peninsula. Breeds also on the

coast of Siberia east of the Taimyr Peninsula, wintering south to Kamchatka and west to Norway; accidental in Greenland (Disco Bay, June 15, 1878) and on Atlantic coast of North America.

Field Museum Collection.—24: Alaska (Barrow, 4; Bering Strait, 2; Point Hope, 1; Nome, 9; Sledge Island, 1; Yukon Delta, 2; Unalaska, 1; Kodiak Island, 3); ?California (northern part, 1).

Conover Collection.—30: Alaska (Point Barrow, 4; Wales, 1; Wainwright, 6; Hooper Bay, Bering Sea, 12; Igiak Bay, Bering Sea, 7).

Subfamily OXYURINAE. Lake Ducks

Genus NOMONYX Ridgway

Nomonyx Ridgway, Proc. U. S. Nat. Mus., 3, p. 15, 1880—type, by orig. desig., *Anas dominica* Linnaeus.

**Nomonyx dominicus* (Linnaeus). MASKED DUCK.

Anas dominica Linnaeus, Syst. Nat., 12th ed., 1, p. 201, 1766—based on "La Sarcelle de S. Domingue" Brisson, Orn., 6, p. 472, pl. 41, fig. 2; Santo Domingo.

Anas spinosa Gmelin, Syst. Nat., 1, (2), p. 522, 1789—based on "Sarcelle à queue épineuse" Buffon, Hist. Nat. Ois., 9, p. 282, and Daubenton, Pl. Enl., pl. 967; Cayenne.

Erismatura ortygoides (Hill MS.) Gosse, Bds. Jamaica, p. 406 (footnote), 1847—Jamaica (no type extant).

Nomonyx dominicus Fisher, Auk, 12, p. 297, 1895—Brownsville, Texas; Salvadori, Cat. Bds. Brit. Mus., 27, p. 438, 1895—Jamaica, Barbados, Guatemala, Panama, Cayenne, Brazil, Ecuador, Bolivia; Ihering, Rev. Mus. Paul., 3, p. 395, (1898), 1899—Piracicaba, São Paulo; Howe, Auk, 19, p. 196, 1902—record from Vermont not good; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Tucumán (ex Dinelli); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 227, 1903—Mexico (Jalapa, Vera Cruz, Tepic), Guatemala, and Panama (Laguna de Pita, Veragua); Houghton, Auk, 23, p. 335, 1906—Maryland; Hartert and Venturi, Nov. Zool., 16, p. 245, 1909—Barracas al Sud, Buenos Aires; Carriker, Ann. Carnegie Mus., 6, p. 437, 1910—Costa Rica (Laguna de Coris and Las Concovas); Dabbene, Orn. Arg., p. 233, 1910—Tucumán, Buenos Aires (Barracas al Sud); Chubb, Bds. Brit. Guiana, 1, p. 196, 1916—Kamuni River; Chapman, Bull. Amer. Mus. N. H., 36, p. 235, 1917—Cali, Colombia; Chubb, Ibis, 1919, p. 276—Eten, Lambayeque, Peru; Osgood and Conover, Field Mus. Nat. Hist., Zool. Ser., 12, p. 47, 1922—Venezuela (Rio Cogollo and Lagunillas, Zulia); Daguerre, El Hornero, 2, p. 265, 1922—Rosas, Buenos Aires; Bent, Bull. U. S. Nat. Mus., 130, p. 161, 1925 (life hist. and United States records); Phillips, Nat. Hist. Ducks, 4, p. 143, pl. 83, distr. map 104, 1926 (monog.); Chapman, Bull. Amer. Mus. N. H., 55,

p. 212, 1926—Chone, Ecuador; Lawrence, *Auk*, 44, p. 415, 1927—Eagle Nest Lake, Brazoria County, Texas (other United States records); Wetmore, *Sci. Surv. Porto Rico and Virgin Islands*, 9, p. 317, 1927—Puerto Rico (rare); Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, 12, No. 18, p. 499, 1929—Inhúma, Rio Parnahyba, Brazil; Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 99, 1930 (range in South America); Peters, *Bds. World*, 1, p. 184, 1931 (range); Griscom, *Bull. Mus. Comp. Zool.*, 78, p. 297, 1935—Panama (Veragua, Canal Zone, and Darien).

Oxyura dominica Bond, *Bds. West Indies*, p. 44, 1936—Cuba, Hispaniola, Jamaica, Grand Cayman, and Puerto Rico.

Range.—Greater Antilles, Costa Rica (Laguna de Coris and Las Concovas), Panama (Veragua, Canal Zone, and Darien), south on the west coast through Colombia and Ecuador (El Oro, Arenillas) to Peru (Sarayacu and Eten) and to the east of the Andes through Venezuela and the Guianas to northern Argentina (Tucumán and Province of Buenos Aires). Occasional in the Virgin Islands (St. Croix), and Lesser Antilles (Guadeloupe, Dominica, Martinique, Barbados) and Trinidad; also in Mexico (Tepic, Vera Cruz, and Jalisco).

Field Museum Collection.—10: Massachusetts (Malden, Middlesex County, 1);¹ Cuba (unspecified, 2); Jamaica (Priestmans River, Surrey, 1); Costa Rica (Bebedero, Guanacaste, 3); Colombia (unspecified, 1); British Guiana (unspecified, 2).

Conover Collection.—30: Cuba (Tapaste, Havana, 5); Costa Rica (Concovas, Cartago, 2); Panama (Port Obaldia, Darien, 2); Venezuela (Rio Cogollo, Perija, 2); Colombia (Popayán, Cauca, 1); Ecuador (Arenillas, El Oro, 1); Brazil (Boim, Pará, 1; Villa Acara, Pará, 1); Paraguay (Villa Rica, 2; Horqueta, 2; 265–170 km. west of Puerto Casado, 10; Orloff, Chaco, 1).

Genus OXYURA Bonaparte

Oxyura Bonaparte, *Ann. Lyc. Nat. Hist. New York*, 2, p. 390, 1828—type, by monotypy, *Anas rubidus* Wilson.

Erismatura Bonaparte, *Giornale Arcadico*, 52, p. 208, 1832—new name for *Oxyura*.

Cerconectes Wagler, *Isis*, 1832, col. 282, March, 1832—no type designated.

Gymnura Nuttall, *Man. Orn.*, 2, p. 425, 1834—substitute name for *Oxyura* Bonaparte.

Erimistura (sic) Degland and Gerbe, *Orn. Eur.*, 2, p. 565, 1867—emendation of *Erismatura* Bonaparte.

¹ Recorded in the *Auk*, 6, p. 336, 1889.

****Oxyura jamaicensis rubida* (Wilson).¹ RUDDY DUCK.**

Anas rubidus Wilson, Amer. Orn., 8, pp. 128, 130, pl. 71, figs. 5-6, 1814—Delaware River, near Philadelphia (type in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 184, 1930).

Anas cyanorostris Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 165, 1816—based on "Yacatexotli" Hernandez, Hist. Anim. Nov. Hisp., p. 29; Mexico.

Erismatura jamaicensis (not *Anas jamaicensis* Gmelin) Salvadori, Cat. Bds. Brit. Mus., 27, p. 445, 1895—part, except Jamaica (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 228, 1903—part, Mexico (San Luis Potosi, Sonora, Sinaloa, Jalisco, Valley of Mexico, Vera Cruz, Oaxaca), Guatemala, and Costa Rica; Brooks, Auk, 20, p. 280, pl. 10, 1903 (pl. nestling); Carriker, Ann. Carnegie Mus., 6, p. 437, 1910—Irazú, Costa Rica; Wetmore, Proc. U. S. Nat. Mus., 52, p. 479, 1917 (secondary sexual chars.); idem, Condor, 20, p. 19, 1918 (on tracheal air sac); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 205, 1918 (life hist. California); van Rossem, Condor, 25, p. 131, 1923 (voice); Henderson, l.c., 26, p. 32, 1924 (voice); Bent, Bull. U. S. Nat. Mus., 130, p. 152, 1925—part, except West Indies (life hist.).

Oxyura jamaicensis Phillips, Nat. Hist. Ducks, 4, p. 159, pl. 84, distr. map 106, 1926—part, except West Indies (monog.).

Oxyura jamaicensis rubida Peters, Bds. World, 1, p. 184, 1931 (range); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 51, 1945—Sonora (rare).

Erismatura jamaicensis rubida Low, Auk, 58, p. 506, pl. 17, 1941—Iowa (nesting; incub. period).

Range.—Breeds from central British Columbia (Cariboo District), Great Slave Lake, and northern Manitoba (York Factory) south to northern Lower California (31° N.), northern New Mexico (Lake Burford), southern Texas (Cameron County), northern Iowa, and northern Illinois; casually and locally east to Ungava and south to Guatemala. Winters from southern British Columbia, northern New Mexico, southern Illinois, and Chesapeake Bay south to Costa Rica, the Gulf of Mexico and Florida.

Field Museum Collection.—53: British Columbia (Victoria, 2); Saskatchewan (Prince Albert, 2); New Brunswick (St. Croix River, 2); North Dakota (Towner County, 8; Benson County, 2; Rolette County, 1; Nelson County, 3); Kansas (Burlington, 3; Blue Rapids, 1); California (unspecified, 1; San Diego County, 1; Wasco, 2;

¹*Oxyura jamaicensis rubida* (Wilson) is probably not a recognizable race, but the question cannot be definitely settled until a series from Jamaica itself can be examined. It is supposed to differ from the typical race by generally lighter coloration, larger size and the presence of an eclipse plumage. However, according to Wetmore (Sci. Surv. Porto Rico and Virgin Islands, 9, p. 314, 1927), Puerto Rican specimens (supposedly typical *jamaicensis*) vary greatly in size and coloration and probably also have an eclipse plumage.

Motordrome, Los Angeles County, 1; Nigger Slough, Los Angeles County, 1; Corona, 1; Riverside, 1); Arizona (Tucson, 1); Texas (Brownsville, 1);¹ Minnesota (Nobles County, 1); Wisconsin (Beaver Dam, 5); Illinois (Monroe County, 1); Massachusetts (Cape Cod, 1; Quincy Bay, 1); Connecticut (North Haven, 4; Guilford, 2); Virginia (unspecified, 1); Florida (Banana River, 2); Mexico (Cusarare, Chihuahua, 1).

Conover Collection.—37: California (Oceano, 1); Utah (Brigham, 21); South Dakota (Eden, 3); Nebraska (Wood Lake, 2); Illinois (Henry, 2); Massachusetts (Newburyport, 1; Mashpee, 1); North Carolina, Currituck Sound (Seagull, 1; Poplar Branch, 3; Waterlily, 1); Mexico (Galeana, Nuevo Leon, 1).

****Oxyura jamaicensis jamaicensis* (Gmelin). ANTILLEAN RUDDY DUCK.**

Anas jamaicensis Gmelin, Syst. Nat., 1, (2), p. 519, 1789—based on "Jamaica Shoveler" Latham, Gen. Syn. Bds., 3, (2), p. 513; Jamaica.

Anas recurvirostra Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 167, 1816—new name for *Anas jamaica* Latham, Ind. Orn., 2, p. 857, 1790—based on "Jamaica Shoveler" Latham, Gen. Syn. Bds., 3, (2), p. 513; Jamaica.

Erismatura jamaicensis Salvadori, Cat. Bds. Brit. Mus., 27, p. 445, 1895—part, Mount Eagle, Jamaica (full bibliog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 228, 1903—part, West Indies; Wetmore, Bds. of Porto Rico, p. 28, 1916—Laguna de Guanica (ex Gundlach); Bent, Bull. U. S. Nat. Mus., 130, p. 152, 1925—part, West Indies (life hist.).

Erismatura alleni Danforth, Auk, 42, p. 558, 1925—Cartagena Lagoon, Porto Rico (type in collection of S. T. Danforth, now in Museum of Cornell University, Ithaca; cf. Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 315, 1927).

Oxyura jamaicensis Phillips, Nat. Hist. Ducks, 4, p. 159, pl. 84, distr. map 106, 1926—part, West Indies (monog.); Bond, Bds. West Indies, p. 43, 1936—Bahama Islands, Greater Antilles and Lesser Antilles; Nichols and Bond, Mem. Soc. Cub. Hist. Nat., 17, p. 28, 1943—nesting, Virgin Islands (St. Thomas, St. John, Dog Island, Saba Cay, Water Island).

Erismatura jamaicensis jamaicensis Wetmore, Sci. Surv. Porto Rico and Virgin Islands, 9, p. 314, 1927—Puerto Rico and St. Croix(?) (disc. dist. chars.); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 106, 1931—Hispaniola (Moca, Haina, Laguna del Salodillo, Trou Caïman).

Oxyura jamaicensis jamaicensis Peters, Bds. World, 1, p. 184, 1931 (range).

Range.—Resident in the West Indies (Cuba, Puerto Rico, Virgin Islands, Jamaica, the Grenadines, and Carriacou). (?)Bahama Islands.

¹ Partial downy.

Conover Collection.—4: Puerto Rico (Anegada Lagoon, 1; Cartagena Lagoon, 3).

****Oxyura ferruginea ferruginea* (Eyton). ANDEAN LAKE DUCK.**

Erismatura ferruginea Eyton, Monog. Anat., p. 170, 1838—Chile (cotypes in the British Museum examined); Doering, in Roca, Inf. Ofic. Exp. Rio Negro, Zool., p. 54, 1881—Lagunas de Rio Negro; Taczanowski, Orn. Per., 3, p. 484, 1886—Lake Junín (ex Jelski) and Lake Titicaca (ex Raimondi); Sclater and Hudson, Arg. Orn., 2, p. 138, 1889—Patagonia; Salvadori, Cat. Bds. Brit. Mus., 27, p. 449, 1895—Lake Titicaca, vicinity of Lima, and Laguna de Tambo, Peru; Hartert and Venturi, Nov. Zool., 16, p. 244, 1909—Valle del Lago Blanco, Chubut; Peters, Bull. Mus. Comp. Zool., 65, p. 303, 1923—Neluan, Rio Negro (rare); Chapman, Bull. Amer. Mus. N. H., 55, p. 212, 1926—Lago San Pablo, Otavalo, Ecuador; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 337, 1932 (distr. in Chile).

Erismatura aequatorialis Salvadori,¹ Cat. Bds. Brit. Mus., 27, pp. 441, 442, 450, 1895—Antisana and Sical, Ecuador (cotypes in British Museum examined).

Oxyura aequatorialis Chubb, Ibis, 1919, p. 276—Colta, Riobamba, Ecuador.

Oxyura ferruginea Chapman, Bull. U. S. Nat. Mus., 117, p. 55, 1921—La Raya, Peru; Phillips, Nat. Hist. Ducks, 4, p. 183, pl. 86, distr. map 109, 1926 (monog.); Peters, Bds. World, 1, p. 185, 1931 (range in part); Morrison, Ibis, 1939, p. 467—Huancavelica, Peru; idem, l.c., 1939, p. 649—Lake Junín, Peru (food).

Range.—Andean lakes from Ecuador south to Chile (Aysen), Argentina (Chubut), and Tierra del Fuego (Cape Peñas). Found also in the central valley and coastal plain of Chile² and in Argentina on the pampas adjoining the Andes from the Rio Negro south.

Field Museum Collection.—14: Bolivia (Huaqui, La Paz, 1; Vacas, Cochabamba, 12); Chile (Lake Malleco, Cautin, 1).

Conover Collection.—17: Ecuador (Laguna Yaguarcocha, Imbabura, 1; Lago Antisana, Pichincha, 1); Peru (Puerto Arturo, Puno, 1); Bolivia (Vacas, Cochabamba, 10); Chile (Casa Richards, Rio Nirehuau, Aysen, 4).

¹*Erismatura aequatorialis* Salvadori: Birds from Ecuador are inseparable from specimens from Peru and Chile.

²In a letter to the junior author, Dr. R. A. Philippi writes that this species and *O. vittata* are found together in the lakes of the valley and coastal plain of Chile. He states that he has a series of about thirty specimens of both species taken on the Lago Peñuelas, which is about eighteen miles from Valparaiso. He further states that both species nest there and that there is a great difference in the size of their eggs.

****Oxyura ferruginea andina* Lehmann.¹ COLOMBIAN LAKE DUCK.**

Oxyura jamaicensis andina Lehmann, Auk, 63, p. 221, April, 1946—Laguna del Páramo de Boca-Grande, north of Nevado de Sumapaz, Cundinamarca, eastern Andes of Colombia, el. 4,000 meters (type in the collection of the Instituto de Ciencias Naturales, Universidad Nacional, Bogotá, Colombia).

Erismatura (Oxyura) ferruginea Lehmann, Caudasia, 2, p. 408, 1944—eastern and central Cordilleras of Colombia.

Range.—Andean lakes of the central (Purace region, Cauca) and eastern (Laguna Fúquene, Cundinamarca, and Boyaca) Cordilleras of Colombia.

Conover Collection.—2: Colombia (Paramo de Purace, Cauca, 2).

****Oxyura vittata* (R. A. Philippi). ARGENTINE LAKE DUCK.**

Erismatura vittata R. A. Philippi, Arch. Naturg., 26, (1), p. 26, 1860—Chile (descr. of juv.; type in the National Museum of Natural History, Santiago, Chile); Salvadori, Cat. Bds. Brit. Mus., 27, p. 450, 1895—Chile (Tarapacá; central Chile; Prov. Santiago; Río Pilmaiquen) and Uruguay (market in Montevideo); Ihering, Cat. Faun. Braz., 1, p. 74, 1907—Pelotas, Río Grande do Sul; Hartert and Venturi, Nov. Zool., 16, p. 244, 1909—Coronel Dorrego and Barracas al Sud, Buenos Aires, and Roca, Río Negro; Dabbene, Anal. Mus. Nac. Buenos Aires, 19, p. 233, 1910—Córdoba, Río Negro (Roca), and Chubut; Scott and Sharpe, Rep. Princet. Univ. Exped. Patagonia, 2, Orn., p. 501, 1912 (general account); Bennett, El Hornero, 2, p. 30, 1920—Decepción Island, South Shetland Islands (accidental); Giacomelli, l.c., 3, p. 79, 1923—Prov. de la Rioja; Peters, Bull. Mus. Comp. Zool., 65, p. 303, 1923—Huanuluan and Neluan, Río Negro; Wetmore, Bull. U. S. Nat. Mus., 133, p. 84, 1926—General Roca, Territory of Río Negro, Argentina (descr. air sac and trachea); idem, Univ. Calif. Pub. Zool., 24, p. 418, 1926—Loma Partida and Río Fetaleufu, Chubut; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 339, 1932 (distr. in Chile).

Oxyura vittata Phillips, Nat. Hist. Ducks, 4, p. 187, pl. 86, distr. map 189, 1926 (monog.); Wilson, El Hornero, 3, p. 355, 1926—southern Santa Fé; Peters, Bds. World, 1, p. 185, 1931 (range, in part).

¹*Oxyura ferruginea andina* Lehmann differs from the typical race by smaller size and has in adult males a greater amount of white on the sides of the head and throat. The drake of the pair listed above has a wing of 149 mm., the same as that of the type, and the female one of 145, while Bolivian specimens run from 158 to 165 and 152 to 155 respectively.

In our opinion the Colombian Lake Duck is a form of *ferruginea* as its bill is similar, being much heavier, wider, and higher at the base, with a broader nail than that of *jamaicensis*. This gives to the Andean Lake Duck a profile somewhat similar to *Aythya valisineria*, a line drawn along the top of the bill from the tip to the crown of the head being almost straight, whereas in the North American Ruddy Duck this line is convex, more like that of *Aythya americana*. In addition the females of *andina* have the dusky cheeks characteristic of *ferruginea* and lack the whitish stripe under the eye found in both *jamaicensis* and *vittata*.

Range.—The central and southern provinces of Chile from Valparaiso to Valdivia, southern Brazil (Rio Grande do Sul), Uruguay and Argentina from the provinces of Rioja and San Juan south to Tierra del Fuego (Cape Peñas).

Conover Collection.—11: Chile (Laguna Huairavo, Santiago, 1; Llolleo, Santiago, 2; Batuco, Santiago, 3; Angol, Bio Bio, 2); Argentina (Cambaceres, Buenos Aires, 3).

Subfamily MERGINAE. Mergansers

Genus MERGELLUS Selby

Mergellus Selby, Cat. Gen. and Subgen. Types Bds., p. 47, 1840—type, by monotypy, *Mergus albellus* Linnaeus.

Mergellus albellus (Linnaeus). SMEW.

Mergus Albellus Linnaeus, Syst. Nat., 10th ed., 1, p. 129, 1758—Europe, restricted type locality, Mediterranean Sea near Smyrna.

Mergus albellus Salvadori, Cat. Bds. Brit. Mus., 27, p. 464, 1895—spec. v", North America; Bent, Bull. U. S. Nat. Mus., 126, p. 30, 1923—North America, Louisiana (life hist.).

Range.—Extralimital. Found in Europe and Asia. Admitted to the American check list because of two rather doubtful occurrences, one a specimen of a female in the British Museum purchased from the Hudson's Bay Company and said to have been taken in Canada, the other a record of a female, which Audubon (1840) claimed to have taken in Louisiana.

Genus LOPHODYTES Reichenbach

Lophodytes Reichenbach, Av. Syst. Nat., p. ix, 1852 (1853)—type, by orig. desig., *Mergus cucullatus* Linnaeus.

**Lophodytes cucullatus* (Linnaeus). HOODED MERGANSER.

Mergus cucullatus Linnaeus, Syst. Nat., 10th ed., 1, p. 129, 1758—based on "The Round-crested Duck" Catesby, Nat. Hist. Carolina, 1, p. 94, pl. 94; Virginia and Carolina.

(?) *Mergus fuscus* Latham, Ind. Orn., 2, p. 832, 1790—based on "Brown Merganser" Pennant, Arct. Zool., 2, Suppl., p. 74; Hudson Bay.

Lophodytes cucullatus Salvadori, Cat. Bds. Brit. Mus., 27, p. 468, 1895—Vancouver Island, District of Columbia, states of New York, Florida, Texas, and Jalapa, Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 230, 1903—Mexico (near Matamoros, Valley of Mexico, Jal-

apa, and Orizaba); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 89, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 22, 1923 (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 241, pls. 95 and 96 (downy), distr. map 114, 1926 (monog.); Peters, Bds. World, 1, p. 186, 1931 (range); Bagg, Auk, 50, p. 430, 1933 (courtship display); Sprunt, Auk, 61, p. 306, 1944—South Carolina (breeding).

Range.—Breeds throughout the wooded regions, from southeastern Alaska (Stikine River) east through British Columbia (Cariboo district), Alberta, and Saskatchewan to Hudson Bay, and perhaps the interior of Labrador, south to Oregon, northern New Mexico, Arkansas (Big Lake), southern Tennessee (near Chattanooga), and central Florida (Titusville and Fort Myers). Winters from British Columbia (Vancouver Island and Okanagan), Utah, Nebraska, Lake Michigan, and Massachusetts south to southern Mexico (Orizaba and Jalapa) and Cuba, but mainly in the southern states.

Field Museum Collection.—53: British Columbia (Okanagan, 1; Sumas Lake, 1); California (Colusa, 1); North Dakota (Hope, 1; Sweetwater Lake, Ramsey County, 1; Lac aux Morts, 1; Towner County, 2; Sheyenne River, Nelson County, 2; Cando, 2); Iowa (Burlington, 2); Wisconsin (Beaver Dam, 5); Illinois (Rondout, Lake County, 1; Fox Lake, 1); Ontario (Point Rowan, 9); Prince Edward Island (Fish Island, 1); Connecticut (North Haven, 9); New York (Lakeside, Wayne County, 1); Virginia (Norfolk County, 1; Norfolk, 4); North Carolina (Pea Island, Dare County, 2; Currituck Sound, Currituck County, 1; unspecified, 1); Florida (Banana River, 3).

Conover Collection.—25: British Columbia (Masset, Queen Charlotte Islands, 1; Stuie, Bella Coola area, 2; Comox, Vancouver Island, 5); Alberta (60 miles east of Edmonton, 1); Illinois (Deerfield, 1; Warrenville, 1; Henry, 5; Sparland, 1); Massachusetts (Quincy, 1; Plymouth, 2; Mashpee, 1; Newburyport, 1); North Carolina (Seagull, Currituck Sound, 2); Florida (Nassau Sound, 1; Homosassa Springs, Citrus County, 1).

Genus *MERGUS* Linnaeus

Mergus Linnaeus, Syst. Nat., 10th ed., 1, p. 129, 1758—type, by subs. desig. (Eyton, Monog. Anat., p. 76, 1838), *Mergus castor* Linnaeus=*Mergus serrator* Linnaeus.

Merganser Brisson, Orn., 6, p. 230, 1760—type, by tautonymy, “*Merganser*”=*Mergus serrator* Linnaeus.

Prister Heine, in Heine and Reichenow, Nomencl. Mus. Orn. Hein., p. 350, 1890—type, by monotypy, *Mergus brasilianus* Vieillot.

Prionochilus (not of Strickland, 1841) Bertoni, Ann. Cient. Paraguayos, 1, No. 1, p. 8, 1901—type, by monotypy, *Prionochilus brasiliensis* Bertoni=*Mergus octosetaceus* Vieillot.

Promergus Mathews and Iredale, Ibis, 1913, p. 410—type, by orig. desig., *Mergus australis* Hombron and Jacquinot.

****Mergus merganser americanus* Cassin. AMERICAN MERGANSER.**

Mergus americanus Cassin, Proc. Acad. Nat. Sci. Phila., 6, p. 187, 1852—North America (no type mentioned, based partly on *Mergus merganser* [not Linnaeus] Wilson, Amer. Orn., 8, p. 68, pl. 68);¹ Townsend, Auk, 33, p. 10, 1916 (courtship); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 79, 1918 (life hist. California); Brooks, Auk, 49, p. 462, 1932 (color of iris); White, J. Biol. Board Canada, 3, p. 323, 1937 (food).

Merganser americanus Turner, Contr. Nat. Hist. Alaska, 2, p. 130, 1886—Unalaska Island; Salvadori, Cat. Bds. Brit. Mus., 27, p. 477, 1895—Canada (Columbia River; British Columbia; 49th Parallel; Vancouver Island), New York (Lyons Falls; Herkimer County; Adirondacks), and Texas (Corpus Christi); Salvin and Godman, Biol. Centr.-Amer., Aves, 3, p. 229, 1903—Mexico (Sonora) and Bermuda; Munro and Clemens, Canad. Field Nat., 46, p. 166, 1932 (food).

Mergus merganser americanus Bent, Bull. U. S. Nat. Mus., 126, p. 1, 1923 (life hist.); Phillips, Nat. Hist. Ducks, 4, p. 256, pls. 96–98, distr. map 115, 1926 (monog.), p. 278 (dist. char.); van Rossem, Auk, 46, p. 380, 1929—Colonia Pacheco, Chihuahua, Mexico (nestling); Peters, Bds. World, 1, p. 187, 1931 (range); Munro and Clemens, Canad. Field Nat., 48, p. 45, 1934 (food); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 51, 1945—Sonora (Colorado Delta; San Esteban Island; Guaymas).

Mergus mergus americanus Moore, Auk, 51, p. 229, 1934 (serrations of bill).

Range.—Breeds from the Alaska Peninsula, the southern Yukon Territory (Teslin Lake), Great Slave Lake, Churchill River, Labrador (probably), the Gaspé Peninsula, and Newfoundland south in the Rocky Mountains to central California (Tulare County), northern Mexico (Chihuahua), and northern New Mexico, and from South Dakota east in the northern tier of states to central New York and southern Maine. Winters from the Aleutian Islands, the northern United States and the Gulf of St. Lawrence south to northern Mexico (northern Lower California and Durango), the Gulf coast and central western Florida (Tampa Bay).

Field Museum Collection.—33: Alaska (Craig, Prince of Wales Island, 1); British Columbia (Comox, Vancouver Island, 2; Okanagan, 2; White Swan Lake, 1); Washington (Nisqually, Thurston

¹ Cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 28 (pub. 1900).

County, 1); Oregon (Marion, 1); California (Colusa, 2; Trinidad, 1); Mexico (Colonia Pacheco, Chihuahua, 1 downy); Illinois (Chicago, 7); Labrador (Kegashka, 1); Quebec (Beaupré, 1; Isle au Gaus, 1); Massachusetts (Concord, 3); Connecticut (New Haven County, 3; Stamford, 2; Stratford, 1; East Hartford, 1; Black Hall, 1).

Conover Collection.—24: British Columbia (Comox, Vancouver Island, 9); Alberta (Jasper Park, 1); Washington (Clallam River, Clallam County, 1); California (Lake Tahoe, 1); Illinois (Waukegan, 1; Henry, 5); Michigan (Augusta, 2); Nova Scotia (Wolfville, 2); Massachusetts (Mashpee, Barnstable County, 2).

**Mergus serrator serrator* Linnaeus. RED-BREASTED MERGANSER.

Mergus Serrator Linnaeus, Syst. Nat., 10th ed., 1, p. 129, 1758—based chiefly on Fauna Svec., No. 114; Europe, restr. type locality, Sweden (ex Fauna Svec.).

Merganser serrator Turner, Contr. Nat. Hist. Alaska, 2, p. 131, 1886—St. Michaels and Aleutian Islands; Nelson, Nat. Hist. Coll. Alaska, 3, p. 66, 1887—Unalaska, St. Lawrence Island and St. Michaels; Salvadori, Cat. Bds. Brit. Mus., 27, p. 479, 1895—spec. dⁿ-wⁿ, a²-r³ (full bibliog.).

Mergus serrator Townsend, Auk, 28, p. 341, 1911 (courtship); Strong, l.c., 29, p. 479, pls. 21-23, 1912 (notes on life hist.); Grinnell, Bryant, and Storer, Game Bds. Calif., p. 84, 1918 (life hist. California); Bent, Bull. U. S. Nat. Mus., 126, p. 13, 1923 (life hist.); Conover, Auk, 43, p. 164, 1926—Hooper Bay, Alaska (nesting); Phillips, Nat. Hist. Ducks, 4, p. 279, pls. 96-98, distr. map 116, 1926 (monog.); Munro, Condor, 32, p. 261, 1930 (killed by sculpin); Peters, Bds. World, 1, p. 187, 1931 (range); White, J. Biol. Board Canada, 3, p. 323, 1937 (food); idem, J. Fish. Res. Board Canada, 4, p. 309, 1940 (food); Porsild, Canad. Field Nat., 57, p. 25, 1943—Mackenzie Delta (breeding); van Rossem, Occ. Pap. Mus. Zool. Louisiana State Univ., 21, p. 51, 1945—coast of Sonora; Soper, Auk, 63, p. 24, 1946—Baffin Island (breeding, southwest coast).

Range.—In North America breeds from Icy Cape, Alaska, the Mackenzie Delta, Great Slave Lake, Hudson Bay (Churchill), central Labrador, and southern Baffin Island south to southeastern British Columbia, central Alberta, and the northern tier of states in the United States. Winters on the Pacific coast from southern British Columbia to Lower California (La Paz), in the interior from the Great Lakes south in the Mississippi Valley to the Gulf coast and on the Atlantic coast from New Brunswick to Florida. Also found in Europe and northern Asia.

Field Museum Collection.—60: Alaska (Collinson Point, 1; St. Michaels, 1; Bethel, 1); British Columbia (Okanagan, 2); Alberta (Tofield, 1); Washington (Port Townsend, 3); California (Mon-

terey, 4); Arizona (Tucson, 1); Ontario (Michipicoten Island, Lake Superior, 2); Wisconsin (Beaver Dam, 4); Indiana (Kankakee River, 1; Miller, Lake County, 1); Mississippi (Graveline Bayou, Jackson County, 1); Labrador (Port Manvers, 1; Indian Harbor, 1); Quebec (Magdalen Islands, 3); Massachusetts (Monomoy Island, 4; Chatham, 2); Connecticut (Woodmont, 1; New Haven County, 1; West Haven, 2; Guilford, 1; Stamford, 1; Middlesex County, 1; Clinton, 2; Westville, 1); New York (Shelter Island, 1; Montauk Point, Long Island, 1); North Carolina (Pea Island, Dare County, 7); Georgia (Chatham County, 1); Florida (East Pass, 4; Mary Esther, 1; Pilot Town, 1).

Conover Collection.—28: Alaska (Barrow, 2; Meade River, near Barrow, 1); Yukon Territory (Marsh Lake, 1); British Columbia (Comox, Vancouver Island, 5); Alberta (Tofield, 2); Manitoba (Churchill, 4); Nebraska (Cherry County, 1); Texas (Corpus Christi, 3); Illinois (Waukegan, 3); Massachusetts (East Orleans, 1; Mashpee, 1); North Carolina (Seagull, Currituck, 1; Waterlily, Currituck, 1; Hatteras, 2).

***Mergus serrator major* Schiøler.¹ GREENLANDIC RED-BREASTED MERGANSER.**

Mergus serrator major Schiøler, Dansk. Orn. Tidsskr., 19, p. 115, 1925—west Greenland (type now in Copenhagen Museum); Nicholson, Ibis, 1930, p. 398—Greenland (Ilulialik; Kugssuk); Bertelsen, Medd. Grøn., 91, No. 4, p. 17, 1932 (range in western Greenland).

Mergus serrator (not of Linnaeus) Winge, Medd. Grøn., 21, p. 113, 1898—Greenland.

Range.—Coasts of Greenland, north to Upernavik on the west and Scoresby Sound on the east; winters in southern Greenland.

***Mergus octosetaceus* Vieillot. BRAZILIAN MERGANSER.**

Mergus octosetaceus Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 222, 1817—Brazil (type in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 68, 1929); Phillips, Nat. Hist. Ducks, 4, p. 301, pl. 100, distr. map 118, 1926 (monog.); Peters, Bds. World, 1, p. 188, 1931 (range); Stresemann, Orn. Monatsb., 43, p. 121, 1935 (specimens in Berlin Museum); Pinto, Rev. Mus. Paul., 22, p. 58, 1938—Salto Grande, Rio Parana-panema, São Paulo.

¹ *Mergus serrator major* Schiøler: Similar in coloration to the nominate race, but with longer wings.

Four specimens from Greenland (Holatenborg, Sukkertoppen, Holsteinborg), when compared with European and American birds, bear out Schiøler's measurements. The race thus seems to be valid.

Mergus octosetaelus Vieillot, Tabl. Enc. Méth., Orn., 1, livr. 89, p. 351, pl. 236, fig. 3, 1820—new name for *Mergus octosetaceus* Vieillot.

Mergus fuscus (not of Latham) Lichtenstein, Verz. Doubl. Zool. Mus. Berlin, p. 84, 1823—São Paulo (male and female descr.).

Mergus brasilianus Vieillot, Gal. Ois., 2, p. 209, pl. 283, circa 1825—Brazil (substitute name for *Mergus octosetaceus* Vieillot).

Mergus lophotes (Cuvier MS.) Pucheran, Rev. Mag. Zool., (2), 2, p. 551, 1850—new name for *Mergus octosetaelus* and *Mergus brasilianus* Vieillot.

Mergus brasiliensis Burmeister, Syst. Uebers. Th. Bras., 3, p. 441, 1856—São Paulo and Santa Catharina; Pelzeln, Orn. Bras., 3, p. 322, 1870—São Paulo (Rio Itararé) and Goyáz (Guardamor), Brazil; Berlepsch, Journ. Orn., 22, p. 281, 1874—Blumenau, Santa Catharina (descr. imm.).

Mergus octosetosus (errore?) Bonaparte, Compt. Rend. Acad. Sci. Paris, 43, p. 652, 1856—in syn. of *M. brasilianus* Vieillot.

Merganser brasilianus Salvadori, Cat. Bds. Brit. Mus., 27, p. 485, 1895—Ytarare, Brazil; Ihering, Rev. Mus. Paul., 3, p. 395, (1898), 1899—range; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 121, 1926—Salto da Ariranha, Paraná (note on female).

Prionochilus brasiliensis Bertoni, Ann. Cient. Paraguayos, 1, No. 1, p. 8, 1901—Alto Paraná, lat. 27° S., Paraguay (type in coll. of A. de W. Bertoni).

Merganser octasetaceus Ihering, Cat. Faun. Braz., 1, p. 77, 1907 (range, Brazil); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 234, 1910—Rio Paraná (ex Bertoni) and Misiones.

Range.—Only known from widely scattered localities in southern Brazil (Guardamor, Goyáz; Salto Grande, Rio Paranapanema and Rio Itararé, São Paulo; Salto da Ariranha, Paraná; Blumenau, Santa Catharina) and the Paraná River drainage in eastern Paraguay and northeastern Argentina (Rio Iguazú).

Subfamily MERGANETTINAE. Torrent Ducks

Genus MERGANETTA Gould¹

Merganetta Gould, Proc. Zool. Soc. Lond., 9, "1841," p. 95, pub. March, 1842—type, by monotypy, *Merganetta armata* Gould.

Raphipterus Gay, Hist. Fís. Pol. Chile, Atlas, Zool., pl. [12], 1844—type, by monotypy, *Raphipterus chilensis* Gay=*Merganetta armata* Gould.

¹ The torrent ducks seem to fall into three divisions, a northern and a southern one, each containing a single form, and a central group of four forms. While all the varieties are undoubtedly closely related, the northern and southern ones differ much more from the central group and each other, than the four central varieties do *inter se*. Since there also appears to be a rather extensive gap in distribution between the northern, the central and the southern divisions, it seems that the relationships are more clearly shown by separating the genus into three species than by including all six forms as races of one species. By doing this we have a northern and a southern monotypic species whose distinguishing characteristics appear to remain constant and a central one comprised of four intergrading races.

Rhaphipterus Des Murs, in Gay, Hist. Fís. Pol. Chile, Zool., 1, p. 458, 1847—
emendation.

**Merganetta colombiana* Des Murs.¹ COLOMBIAN TORRENT DUCK.

Merganetta Colombiana Des Murs, Rev. Zool., 8, p. 179, 1845—no locality =
Santa Fé de Bogotá, Colombia (type in Paris Museum; cf. Berlioz,
Bull. Mus. Hist. Nat. Paris, (2), 1, p. 68, 1929); idem, Icon. Orn., livr. 1,
pl. 6, 1845—Santa Fé de Bogotá (fig. of type).

Merganetta leucogenys (not *Anas leucogenis* Tschudi) Sclater and Salvin,
Proc. Zool. Soc. Lond., 1876, p. 408—part, Colombia and Ecuador.

Merganetta columbiana Salvadori, Cat. Bds. Brit. Mus., 27, p. 462, 1895—
Colombia ("Santa Marta;") Frontino, Antioquia, Bogotá) and Ecuador
(Rio Blanco; Sarayacu); Beebe and Crandall, Zoologica, N. Y., 1, p. 251,
1914 (desc. tail down); Osgood and Conover, Field Mus. Nat. Hist.,
Zool. Ser., 12, p. 47, 1922—Laguna de Pan de Azucar and Rio Alba,
Mérida, Venezuela.

Merganetta colombiana Chapman, Bull. Amer. Mus. N. H., 36, p. 236, 1917—
Salento, Rio Toche, and El Eden, Colombia; Chubb, Ibis, 1919, p. 277—
Papallacta Lake, Ecuador; Lönnberg and Rendahl, Ark. Zool., 14, No. 25,
p. 28, 1922—Rio San Pedro, Amaguño, Cumbaya, and Rio Pita, Ecuador
(young descr.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 140,
1922—"Santa Marta," ex British Museum; Chapman, Bull. Amer. Mus.
N. H., 55, p. 212, 1926—Antisana, Valle de Cumbaya, upper Rio Pita,
San Pedro above Tumbaco, Rio Quijos, Oyacachi, and lower Sumaco,
Ecuador; Phillips, Nat. Hist. Ducks, 4, p. 219, pl. 93, distr. map 112,
1926 (monog.); Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 346,
1943 (monog.).

Merganetta armata colombiana Peters, Bds. World, 1, p. 188, 1931 (range).

Range.—The northern Andes from Venezuela (Mérida) south
through Colombia (all three ranges)² to central Ecuador (Chim-
borazo and Rio Pastaza).

Field Museum Collection.—1: Ecuador (Tungaragua, Rio Ambata,
1).

¹ *Merganetta colombiana* Des Murs is nearest to typical *leucogenis*. From that
form the males differ by having the mantle gray (not black) and the dark shaft
stripes to the feathers of the breast lighter. Females have the under parts much
lighter, the color being more orange than red. The sides of the neck and the face
behind the eye are also orange red, *not gray finely barred with white as in all other
forms of the genus*.

Additional material examined.—Venezuela: Mérida, 1; La Chuchilla, 2;
Nevados, 2; Rio Alba, 1.—Colombia: west of Harmonde, Cauca Valley, 1; Rio
Toche, east Quindio Andes, Tolima, 1; Cali, 1; Cauca Valley, 1; "Bogotá," 6;
La Plata, Huila, 2; Salento, Cauca, 2; El Roble, Quindio Andes, 1.—Ecuador:
Oyacachi River, 2; upper Rio Pita, 4; above Tumbaco, 1; Rio Tumbaco, 2; Mount
Chimborazo, 1; Antisana, 1; Cerro Galeras, Rio Pauchsi Yacu, 1; near Tumbaco,
Rio San Pedro, 1; Rio Quijos, 1; Rio Ambato, 1; Cumbaya, 1; Sumaco, 1; Papa-
lacta, 1.

² No authentic record from the Santa Marta Mountains.

Conover Collection.—23: Venezuela, Mérida (Laguna de Pan de Azucar, 1; Rio Alba, 1); Colombia (Moscofan, Cauca, 4; Paramo de Purace, Cauca, 1; Munchique, Cauca, 3; San Agustin, Huila, 1; La Plata, Huila, 3; Cumbál, Narino, 1); Ecuador (Cerro Mojanda, Imbabura, 1; Rio Shubol, Chimborazo, 1; Rio Guailabamba, Pichincha, 1; La Palmera, Rio Pastaza, 1; San Francisco, Rio Pastaza, 1; Rio Chalpi, Oriente, 1; Rio Mira, Occidente, 1; Rio Oyacachi, Napo Pastaza, 1).

**Merganetta leucogenis leucogenis* (Tschudi).¹ PERUVIAN
TORRENT DUCK.

Anas leucogenis Tschudi, Arch. Naturg., 9, (1), p. 390, 1843—"in Antibus Elevatis"—Mana Rimacunan, sources of the Aynamayo, Junín, Peru² (type in Museum of Neuchatel).

Merganetta leucogenys Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 554—Maraynioc; Selater and Salvin, l.c., 1876, p. 408—part, central Peru; Taczanowski, Orn. Per., 3, p. 486, 1886—part, Maraynioc (ex Jelski), Puna Manarimacunan (ex Tschudi); Salvadori, Cat. Bds. Brit. Mus., 27, p. 461, 1895 (descr., full bibliog.); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1902, (2), p. 54—Acobamba and Maraynioc; Phillips, Nat. Hist. Ducks, 4, p. 222, pl. 94, distr. map 112, 1926 (monog.).

Merganetta armata leucogenis Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 244, 1930—Panao, Peru (disc.; descr. imm.); Peters, Bds. World, 1, p. 188, 1931 (range, except central Ecuador).

Merganetta leucogenis leucogenis Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 349, 1943 (monog.).

Range.—Andes of Peru, from Amazonas³ (Molinopampa) to Maraynioc, Department of Junín.

Field Museum Collection.—1: Peru (Molinopampa, Amazonas, 1).

Conover Collection.—3: Peru (Panao Mountains, Huánuco, 1; Huánuco Viejo, Huánuco, 1; Junín, 1).

¹ *Merganetta leucogenis leucogenis* (Tschudi) is closest to *colombiana*, but in the males differs by having the mantle black (not light gray) and the edges to the scapulars and tertials slightly darker, more reddish. Below, the shaft stripes to the feathers of the breast are blacker, and there is a tendency toward a black line across the upper chest, separating the pure white neck from the streaked breast.

Females are indistinguishable from those of *turneri*, *garleppi*, and *berlepschi*, but can be told from the corresponding sex of *colombiana* by their darker red breasts and the fine gray and white bars marking the sides of the neck and extending to the face behind the eye.

Additional material examined.—Peru: Leimebamba, Amazonas, 1; Huánuco, Huánuco, 1; Maraynioc, Junín, 3; Chipa, Junín, 4; Obrajillo, Canta, 1; Oroya, Rio Mantaro, Junín, 4.

² Cf. Tschudi, Faun. Per., Orn., p. 312, 1846.

³ The pullus from "Tumbes" listed by Taczanowski (Proc. Zool. Soc. Lond., 1879, p. 243) can hardly belong here.

****Merganetta leucogenis turneri* Sclater and Salvin.¹ TURNER'S
TORRENT DUCK.**

Merganetta turneri Sclater and Salvin, Exot. Orn., Part 13, p. 199, pl. 100, Nov. 1, 1869—Tinta, Cuzco, Peru (type in British Museum); iidem, Proc. Zool. Soc. Lond., 1869, p. 600, pub. 1870—Tinta, Peru; iidem, l.c., 1876, p. 407—southern Peru (crit.); Salvadori, Cat. Bds. Brit. Mus., 27, p. 460, 1895—Tinta, Peru (full bibliog.); Chubb, Ibis, 1919, p. 276—Sumbay, Rio Vitor, Arequipa, Peru; Phillips, Nat. Hist. Ducks, 4, p. 216, pl. 92, distr. map 112, 1926 (monog.).

Merganetta leucogenys (not *Anas leucogenys* Tschudi) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 157—Tinta, Peru; iidem, l.c., 1874, p. 679—"upper Andes" (=Cuzco region, Peru); Taczanowski, Orn. Per., 3, p. 486, 1886—part, Andes of Cuzco (ex Whitely).

Merganetta Turneri Taczanowski, Orn. Per., 3, p. 488, 1886—Tinta (ex Whitely).

Merganetta leucogenys garleppi (not *Merganetta garleppi* Berlepsch) Ménégaux, Rev. Franc. d'Orn., 1, p. [138], 1909—Yura, southern Peru.

Merganetta leucogenys leucogenys Chapman, Bull. U. S. Nat. Mus., 117, p. 56, 1921—Occobamba Valley, Lucma, and Huaracundo Canyon, Peru.

Merganetta armata turneri Peters, Bds. World, 1, p. 188, 1931 (range).

(?)*Merganetta armata leucogenis* Morrison, Ibis, 1939, p. 467—Huancavelica.

Merganetta leucogenis turneri Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 350, 1943 (monog.).

Range.—From the Cuzcan Andes south to Lake Titicaca, west to (?)Huancavelica and the province of Arequipa (Rio Vitor)² and east to the Bolivian border (Limbaní).

¹ *Merganetta leucogenis turneri* Sclater and Salvin is a very dark-breasted form. According to the description of the male type, the chest and flanks are black and the lower breast and abdomen dark reddish gray broadly streaked with black. This is much as in some specimens of *berlepschi*, but from that form *turneri* can be told by the rufous brown (not buffy white) edges to the scapulars and tertials and the dark mantle unmarked with white. Females cannot be told from those of *garleppi*, *berlepschi* or typical *leucogenis*.

As in *berlepschi* there seems to be a great variation in the extent of the black on the chest and flanks. Among the specimens examined were four adult males. In all of these specimens the black flanks were lacking, and the black chest was represented simply by a narrow line separating the white foreneck from the darker under parts. The rest of the chest, breast and abdomen were light brownish heavily streaked with black. While some of this difference may be due to intergradation with the neighboring forms *leucogenis* and *garleppi*, much of it probably is individual variation.

Additional material examined.—Peru: Tocopqueu, Occobamba Valley, 2; Huaracundo Canyon, 4; Lucma, Cosireni Pass, Urubamba Valley, 1; Keatin (Quiton) River, 2; Limbaní, Puno, 1.

² Dr. R. A. Philippi B. in a letter to the junior author states that he has seen a torrent duck in the Quebrada de Putre, el. 4,200 meters, Cordillera de Arica, and that the bird is known to the natives of that region and goes by the name of "Chulyumpi." Unfortunately, he was not able to collect the specimen, but on geographical grounds the birds from that region would appear most likely to belong to the form *turneri*.

Conover Collection.—7: Peru, Puno (Limbaní, 1; Río Sandía, 2; Río Sangaban, 4).

***Merganetta leucogenis garleppi* Berlepsch.¹ BOLIVIAN TORRENT DUCK.**

Merganetta garleppi Berlepsch, Orn. Monatsb., 2, p. 110, 1894—Cocotal (Locotal), Bolivia (type in Berlepsch Collection, now in Frankfurt Museum); Salvadori, Cat. Bds. Brit. Mus., 27, p. 460, 1895 (full bibliog.); Chubb, Ibis, 1919, p. 277—Río Blanco, La Paz, Bolivia; Phillips, Nat. Hist. Ducks, 4, p. 217, pl. 92, distr. map 112, 1926 (monog.).

Merganetta armata garleppi Peters, Bds. World, 1, p. 188, 1931 (range).

Merganetta leucogenis garleppi Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 351, 1943 (monog.).

Range.—Andes of Bolivia (except extreme south), intergrading in the north with *turneri* and in the south with *berlepschi*.

****Merganetta leucogenis berlepschi* Hartert.² BERLEPSCH'S TORRENT DUCK.**

Merganetta berlepschi Hartert, Nov. Zool., 16, p. 244, 1909—near Tucumán, 1,800 meters (type in Tring Collection, now in the American Museum of Natural History, New York, examined); idem, l.c., 32, p. 273, 1925 (note on type=*M. turneri berlepschi*); Phillips, Nat. Hist. Ducks, 4, p. 218 (in text), 1926—near Tucumán.

Merganetta Garleppi (not of Berlepsch) Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 208, 1902—Tucumán (La Hoyada; Río Vipos; Ancajuli).

Merganetta armata (not of Gould) Bruch, Rev. Mus. La Plata, 11, p. 247, 1904—Santa Catalina, Jujuy; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 234, 1910—part, "La Ciénaga," Tucumán, and Santa Catalina, Jujuy.

¹ *Merganetta leucogenis garleppi* Berlepsch, in the male sex can be told from the other races of *leucogenis* by the buffy gray (sometimes almost white) edges to the scapulars and tertials combined with a white or very pale buffy white breast which is fairly heavily streaked with black. The mantle is streaked with white as in *berlepschi*. The under parts often show a reddish tinge which probably denotes immaturity or, at the edges of its range, intergradation with *turneri* or *berlepschi*.

Females are indistinguishable from those of *berlepschi*, *turneri* or typical *leucogenis*.

Material examined.—Bolivia: Incachaca, Cochabamba, 5; Yungas de Cochabamba, 1; Omeja, Yungas, 1; western Bolivia, 1.

² *Merganetta leucogenis berlepschi* Hartert most nearly resembles *turneri*, but the males have the mantle streaked with white and the edges of the scapulars and tertials white or buffy white, not reddish buff. Females are indistinguishable from those of *turneri*.

This form is very dark-breasted as is *turneri* but typical specimens, as far as is now known, seem to come only from Tucumán and Salta (Sierra del Cajón) and these vary widely, some having the chest black and others reddish brown streaked with black like the breast and abdomen. South of Tucumán and north of Salta the birds seem to get lighter colored. A specimen from Catamarca ex-

Merganetta garleppi (not of Berlepsch) Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 234, 1910—La Hoyada, Tucumán.

Merganetta Garleppi or *Berlepschi* Dabbene, El Hornero, 4, p. 34, pls. 3 and 4, 1927—Tucumán (Aconquija; Ciénaga; Ancajuli; Las Pavas) and Salta (Sierra del Cajón) (desc. variation in males).

Merganetta armata berlepschi Peters, Bds. World, 1, p. 189, 1931 (range).

Merganetta leucogenis berlepschi Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 352, 1943 (monog.).

Range.—Andes of southern Bolivia (Tarija) and northwestern Argentina south to Catamarca (Lago Blanco).

Conover Collection.—1: Bolivia (Rio Narvaes, Dept. Tarija, 1).

**Merganetta armata* Gould.¹ CHILEAN TORRENT DUCK.

Merganetta armata Gould, Proc. Zool. Soc. Lond., 9, "1841," p. 95, pub. March, 1842—"Andes of Chile, lat. 34°-35°"=Colchagua (cotypes in British Museum examined); Des Murs, Icon. Orn., livr. 1, pl. 5 (=male), 1845—Chile; idem, l.c., livr. 8, pl. 48 (=female), 1847; Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 406—Chilean Andes (ex Bridges, Gay); Salvadori, Cat. Bds. Brit. Mus., 27, p. 458, pl. 5, fig. 2, 1895—Chilean Andes and Colchagua, Chile; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 234, 1910—part, Lago General Paz, Chubut; Wetmore, Univ. Calif. Pub. Zool., 24, p. 419, 1926—Rio Negro (Bariloche; Rio Quemquemtreu) and Chubut (Rio Epuyén; Rio Cholila); Conover, Field Mus. Nat. Hist., Zool. Ser., 24, p. 353, 1943 (monog.).

Raphipterus chilensis Gay, Hist. Fis. Pol. Chile, Atlas, Zool., pl. [12], 1844—Chile (cotypes in Paris Museum; cf. Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 1, p. 68, 1929).

amined by the junior author is much lighter than the type, the under parts being light reddish buff streaked fairly heavily with black. It surprisingly appears to be tending toward *garleppi*, being only redder on the breast, and shows no tendency toward *armata* in its facial markings. The only specimen of an adult male available from north of Salta was from Tarija, Bolivia. This example has the chest and upper breast very heavily marked with black, only the edges of the feathers being white, and the lower breast and abdomen are rusty white heavily streaked with black.

Additional material examined.—Argentina: Tucumán (the type), 1; Rio Norco, Tucumán, 1; Lago Blanco, Catamarca, 2.

¹ *Merganetta armata* Gould, in the male sex, differs from all other forms of the genus by having a black stripe running down the foreneck from the chin to the chest and another transverse black stripe from each eye to the black throat band; also by having broad white edgings to the feathers of the mantle, the scapulars and the tertials. Females cannot be distinguished from the corresponding sex of *leucogenis*, *garleppi*, *turneri* and *berlepschi*, though ten examples of *armata* all have the breast very dark red, showing no variation in this feature, whereas in a series from Peru an occasional lighter-breasted (immature?) example occurs.

This form has been kept specifically separate from the others because of the very distinct throat and facial markings. (In immature males these markings are the first features of the adult plumage to make their appearance.)

Additional material examined.—Chile: Santiago, 2; Baños Cauquenes, Rio Claro, 5; Colchagua, 3; unspecified, 5.—Argentina: Bariloche, Rio Negro, 1; Rio Quemquemtreu, Rio Negro, 1; Rio Epuyén, Chubut, 1; Rio Cholila, Chubut, 1.

Merganetta fraenata Salvadori,¹ Cat. Bds. Brit. Mus., 27, p. 458, pl. 5, fig. 1, 1895—"Central Chili" (type in British Museum examined).

Merganetta andina Blaauw, Notes Leyden Mus., 35, p. 26, December, 1912—between Puerto Varas and Lake Todos los Santos, Llanquihue.

Merganetta armata armata Phillips, Nat. Hist. Ducks, 4, p. 211, pl. 91, distr. map 112, 1926 (monog.); Peters, Bds. World, 1, p. 189, 1931 (range); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 340, 1932—Coquimbo (Balala and Guanta, Rio Turbio), Llanquihue (Casa Richards, Rio Nirehuau), Colchagua (Colchagua), "Central Chile," "Andes" (of Chile), and Tierra del Fuego (Lago Fagnano).

Merganetta armata fraenata Phillips, Nat. Hist. Ducks, 4, p. 214, pl. 92, distr. map 112, 1926 (dist. char.); Peters, Bds. World, 1, p. 189, 1931 (range).

Range.—The Andes of Chile and Argentina from Coquimbo (Balala, Rio Turbio) south to Aysen (Rio Nirehuau, 46° S. lat.), Chubut (Rio Cholila and Rio Epuyén), and even to Tierra del Fuego.²

Field Museum Collection.—3: Chile (Guanta, Rio Turbio, Coquimbo, 1; Villarica, Cautin, 2).

Conover Collection.—20: Chile (Balala, Rio Turbio, Coquimbo, 2; Rio Blanco, Santiago, 1; Lautaro, Cautin, 14; Casa Richards, Rio Nirehuau, Aysen, 2); Argentina (Las Lajas, Rio Agrio, Neuquen, 1).

¹ The distinctive features of this supposed race appear to be due to individual variation.

² The British Museum has an adult male obtained by P. W. Reynolds eight miles south of Lago Fagnano on Dec. 22, 1928 (cf. Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 342, footnote 2, 1932).

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