





Check-list of Birds of the World

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CHECK - LIST  
OF  
BIRDS OF THE WORLD  
  
VOLUME I  
SECOND EDITION





CHECK-LIST  
OF  
BIRDS OF THE WORLD

VOLUME I  
SECOND EDITION  
Revision of the Work of James L. Peters

*Edited by*  
ERNST MAYR  
and  
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CAMBRIDGE · MASSACHUSETTS  
MUSEUM OF COMPARATIVE ZOOLOGY  
1979

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QL  
677  
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1979

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## INTRODUCTION

Nearly fifty years have passed since the publication of the first edition of this volume. In these years many changes have taken place in the concepts of taxonomy, so that the work was already obsolete when it went out of stock some twenty years ago, pioneering as it had been when published in 1931. A thorough revision was evidently necessary, a task exceeding the competence of any single author. The editors therefore invited various specialists to accept authorship of the manuscript of the orders involved, and this invitation was accepted by nearly all those asked. World ornithology is deeply indebted to these authors for their willingness to participate in this cooperative project, at the cost to themselves of a great deal of time and effort.

This new edition of Volume I follows essentially the style of recent volumes of the *Check-list* in accepting large genera and in making the species the principal unit. Similarly, references to the literature have been expanded, and geographical ranges given in more detail. Citations and references have been given in rather fuller form, in the interest of intelligibility. References to type locality have been standardized, except when exact quotation seemed called for.

With regard to taxonomic sequence, it seems likely that we are on the verge of a significant breakthrough in our understanding of the interrelationship of the major groups of birds. The analysis of amino acid replacements in macromolecules permits a precise reconstruction of the sequence of branching points for the major taxa. This method has already demonstrated conclusively that the Anseriformes are a side branch of the galliform birds (Jollès *et al.*, 1976, *Journ. Molecular Evolution*, **8**, pp. 59-78), and, predictably, during the next twenty years will permit a complete reconstruction of avian phylogeny. When all (or at least most) of this information is in hand, ornithologists will wish to adopt a new sequence of the avian orders and, presumably, a change in ranking of many higher taxa. In the present revision we

have adopted only those changes that are clearly dictated by the new evidence. This includes treating the Sphenisciformes as derived from the Procellariiformes (both not too far from the Gaviiformes), and reversing the sequence of Anseriformes and Falconiformes, in order to bring the Anseriformes closer to the Galliformes (first order in Volume II of the *Check-list*) and the Falconiformes closer to the Ciconiiformes.

Decisions concerning classification have been the responsibility of the authors of the various sections. Some authors, for instance, have preferred broader genera than others. Authors may also differ in their views as to the most primitive species and genera in a family. The editors felt that they had no right to interfere with the judgment of the authors, but they urged in correspondence the following of similar standards from one group to another. In cases of radical departure from previous classifications, each user of the *Check-list* will have to determine for himself whether to follow the new presentation or one of the more traditional arrangements.

The sequence of families and genera within the orders has again been determined by the authors of the sections. The sequence offered by Peters in 1931 was frequently highly unnatural (nowhere more so than in the Anseriformes), and the adoption of a sequence seeking to represent common descent was a strong desideratum. The classification and sequence here proposed constitute, of course, only a progress report, and further studies, particularly biochemical ones, will almost certainly result in further modifications.

Valid names of the first edition but now synonymized have regularly been listed as synonyms under the appropriate name. Synonyms correctly listed in the first edition have been omitted; incorrectly listed synonyms have been placed in the correct synonymy.

Fossil orders and families appearing in the first edition have not been included, but the principle there established of considering as fossil any taxon "not known from at least a fragment of the skin and feathers" has been adhered to.

A comparison of the number of genera and species, by orders, between the two editions shows the following:

	<i>Genera</i>		<i>Species</i>	
	1931	1978	1931	1978
Struthioniformes	6	6	14	11
Tinamiformes	9	9	51	47
Procellariiformes	24	23	107	99
Sphenisciformes	6	6	17	15
Gaviiformes	1	1	4	4
Podicipediformes	5	6	18	20
Pelecaniformes	9	7	59	55
Ciconiiformes	65	36	118	109
Phoenicopteriformes	3	3	6	5
Falconiformes	89	75	289	282
Anseriformes	64	46	170	152
	281	218	853	799

These figures, however, do not fully reveal the extent of taxonomic activity in the last forty-eight years. This is better indicated by the following tabulation:

Number of species recognized by Peters	853
Number of these species since reduced to subspecies or synonyms	<u>101</u>
	752
Number of species described since 1930	13
Taxa listed by Peters as subspecies or synonyms but now considered full species	<u>34</u>
Taxa considered species in this edition	799

Most of these changes concern the Procellariiformes and the Falconiformes.

As with recently published volumes of this work, the changes in names of countries and geographical features have caused considerable difficulty. When a colony of a European nation becomes independent, it is natural that it should wish to acquire an independent name, such as Tanzania, Zambia, or Zaire;

such names of sovereign states are adopted herein. With regard to other changes, it has been impossible to achieve consistency. The change, for example, from Celebes, with its numerous *celebensis* species and subspecies, to Sulawesi has not been observed. There will be inevitable variation in the degree to which universally known names are replaced—or paralleled—by new ones.

It should be borne in mind that, in referring to information contained in this volume, citation should be to the authors of the various sections, not to the editors. Author names appear in the heading of each order, or in some instances family.

Several ornithologists have generously given of their time and knowledge to serve as readers of one or more sections of the manuscript; their names appear in footnotes at the beginning of the sections. The editors are deeply grateful to them, as they are to Helen Phillips for expert editorial assistance.

1 March 1978

ERNST MAYR  
G. WILLIAM COTTRELL

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CHECK - LIST  
OF  
BIRDS OF THE WORLD  
VOLUME I  
SECOND EDITION



CLASS AVES  
SUBCLASS NEORNITHES  
ORDER STRUTHIONIFORMES

ERNST MAYR

- cf. Fürbringer, 1888, K. Zool. Genootschap Natura Artis  
Magistra Amsterdam, Bijdragen Dierkunde, pt. 15, pp.  
1424-1518 (relationships).  
Sibley, 1960, *Ibis*, **102**, pp. 229-230 (egg-white proteins).  
Bock, 1963, Proc. XIII Int. Ornith. Congr., Ithaca (1962),  
pp. 39-54 (cranial evidence).  
Meise, 1963, Proc. XIII Int. Ornith. Congr., Ithaca (1962),  
pp. 115-125 (behavior).  
Krumbiegel, 1966, Straussenvögel (Neue Brehm-Bücherei  
362), 128 pp.  
Jehl, 1971, Trans. San Diego Soc. Nat. Hist., **16**, pp.  
291-301 (color patterns of downy young).  
Sibley and Frelin, 1972, *Ibis*, **114**, pp. 377-387 (egg-white  
proteins).  
Cracraft, 1974, *Ibis*, **116**, pp. 494-521 (phylogeny and  
evolution).  
Davies, 1976, Proc. XVI Int. Ornith. Congr., Canberra  
(1974), pp. 109-120 (comparative biology).  
Prager *et al.*, 1976, Journ. Molecular Evol., **8**, pp. 283-294  
(monophyletic origin).

SUBORDER STRUTHIONES

FAMILY STRUTHIONIDAE<sup>1</sup>

GENUS STRUTHIO LINNAEUS

- Struthio* Linnaeus, 1758, Syst. Nat., ed. 10, p. 155. Type,  
by subsequent designation (G. R. Gray, 1840, List Gen.  
Birds, p. 63), *Struthio camelus* Linnaeus.
- cf. Meinertzhagen, 1954, Birds Arabia, pp. 573-575.  
Valverde, 1957, Aves Sahara Español, pp. 106-116.  
Sauer and Sauer, 1966, Living Bird, **5**, pp. 45-75 (behavior  
and ecology).  
Etchécopar and Hüe, 1967, Birds North Africa, pp. 1-2.

<sup>1</sup>MS read by D. W. Snow.

Int. Union Conservation Nature (IUCN), 1967, Red Data Book, **2** (Aves), p. 22a (status of *syriacus*).

Benson *et al.*, 1971, Birds Zambia, p. 33.

Sauer, 1971, Zeitschr. Kölner Zoo, **14**, pp. 43-64 (biology).

Urban and Brown, 1971, Checklist Birds Ethiopia, p. 22.

Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 37-41.

#### STRUTHIO CAMELUS

##### **Struthio camelus syriacus** Rothschild

*Struthio camelus syriacus* Rothschild, 1919, Bull. Brit. Ornith. Club, **39**, p. 83—Syrian Desert.

Formerly deserts of Syria, Jordan, Iraq, and Saudi Arabia. Extinct?

##### **Struthio camelus camelus** Linnaeus

*Struthio Camelus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 155—Syria, Arabia, Libya, Africa; restricted to North Africa by Rothschild, 1919, Bull. Brit. Ornith. Club, **39**, p. 83; further restricted to Sennar by Stresemann, 1926, Ornith. Monatsber., **34**, p. 139.

*Struthio camelus spatzi* Stresemann, 1926, Ornith. Monatsber., **34**, p. 138—Río de Oro = Spanish Sahara.

*Struthio camelus rothschildi* Grant and Mackworth-Praed, 1951, Bull. Brit. Ornith. Club, **71**, p. 45—new name for *camelus* (by error; cf. Meinertzhagen, 1951, Bull. Brit. Ornith. Club, **71**, p. 46).

Spanish Sahara, Mauritania, and interior Senegal east to Sudan and Eritrea; western and northeastern Ethiopia south to about the Awash and Omo Rivers.

##### **Struthio camelus molybdophanes** Reichenow

*Struthio molybdophanes* Reichenow, 1883, Mitt. Ornith. Vereines Wien, p. 202—Somaliland.

Somalia, southeastern and southern Ethiopia (including Rift Valley), extreme southeastern Sudan, and Kenya (? overlapping range of *massaicus*).

##### **Struthio camelus massaicus** Neumann

*Struthio massaicus* Neumann, 1898, Journ. Ornith., **46**, p. 243—Ukamba, Kenya Colony.

Southern Kenya and Tanzania south to northwest of Lake Rukwa and to the Great and Little Ruaha Rivers.

**Struthio camelus australis** Gurney

*Struthio australis* Gurney, 1868, *Ibis*, p. 253—South Africa. Southwestern Angola, South West Africa (Namibia), Botswana, Rhodesia (Zimbabwe), southern Mozambique, extreme northwestern Cape Province, and northeastern Transvaal; formerly Zambia, and more widespread in South Africa.

## SUBORDER RHEAE

FAMILY RHEIDAE<sup>1</sup>

## GENUS RHEA BRISSON

*Rhea* Brisson, 1760, *Ornith.*, **1**, p. 46; **5**, p. 8. Type, by tautonymy, *Rhea* = *Struthio americanus* Linnaeus.

cf. Hellmayr and Conover, 1942, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 1, pp. 1-4.

Müller, 1961-63, *Zeitschr. Wissen. Zool.*, **165**, pp. 221-319; **168**, pp. 35-118 (morphology).

Raikow, 1968-69, *Wilson Bull.*, **80**, pp. 312-319; **81**, pp. 196-206 (behavior).

Bruning, 1975, *Living Bird*, **13** (1974), pp. 251-294 (social structure and reproductive behavior).

Blake, 1977, *Man. Neotropical Birds*, **1**, pp. 8-11.

## RHEA AMERICANA

**Rhea americana americana** (Linnaeus)

*Struthio americanus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 155; based on "Nhanduguaçu" of Marcgrave, 1648, *Hist. Rerum Nat. Brasiliae*, p. 190—South America = Sergipe and Rio Grande do Norte, Brazil, *vide* Marcgrave.

Campo region of eastern Brazil from Maranhão, Piauí, Ceará, and Rio Grande do Norte south to São Paulo and ? southern Mato Grosso (Rio Vacaria).

**Rhea americana intermedia** Rothschild and Chubb

*Rhea americana intermedia* Rothschild and Chubb, 1914, *Novit. Zool.*, **21**, p. 223—Barra San Juan, Colonia, Uruguay.

Extreme southeastern Brazil (Rio Grande do Sul) and Uruguay.

<sup>1</sup>MS read by E. R. Blake.

**Rhea americana nobilis** Brodkorb

*Rhea americana nobilis* Brodkorb, 1939, Proc. Biol. Soc. Washington, **52**, p. 138—40 kilometers west-southwest of Capitán Bado, Paraguay.

Paraguay east of Río Paraguay (Capitán Bado, Horqueta, Rosario).

**Rhea americana araneipes** Brodkorb

*Rhea americana araneipes* Brodkorb, 1938, Occas. Papers Mus. Zool., Univ. Michigan, no. 367, p. 1—200 kilometers west of Puerto Casado, Paraguay.

Paraguayan Chaco. Probably north to eastern Bolivia and southern Mato Grosso.

**Rhea americana albescens** Lynch Arribálzaga and Holmberg

*Rhea albescens* Lynch Arribálzaga and Holmberg, 1878, Naturalista Argentina, **1**, p. 101—Carhué, Buenos Aires, Argentina.

Plains of Argentina (to 2,000 meters) from the Andes to the Atlantic and south to Río Negro. Birds of eastern Bolivia and southern Mato Grosso possibly this form.

GENUS **PTEROCNEMIA** GRAY

*Pterocnemia* G. R. Gray, 1871, Hand-list Birds Brit. Mus., **3**, p. 2. Type, by monotypy, *Rhea darwinii* Gould = *Rhea pennata* Orbigny.

cf. Hellmayr and Conover, 1942, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 1, pp. 5-6.

Johnson, A. W., 1965, Birds Chile, **1**, pp. 47-48; 1972, Suppl., p. 86.

**PTEROCNEMIA PENNATA****Pterocnemia pennata garleppi** Chubb

*Pterocnemia tarapacensis garleppi* Chubb, 1913, Bull. Brit. Ornith. Club, **33**, p. 79—Esperanza, Bolivia; altitude 4,000 meters.

High Andes of southern Peru (Tacna, Puno), southwestern Bolivia (Oruro, Potosí), and northwestern Argentina (Jujuy, Catamarca). Doubtfully distinct from *tarapacensis*.<sup>1</sup>

<sup>1</sup>According to some authors the highland populations (*garleppi* and *tarapacensis*) are specifically distinct from *pennata*.—E. M.

**Pterocnemia pennata tarapacensis** Chubb

*Pterocnemia pennata tarapacensis* Chubb, 1913, Bull. Brit. Ornith. Club, **33**, p. 79—Canchosa, Tarapacá, Chile.

Puna zone of northern Chile south to Atacama (Alto Huasco).<sup>1</sup>

**Pterocnemia pennata pennata** (Orbigny)

*Rheapennata* Orbigny, 1834, Voyage Amérique Méridionale, livr. 2, p. 67, note 2—lower Río Negro, southern Buenos Aires.

Southern Chile from southern Aisén to Strait of Magellan; Patagonian lowlands of Argentina south from southern Mendoza. Introduced Tierra del Fuego.

## SUBORDER CASUARI

## FAMILY CASUARIIDAE

GENUS CASUARIUS BRISSON<sup>2</sup>

*Casuarius* Brisson, 1760, Ornith., **1**, p. 46; **5**, p. 10. Type, by tautonymy, *Casuarius* = *Struthio casuarius* Linnaeus.

cf. Rothschild, 1900, Trans. Zool. Soc. London, **15**, pp. 109-148, pls. 22-41.

Rothschild, 1931, Novit. Zool., **36**, pp. 181-183 (*bennetti*).

<sup>1</sup>See preceding note.—E. M.

<sup>2</sup>Nothing is certain about the classification of the cassowaries except the fact that there are 3 species. Not a single series of adult specimens from a single locality exists. The 42 described species and subspecies are largely based on size, on the formation of the wattles, and on differences in the color of the naked throat, yet nothing is known about sexual dimorphism and age changes in these characters. Furthermore, many of the types are zoological garden specimens of uncertain origin. The Papuans often have tame young cassowaries in their villages and take them along on their canoe voyages. There is little doubt that this is how cassowaries got to Ceram (*casuarius*) and to New Britain (*bennetti*). To continue, as was done in the past, to recognize subspecies strictly on a geographical basis, when there is no agreement at all on their diagnostic characters, would seem unrealistic. I have, however, indicated what the oldest name would be, if subspecies for the populations of certain areas were recognized.

Synonyms for names proposed prior to 1940 are not listed; a full citation is given in Peters, 1931, Check-list Birds World, **I**, pp. 5-9, and Mayr, 1941, List New Guinea Birds, pp. 1-3.—E. M.

- Mayr, 1940, Amer. Mus. Novit., no. 1056, pp. 1-4 (individual and geographical variation).
- Mayr, 1941, List New Guinea Birds, pp. 1-3 (synonymy).
- Warren, 1956, Ann. Mag. Nat. Hist., ser. 12, 9, pp. 753-773 (specimens, chiefly British Museum).
- Fisher, 1968, Avic. Mag., 74, pp. 181-194 (breeding of *casuarius*).
- Storr, 1973, Western Austral. Mus., Spec. Publ. no. 5, p. 2 (range of *casuarius*, northern Queensland).
- White, 1975, Bull. Brit. Ornith. Club, 95, pp. 165-170 (*casuarius*, Ceram).
- Crome, 1976, Emu, 76, pp. 8-14 (*casuarius*, northern Queensland).
- White, 1976, Bull. Brit. Ornith. Club, 96, pp. 66-68 (*bennetti*, New Britain).

#### CASUARIUS BENNETTI

##### **Casuarius bennetti** Gould

*Casuarius Bennetti* Gould, 1857, Proc. Zool. Soc. London, p. 269, pl. 129—New Britain.

Hill country and mountains of New Guinea (up to 2,800 meters); Japen Island and New Britain (presumably introduced).<sup>1</sup>

#### CASUARIUS CASUARIUS

##### **Casuarius casuarius** (Linnaeus)

*Struthio Casuarius* Linnaeus, 1758, Syst. Nat., ed. 10, p. 155—Asia, Sumatra, Moluccas, Banda; Ceram, "corrected" type locality, Rothschild, 1900, Trans. Zool. Soc. London, 15, p. 115.

Western, southern, and eastern New Guinea; from the Vogelkop east at least to east coast of Geelvink Bay, all of southern New Guinea from Onin Peninsula to Milne Bay, and north coast of southeastern New Guinea to Morobe district (Gira River). Occurrence in northern New Guinea not so well substantiated, but reported from mouth of Mamberano River to Tana Mera (west of Humboldt Bay). Aru Islands; Ceram

<sup>1</sup>Regional names available: Vogelkop (*papuanus*), Japen (*goodfellowi*), Snow Mountains (*claudii*), central highlands (*shawmayeri*), Huon Peninsula (*hecki*), New Britain (*bennetti*), southeastern New Guinea (*picticollis*).—E. M.



(undoubtedly introduced from Onin Peninsula, southwestern New Guinea). East coast of Cape York Peninsula from Pascoe River south to Massy Creek, inland to upper Wenlock River; northern Queensland from Cooktown district (Mt. Amos) south to Burdekin drainage (Paluma), inland to Herberton Range; Hinchinbrook Island.<sup>1</sup>

## CASUARIUS UNAPPENDICULATUS

**Casuarius unappendiculatus** Blyth

*Casuarius unappendiculatus* Blyth, 1860, Journ. Asiatic.

Soc. Bengal, **29**, p. 112—no locality.

Salawati and Japen Islands, and northern New Guinea from the Vogelkop to Astrolabe Bay.<sup>2</sup>

## FAMILY DROMAIIDAE

GENUS DROMAIUS<sup>3</sup> VIEILOTT

*Dromiceius* Vieillot, 1816, Analyse, p. 54; *Dromaius*, p. 70.

Type, by monotypy, *Casuarius novaehollandiae* Latham.

cf. Neumann, 1962, Journ. Ornith., **103**, pp. 153–165 (behavior).

Davies, 1968, Proc. Ecol. Soc. Australia, **3**, pp. 160–166 (ecology).

Eastman, 1969, Life Emu, 72 pp.

<sup>1</sup>Regional names available: Ceram (*casuarius*), Geelvink Bay (*tricarunculatus*), northern New Guinea east to Tana Mera (*bistriatus*), north coast of southeastern New Guinea (*lateralis*), southern New Guinea and Cape York (*slaterii*), northeastern Queensland (*johnsonii*), Aru Islands (*aruensis*). The home of *bicarunculatus* is quite uncertain, but surely not the Aru Islands.—E. M.

<sup>2</sup>Regional names available: Salawati and Vogelkop (*unappendiculatus*), Japen (*occipitalis*), northern New Guinea (*aurantiacus*, *philipi*).—E. M.

<sup>3</sup>The incorrect formation *Dromiceius*, possibly arising from a printer's misreading of manuscript, and changed to *Dromaius* by the author a few pages later, was not employed except as a synonym of *Dromaius* until early in the twentieth century. G. R. Gray, as first reviser, 1840, List Gen. Birds, p. 63, clearly established *Dromaius* as the correct spelling. Cf. Serventy, Condon, and Mayr, 1965, Bull. Zool. Nomencl., **22**, pp. 63–65, and Melville, 1977, Bull. Zool. Nomencl., **34**, pp. 12–13.—E. M.

## DROMAIUS NOVAEHOLLANDIAE

**Dromaius novaehollandiae novaehollandiae** (Latham)

*Casuarius N. Hollandiae* Latham, 1790, Index Ornith., p. 665—New Holland = Sydney, New South Wales, *vide* Mathews, 1910, Birds Australia, 1, p. 3.

*Dromiceius novaehollandiae rothschildi* Mathews, 1912, Novit. Zool., 18, p. 175—Gracefield, Southwest Australia.

*Dromiceius novaehollandiae woodwardi* Mathews, 1912, Novit. Zool., 18, p. 175—Strelly River, Northwest Australia.

*Dromaius novaehollandiae montanus* Campbell, 1939, Bird Observers' Club, Melbourne, Monthly Notes, June 13—Grampian Mountains, Victoria; altitude above 1,000 feet. All of Australia, particularly in the interior.

**Dromaius novaehollandiae diemenensis** Le Souef

*Dromaeus diemenensis* Le Souef, 1907, Bull. Brit. Ornith. Club, 21, p. 13—Tasmania.

Tasmania. Extinct.

## DROMAIUS DIEMENIANUS

**Dromaius diemenianus** (Jennings)

*Casuarius diemenianus* Jennings, 1828, Ornithologia, p. 382—Kangaroo Island.

Kangaroo Island, Australia. Extinct.

SUBORDER **APTERYGES**FAMILY **APTERYGIDAE**GENUS **APTERYX** SHAW

*Apteryx* Shaw, 1813, Nat. Misc., 24, pls. 1057, 1058. Type, by monotypy, *Apteryx australis* Shaw.

*Kiwi* Verheyen, 1960, Bull. Soc. Roy. Zool. Anvers, no. 15, p. 10. Type, by original designation, *Apteryx owenii* Gould.

cf. Oliver, 1955, N. Z. Birds, ed. 2, pp. 47-56.

Ornith. Soc. N. Z., 1970, Annot. Checklist Birds N. Z., p. 15.

Clayton, 1972, Int. Zoo Yearbook, 12, pp. 134-136 (breeding and behavior).

Reid and Williams, 1975, in Kuschel (ed.), *Biogeogr. Ecol. N. Z.*, pp. 301-330.

Davis and Greenville, 1976, *Int. Zoo Yearbook*, **16**, pp. 86-88 (breeding).

APTERYX AUSTRALIS

***Apteryx australis mantelli*** Bartlett

*Apteryx Mantelli* Bartlett, 1852, *Proc. Zool. Soc. London* (1850), p. 275—North Island.

North Island: generally distributed in forest areas north of lat. 40° S.; Little Barrier and Kapiti Islands (introduced).

***Apteryx australis australis*** Shaw

*Apteryx australis* Shaw, 1813, in Shaw and Nodder, *Nat. Misc.*, **24**, pl. 1057—New Zealand. Type from Dusky Sound, South Island, *vide* Oliver, 1955, *N. Z. Birds*, ed. 2, p. 51.

South Island: high rainfall areas of southern Westland, western Otago, and Southland; Kapiti Island (introduced).

***Apteryx australis lawryi*** Rothschild

*Apteryx lawryi* Rothschild, 1893, *Bull. Brit. Ornith. Club*, **1**, p. 61—Stewart Island.

Stewart island (main island only).

APTERYX OWENII

***Apteryx owenii*** Gould

*Apteryx Owenii* Gould, 1847, *Proc. Zool. Soc. London*, p. 93—New Zealand. Type probably from Nelson or Marlborough, *vide* Oliver, 1955, *N. Z. Birds*, ed. 2, p. 53.

South Island: high rainfall areas, Marlborough to southern Fiordland, chiefly west of main divide; Kapiti Island (introduced); North Island: extinct before 1900.

APTERYX HAASTII

***Apteryx haastii*** Potts

*Apteryx Haastii* Potts, 1872, *Trans. N. Z. Inst.*, **4**, p. 204—Westland. Type from Okarito River, *vide* Oliver, 1955, *N. Z. Birds*, ed. 2, p. 55.

South Island: forest areas from western Nelson to Westland, possibly to Fiordland, crossing main divide at Lewis and Arthur's Passes; Little Barrier Island (introduced).

ORDER TINAMIFORMES<sup>1</sup>

EMMET R. BLAKE

## FAMILY TINAMIDAE

- cf. Boetticher, 1934, *Jenaische Zeitschr. Naturwissen.*, **69**, pp. 169-192.  
 Hellmayr and Conover, 1942, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 1, pp. 6-114.  
 Todd, 1942, *Ann. Carnegie Mus.*, **29**, pp. 1-29.  
 Meyer de Schauensee, 1949, *Caldasia*, **5**, pp. 343-349 (Colombia).  
 Friedmann, Griscom, and Moore, 1950, *Pacific Coast Avifauna* (Cooper Ornith. Soc.), no. 29, pp. 9-11 (Mexico).  
 Olivares, 1958, *Rev. Univ. Nac. Colombia*, no. 23, pp. 245-301 (Colombia).  
 Phelps and Phelps, 1958, *Bol. Soc. Venezolana Cien. Nat.*, **19**, pp. 23-29.  
 Pinto, 1964, *Ornitologia Brasiliense*, **1**, pp. 1-13.  
 Parkes and Clark, 1966, *Condor*, **68**, pp. 459-471 (monophyly with ratites).  
 Jehl, 1971, *Trans. San Diego Soc. Nat. Hist.*, **16**, pp. 291-301 (color patterns of downy young).  
 Blake, 1977, *Man. Neotropical Birds*, **1**, pp. 12-80.

## GENUS TINAMUS HERMANN

- Tinamus* Hermann, 1783, *Tabula Affinitatum Animalium*, pp. 164, 235; based on "Les Tinamous" of Buffon, 1778, *Hist. Nat. Générale*, **19**, *Hist. Nat. Oiseaux*, **4**, p. 502. Type, by subsequent designation (Apstein, 1915, *Sitzungsber. Gesell. Naturforsch. Freunde Berlin*, no. 5, p. 197), *Tetrao major* Gmelin.<sup>2</sup>  
 cf. Brabourne and Chubb, 1913, *Ann. Mag. Nat. Hist.*, ser. 8, **12**, p. 579 (key to species).

<sup>1</sup>Placed by some with the Struthioniformes.—E. R. B.

<sup>2</sup>*Tinamus* Hermann, 1783, has priority over *Tinamus* Latham, 1790, *Index Ornith.*, p. 633, the type of which also is *Tetrao major* Gmelin (designated by G. R. Gray, 1840, *List. Gen. Birds*, p. 63).—E. R. B.

Traylor, 1952, Fieldiana, Zool., 34, pp. 17-19 (*osgoodi*).  
 Amadon, 1959, Amer. Mus. Novit., no. 1955, pp. 1-7 (*tao*,  
*solitarius*).

## TINAMUS TAO

**Tinamus tao larensis** Phelps and Phelps

*Tinamus tao larensis* Phelps and Phelps, 1949, Proc. Biol. Soc. Washington, 62, p. 109—Cerro El Cogollal, Quebrada Arriba, Lara, Venezuela.

Colombia on eastern slope of the Western Andes along the Cauca Valley, and east of the Andes in Meta; Sierra de Perijá, on the Colombian-Venezuelan border; northern Venezuela from Zulia and Táchira east to Distrito Federal. Chiefly in montane forest. Intergrades with *kleei* in southern Colombia.

**Tinamus tao kleei** (Tschudi)

*Crypturus kleei* Tschudi, 1843, Archiv Naturgeschichte, 9, pt. 1, p. 387—"apud flumen Chanchamayo et in Chunchotambo," Junín, Peru.

*Tinamus weddelli* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, pp. 881, 954—"Forêts vierges de la Paz en Bolivie."

Eastern Ecuador in Napo-Pastaza; eastern Peru from San Martín south through Junín and Cuzco to Cochabamba and Santa Cruz, Bolivia. Intergrades with *larensis* in southern Colombia, and with *tao* in western Brazil.

**Tinamus tao septentrionalis** Brabourne and Chubb

*Tinamus tao septentrionalis* Brabourne and Chubb, 1913, Ann. Mag. Nat. Hist., ser. 8, 12, pp. 578, 579 (in key)—plains of Cumaná, northeastern Venezuela.

Tropical forest of northeastern Venezuela (Sucre, Monagas), and possibly northwestern Guyana (sight, Aremu River, *vide* Beebe, 1910, Search Wilderness, pp. 321, 389).

**Tinamus tao tao** Temminck

*Tinamus tao* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 569, 749—"dans la province de Pará, au Brésil."

Brazil, south of the Amazon, from the Rio Madeira and Rio Guaporé east in Pará and northern Mato Grosso (upper Rio Xingu) to the Rio Capim, vicinity of Belém. Erroneously attributed to Monte Alegre, north bank of the middle Amazon. Intergrades with *kleei* in the approaches to Peru and Bolivia.

## TINAMUS SOLITARIUS

**Tinamus solitarius pernambucensis** Berla

*Tinamus solitarius pernambucensis* Berla, 1946, Bol. Mus. Nac. Rio de Janeiro, Zool., no. 65, p. 2—Usina São José, Igarapu, Pernambuco, Brazil.

Tropical forest of eastern Brazil in Pernambuco (Igarapu) and Alagoas (Mangabeira). Formerly perhaps Sergipe and northeastern Bahia.

**Tinamus solitarius solitarius** (Vieillot)

*Cryptura solitaria* Vieillot, 1819, Nouv. Dict. Hist. Nat., nouv. éd., 34, p. 105; based on "Ynambú Mocoicogóé," no. 332, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 56—Paraguay.

*Tinamus solitarius nattereri* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 738, pl. 16—Humboldt, Santa Catarina, Brazil.

*Tinamus solitarius farinosus* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 738—Serra de Friburgo, Rio de Janeiro, Brazil.

*Tinamus solitarius organorum* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 738—Serra dos Orgãos, Rio de Janeiro, Brazil.

Tropical forest of eastern Brazil from southern Bahia south to Rio Grande do Sul, west to extreme southeastern Mato Grosso; eastern Paraguay (Río Paraná) and northeastern Argentina (Misiones).

## TINAMUS OSGOODI

**Tinamus osgoodi hershkovitzi** Blake

*Tinamus osgoodi hershkovitzi* Blake, 1953, Fieldiana, Zool., 34, p. 199—San Adolfo, Río Aguas Claras, Acevedo, Huila, Colombia; altitude 1,500 meters.

Known only from the type locality (3 specimens, Field Museum of Natural History, Chicago) in the upper Río Magdalena drainage, southwestern Colombia.

**Tinamus osgoodi osgoodi** Conover

*Tinamus osgoodi* Conover, 1949, Fieldiana, Zool., 31, p. 263—Hacienda Cadena, Marcapata Valley, Cuzco, Peru; altitude 1,000 meters.

Known only from the type locality in southeastern Peru.

#### TINAMUS MAJOR

##### **Tinamus major robustus** Sclater and Salvin<sup>1</sup>

*Tinamus robustus* P. L. Sclater and Salvin, 1868, Exotic Ornith., pt. 6, p. 87, pl. 44—Choctum, Guatemala.

Tropical zone of southern Mexico in southeastern Puebla, adjacent parts of Veracruz, northern Oaxaca, and northern Chiapas; Caribbean lowlands of Guatemala (west to Baja Vera Paz) and Honduras.

##### **Tinamus major percautus** Van Tyne

*Tinamus major percautus* Van Tyne, 1935, Misc. Publ. Mus. Zool., Univ. Michigan, no. 27, p. 8—Uaxactún, Petén, Guatemala.

Wet tropical forest of southeastern Mexico in extreme southern Veracruz, Tabasco, southern Campeche, and adjacent parts of Quintana Roo; northern Guatemala (Petén) and Belize (British Honduras).

##### **Tinamus major fuscipennis** Salvadori

*Tinamus fuscipennis* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 497 (in key), 500—Escondido River and San Rafael, Nicaragua; restricted to Escondido River by Peters, 1931, Check-list Birds World, 1, p. 13, note 1.

Caribbean lowlands of Nicaragua and most of Costa Rica (to the subtropical zone on the Pacific slope of the Cordillera de Guanacaste, *vide* Slud, 1964, Bull. Amer. Mus. Nat. Hist., 128, p. 27) south to northern Veraguas and western Colón, Panama. Intergrades with *saturatus* in the Caribbean lowlands of Coclé (El Uracillo) and in Colón.

<sup>1</sup>As correctly stated by Brodkorb, 1943, Misc. Publ. Mus. Zool., Univ. Michigan, no. 55, pp. 20-21, the name *robustus* was first published with description in an anatomical paper by Parker, 1866, Trans. Zool. Soc. London, 5 (1864), pp. 205-232. There are two reasons why this fact has been ignored since 1943. First, an illustration of a skeleton can hardly be considered a sufficient "indication" for a subspecies as demanded by Articles 12 and 16 of the International Code of Zoological Nomenclature. More importantly, a name not employed for over 75 years is surely a *nomen oblitum*. There is no need to change authorship or type locality of Sclater and Salvin's *robustus*.—E. R. B.

**Tinamus major castaneiceps** Salvadori

*Tinamus castaneiceps* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 497 (in key), 507, pl. 6—Volcán de Chiriquí, Panama.

Humid tropical and subtropical zones of southwestern Costa Rica and the Pacific slope of Panama from western Chiriquí through central Veraguas to the Canal Zone, where intergrading with *saturatus*.

**Tinamus major brunneiventris** Aldrich

*Tinamus major brunneiventris* Aldrich, 1937, Sci. Publ. Cleveland Mus. Nat. Hist., 7, p. 28—Paracoté, 1 mile south of mouth of Río Ángulo, Veraguas, Panama.

Central Panama in humid tropical forests of southern Veraguas adjacent to Golfo de Montijo.

**Tinamus major saturatus** Griscom

*Tinamus major saturatus* Griscom, 1929, Bull. Mus. Comp. Zool., 69, pp. 150, 152—Cana, eastern Panama; altitude 2,200 feet.

Pacific slope of eastern Panama from Cerro Azul, Province of Panamá, east through Darién, and on the Caribbean side from Madden Lake through San Blas; northwestern Colombia in Chocó and northern Antioquia south to the middle Río Atrato. Intergrades with *castaneiceps* in the Canal Zone and with *fuscipennis* in the Caribbean lowlands of Coclé (El Uracillo) and in Colón.

**Tinamus major latifrons** Salvadori

*Tinamus latifrons* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 497 (in key), 506—Balzar Mountains, Ecuador.

Southwestern Colombia north to southern Chocó, and western Ecuador south to Balzar.

**Tinamus major zuliensis** Osgood and Conover

*Tinamus major zuliensis* Osgood and Conover, 1922, Publ. Field Mus. Nat. Hist., Zool. Ser., 12, p. 24—Río Cogollo, Perijá, Zulia, Venezuela.

Tropical zone of northeastern Colombia in the Santa Marta region and Santander; Venezuela north of the Orinoco, and western Bolívar (lower Río Caura) south to extreme southern Amazonas.

**Tinamus major peruvianus** Bonaparte

*Tinamus peruvianus* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 43, p. 573, note—Peru.



*Tinamus ruficeps* P. L. Sclater and Salvin, 1873, Nomencl.

Avium Neotrop., pp. 152, 162—Río Napo, Ecuador.

Tropical zone of southeastern Colombia (Sierra Macarena region) south, east of the Andes, through eastern Ecuador and eastern Peru to Santa Cruz, Bolivia; extreme western Brazil, south of the Solimões (Amazon), east to the Rio Juruá.

**Tinamus major serratus** (Spix)

*Pezus serratus* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 61, pl. 76—"in sylvis campestribus fl. Nigri" = Rio Negro, Brazil.

Northwestern Brazil, north of the Solimões (Amazon), from the lower Rio Içá east to the Rio Negro.

**Tinamus major major** (Gmelin)

*Tetrao major* Gmelin, 1789, Syst. Nat., 1, p. 767; based chiefly on "Le Magoua" of Buffon, 1778, Hist. Nat. Générale, 19, Hist. Nat. Oiseaux, 4, p. 507, pl. 24—Cayenne.

Eastern Venezuela from the delta of the Orinoco south in eastern Bolívar to the Río Paragua and the Gran Sabana; the Guianas; northern Brazil, north of the lower Amazon, west to the lower Rio Negro and Rio Branco.

**Tinamus major olivascens** Conover

*Tinamus major olivascens* Conover, 1937, Proc. Biol. Soc. Washington, 50, p. 191—Tome-assú (=Tomé-Açu), Rio Acará, Pará, Brazil.

Amazonian Brazil, south of the Amazon, from the Rio Purús and Rio Guaporé east to the Rio Acará (Belém district), south to northern Mato Grosso.

TINAMUS GUTTATUS

**Tinamus guttatus** Pelzeln

*Tinamus guttatus* Pelzeln (ex Natterer MS), 1863, Verh. Zool.-Bot. Gesell. Wien, 13, pp. 1126, 1128—Brazil; restricted to Borba, Rio Madeira, by Hellmayr, 1907, Novit. Zool., 14, p. 409.

Tropical zone of northern South America, east of the Andes, from southeastern Colombia (Caquetá, Putumayo) and southwestern Venezuela (southern Amazonas) south to the lower Río Beni, northern Bolivia; northwestern Brazil (Amazonas) east to Amapá and the region of Belém.

GENUS **NOTHOCERCUS** BONAPARTE

*Nothocercus* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, p. 881. Type, by subsequent designation (Salvadori, 1895, Cat. Birds Brit. Mus., 27, p. 509), *Tinamus julius* Bonaparte.

cf. Schäfer, 1954, Journ. Ornith., 95, pp. 219-232 (biology of *bonapartei*).

**NOTHOCERCUS BONAPARTEI****Nothocercus bonapartei frantzii** (Lawrence)

*Tinamus frantzii* Lawrence, 1868, Ann. Lyceum Nat. Hist. New York, 9, p. 140—Cervantes, Costa Rica.

Central highlands of Costa Rica and the upper tropical and subtropical zones of western Panama in the region of Volcán de Chiriquí.

**Nothocercus bonapartei intercedens** Salvadori

*Nothocercus intercedens* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 509 (in key), 513—Frontino, Antioquia, Colombia.

Western Andes of Colombia (both slopes) in the upper tropical and subtropical zones from southwestern Antioquia south to the Río Mechengue, Cauca.

**Nothocercus bonapartei bonapartei** (Gray)

*Tinamus bonapartei* G. R. Gray, 1867, List Specimens Birds Brit. Mus., pt. 5, p. 97—valley of Aragua, Venezuela.

Subtropical zone of Colombia in the Central and Eastern Andes south at least to Cundinamarca; Sierra de Péríjé on the Colombian-Venezuelan border; humid mountain forest of western Venezuela and the coastal range east to Aragua.

**Nothocercus bonapartei discrepans** Friedmann

*Nothocercus bonapartei discrepans* Friedmann, 1947, *Caldasia*, 4, p. 472—Melgar, Tolima, Colombia.

Tropical zone of Colombia at the base of the Eastern Andes in Tolima (Melgar) and Meta (Villavicencio).

**Nothocercus bonapartei plumbeiceps** Lönnberg and Rendahl

*Nothocercus plumbeiceps* Lönnberg and Rendahl, 1922, *Arkiv Zool.*, 14, no. 25, p. 13—Baeza, road to Napo, eastern Ecuador; altitude 5,500 feet.

Subtropical zone of the eastern slope of the Andes in Ecuador and northern Cajamarca (Chaupe), northwestern Peru.

#### NOTHOCERCUS JULIUS

##### **Nothocercus julius** (Bonaparte)<sup>1</sup>

*Tinamus julius* Bonaparte, 1854, Compt. Rend. Acad. Sci., Paris, **38**, p. 663, note—Colombia; restricted to vicinity of Bogotá by Blake, 1955, Fieldiana, Zool., **37**, p. 15.

*Nothocercus julius venezuelensis* Cory, 1913, Publ. Field Mus. Nat. Hist., Ornith. Ser., **1**, p. 283—Páramo de Tamá, Táchira, Venezuela.

*Nothocercus fuscipennis* Chapman, 1921, Amer. Mus. Novit., no. 18, p. 1—Andes west of Popayán, Colombia; altitude 10,340 feet.

Humid subtropical and temperate zones of the Andes of Colombia south to south-central Ecuador; extreme western Venezuela in the temperate zone of Páramo de Tamá, Táchira; mountains of central and southern Peru in Huánuco (Acomayo) and Cuzco (Cordillera Vilcabamba).

#### NOTHOCERCUS NIGROCAPILLUS

##### **Nothocercus nigrocapillus cadwaladeri** Carriker

*Nothocercus nigrocapillus cadwaladeri* Carriker, 1933, Proc. Acad. Nat. Sci. Philadelphia, **85**, p. 2—Leimebamba, Amazonas, Peru; altitude 7,000 feet.

Subtropical zone of northwestern Peru in the region of Leimebamba, southern Amazonas. Intergrades with *nigrocapillus* in Junín.

##### **Nothocercus nigrocapillus nigrocapillus** (Gray)

*Tinamus nigrocapillus* G. R. Gray, 1867, List Specimens Birds Brit. Mus., pt. 5, p. 98—Chile; error, central Bolivia, *vide* Peters, 1931, Check-list Birds World, **1**, p. 14.

Subtropical zone from Junín, Peru, south to Cochabamba, Bolivia. Intergrades with *cadwaladeri* in Junín.

<sup>1</sup>For discussion of variability see Blake, 1955, Fieldiana, Zool., **37**, pp. 13-15. All examples of the recently discovered Peruvian population have strongly rufescent heads (less pronounced in the north) and possibly represent an undescribed race.—E. R. B.

GENUS **CRYPTURELLUS** BRABOURNE AND CHUBB<sup>1</sup>

*Crypturellus* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, p. 322. Type, by original designation, "*C. tataupa* Temm." = *Tinamus tataupa* Temminck.

*Orthocrypturus* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 739. Type, by original designation, *Tetrao variegatus* Gmelin.

cf. Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319-322 (key to species).

Beebe, 1925, Zoologica, 6, pp. 195-227 (*variegatus*).

Conover, 1933, Proc. Biol. Soc. Washington, 46, pp. 113-118 (races of *cinnamomeus*).

Todd, 1937, Proc. Biol. Soc. Washington, 50, pp. 175-178 (*variegatus*).

Skutch, 1963, Condor, 65, pp. 224-231 (life history of *soui*).

Lancaster, 1964, Condor, 66, pp. 165-181, 253-276 (life history of *boucardi*).

Short, 1975, Bull. Amer. Mus. Nat. Hist., 154, pp. 186-187 (*undulatus*, *parvirostris*, *tataupa*).

**CRYPTURELLUS BERLEPSCHI*****Crypturellus berlepschi*** (Rothschild)

*Crypturus berlepschi* Rothschild, 1897, Bull. Brit. Ornith. Club, 7, p. 5—Cachabé (= Cachabí), Esmeraldas, Ecuador; altitude 500 feet.

Tropical Pacific slope of Colombia from Antioquia south to Esmeraldas, northwestern Ecuador.

<sup>1</sup>This notably complex genus includes numerous more or less distinctive populations of uncertain relationship. The present arrangement follows in part recent unpublished proposals of various neotropical specialists, especially Eugene Eisenmann, Paul Schwartz, Rodolphe Meyer de Schauensee, and William Phelps, Jr. Earlier revisions, for lack of broader biological data, depended almost entirely on considerations of morphology and of the colors and patterns of plumage. The concepts reflected below are based in part, also, on present knowledge of vocalization, egg color, and colors of the "soft parts" as supplementary indicators of genetic relationship.  
—E. R. B.

## CRYPTURELLUS CINEREUS

**Crypturellus cinereus** (Gmelin)

*Tetrao cinereus* Gmelin, 1789, Syst. Nat., 1, p. 768; based on "Le Tinamou cendré" of Buffon, 1778, Hist. Nat. Générale, 19, Hist. Nat. Oiseaux, 4, p. 510—Cayenne.

*Crypturus macconnelli* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319 (in key), 320—Bonasica, Guyana.

*Crypturus macconnelli fumosus* Chapman, 1928, Amer. Mus. Novit., no. 332, p. 1—junction of Río Napo and Río Curaray, Loreto, Peru.

*Crypturellus berlepschi cinerascens* Carriker, 1935, Proc. Acad. Nat. Sci. Philadelphia, 87, p. 315—Chatarona (near Reyes), Beni, Bolivia.

*Crypturellus cinereus rufescens* Todd, 1938, Proc. Biol. Soc. Washington, 51, p. 125—Miritituba, Rio Tapajós, Brazil.

Tropical zone of northern South America, east of the Andes, from southeastern Colombia (Meta) to northern Bolivia, east through the upper Orinoco region of Venezuela (Amazonas) to the Guianas, and Amazonian Brazil east to Amapá and Marajó Island, Pará.

## CRYPTURELLUS SOUI

**Crypturellus soui meserythrus** (Sclater)

*Tinamus meserythrus* P. L. Sclater, 1859, Proc. Zool. Soc. London, p. 392—Playa Vicente, Oaxaca, Mexico.

Tropical zone of southern Mexico (south from southern Veracruz and northern Oaxaca), Belize (British Honduras), and the Caribbean slope of Guatemala and Honduras to southeastern Nicaragua.

**Crypturellus soui modestus** (Cabanis)

*Crypturus modestus* Cabanis, 1869, Journ. Ornith., 17, p. 212—Costa Rica.

Costa Rica, chiefly in the Caribbean lowlands, and the Pacific slope of western Chiriquí, Panama. Intergrades with *capnodes* in the vicinity of Volcán de Chiriquí.

**Crypturellus soui capnodes** Wetmore

*Crypturellus soui capnodes* Wetmore, 1963, Proc. Biol. Soc. Washington, 76, p. 173—Almirante, Bocas del Toro, Panama.

Northwestern Panama in the humid lowlands of western and central Bocas del Toro, and probably adjacent parts of Costa Rica in the lower Sixaola Valley. Intergrades with *modestus* in the vicinity of Volcán de Chiriquí.

**Crypturellus soui poliocephalus** (Aldrich)

*Crypturornis soui poliocephalus* Aldrich, 1937, Sci. Publ. Cleveland Mus. Nat. Hist., 7, p. 30—Paracoté, east shore Montijo Bay, 1 mile south of mouth of Río Ángulo, Veraguas, Panama.

Pacific lowlands of Panama from western Veraguas (Soná) to the Canal Zone (Empire), and the Province of Panamá east to the lower Río Bayano; Isla del Rey (probably introduced), Pearl Islands.

**Crypturellus soui panamensis** (Carriker)

*Crypturus soui panamensis* Carriker, 1910, Ann. Carnegie Mus., 6, p. 379—Loma del León (= Lion Hill), Canal Zone, Panama.

Caribbean lowlands of Panama from western Colón east through the northern Canal Zone, the upper Chagres drainage (Río Boquerón), and San Blas; the Pacific slope from eastern Province of Panamá (Río Majé) through Darién. Intergrades with *caucaae* in northeastern Chocó, Colombia; intergradation with *harterti* is anticipated in northwestern Chocó.

**Crypturellus soui harterti** (Brabourne and Chubb)

*Crypturus soui harterti* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319 (in key), 321—Vaquería, Esmeraldas, Ecuador.

Tropical zone of Colombia from the west side of the Golfo de Urabá south along the Pacific slope to Ecuador. Intergradation with *panamensis* is anticipated in northwestern Chocó.

**Crypturellus soui caucaae** (Chapman)

*Crypturus soui caucaae* Chapman, 1912, Bull. Amer. Mus. Nat. Hist., 31, p. 141—San Antonio, Western Andes, Colombia; altitude 6,600 feet.

Tropical and lower subtropical zones of north-central Colombia in the middle Magdalena Valley and drainages of Río Cauca and Río Sinú. Intergrades with *panamensis* in northeastern Chocó.

**Crypturellus soui mustelinus** (Bangs)

*Crypturus soui mustelinus* Bangs, 1905, Proc. Biol. Soc.

Washington, 18, p. 151—Santa Marta Mountains, Colombia.

Tropical zone of northeastern Colombia from the Santa Marta region south on the eastern slope of the Eastern Andes to Boyacá; northwestern Venezuela in northwestern Zulia (region of Perijá), Mérida, and northern Táchira.

**Crypturellus soui andrei** (Brabourne and Chubb)

*Crypturus andrei* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319 (in key), 321—Trinidad.

Coastal region of Venezuela from Falcón east to Monagas, south in the tropical zone (except where occupied by *mustelinus*) to southern Táchira, Apure, and the lower Orinoco; Trinidad.

**Crypturellus soui soui** (Hermann)

*Tinamus soui* Hermann, 1783, Tabula Affinitatum Animalium, p. 165; based on "Le Soui" of Buffon, 1778, Hist. Nat. Générale, 19, Hist. Nat. Oiseaux, 4, p. 512, and "Le Soui ou petit Tinamou, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 829—Cayenne.

Tropical zone of eastern Colombia (Meta, Vaupés), southern Venezuela (Bolívar, Amazonas); the Guianas, Brazil north of the Amazon.

**Crypturellus soui caquetae** (Chapman)

*Crypturus soui caquetae* Chapman, 1915, Bull. Amer. Mus. Nat. Hist., 34, p. 635—Florenxia, Caquetá, Colombia; altitude 675 feet.

Tropical zone of southeastern Colombia from the eastern base of the Sierra Macarena, Meta (*vide* Blake, 1962, Fieldiana, Zool., 44, p. 72), south to Caquetá and Putumayo.

**Crypturellus soui nigriceps** (Chapman)

*Crypturus soui nigriceps* Chapman, 1923, Amer. Mus. Novit., no. 96, p. 1—upper Río Suno, eastern Ecuador.

Tropical zone of eastern Ecuador and northeastern Peru.

**Crypturellus soui inconspicuus** Carriker

*Crypturellus soui inconspicuus* Carriker, 1935, Proc. Acad. Nat. Sci. Philadelphia, 87, p. 315—Susi (near Rurrenabaque), Río Beni, Bolivia.

Central and eastern Peru south to Santa Cruz, Bolivia.

**Crypturellus soui albigularis** (Brabourne and Chubb)

*Crypturus soui albigularis* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, p. 320—Rio de Janeiro, Brazil.

*Crypturus soui hoffmannsi* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319 (in key), 321—Humaitá, Rio Madeira, Brazil.

*Crypturellus soui decolor* Griscom and Greenway, 1937, Bull. Mus. Comp. Zool., 81, p. 417—Pinhi, right bank of Rio Tapajós, Pará, Brazil.

*Crypturornis soui lyardi* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 767—Turiaçu, Maranhão, Utinga, Pará, and Rio Jamari, Rondônia, Brazil.

Northern and eastern Brazil, south of the Amazon, from the Rio Madeira and Rio Guaporé east to northern Maranhão and Pernambuco, south to eastern Mato Grosso (Rio das Mortes or Manso), Goiás, Rio de Janeiro, and Espírito Santo.

#### CRYPTURELLUS PTARITEPUI

***Crypturellus ptaritepui*** Zimmer and Phelps

*Crypturellus ptaritepui* Zimmer and Phelps, 1945, Amer. Mus. Novit., no. 1274, p. 1—Cerro Ptari-tepui, southwest slope, Gran Sabana, Bolívar, Venezuela; altitude 1,700 meters.

Subtropical zone of Cerros Ptari-tepui and Sororopán-tepui in southeastern Bolívar, Venezuela.

#### CRYPTURELLUS OBSOLETUS

***Crypturellus obsoletus castaneus*** (Sclater)

*Tinamus castaneus* P. L. Sclater, 1858, Proc. Zool. Soc. London (1857), p. 277—"Bogotá," Colombia.

*Crypturus obsoletus chirimontanus* Stolzmann, 1926, Ann. Zool. Mus. Polon. Hist. Nat., 5, p. 198—Chirimoto, Huayabamba Valley, Peru.

Tropical zone of eastern Colombia ("Bogotá"), eastern Ecuador, and northern Peru (San Martín). Limits of range uncertain.

***Crypturellus obsoletus ochraceiventris*** (Stolzmann)

*Crypturus obsoletus ochraceiventris* Stolzmann, 1926, Ann. Zool. Mus. Polon. Hist. Nat., 5, p. 199—La Gloria, Chanchamayo, Junín, Peru.

Subtropical zone of central and southeastern Peru in Huánuco, Junín, Ayacucho, and the lower Marcapata Valley, eastern Cuzco.



***Crypturellus obsoletus traylori* Blake**

*Crypturellus obsoletus traylori* Blake, 1961, Fieldiana, Zool., 39, p. 573—8 kilometers south of Hacienda Cadena, Marcapata Valley, Cuzco, Peru; altitude 1,400 meters.

Subtropical zone of southeastern Peru in the middle Marcapata Valley (Cadena, San Andrés), Cuzco. Possibly a distinct species.

***Crypturellus obsoletus punensis* (Chubb)**

*Crypturus obsoletus punensis* Chubb, 1917, Bull. Brit. Ornith. Club, 28, p. 30—Oroya, Puno, Peru.

*Crypturellus obsoletus crucis* Bond and Meyer de Schauensee, 1941, Notulae Naturae, no. 93, p. 1—Samaipata, Santa Cruz, Bolivia; altitude 5,500 feet.

Subtropical zone of southeastern Peru (Puno) and northern Bolivia in La Paz, Cochabamba, and western Santa Cruz.

***Crypturellus obsoletus cerviniventris* (Sclater and Salvin)**

*Crypturus cerviniventris* P. L. Sclater and Salvin, 1873, Proc. Zool. Soc. London, p. 512—Venezuela; restricted to the vicinity of Caracas by Hellmayr and Conover, 1942, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 1, p. 47.

Subtropical zone of northwestern Venezuela from north-central Falcón (Curimagua) and western Lara (Cerro El Cerrón) east in the Cordillera de la Costa Central to Aragua and western Distrito Federal (El Junquito).

***Crypturellus obsoletus knoxi* Phelps**

*Crypturellus obsoletus knoxi* W. H. Phelps, Jr., 1976, Bol. Soc. Venezolana Cien. Nat., 32, p. 16—35 kilometers south of Cabudare, Lara, Venezuela; altitude 1,500 meters.

Subtropical zone of northwestern Venezuela in the Andes of Mérida (La Azulita) north to southern Lara.

***Crypturellus obsoletus griseiventris* (Salvadori)**

*Crypturus griseiventris* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 514 (in key), 521—Santarém, Brazil.

North-central Brazil, south of the Amazon, in the region of the lower Rio Tapajós.

***Crypturellus obsoletus hypochracea* (Miranda-Ribeiro)**

*Cryptuornis hynochracea* [sic] Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 763—Vilhena and Rio Jamari, Brazil. Rio Jamari, northern Rondônia, is here designated as the restricted type locality.

Southwestern Brazil in the region of the upper Rio Madeira

(Rios Jamari and Jiparaná, Rondônia).

**Crypturellus obsoletus obsoletus** (Temminck)

*Tinamus obsoletus* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 588, 751—"Brésil"; vicinity of the city of São Paulo suggested as restricted type locality by Pinto, 1964, Ornitologia Brasiliense, 1, p. 5.

*Crypturellus obsoletus caerulescens* Neumann, 1933, Verh. Ornith. Gesell. Bayern, 20, p. 181—Villarrica, Paraguay.

*Crypturellus obsoletus laubmanni* Neumann, 1933, Verh. Ornith. Gesell. Bayern, 20, p. 181—Vitória, Espírito Santo, Brazil.

Southeastern Brazil from southern Minas Gerais to Rio Grande do Sul, eastern Paraguay, and adjacent parts of northeastern Argentina (Misiones).

CRYPTURELLUS UNDULATUS

**Crypturellus undulatus manapiare** Phelps and Phelps

*Crypturellus undulatus manapiare* Phelps and Phelps, 1952, Proc. Biol. Soc. Washington, 65, p. 39—San Juan de Manapiare, Río Manapiare, Amazonas, Venezuela.

Known only from southern Venezuela in the region of the upper Río Ventuari, Amazonas.

**Crypturellus undulatus simplex** (Salvadori)

*Crypturus simplex* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 516 (in key), 531—Río Rupununi, Guyana.

Southwestern Guyana and adjacent parts of Brazil south to the Rio Negro and north bank of the lower Amazon.

**Crypturellus undulatus yapura** (Spix)

*Pezus yapura* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 62, pl. 78—Rio Yapurá and Rio Solimões, Brazil.

Western Amazonia from southeastern Colombia (Meta), eastern Ecuador, eastern Peru (north of Madre de Dios), and northwestern Brazil east to Rio Negro and Rio Purús. Intergrades with *adspersus* in the region of the upper Rio Purús.

**Crypturellus undulatus vermiculatus** (Temminck)

*Tinamus vermiculatus* Temminck, 1825, Planches Color., livr. 62, pl. 369—"Brésil"; type locality probably the region of Franca, northern São Paulo, *fide* Pinto, 1964, Ornitologia Brasiliense, 1, p. 7.

Eastern Brazil from southern Maranhão and Piauí south in eastern Mato Grosso, Goiás, western Minas Gerais, and São Paulo to Paraná (Rio Paracáí).

**Crypturellus undulatus adpersus** (Temminck)

*Tinamus adpersus* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 585, 751—"dans la province de Pará," Brazil.

*Crypturus undulatus confusus* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 319 (in key), 321—Humaitá, Rio Madeira, Brazil.

Central Brazil, south of the Amazon, from the left bank of the Rio Madeira (Humaitá) east to the Rio Tapajós and Cachimbo region. Intergrades with *yapura* in the region of the upper Rio Purús.

**Crypturellus undulatus undulatus** (Temminck)

*Tinamus undulatus* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 582, 751; based on "Ynambú listado," no. 331, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 53—Paraguay (lat. 24° S.).

Southeastern Peru in southern Madre de Dios and Puno (Astillero); eastern Bolivia to Santa Cruz; western Brazil (Rondônia, southwestern Mato Grosso); Paraguay; northern Argentina (Formosa, Chaco).

CRYPTURELLUS TRANSFASCIATUS

**Crypturellus transfasciatus** (Sclater and Salvin)

*Crypturus transfasciatus* P. L. Sclater and Salvin, 1878, Proc. Zool. Soc. London, p. 141, pl. 13—Santa Rosa, Manabí, Ecuador.

*Crypturus rubripes* Taczanowski, 1886, Ornith. Pérou, 3, p. 303—Lechugal, Río Zarumilla, Tumbes, Peru (= adult male of *C. transfasciatus*; cf. Koepcke, 1962, Journ. Ornith., 103, pp. 272-275).

Tropical zone of western Ecuador from Manabí (Río Chone) south to Tumbes and Piura, northwestern Peru.

CRYPTURELLUS STRIGULOSUS

**Crypturellus strigulosus** (Temminck)

*Tinamus strigulosus* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 594, 752—"dans la province de Pará."

*Crypturus hellmayri* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 320 (in key), 322—Humaitá, Rio Madeira, Brazil.

*Crypturellus strigulosus peruvianus* Blake, 1959, Fieldiana, Zool., 39, p. 373—Collpa, left bank of Río Tambopata, Madre de Dios, Peru.

*Crypturellus strigulosus tambopatae* Blake, 1960, Auk, 77, p. 92. New name for *Crypturellus strigulosus peruvianus* Blake, 1959, preoccupied by *Crypturus tataupa peruviana* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., 1, p. 293.

Tropical zone of eastern Peru (Loreto, Madre de Dios), northwestern Bolivia (Beni), and Amazonian Brazil, south of the Amazon, east to the Belém region of Pará and the forested littoral of Pernambuco and Alagoas.

#### CRYPTURELLUS DUIDAE

##### **Crypturellus duidae** Zimmer

*Crypturellus noctivagus duidae* Zimmer, 1938, Proc. Biol. Soc. Washington, 51, p. 48—Mt. Duida, Venezuela.

Tropical zone of southeastern Colombia (Sierra Macarena, Meta) and southern Venezuela in the region of Cerro Duida, central Amazonas.

#### CRYPTURELLUS ERYTHROPUS

##### **Crypturellus erythropus columbianus** (Salvadori)

*Crypturus columbianus* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 517 (in key), 545—Nechí, Antioquia, Colombia.

North-central Colombia in Córdoba, northern Bolívar, and northern Antioquia. Possibly a distinct species, or perhaps a very distinct isolate of the Middle American *boucardi*.

##### **Crypturellus erythropus saltuarius** Wetmore

*Crypturellus saltuarius* Wetmore, 1950, Proc. Biol. Soc. Washington, 63, p. 171—Ayacucho, 25 kilometers east of La Gloria, Magdalena, Colombia; altitude 500 feet.

Known only by the unique type (male) from the northwestern base of Sierra de Ocaña, southern Magdalena, Colombia. Possibly a distinct species, or even a subspecies of the Pacific slope isolate *kerriae*.

**Crypturellus erythropus idoneus** (Todd)

*Crypturus idoneus* Todd, 1919, Proc. Biol. Soc. Washington, 32, p. 117—Bonda, Santa Marta region, Colombia.

Tropical zone of northern Colombia from Atlántico to the western flank of the Guajira and Perijá highlands, south in western Zulia, Venezuela, along the eastern base of the Sierra de Perijá from Río Socuy to the region of Machiques.

**Crypturellus erythropus cursitans** Wetmore and Phelps

*Crypturellus noctivagus cursitans* Wetmore and Phelps, 1956, Proc. Biol. Soc. Washington, 69, p. 1—San Luis (near Burgua), Táchira, Venezuela.

Tropical zone of northern Colombia, east of the Andes, in western Arauca and extreme northern Boyacá, and western Venezuela in vicinity of Burgua, southwestern Táchira. Possibly a race of *duidae*.

**Crypturellus erythropus spencei** (Brabourne and Chubb)

*Crypturus cinnamomeus spencei* Brabourne and Chubb, 1914, Ann. Mag. Nat. Hist., ser. 8, 14, pp. 320 (in key), 322—Venezuela; restricted to Caracas, Venezuela, by Chubb, 1917, Bull. Brit. Ornith. Club, 38, p. 29.

Tropical zone of northern Venezuela from the Sierra San Luis, Falcón, and Andes of Mérida east in the coastal range of Distrito Federal and Aragua to eastern Guárico and central Anzoátegui.

**Crypturellus erythropus margaritae** Phelps and Phelps

*Crypturellus noctivagus margaritae* Phelps and Phelps, 1948, Bol. Soc. Venezolana Cien. Nat., 11 (1947), p. 57—Cerro El Copey, Margarita Island, Venezuela.

Margarita Island, Venezuela.

**Crypturellus erythropus erythropus** (Pelzeln)

*Tinamus erythropus* Pelzeln, 1863, Verh. Zool.-Bot. Gesell. Wien, 13, pp. 1127, 1129—Barra do Rio Negro (= Manaus), Brazil.

*Crypturus dissimilis* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 516 (in key), 541—Quonga and Courantyne River, Guyana.

Tropical zone of northeastern Venezuela (Sucre, Monagas, northeastern Bolívar) east to Surinam, and northern Brazil, north of the Amazon, from the Rio Branco and Rio Negro east to Amapá.

## CRYPTURELLUS NOCTIVAGUS

**Crypturellus noctivagus zabele** (Spix)

*Pezus zabele* Spix, 1825, *Avium Species Novae Itinere Brasiliam*, 2, p. 62, pl. 77—"in limite sylvarum campestrium (Catingha)," Brazil; Oeiras, Piauí, Brazil, suggested as type locality by Hellmayr and Conover, 1942, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, 13, pt. 1, no. 1, p. 60.

Northeastern Brazil from southern Piauí and eastern Pernambuco south to Bahia and the interior of Minas Gerais.

**Crypturellus noctivagus noctivagus** (Wied)

*Tinamus noctivagus* Wied, 1820, *Reise Brasilien*, 1, p. 160, note—Muribeca, Rio Itabapuana, Espírito Santo, Brazil.

Littoral forest of southeastern Brazil from extreme southern Bahia (Rio Jucuruçu) and eastern Minas Gerais south to Rio Grande do Sul.

## CRYPTURELLUS ATROCAPILLUS

**Crypturellus atrocapillus atrocapillus** (Tschudi)

*Crypturus atro-capillus* Tschudi, 1844, *Archiv Naturgeschichte*, 10, pt. 1, p. 307—Peru.

Southeastern Peru in ? Junín, northern Ayacucho, southeastern Cuzco (Quincemil, Pilcopata), and probably adjacent parts of Madre de Dios. Northern limits uncertain.

**Crypturellus atrocapillus garleppi** (Berlepsch)

*Crypturus garleppi* Berlepsch, 1892, *Bericht XVII Jahresversammlung Allgemeinen Deutschen Ornith. Gesell.*, p. 13—Santa Cruz de la Sierra, Bolivia.

*Crypturus garleppi affinis* Chubb, 1919, *Ibis*, p. 8—Río Blanco, ? Cochabamba, Bolivia.

Northern Bolivia in northern and eastern La Paz, Beni, ? Cochabamba, and Santa Cruz. Possibly a distinct species.

## CRYPTURELLUS CINNAMOMEUS

**Crypturellus cinnamomeus occidentalis** (Salvadori)

*Crypturus occidentalis* Salvadori, 1895, *Cat. Birds Brit. Mus.*, 27, pp. 516 (in key), 546—San Blas, Nayarit, Mexico.

Tropical zone of the Pacific slope of Mexico from central Sinaloa to Guerrero.

**Crypturellus cinnamomeus soconuscensis** Brodkorb

*Crypturellus cinnamomeus soconuscensis* Brodkorb, 1939,

Occas. Papers Mus. Zool., Univ. Michigan, no. 401, p. 1—Colonia Soconusco, Chiapas, Mexico; altitude 30 meters.

Pacific slope of southern Mexico in Oaxaca and Chiapas.

**Crypturellus cinnamomeus mexicanus** (Salvadori)

*Crypturus mexicanus* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 516 (in key), 545—Monte Verde, Tamaulipas, Mexico.

*Crypturus inornatus* Nelson, 1900, Auk, 17, p. 253—Metlatoyuca, Puebla, Mexico.

Tropical zone (to 1,400 meters) of the Atlantic slope of Mexico from southern Tamaulipas and San Luis Potosí to northern Veracruz and northern Puebla.

**Crypturellus cinnamomeus sallaei** (Bonaparte)

*Nothocernus* [sic] *sallaei* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, p. 954—Córdoba, Veracruz, Mexico.

Atlantic slope of southeastern Mexico in southern Puebla, southern Veracruz, and adjoining parts of Oaxaca; the Pacific side of the Isthmus of Tehuantepec, south to Tonalá, Chiapas.

**Crypturellus cinnamomeus goldmani** (Nelson)

*Crypturus sallaei goldmani* Nelson, 1901, Proc. Biol. Soc. Washington, 14, p. 169—Chichén Itzá, Yucatán.

*Crypturellus cinnamomeus intermedius* Traylor, 1941, Publ. Field Mus. Nat. Hist., Zool. Ser., 24, p. 199—Pacaytún, Campeche, Mexico; altitude 200 feet.

Lowlands of southeastern Mexico (Tabasco and the Yucatán Peninsula), northern Guatemala (Petén), and northern Belize (British Honduras).

**Crypturellus cinnamomeus vicinior** Conover

*Crypturellus cinnamomeus vicinior* Conover, 1933, Proc. Biol. Soc. Washington, 46, p. 115—La Flor, Tegucigalpa, Honduras.

Interior valley of Chiapas, Mexico (*vide* Brodkorb, 1939, Occas. Papers Mus. Zool., Univ. Michigan, no. 401, p. 3), south to the highlands and interior valleys of Guatemala and Honduras.

**Crypturellus cinnamomeus cinnamomeus** (Lesson)

*Tinamus (Nothura) cinnamomea* Lesson, 1842, Rev. Zool., Paris, 5, p. 210—La Unión, "Centre Amérique." Type from El Salvador.

Pacific lowlands of Guatemala, El Salvador, and Honduras

in the region of the Golfo de Fonseca, Tegucigalpa.

**Crypturellus cinnamomeus delatirii** (Bonaparte)

*Tinamus delatirii* Bonaparte, 1854, Compt. Rend. Acad. Sci., Paris, 38, p. 663—Nicaragua.

Pacific lowlands of Nicaragua, to about 450 meters.

**Crypturellus cinnamomeus praepes** (Bangs and Peters)

*Crypturornis cinnamomeus praepes* Bangs and Peters, 1927, Bull. Mus. Comp. Zool., 67, p. 472—Bolsón, Costa Rica.

Tropical zone of northwestern Costa Rica from the Golfo de Nicoya to the base of the Cordillera de Guanacaste and probably the lower slopes of the Cordillera de Tilarán.

CRYPTURELLUS BOUCARDI

**Crypturellus boucardi boucardi** (Sclater)

*Tinamus boucardi* P. L. Sclater (*ex* Sallé MS), 1859, Proc. Zool. Soc. London, p. 391—Playa Vicente and Teotalcingo, Oaxaca, Mexico.

*Crypturellus boucardi blancaneauxi* Griscom, 1935, Ibis, p. 543—British Honduras.

Caribbean slope of southeastern Mexico in humid forests of southern Veracruz (Cerro de Tuxtla), Oaxaca, Chiapas, Tabasco, and extreme southern Quintana Roo; Guatemala in Petén and the Caribbean lowlands; Belize (British Honduras). Intergrades with *costaricensis* west of the Sula Valley, extreme northwestern Honduras.

**Crypturellus boucardi costaricensis** (Dwight and Griscom)

*Crypturus boucardi costaricensis* Dwight and Griscom, 1924, Amer. Mus. Novit., no. 142, p. 1—Miravalles, Costa Rica; altitude 1,500 feet.

Caribbean lowlands of Honduras, Nicaragua, and Costa Rica north of Limón (lat. 10° N.); also the Pacific slope of the Cordillera de Guanacaste, Costa Rica. Intergrades with *boucardi* west of the Sula Valley, extreme northwestern Honduras.

CRYPTURELLUS KERRIAE

**Crypturellus kerriae** (Chapman)

*Crypturus kerriae* Chapman, 1915, Bull. Amer. Mus. Novit., 34, p. 636—Baudó, Chocó, Colombia.

Humid lowland forests in southeastern Darién (Cerros de Quía), Panama, and northwestern Colombia in the foothills



of the Serranía Baudó, Chocó. Possibly an isolated southern race of *boucardi*.

#### CRYPTURELLUS VARIEGATUS

##### **Crypturellus variegatus** (Gmelin)

*Tetrao variegatus* Gmelin, 1789, Syst. Nat., 1, p. 768; based on "Le Tinamou varié, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 828—Cayenne.

*Crypturus salvini* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 517 (in key), 537—Sarayacu, eastern Ecuador.

*Crypturellus variegatus transamazonicus* Todd, 1937, Proc. Biol. Soc. Washington, 50, p. 176—Santarém, Brazil.

*Orthocrypturus variegatus superciliosus* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 741, pl. 17a—São Joaquim and Utinga, Pará, Solimões, Manacapuru, and Rio Jamari, Mato Grosso, Brazil.

*Orthocrypturus variegatus lakoi* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 743—Alto Jatôa and Lago Mapixi, Amazonas, Brazil.

Humid tropical and lower subtropical zones of South America east of the Andes from Meta, Colombia, to Junín, Peru; Venezuela south of the Orinoco; the Guianas; Amazonian Brazil south to Rondônia (Rio Jiparaná), northern Mato Grosso, and the Belém region of Pará; forested littoral of eastern Brazil in southern Bahia, southeastern Minas Gerais, and Espírito Santo.

#### CRYPTURELLUS BREVIROSTRIS

##### **Crypturellus brevirostris** (Pelzeln)

*Tinamus brevirostris* Pelzeln, 1863, Verh. Zool.-Bot. Gesell. Wien, 13, pp. 1128, 1130—Barra do Rio Negro, Brazil.

Type from Manaus.

Tropical zone of eastern Peru and adjoining parts of western Brazil, north and south of the Amazon, east at least to Rio Negro and Rio Madeira. Also reported in French Guiana (Tamanoir, Mana River) and Amapá, Brazil.

#### CRYPTURELLUS BARTLETTI

##### **Crypturellus bartletti** (Sclater and Salvin)

*Crypturus bartletti* P. L. Sclater and Salvin, 1873, Proc.

Zool. Soc. London, p. 311—"Santa Cruz de la Sierra" and Pebas, Peru. Type from Santa Cruz, Río Huallaga, Peru. Tropical zone of eastern Peru and northern Bolivia (Pando, Beni, La Paz); western Brazil, south of the Amazon, east to Rio Madeira.

#### CRYPTURELLUS PARVIROSTRIS

##### **Crypturellus parvirostris** (Wagler)

*Crypturus parvirostris* Wagler, 1827, Syst. Avium, *Crypturus*, no. 13—Brazil.

*Orthocrypturus parvirostris superciliaris* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, **23** (1937), p. 775—northern slope of Serra dos Parecis, Mato Grosso, Brazil.

*Orthocrypturus parvirostris fuscus* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, **23** (1937), p. 776—Marajó Island, Pará, Brazil.

Tropical zone of southeastern Peru, northern and eastern Bolivia, virtually all of Brazil south of the Amazon, Paraguay, and northern Argentina (Misiones; possibly Chaco and Santa Fe).

#### CRYPTURELLUS CASIQUIARE

##### **Crypturellus casiquiare** (Chapman)

*Crypturornis casiquiare* Chapman, 1929, Amer. Mus. Novit., no. 380, p. 3—right bank of the Río Casiquiare at its junction with the Río Guainía, Amazonas, Venezuela.

Tropical zone of eastern Colombia (Vaupés) in the region of the Río Guainía and Río Vaupés, and extreme southern Venezuela (Amazonas) at the mouth of the Casiquiare Canal and "la pica Yavita-Pimichín," *vide* Phelps and Phelps, 1958, Bol. Soc. Venezolana Cien. Nat., **19**, p. 29.

#### CRYPTURELLUS TATAUPA

##### **Crypturellus tataupa inops** Bangs and Noble

*Crypturellus tataupa inops* Bangs and Noble, 1918, Auk, **35**, p. 445—Perico, northwestern Peru.

Northwestern Peru in the Marañón Valley of Cajamarca.

##### **Crypturellus tataupa peruviana** (Cory)

*Crypturus tataupa peruviana* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., **1**, p. 293—San Ramón, Chanchamayo, Junín, Peru; altitude about 2,900 feet.

Tropical zone of central Peru in the Chanchamayo Valley, Junín.

**Crypturellus tataupa lepidotus** (Swainson)

*Crypturus lepidotus* Swainson, 1837, Nat. Hist. Class. Birds, 2, p. 345; based on *Tinamus tataupa* var. Swainson, 1821, Zool. Illustrations, 1, pl. 19—"in the interior of Bahia"; Orobó, Bahia, suggested by Hellmayr and Conover, 1942, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 1, p. 77, note 2.

*Crypturellus tataupa septentrionalis* Naumburg, 1932, Amer. Mus. Novit., no. 554, p. 6—Corrente, Rio Parnaíba, Piauí, Brazil.

Northeastern Brazil in Maranhão, Ceará, Piauí, Pernambuco, and Bahia.

**Crypturellus tataupa tataupa** (Temminck)

*Tinamus tataupa* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 590, 752; based on specimens from Brazil in collections at Lisbon and Paris, as well as on "Ynambú tatáupá," no. 329, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 48—"Brésil"—Rio de Janeiro, *vide* Pinto, 1964, Ornitologia Brasiliense, 1, p. 10.

Bolivia south and east from La Paz and southern Beni; Brazil from Rondônia and Mato Grosso (Rio Guaporé) east to Minas Gerais and Espírito Santo, south to Rio Grande do Sul; Paraguay; northern Argentina south to San Juan, La Rioja, northern Córdoba, northern Santa Fe, and Entre Ríos. To 2,500 meters in the Andes.

GENUS **RHYNCHOTUS** SPIX

*Rhynchotus* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 60. Type, by monotypy, *Rhynchotus fasciatus* Spix = *Tinamus rufescens* Temminck.

cf. Wetmore, 1926, Bull. U. S. Nat. Mus., no. 133, pp. 40-42. Weeks, 1973, Zoologica, 58, pp. 13-40.

Short, 1975, Bull. Amer. Mus. Nat. Hist., 154, pp. 187-188.

**RHYNCHOTUS RUFESCENS**

**Rhynchotus rufescens catinae** Reiser

*Rhynchotus rufescens catinae* Reiser, 1905, Anzeiger K.

Akad. Wissen. Wien, Math.-Naturwissen. Kl., 42, p. 324—  
Palmeirinhas and Corrientes, Brazil. Type from Rio  
Parnaíba, Piauí.

Central and northeastern Brazil from southern Amazonas  
(Humaitá, left bank of the upper Rio Madeira) east to Maranhão,  
Piauí, and arid parts of northern Bahia (Bonfim).

**Rhynchotus rufescens rufescens** (Temminck)

*Tinamus rufescens* Temminck, 1815, Hist. Nat. Pigeons  
Gallinacés, 3, pp. 552, 747; based on "Ynambú-guazú,"  
no. 326, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros  
Paraguay Rio Plata, 3, p. 34—Brazil and Paraguay, ex  
Azara; São Paulo suggested as type locality by Hellmayr,  
1929, Publ. Field Mus. Nat. Hist., Zool. Ser., 12, p. 479,  
note 3.

Northern Bolivia in the region of the upper Río Beni (Cha-  
tarona); central and eastern Brazil in Mato Grosso, and from  
Goiás, Pernambuco, and eastern Bahia south to eastern Para-  
guay, Uruguay, and Argentina (Misiones and probably adja-  
cent parts of Corrientes).

**Rhynchotus rufescens pallescens** Kothe

*Rhynchotus pallescens* Kothe, 1907, Journ. Ornith., 55, p.  
164—Tornquist, Buenos Aires, Argentina.

Lowland grassland of northern and central Argentina from  
eastern Formosa, Chaco, and Corrientes south to eastern La  
Pampa, southern Buenos Aires, and ? Río Negro.

**Rhynchotus rufescens maculicollis** Gray

*Rhynchotus maculicollis* G. R. Gray, 1867, List Specimens  
Birds Brit. Mus., pt. 5, p. 102—Bolivia.

Mountain grassland of northwestern and central Bolivia in  
La Paz, Cochabamba, Santa Cruz, and Chuquisaca; foothills  
and mountains (to 2,500 meters) of northwestern Argentina  
in Jujuy, Salta, Catamarca, and Tucumán.

GENUS **NOTHOPROCTA** SCLATER AND SALVIN

*Nothoprocta* P. L. Sclater and Salvin, 1873, Nomencl. Avium  
Neotrop., pp. 153, 156. Type, by original designation,  
*Crypturus perdicarius* Kittlitz.

cf. Pearson and Pearson, 1955, Auk, 72, pp. 113-127 (*ornata*).  
Lancaster, 1964, Bull. Amer. Mus. Nat. Hist., 127, pp.  
269-314 (*cinerascens*).

Banks and Bohl, 1968, Proc. Biol. Soc. Washington, **81**, pp. 485-489 (*pentlandii*, Argentina).

Koepcke, 1968, Bonner Zool. Beitr., **19**, pp. 225-234 (*pentlandii*).

Short, 1975, Bull. Amer. Mus. Nat. Hist., **154**, pp. 188-189 (*cinerascens*).

#### NOTHOPROCTA TACZANOWSKII

##### **Nothoprocta taczanowskii** Sclater and Salvin

*Nothoprocta taczanowskii* P. L. Sclater and Salvin, 1875, Proc. Zool. Soc. London (1874), p. 564—Maraynioc, Junín, Peru.

Temperate zone grassland of central and southeastern Peru in Junín, Apurímac (Bosque de Chincheros), and Cuzco.

#### NOTHOPROCTA KALINOWSKII

##### **Nothoprocta kalinowskii** Berlepsch and Stolzmann

*Nothoprocta kalinowskii* Berlepsch and Stolzmann, 1901, Ornith., **11**, p. 192—Licamachay, Cuzco, Peru.

Temperate zone grassland of north-central and southeastern Peru in La Libertad (southeast of Huamachuco) and Cuzco (Licamachay).

#### NOTHOPROCTA ORNATA

##### **Nothoprocta ornata branickii** Taczanowski

*Nothoprocta branickii* Taczanowski, 1875, Proc. Zool. Soc. London (1874), p. 563—Junín, Peru.

Altiplano of central Peru from Junín south to northwestern Apurímac.

##### **Nothoprocta ornata ornata** (Gray)

*Rhynchotus ornatus* G. R. Gray, 1867, List Specimens Birds Brit. Mus., pt. 5, p. 102—Bolivia.

Puna zone of southern Peru (Puno), northwestern Bolivia (La Paz, Cochabamba, Oruro), and northern Chile in the Andes of Tarapacá (Salar del Huasco).

##### **Nothoprocta ornata rostrata** Berlepsch

*Nothoprocta ornata rostrata* Berlepsch, 1907, Ornith., **14**, p. 371—Cumbre de Malamala, Tucumán; altitude 3,300 meters.

Puna zone of northwestern Argentina in Jujuy, Salta, Catamarca, Tucumán, and La Rioja.

#### NOTHOPROCTA PERDICARIA

##### **Nothoprocta perdicaria perdicaria** (Kittlitz)

*Crypturus perdicarius* Kittlitz, 1830, Mém. Savans Étrangers Acad. Imp. Sci. St.-Pétersbourg, 1, livr. 2, p. "192" [= 193], pl. 12—near Valparaíso, Chile.

Central Chile from southern Atacama (Huasco Valley) south to Ñuble. Intergrades with *sanborni* from Curicó south. Introduced Easter Island.

##### **Nothoprocta perdicaria sanborni** Conover

*Nothoprocta perdicaria sanborni* Conover, 1924, Auk, 41, p. 334—Máfil, Valdivia, Chile.

Central Chile from Maule south to Llanquihue. Intergrades with *perdicaria* north to Curicó.

#### NOTHOPROCTA CINERASCENS

##### **Nothoprocta cinerascens cinerascens** (Burmeister)

*Nothura cinerascens* Burmeister, 1860, Journ. Ornith., 8, p. 259—Tucumán, Argentina.

Semiarid parts of southeastern Bolivia (Tarija) and the Chaco region of northwestern Paraguay; Argentina from Jujuy, Salta, and Formosa south, exclusive of La Rioja, at least to northeastern Mendoza, northern and eastern San Luis, northeastern La Pampa, and northeastern Santa Fe. Recent reports of the species in extreme northeastern Río Negro and southern Buenos Aires (Olrog, 1972, Acta Zool. Lilloana, 26, p. 269), probably are referable to this race.

##### **Nothoprocta cinerascens parvimaclata** Olrog

*Nothoprocta cinerascens parvimaclata* Olrog, 1959, Neotropica, 5, p. 39—Santa Rosa, Patquía, La Rioja, Argentina.

Known only from the arid brushy region of eastern La Rioja, Argentina.

#### NOTHOPROCTA PENTLANDII

##### **Nothoprocta pentlandii ambigua** Cory

*Nothoprocta ambigua* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., 1, p. 293—Hacienda Llagueda, north-

east of Otuzco, La Libertad, Peru.

Western Andes of southern Ecuador and northwestern Peru, chiefly at high altitudes; foothills, locally, in grassy areas.

**Nothoprocta pentlandii oustaleti** Berlepsch and Stolzmann

*Nothoprocta oustaleti* Berlepsch and Stolzmann, 1901, Ornith.

11, p. 191—Coracora, Ayacucho, Peru; altitude 11,500 feet.

Andes of central and southern Peru, chiefly at altitudes of 1,500–3,500 meters.

**Nothoprocta pentlandii niethammeri** Koepcke

*Nothoprocta pentlandii* [sic] *niethammeri* Koepcke, 1968,

Bonner Zool. Beitr., 19, p. 231—lomas of Lachay, about

90 kilometers north of Lima, Peru.

Lomas of coastal central Peru (Lachay and vicinity of Lima).

Reports of this species from coastal southern Peru (lomas of Pongo at Acarí and of Atiquipa at Chala) may refer to an undescribed form.

**Nothoprocta pentlandii fulvescens** Berlepsch

*Nothoprocta fulvescens* Berlepsch, 1902, Verh. V Int. Zool.

Congr., Berlin (1901), p. 548—Urcos, Cuzco, Peru; altitude

3,500 meters.

Temperate zone of southeastern Peru in the region of Cuzco.

**Nothoprocta pentlandii pentlandii** (Gray)

*Rhynchotus Pentlandii* G. R. Gray, 1867, List Specimens

Birds Brit. Mus., pt. 5, p. 103—Andes of Bolivia.

Eastern Cordillera of Bolivia from La Paz south to Chuquisaca and ? Tarija; extreme northern Chile in the Andes of Arica; northwestern Argentina at moderate to high altitudes in Jujuy, Salta, Tucumán, and Catamarca (where evidently intergrading with *doeringi*).

**Nothoprocta pentlandii doeringi** Cabanis

*Nothoprocta doeringi* Cabanis (*ex* Schulz MS), 1878, Journ.

Ornith., 26, p. 198—Sierra Chica, near Córdoba, Argentina.

Central Argentina in the mountains of San Luis and Córdoba (evidently intergrading with *pentlandii* to northwest).

**Nothoprocta pentlandii mendozae** Banks and Bohl

*Nothoprocta pentlandii mendozae* Banks and Bohl, 1968,

Proc. Biol. Soc. Washington, 81, p. 486—Quebrada de Canota, Mendoza, Argentina.

Known only from the mountains of northwestern Mendoza, west-central Argentina. Records of this species from other

parts of Mendoza and from northern Neuquén probably also apply to this form.

#### NOTHOPROCTA CURVIROSTRIS

**Nothoprocta curvirostris curvirostris** Sclater and Salvin  
*Nothoprocta curvirostris* P. L. Sclater and Salvin, 1873,  
 Nomencl. Avium Neotrop., p. 163—Calacalí and Puéllaro,  
 Pichincha, Ecuador.

Páramo zone of Ecuador from Mt. Pichincha south.

**Nothoprocta curvirostris peruviana** Taczanowski  
*Nothoprocta curvirostris peruviana* Taczanowski, 1886, Or-  
 nith. Pérou, 3, p. 307 (in text)—Cutervo, Peru.  
 Temperate zone of Peru south to Huánuco.

#### GENUS NOTHURA WAGLER

*Nothura* Wagler, 1827, Syst. Avium. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 63), *Tinamus boraquira* Spix.

cf. Conover, 1950, Fieldiana, Zool., 31, pp. 339-362.

Bump and Bump, 1969, U. S. Dept. Int., Fish Wildlife Serv., Spec. Sci. Rep.—Wildlife no. 120, 170 pp. (*maculosa*, *darwinii*).

Short, 1975, Bull. Amer. Mus. Nat. Hist., 154, pp. 189-191 (*boraquira*, *maculosa*, *darwinii*).

Short, 1976, Amer. Mus. Novit., no. 2597, pp. 2-3 (*maculosa chacoensis*).

#### NOTHURA BORAQUIRA

**Nothura boraquira** (Spix)

*Tinamus boraquira* Spix 1825, Avium Species Novae Itinere Brasiliam, 2, p. 63, pl. 79—"in campis petrosis districtus adamantini." Type from Minas Gerais, Brazil.

*Nothura marmorata* G. R. Gray, 1867, List Specimens Birds Brit. Mus., pt. 5, p. 104—Bolivia.

*Nothura schreineri* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 702, pl. 2—Minas Gerais, Brazil.

*Nothura spixi* Miranda-Ribeiro, 1938, Rev. Mus. Paulista, 23 (1937), p. 704, pls. 3, 4a. New name for *Nothura boraquira* (Spix).



Dry grassland of northeastern Brazil from Piauí, Ceará, and Paraíba south to Minas Gerais; also eastern Bolivia (Santa Cruz) and drier parts of the Paraguayan Chaco (west of Puerto Casado).

#### NOTHURA MINOR

##### **Nothura minor** (Spix)

*Tinamus minor* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 65, pl. 82—"in campis prope pagum Tejuco."

Type from Diamantina, Minas Gerais, Brazil.

Grassland and scrub of southeastern Brazil in Minas Gerais, southern Mato Grosso, and São Paulo.

#### NOTHURA DARWINII

##### **Nothura darwinii peruviana** Berlepsch and Stolzmann

*Nothura maculosa peruviana* Berlepsch and Stolzmann, 1906, Ornith., 13, p. 101—Santa Ana, Urubamba Valley, Cuzco, Peru.

Known only from southern Peru in the Urubamba Valley, Cuzco. Intergrades with *agassizii* to the south.

##### **Nothura darwinii agassizii** Bangs

*Nothura agassizii* Bangs, 1910, Proc. Biol. Soc. Washington, 23, p. 107—Moho, northern border of Lake Titicaca, Peru.

*Nothura maculosa oruro* Bond and Meyer de Schauensee, 1941, Notulae Naturae, no. 93, p. 2—Callipampa, Lake Poopó, Oruro, Bolivia; altitude 12,200 feet.

Highlands of southeastern Peru from the southern Cuzco region and Titicaca basin south through western Bolivia at least to Lake Poopó, Oruro. Intergrades with *peruviana* and *boliviana* respectively in the extreme north and south.

##### **Nothura darwinii boliviana** Salvadori

*Nothura boliviana* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 558 (in key), 561—Bolivia; restricted to Tiraque, Cochabamba, by Conover, 1950, Fieldiana, Zool., 31, p. 347.

Highlands of western Bolivia from Cochabamba south to Tarija at elevations of 1,800 to 3,500 meters. Intergrades with *agassizii* in the region of Lake Poopó, Oruro.

**Nothura darwinii salvadorii** Hartert

*Nothura salvadorii* Hartert, 1909, in Hartert and Venturi, Novit. Zool., 16, p. 216—Arenal, Salta, Argentina.

Dry steppes and uplands of western Argentina from Jujuy and Salta south to Mendoza and east to western Santiago del Estero, western Córdoba, and western La Pampa.

**Nothura darwinii darwinii** Gray

*Nothura Darwinii* G. R. Gray, 1867, List Specimens Birds Brit. Mus., pt. 5, p. 104—Bahía Blanca, southern Buenos Aires.

South-central Argentina, chiefly in high dry regions, from the ? eastern sierras of Córdoba south in eastern La Pampa to the Sierra de la Ventana, southwestern Buenos Aires, and the dry upland steppes of Río Negro and northern Chubut. Not reported south of Golfo Nuevo, Chubut, or more than 30 kilometers inland.

## NOTHURA MACULOSA

**Nothura maculosa cearensis** Naumburg

*Nothura maculosa cearensis* Naumburg, 1932, Amer. Mus. Novit., no. 554, p. 1—Lavras, Ceará, Brazil.

Known only by the unique type (American Museum of Natural History, New York) from southern Ceará, northeastern Brazil.

**Nothura maculosa major** (Spix)

*Tinamus major* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 64, pl. 80—"in campis Minas Geraes, prope pagos Tejuco et Contendas." Type from Diamantina, Minas Gerais, Brazil.

Interior of east-central Brazil in Goiás, Minas Gerais, and probably adjacent parts of southwestern Bahia.

**Nothura maculosa paludivaga** Conover

*Nothura maculosa paludivaga* Conover, 1950, Fieldiana, Zool., 31, p. 357—7 kilometers southwest of Laguna General Díaz (lat. 22° 15' S., long. 59° 5' W.), Chaco, Paraguay.

*Nothura maculosa chacoensis* Conover, 1937, Proc. Biol. Soc. Washington, 50, p. 227 part—Puerto Pinasco, Paraguay.

Central Paraguay (probably north to the Bolivian border) from the Río Paraguay west about 150 kilometers, the Pilcomayo

Valley, and north-central Argentina in eastern Formosa and Chaco. Marshy savannas and grasslands.

**Nothura maculosa chacoensis** Conover

*Nothura maculosa chacoensis* Conover, 1937, Proc. Biol. Soc. Washington, **50**, p. 227—265 kilometers west of Puerto Casado, Paraguayan Chaco.

Arid parts of the Paraguayan Chaco from about 150 kilometers west of Río Paraguay (probably at least to the Bolivian border) south to Formosa, north-central Argentina. Semiarid grasslands.

**Nothura maculosa maculosa** (Temminck)

*Tinamus maculosa* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, **3**, pp. 557, 748; based on "Ynambuí," no. 327, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata, **3**, p. 40—Paraguay.

*Nothura maculosa savannarum* Wetmore, 1921, Journ. Washington Acad. Sci., **11**, p. 435—San Vicente, Rocha, Uruguay.

Eastern Paraguay and southeastern Brazil south from southern Mato Grosso (Campo Grande, Vacaria, Rio Brilhante), São Paulo, and Rio de Janeiro; Uruguay; northeastern Argentina from Misiones south to northern Santa Fe and Entre Ríos. Savannas, plains, and open palm forests.

**Nothura maculosa pallida** Olrog

*Nothura maculosa pallida* Olrog, 1959, Neotropica, **5**, no. 17, p. 41—Igusa, Aguaray, Salta, Argentina.

Moist Chacoan grasslands of northern Argentina in Jujuy, northern and eastern Salta, western Formosa, Chaco, northern and western Santiago del Estero, and eastern Catamarca.

**Nothura maculosa annectens** Conover

*Nothura maculosa annectens* Conover, 1950, Fieldiana, Zool., **31**, p. 353—Cambaceres (lat. 36° 35' S., long. 61° 5' W.), Buenos Aires, Argentina.

Lush grasslands of eastern Argentina from central Córdoba, southern Santa Fe, and northern Buenos Aires south to Bahía Blanca and southern La Pampa.

**Nothura maculosa submontana** Conover

*Nothura maculosa submontana* Conover, 1950, Fieldiana, Zool., **31**, p. 351—Chos-Malal (lat. 37° 20' S., long. 70°

15' W.), Río Neuquén, Neuquén, Argentina; altitude 2,500 feet.

Known only from the type locality in the Andean foothills of northern Neuquén, southwestern Argentina. Intergrades with *nigroguttata* to southeast.

**Nothura maculosa nigroguttata** Salvadori

*Nothura nigroguttata* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 558 (in key), 560—"Central Pampas, Argentine Republic." Type from Choele-Choel, Río Negro, Argentina. Coastal regions and interior river valleys of southern Argentina in southeastern Neuquén, eastern Río Negro, and north-eastern Chubut. Moist grasslands. Intergrades with *submontana* in Neuquén.

GENUS **TAONISCUS** GLOGER

*Taoniscus* Gloger, 1842, Gemeinnütziges Hand- und Hilfsbuch Naturgeschichte, p. 404. Type, by monotypy, *Taoniscus pavoninus* Gloger = *Tinamus nanus* Temminck.

cf. Pinto da Silveira, E. K., 1967, Bol. Geogr., Conselho Nac. Geogr., Rio de Janeiro, no. 200, pp. 38-41 (distribution).

**TAONISCUS NANUS**

**Taoniscus nanus** (Temminck)

*Tinamus nanus* Temminck, 1815, Hist. Nat. Pigeons Gallinacés, 3, pp. 600, 753; based on "Ynambú-carapé," no. 328, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata, 3, p. 45—Misiones, Argentina.

Secondary forest and savannas of southeastern Brazil in southeastern Goiás, Brasília (Distrito Federal), São Paulo, and Paraná (Bôa Vista, Rio Jaguaraíba); Misiones (no recent record), Argentina.

GENUS **EUDROMIA** GEOFFROY SAINT-HILAIRE

*Eudromia* I. Geoffroy Saint-Hilaire, 1832, Mag. Zool., Paris, 2, cl. 2, p. [1], pl. 1. Type, by monotypy, *Eudromia elegans* Orbigny and Geoffroy Saint-Hilaire.

cf. Conover, 1950, Fieldiana, Zool., 31, pp. 363-374.

Olog, 1959, Neotropica, 5, pp. 13-21.

Bohl, 1970, U. S. Dept. Int., Fish Wildlife Serv., Spec.

Sci. Rep.—Wildlife no. 131, 107 pp. (*elegans*).  
Short, 1975, Bull. Amer. Mus. Nat. Hist., **154**, pp. 191-192.  
Banks, 1977, Proc. Biol. Soc. Washington, **89**, pp. 529-544.

## EUDROMIA ELEGANS

**Eudromia elegans intermedia** (Dabbene and Lillo)

*Calopezus intermedius* Dabbene and Lillo, 1913, Anales Mus. Nac. Hist. Nat. Buenos Aires, **24**, pp. 192, 194, pl. 12—Colalao del Valle, western Tucumán, Argentina. Southeastern Bolivia and northwestern Argentina in northern and central Salta, western Tucumán, and adjacent northeastern Catamarca.

**Eudromia elegans magnistriata** Olrog

*Eudromia elegans magnistriata* Olrog, 1959, Neotropica, **5**, p. 19—Pinto, Aguirre, Santiago del Estero, Argentina. Northwestern Argentina in southern Santiago del Estero, northern Córdoba, and possibly adjacent Tucumán, Catamarca, and Santa Fe. Chiefly dry woodland.

**Eudromia elegans riojana** Olrog

*Eudromia elegans riojana* Olrog, 1959, Neotropica, **5**, p. 19—Guayapa, Estación Patquía, La Rioja, Argentina. Western Argentina in La Rioja. Chiefly dry woodland.

**Eudromia elegans albida** (Wetmore)

*Calopezus elegans albidus* Wetmore, 1921, Journ. Washington Acad. Sci., **11**, p. 437—San Juan, Argentina. Western Argentina in San Juan, northern Mendoza, and adjacent San Luis. Dry savannas.

**Eudromia elegans wetmorei** Banks

*Eudromia elegans wetmorei* Banks, 1977, Proc. Biol. Soc. Washington, **89**, p. 537—Tunuyán, Mendoza, Argentina. Western Argentina in the Andean foothills of north-central Mendoza.

**Eudromia elegans devia** Conover

*Eudromia elegans devia* Conover, 1950, Fieldiana, Zool., **31**, p. 369—Chos-Malal (lat. 37° 20' S., long. 70° 15' W.), Río Neuquén, Neuquén, Argentina; altitude 2,500 feet. Southwestern Argentina in western Neuquén and probably southwestern Argentina. Savannas.

**Eudromia elegans numida** Banks

*Eudromia elegans numida* Banks, 1977, Proc. Biol. Soc. Washington, **89**, p. 536—west of Telén, La Pampa, Argentina, along Route 143 near kilometer marker 287.

Central Argentina in southern Córdoba, southeastern Mendoza, central and eastern La Pampa, and probably southern San Luis.

**Eudromia elegans multiguttata** Conover

*Eudromia elegans multiguttata* Conover, 1950, Fieldiana, Zool., **31**, p. 367—Cambaceres (lat. 36° 35' S., long. 61° 5' W.), Buenos Aires, Argentina.

East-central Argentina in Buenos Aires, north of the Río Colorado, and extreme southeastern La Pampa. Chiefly dry grasslands. Northern limits poorly defined.

**Eudromia elegans elegans** Geoffroy Saint-Hilaire

*Eudromia elegans* ("D'Orb. et Is. Geoff.") = I. Geoffroy Saint-Hilaire, 1832, Mag. Zool., Paris, **2**, cl. 2, p. [3], pl. 1—between lat. 38° S. and 46° S., in eastern Argentina. Type from Bahía de San Blas, extreme southern Buenos Aires.

*Calopezus elegans morenoi* Chubb, 1917, Bull. Brit. Ornith. Club, **38**, p. 31—Neuquén.

South-central Argentina from eastern Neuquén through most of Río Negro to extreme southern Buenos Aires; generally bounded on the north by the Río Colorado.

**Eudromia elegans patagonica** Conover

*Eudromia elegans patagonica* Conover, 1950, Fieldiana, Zool., **31**, p. 364—Estación Pampa Alta, Ferrocarril Patagonica, Santa Cruz, Argentina; altitude 600 feet.

Southern Argentina in southern Neuquén and southwestern Río Negro south through Chubut and Santa Cruz, with adjacent Chile; from elevations of about 900 meters to the Atlantic coast.

## EUDROMIA FORMOSA

**Eudromia formosa mira** Brodkorb

*Eudromia mira* Brodkorb, 1938, Occas. Papers Mus. Zool., Univ. Michigan, no. 382, p. 1—120 kilometers west of Puerto Pinasco, Paraguay.

Arid Paraguayan Chaco from about Islapoi (Villa Militar) west and north an unknown distance; possibly has contact with nominate *formosa* in northern Formosa, Argentina. Perhaps not separable from *formosa*.

**Eudromia formosa formosa** (Lillo)

*Calopezus formosus* Lillo, 1905, Rev. Letras Cien. Sociales, Tucumán, 3, p. 72—eastern Tucumán near the border of Santiago del Estero, Argentina. Type from between Lejas and Isca Yacú.

Dry chaco woodland of north-central Argentina in eastern Salta, western Formosa, and western Chaco south to eastern Tucumán and western Santiago del Estero.

GENUS **TINAMOTIS** VIGORS

*Tinamotis* Vigors, 1837, Proc. Zool. Soc. London (1836), p. 79. Type, by monotypy, *Tinamotis pentlandii* Vigors.

**TINAMOTIS PENTLANDII**

**Tinamotis pentlandii** Vigors

*Tinamotis Pentlandii* Vigors, 1837, Proc. Zool. Soc. London (1836), p. 79—"on a high elevation in the Andes"; probably Bolivia. Type in British Museum (Natural History).

Puna zone of the Andes from central Peru (Junín) south to Antofagasta, Chile; highlands of Bolivia south to northwestern Argentina in Jujuy, Salta, and northern Catamarca. Grasslands and barrens above 4,000 meters.

**TINAMOTIS INGOUFI**

**Tinamotis ingoufi** Oustalet

*Tinamotis ingoufi* Oustalet, 1890, Ann. Sci. Nat., Zool., Paris, sér. 7, 9, p. 18—vicinity of Santa Cruz, Patagonia.

Grasslands of southern Chile in Aisén and Magallanes north of the Strait of Magellan; savanna steppes of southern Argentina from western Río Negro south to southern Santa Cruz.

ORDER PROCELLARIIFORMES<sup>1</sup>

CHRISTIAN JOUANIN AND JEAN-LOUIS MOUGIN

## FAMILY DIOMEDEIDAE

- cf. Mathews, 1934, *Novit. Zool.*, **39**, pp. 152-158.  
 Murphy, 1936, *Oceanic Birds South Amer.*, pp. 489-584.  
 Falla, 1937, *Brit. Austral. N. Z. Antarctic Res. Exped. Rep.*, ser. B, **2**, pp. 114-136.  
 Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, pp. 40-50 (New World).  
 Dementiev *et al.*, 1951, *Ptitsy Sovetskogo Soiuza*, **2**, pp. 294-303 (English trans., 1968, *Birds Soviet Union*, **2**, pp. 342-352).  
 Bourne, 1961 ff., *Observations Sea Birds*, in *Sea Swallow* (Annual Rep. Roy. Naval Bird Watching Soc.), **14** ff.  
 Alexander *et al.*, 1965, *Ibis*, **107**, pp. 401-405.  
 Bourne, 1967, *Ibis*, **109**, pp. 145-149 (long-distance vagrancy).  
 Ornith. Soc. N. Z., 1970, *Annot. Checklist Birds N. Z.*, pp. 18-20.  
 Prévost and Mougin, 1971, *Guide Oiseaux Mammifères Terres Australes Antarctiques Françaises*, pp. 38-48.  
 Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 61-82.  
 Watson *et al.*, 1971, *Birds Antarctic Subantarctic*, pls. 3-4, 15.  
 Watson, 1975, *Antarctic Res. Ser. (Amer. Geophys. Union)*, no. 24, pp. 85-99.

## GENUS DIOMEDEA LINNAEUS

*Diomedea* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 132. Type, by subsequent designation (G. R. Gray, 1840, *List Gen. Birds*, p. 78), *Diomedea exulans* Linnaeus.

<sup>1</sup>MS read by W. R. P. Bourne, J. Warham, and G. E. Watson, to whom the authors are greatly indebted for numerous constructive suggestions. The senior author particularly wishes to acknowledge the contribution of W. R. P. Bourne in lengthy and valuable discussions over many years.



- Phoebastria* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 5. Type, by original designation, *Diomedea brachyura* Temminck = *Diomedea albatrus* Pallas.
- Thalassarche* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 5. Type, by original designation, *Diomedea melanophrys* Temminck.
- Thalassogeron* Ridgway, 1884, in Baird, Brewer, and Ridgway, Mem. Mus. Comp. Zool., 13, pp. 345, 357. Type, by original designation, *Diomedea culminata* Gould = *Diomedea chrysostoma* J. R. Forster.
- Julietata* Mathews, 1943, in Mathews and Hallstrom, Notes Order Procellariiformes, p. 27. Type, by original designation, *Diomedea irrorata* Salvin.
- Galapagornis* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 27. Type, by original designation, *Diomedea irrorata* Salvin.
- Laysanornis* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 27. Type, by original designation, *Diomedea immutabilis* Rothschild.
- Penthirenia* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 27. Type, by original designation, *Diomedea nigripes* Audubon.
- cf. Murphy, 1930, Amer. Mus. Novit., no. 419, pp. 1-7.
- Mathews, 1934, Ibis, p. 813 (type locality of *exulans* Linnaeus).
- Austin, 1949, Pacific Science, 3, pp. 283-295 (status of *albatrus*).
- Richdale, 1949, Biol. Monogr., 2, 50 pp. (pre-egg stage in *bulleri*).
- Richdale, 1950, Biol. Monogr., 3, 92 pp. (pre-egg stage in Diomedidae).
- Sorensen, 1950, Cape Exped. Ser., Bull. no. 2, 39 pp. (ecology of *epomophora*).
- Rowan, 1951, Ostrich, 22, pp. 139-159 (ecology of *chlororhynchos*).
- Richdale, 1952, Biol. Monogr., 4, 166 pp. (post-egg stage in Diomedidae).
- Westerskov, 1961, Emu, 61, pp. 153-170 (taxonomic status of *epomophora*).
- Palmer (ed.), 1962, Handb. North Amer. Birds, 1, pp. 116-136.

- Rice and Kenyon, 1962, *Auk*, **79**, pp. 365-386, 517-567 (breeding distribution, breeding cycles, behavior, and populations of *nigripes* and *immutabilis*).
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 18-19.
- Tickell, 1968, in Austin (ed.), *Antarctic Bird Studies*, pp. 1-55 (biology of *exulans* and *epomophora*).
- Voisin, 1969, *Oiseau*, **39**, no. spéc., pp. 82-106 (ecology of *exulans*).
- Mougin, 1970, *Oiseau*, **40**, no. spéc., pp. 16-36 (ecology of *exulans*).
- Fisher, 1971, *Living Bird*, **10**, pp. 19-78 (ecology of *immutabilis*).
- Fisher, 1972, *Auk*, **89**, pp. 381-402 (sympatry of *immutabilis* and *nigripes*).
- Fisher, H. I. and J. R., 1972, *Wilson Bull.*, **84**, pp. 7-27 (pelagic distribution of *immutabilis*).
- Sanger, 1972, *Biol. Conserv.*, **4**, pp. 189-193 (pelagic distribution of *albatrus*).
- Harris, 1973, *Ibis*, **115**, pp. 483-510 (ecology of *irrorata*).
- Richdale and Warham, 1973, *Ibis*, **115**, pp. 257-263 (ecology of *bulleri*).
- Robbins and Rice, 1974, in King (ed.), *Smithsonian Contrib. Zool.*, no. 158, pp. 232-271 (pelagic distribution of *immutabilis* and *nigripes*, Pacific Ocean).
- Sanger, 1974, in King (ed.), *Smithsonian Contrib. Zool.*, no. 158, pp. 96-153 (pelagic distribution of *nigripes* and *immutabilis*, Pacific Ocean).
- Fisher, 1975, *Pacific Science*, **29**, pp. 279-300 (life cycle of *immutabilis*).
- Johnstone, Milledge, and Dorward, 1975, *Emu*, **75**, pp. 1-11 (ecology of *cauta*).
- Tickell and Pinder, 1975, *Ibis*, **117**, pp. 433-451 (breeding biology of *melanophrys* and *chrysostoma*).
- Barrat, Barré, and Mougin, 1976, *Oiseau*, **46**, pp. 143-155 (ecology of *exulans*).
- Fisher, 1976, *Wilson Bull.*, **88**, pp. 121-142 (breeding of *immutabilis*).
- Tickell, 1976, *Emu*, **76**, pp. 64-68 (distribution of *melanophrys* and *chrysostoma*).
- Tickell, 1976, *XII Bull. Int. Council Bird Preservation*

(1975), pp. 125-131 (status of *albatrus*).  
Cramp and Simmons (eds.), 1977, Birds Western Palearctic, 1, pp. 113-117.

DIOMEDEA EXULANS<sup>1</sup>**Diomedea exulans exulans** Linnaeus

*Diomedea exulans* Linnaeus, 1758, Syst. Nat., ed. 10, p. 132; based chiefly on "The Albatross" of Edwards, 1747, Nat. Hist. Birds, p. 88, pl. 88—"intra tropicos Pelagi ad Cap. b. Spei" = Cape of Good Hope *ex* Edwards.<sup>2</sup>

*Diomedea chionopectera alexanderi* Dabbene, 1926, Hornero, 3, p. 338—South Atlantic, lat. 38° 30' S., long. 56° W., 100 miles off coast of Argentina.

*Diomedea dabbenena* Mathews, 1929, Bull. Brit. Ornith. Club, 50, p. 11. New name for *Diomedea chionopectera alexanderi* Dabbene, 1926, preoccupied by *Thalassogeron chrysostoma alexanderi* Mathews, 1916, Austral Avian Rec., 3, p. 55.

Breeds on subtropical and subantarctic islands: Tristan da Cunha Group (Inaccessible, Tristan da Cunha—formerly, Gough), Amsterdam Island, Auckland (Adams, Disappointment), Campbell, and Antipodes Islands. Birds from the New Zealand region seem intermediate between *exulans* and *chionopectera*.<sup>3</sup> Not distinguishable at sea from *chionopectera*.

**Diomedea exulans chionopectera** Salvin

*Diomedea chionopectera* Salvin, 1896, Cat. Birds Brit. Mus., 25, pp. 440 (in key), 443—Kerguelen.

*Diomedea exulans rothschildi* Mathews, 1912, Birds Australia, 2, p. 246, pl. 95—Australian seas.

<sup>1</sup>*D. exulans* and *epomophora* form a subgenus *Diomedea*.—C. J. and J.-L. M.

<sup>2</sup>The breeding origin of the type has been debated, Mathews (1934, Ibis, p. 813) assuming it to be Tristan da Cunha, Murphy (1936, Oceanic Birds South Amer., p. 547) the southern part of the range of the species. These contradictory treatments created a confusing use of the name *exulans*, but Mathews, having the priority, has to be followed.—C. J. and J.-L. M.

<sup>3</sup>W. R. P. Bourne and J. Warham, pers. com. Cf. also Warham, 1977, N. Z. Journ. Zool., 4, p. 76, note.—C. J. and J.-L. M.

*Diomedea exulans rohui* Mathews, 1915, Austral Avian Rec., 2, p. 125—Sydney, New South Wales.

*Diomedea exulans westralis* Mathews, 1918, Bull. Brit. Ornith. Club, 39, p. 23—off Albany, Western Australia.

*Diomedea exulans georgia* Mathews, 1933, Bull. Brit. Ornith. Club, 53, p. 214—South Georgia.

Breeds on high-latitude subantarctic and antarctic islands: ? Falklands, South Georgia, Marion Group, Crozet (Hog, Possession, East), Kerguelen, and Macquarie Islands. Highly migratory: circumpolar in the austral seas between lat. 65° S. and the Tropic of Capricorn. Some stragglers (? or possibly imported birds) observed in the Northern Hemisphere: Belgium, Sicily, Portugal.

#### DIOMEDEA EPOMOPHORA

##### ***Diomedea epomophora epomophora* Lesson**

*Diomedaea* [sic] *epomophora* Lesson, 1825, Ann. Sci. Nat., Paris, 6, p. 95—no locality; probably Australian waters.

*Diomedea regia* Buller, 1891, Trans. N. Z. Inst., 22, p. 230—Campbell Island.

*Diomedea epomophora mccormicki* Mathews, 1912, Birds Australia, 2, p. 261—Enderby Island.

*Diomedea epomophora longirostris* Mathews, 1934, Bull. Brit. Ornith. Club, 54, p. 112—south Atlantic Ocean.

Breeds in large numbers on Campbell Island; a few pairs breed in the Auckland Group (Auckland Island itself and Enderby and Adams Islands). Highly migratory: range circumpolar, north to New Zealand and Australian seas, Polynesia; also known off the east and west coasts of South America, from Uruguay and Chile to Cape Horn. Difficult to distinguish at sea from *Diomedea exulans*; the ranges of both species are perhaps similar.

##### ***Diomedea epomophora sanfordi* Murphy**

*Diomedea (Rhothonia) sanfordi* Murphy, 1917, Bull. Amer. Mus. Nat. Hist., 37, p. 861—at sea, 40 miles off Corral, Chile.

Breeds in New Zealand at Taiaroa Head, Otago Peninsula, and on the Chatham Islands (Sisters, Forty Fours). Ranges

north in New Zealand seas and east to west and east coasts of South America.

#### DIOMEDEA IRRORATA<sup>1,2</sup>

##### **Diomedea irrorata** Salvin

*Diomedea irrorata* Salvin, 1883, Proc. Zool. Soc. London, p. 430—Callao Bay, Peru.

Breeds on Española (Hood) Island, Galapagos Archipelago, and on La Plata Island, off Ecuador, where a small colony has recently been discovered.<sup>3</sup> Ranges at sea east and south to the coasts of Ecuador and northern Peru, from the Gulf of Guayaquil to about lat. 12° S. Extreme records off Punta Doña Maria (lat. 14° 54' S.), Peru, and off Chocó Province, northwestern Colombia.

#### DIOMEDEA ALBATRUS

##### **Diomedea albatrus** Pallas

*Diomedea albatrus* Pallas, 1769, Spicilegia Zool., 1, fasc. 5, p. 28—off Kamchatka.

Bred formerly on the northernmost of the Bonin Islands, on islets in the southern Ryukyus (Kobi Sho), probably also on the Pescadores, Agincourt Island, and the Borodino (Daito) Islands. Now reduced to a few pairs breeding on Tori Shima (southernmost of the Izu Islands, known also as Ponafidin Island). Highly migratory: ranges, or has ranged, over the north Pacific, from the Fukien coast of China to Bering Strait and Baja California.

<sup>1</sup>The specific name *irrorata*, as published in the binomen *Diomedea irrorata* Salvin 1883, has been placed on the Official List of Specific Names in Zoology with the Name No. 2578, and the specific name *leptorhyncha*, as published in the binomen *Diomedea leptorhyncha* Coues 1866, has been placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 1012, by the International Commission on Zoological Nomenclature, Opin. 1060, 1976, Bull. Zool. Nomencl., 33, p. 27.—C. J. and J.-L. M.

<sup>2</sup>*D. irrorata*, *albatrus*, *nigripes*, and *immutabilis* form a subgenus *Phoebastria*.—C. J. and J.-L. M.

<sup>3</sup>Cf. Owre, 1976, Ibis, 118, pp. 419-420.—C. J. and J.-L. M.

DIOMEDEA NIGRIPES<sup>1</sup>**Diomedea nigripes** Audubon

*Diomedea nigripes* Audubon, 1849, Ornith. Biog., 5, p. 327—Pacific Ocean, lat. 30° 44' N., long. 146° W.

Breeds on Tori Shima (southernmost of the Izu Islands, known also as Ponafidin Island) and on islands in the Leeward Hawaiian Chain (Kure, Midway, Pearl and Hermes Reef, Lisianski, Laysan, French Frigate Shoals, Necker, Nihoa, Kaula). Bred formerly on Muko Shima in the northern Bonins, Iwo Jima in the Volcano Islands, Agrihan in the Marianas, Marcus and Wake Islands, Taongi in the northern Marshalls, and Johnston Island. Migratory: ranges the north Pacific from the Bering Sea west to Taiwan and the Fukien coast of China, east to the coast of America, south to southern Baja California and equatorial waters, the main area of dispersal lying in the northeastern Pacific, with a relatively coastal distribution.

## DIOMEDEA IMMUTABILIS

**Diomedea immutabilis** Rothschild

*Diomedea immutabilis* Rothschild, 1893, Bull. Brit. Ornith. Club, 1, p. 48—Laysan Island.

Breeds on islands of the Leeward Hawaiian Chain (Kure, Midway, Pearl and Hermes Reef, Lisianski, Laysan, Gardner Pinnacles, French Frigate Shoals, Necker, Nihoa), and recently on Kauai; formerly on Marcus, Wake, and Johnston Islands, and once on Tori Shima (southernmost of the Izu Islands, known also as Ponafidin Island). Migratory: ranges the north Pacific from the Bering Sea to Japan and Baja California, the main area of dispersal lying in the northwestern Pacific, with a relatively marine distribution.

DIOMEDEA MELANOPHRYS<sup>2</sup>**Diomedea melanophrys melanophrys** Temminck

*Diomedea melanophrys*<sup>3</sup> Temminck, 1828, Planches Color.,

<sup>1</sup>*Diomedea gibbosa* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 361—north Pacific, is either an aberrant example of this species or a hybrid between it and *Diomedea immutabilis*; cf. Fisher, 1972, Auk, 89, pp. 381-402.—C. J. and J.-L. M.

<sup>2</sup>*D. melanophrys* forms a monotypic subgenus *Thalassarche*.—C. J. and J.-L. M.

<sup>3</sup>Corrected to *melanophrys*, Temminck, 1839, Planches Color., Tableau Méthod., livr. 102, p. 76.—C. J. and J.-L. M.

livr. 77, pl. 456 and text—Cape of Good Hope.

*Thalassarche melanophris richmondi* Mathews, 1912, Birds Australia, 2, p. 272—west coast of South America.

Breeds on islands off Tierra del Fuego (Ildefonso, Evout, Diego Ramírez, and Staten), on the Falklands, South Georgia, ? Marion Group, ? Crozet, Kerguelen, Heard, and Macquarie Islands. Migratory: ranges the southern oceans from lat. 30° S. to the coasts of the Antarctic Continent. Relatively common vagrant to the Northern Hemisphere: recorded from Greenland, Faeroes, British Isles, Norway, and from central Pacific.

**Diomedea melanophrys impavida** (Mathews)

*Thalassarche melanophris impavida* Mathews, 1912, Birds Australia, 2, p. 267, pl. 96—Tasmania.

Breeds in the New Zealand region on Campbell and ? Antipodes Islands. Not easily distinguishable at sea from *melanophrys*.

#### DIOMEDEA CAUTA<sup>1</sup>

**Diomedea cauta cauta** Gould

*Diomedea cauta* Gould, 1841, Proc. Zool. Soc. London (1840), p. 177—Bass Strait.

*Thalassarche cauta steadi* Falla, 1933, Rec. Auckland Inst. Mus., 1, p. 179—Foveaux Strait, New Zealand.

Breeds on Albatross Island, 30 kilometers northwest of Tasmania, the Mewstone, south of Tasmania, and Auckland Islands (Disappointment). Migratory: ranges New Zealand and southern Australian waters and Indian Ocean, reaching South Africa. One straggler collected at lat. 47° 55' N., long. 125° 37' W., off the coast of Washington, United States.

**Diomedea cauta salvini** (Rothschild)

*Thalassogeron salvini* Rothschild, 1893, Bull. Brit. Ornith. Club, 1, p. 58—New Zealand.

*Diomedella cauta atlantica* Mathews, 1933, Bull. Brit. Ornith. Club, 53, p. 213—lat. 35° 44' S., long. 53° W., south Atlantic Ocean, about 120 miles off the coast of the Province of Buenos Aires.

*Diomedella cauta peruvia* Mathews, 1933, Bull. Brit. Ornith. Club, 53, p. 185—western Peru.

Breeds in the New Zealand region on Snares (Toru, Rima)

<sup>1</sup>*D. cauta*, *chrysostroma*, *chlororhynchus*, and *bulleri* form a subgenus *Thalassogeron*.—C. J. and J.-L. M.

and Bounty Islands. Migratory: ranges east to the coasts of Peru and Chile, west to South Africa and the coast of Argentina.

**Diomedea cauta eremita** (Murphy)

*Thalassarche cauta eremita* Murphy, 1930, Amer. Mus. Novit., no. 419, p. 4—Pyramid Rock off Pitt Island, Chatham Islands.

Breeds on Pyramid Rock, Chatham Islands, New Zealand region. Ranges locally within the area.

DIOMEDEA CHRYSOSTOMA

**Diomedea chrysostoma** Forster<sup>1</sup>

*Diomedea chrysostoma* J. R. Forster, 1785, Mém. Math. Phys. Acad. Sci., Paris, 10, p. 571, pl. 14—vicinity of the Antarctic Circle and in the Pacific Ocean.

*Thalassogeron desolationis* Salvadori, 1911, Boll. Mus. Zool. Anat. Comp. Univ. Torino, 26 (no. 638), p. 2—Desolation Island, Tierra del Fuego, lat. 52° S., long. 74° W.

Breeds on Diego Ramírez Islands (near Cape Horn), South Georgia, Prince Edward and Marion Islands, Crozet (Possession, East), Kerguelen, Macquarie, Campbell, and ? Antipodes Islands. Migratory: circumpolar in the austral seas from lat. 40° S. to the edge of the pack ice. Some very dubious records for the Northern Hemisphere (Norway)—probably imported birds.

DIOMEDEA CHLORORHYNCHOS

**Diomedea chlororhynchos** Gmelin

*Diomedea chlororhynchos* Gmelin, 1789, Syst. Nat., 1, p. 568; based on "Yellow-nosed Albatross" of Latham, 1785, General Synop. Birds, 3, p. 309, pl. 94—Cape of Good Hope.

Breeds north and south of the Subtropical Convergence: Tristan da Cunha Group (Inaccessible, Tristan da Cunha, Nightingale, Gough), Prince Edward, Amsterdam, and St. Paul Islands. Migratory: ranges at sea in the Atlantic Ocean, Indian Ocean, and Australian and New Zealand seas, chiefly between lat.

<sup>1</sup>*Diomedea chrysostoma* Forster replaces *Thalassogeron culminatus* (Gould) of Sharpe, 1899, Hand-list Birds, 1, p. 129.—C. J. and J.-L. M.



50° S. and 30° S., sometimes farther north and south. Stragglers recorded in Canada and eastern United States, doubtfully in the British Isles, Iceland, and France.

## DIOMEDEA BULLERI

**Diomedea bulleri bulleri** Rothschild

*Diomedea bulleri* Rothschild, 1893, Bull. Brit. Ornith. Club, 1, p. 58—New Zealand.

Breeds in the New Zealand region on Solander Island and Snares Islands. Dispersal area New Zealand seas. Recorded coast of Victoria, Australia.

**Diomedea bulleri platei** Reichenow

*Diomedea platei* Reichenow, 1898, Ornith. Monatsber., 6, p. 190—Cavancha, Chile.

Breeds in the New Zealand region on the Chatham Islands (Sisters, Forty Fours). Highly migratory: ranges the south Pacific from New Zealand to Chile and Peru.

## GENUS PHOEBETRIA REICHENBACH

*Phoebetria* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 5. Type, by original designation, *Diomedea fuliginosa* Gmelin = *Diomedea palpebrata* Forster.

cf. Sorensen, 1950, Cape Exped. Ser., Bull. no. 8, 30 pp. (ecology of *palpebrata*).

Mougin, 1970, Oiseau, 40, no. spéc., pp. 37-61 (ecology of *palpebrata* and *fusca*).

## PHOEBETRIA FUSCA

**Phoebetria fusca** (Hilsenberg)

*Diomedea fusca* Hilsenberg, 1822, in Froriep, Notizen, 3, col. 74—Mozambique Channel.

*Phoebetria fusca campbelli* Mathews, 1912, Birds Australia, 2, p. 304—Australian seas.

Breeds north and south of the Subtropical Convergence: Tristan da Cunha Group (Inaccessible, Tristan da Cunha, Nightingale, Gough), Prince Edward, Marion, Crozet (Hog, Possession, East), Kerguelen (uncommon), Amsterdam, and St. Paul Islands. Migratory: range at sea circumpolar in the austral seas between lat. 30° S. and the edge of the pack ice.

## PHOEBETRIA PALPEBRATA

**Phoebetria palpebrata** (Forster)

*Diomedea palpebrata* J. R. Forster, 1785, Mém. Math. Phys. Acad. Sci., Paris, **10**, p. 571, pl. 15—"depuis le degré quarante-septième de latitude australe jusqu'au soixante-onzième et dix minutes" = south of Prince Edward and Marion Islands, *vide* Mathews, 1934, Novit. Zool., **39**, p. 157.

*Phoebetria palpebrata auduboni* Nichols and Murphy, 1914, Auk, **31**, p. 531—mouth of the Columbia River, Oregon.

Breeds north and south of the Antarctic Convergence: South Georgia, Prince Edward, Marion, Crozet (Hog, Possession, East), Kerguelen, Heard, Macquarie, Auckland, Campbell, and Antipodes Islands. Migratory: range circumpolar in the austral seas, between lat. 30° S. and the coasts of the Antarctic Continent. Some very dubious records for the Northern Hemisphere (United States, France).

## FAMILY PROCELLARIIDAE

cf. Mathews, 1934, Novit. Zool., **39**, pp. 158-186.

Murphy, 1936, Oceanic Birds South Amer., pp. 584-726.

Falla, 1937, Brit. Austral. N. Z. Antarctic Res. Exped. Rep., ser. B, **2**, pp. 137-206.

Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, pp. 50-86 (New World).

Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, **2**, pp. 304-327 (English trans., 1968, Birds Soviet Union, **2**, pp. 353-380).

Bourne, 1961 ff., Observations Sea Birds, in Sea Swallow (Annual Rep. Roy. Naval Bird Watching Soc.), **14** ff.

Palmer (ed.), 1962, Handb. North Amer. Birds, **1**, pp. 136-217.

Alexander *et al.*, 1965, Ibis, **107**, pp. 401-405.

Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 20-30.

Bauer and Glutz von Blotzheim, 1966, Handb. Vögel Mitteleuropas, **1**, pp. 166-207.

Ornith. Soc. N. Z., 1970, Annot. Checklist Birds N. Z., pp. 20-28.

Prévost and Mougins, 1971, Guide Oiseaux Mammifères

- Terres Australes Antarctiques Françaises, pp. 49-83.  
 Serventy, D. L. and V., and Warham, 1971, Handb. Austral. Sea-birds, pp. 82-139.  
 Watson *et al.*, 1971, Birds Antarctic Subantarctic, pls. 4-10, 15.  
 Mougin, 1975, Comité Nat. Français Recherches Antarctiques, no. 36, 199 pp. (comparative ecology of antarctic and subantarctic Procellariidae).  
 Watson, 1975, Antarctic Res. Ser. (Amer. Geophys. Union), no. 24, pp. 99-151 (Antarctic and Subantarctic).  
 Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 118-155.

GENUS **MACRONECTES** RICHMOND

- Macronectes* Richmond, 1905, Proc. Biol. Soc. Washington, **18**, p. 76. Type, by original designation, *Procellaria gigantea* Gmelin. New name for *Ossifraga* Hombron and Jacquinet, 1844, Compt. Rend. Acad. Sci., Paris, **18**, p. 356, preoccupied by Wood, 1835, Analyst, **2**, p. 305.
- cf. Warham, 1962, Auk, **79**, pp. 139-160 (ecology).  
 Bourne and Warham, 1966, Ardea, **54**, pp. 45-67 (taxonomy).  
 Voisin, 1968, Oiseau, **38**, no. spéc., pp. 95-122 (ecology).  
 Conroy, 1972, Brit. Antarctic Surv. Sci. Rep., no. 75, 74 pp. (ecology of *giganteus*).  
 Johnstone, 1974, Emu, **74**, pp. 209-218 (characters, behavior, distribution).  
 Conroy, Bruce, and Furse, 1975, Ardea, **63**, pp. 87-92 (plumages and iris colors).  
 Voisin, 1976, Alauda, **44**, pp. 411-429 (sympatry, Crozet Archipelago).

**MACRONECTES GIGANTEUS****Macronectes giganteus** (Gmelin)

- Procellaria gigantea* Gmelin, 1789, Syst. Nat., **1**, p. 563; based on "Giant Petrel" of Latham, 1785, General Synop. Birds, **3**, p. 396, pl. 100—Staten Island, off Tierra del Fuego.  
*Ossifraga alba* Potts, 1874, Trans. N. Z. Inst., **6**, p. 152—off Centre Island, Foveaux Strait, New Zealand.

*Macronectes giganteus forsteri* Mathews, 1912, Birds Australia, **2**, p. 189—Valparaíso Bay, Chile.

*Macronectes giganteus solanderi* Mathews, 1912, Birds Australia, **2**, p. 187—Falkland Islands.

*Macronectes giganteus wilsoni* Mathews, 1912, Birds Australia, **2**, p. 189—Ross Sea, Antarctica.

*Macronectes giganteus dovei* Mathews, 1916, Austral Avian Rec., **3**, p. 54—Sydney, New South Wales.

*Procellaria maxima fusca* Mathews (ex Anderson MS), 1933, Emu, **33**, p. 138—Tierra del Fuego and Kerguelen Island. Synonym of *Macronectes giganteus* (Gmelin).

Breeds on the Antarctic Continent and Peninsula, Falkland Islands, South Georgia, South Sandwich, South Orkney, South Shetland, ? Bouvet Islands, Marion Group, Crozet (Hog, Possession, East), Kerguelen, Heard, and Macquarie Islands.<sup>1</sup> Adults rather sedentary; immatures highly migratory: circumpolar in the Southern Hemisphere, from the coasts of the Antarctic Continent to lat. 30° S., rarely farther north than lat. 10° S. One straggler reported off Brittany; another, or one belonging to *halli*, settled on Midway Atoll.

#### MACRONECTES HALLI

**Macronectes halli** Mathews

*Macronectes giganteus halli* Mathews, 1912, Birds Australia, **2**, p. 187—Kerguelen.

Breeds in the subantarctic zone of surface waters on Gough, Prince Edward, Marion, Crozet (Hog, Possession, East), Kerguelen, Macquarie, Stewart, Auckland, Campbell, Chatham, and Antipodes Islands, and, in the antarctic zone, on South Georgia.<sup>2</sup> Not easily distinguishable at sea from *giganteus*; probably the same range.

#### GENUS FULMAREUS STEPHENS

*Fulmarus* Stephens, 1826, in Shaw, General Zool., **13**, pt. 1, p. 236. Type, by subsequent designation (G. R. Gray,

<sup>1</sup>*Macronectes* breeding at Gough and Falkland Islands present intermediate characters. Their systematic status is still uncertain; cf. Johnston *et al.*, 1976, South Afr. Journ. Antarctic Res., **6**, pp. 19-22.—C. J. and J.-L. M.

<sup>2</sup>See preceding note.—C. J. and J.-L. M.

1855, Cat. Gen. Subgen. Birds Brit. Mus., p. 129), *Procellaria glacialis* Linnaeus.

*Priocella* Hombron and Jacquinot, 1844, Compt. Rend. Acad. Sci., Paris, 18, p. 357. Type, by monotypy, *Priocella garnotii* Hombron and Jacquinot = *Procellaria glacialoides* A. Smith.

cf. Voous, 1949, Ardea, 37, pp. 113-122 (*glacialis*, *glacialoides*).

Fisher, 1952, Fulmar, 512 pp.

Wynne-Edwards, 1952, Scott. Nat., 64, pp. 84-101 (geographical variation in *glacialis*).

Prévost, 1953, Alauda, 21, pp. 157-164 (breeding of *glacialoides*).

Carrick and Dunnet, 1954, Ibis, 96, pp. 356-370 (breeding of *glacialis*).

Salomonsen, 1965, Auk, 82, pp. 327-355 (geographical variation of *glacialis*).

Mougin, 1967, Oiseau, 37, pp. 57-103 (comparative ecology of *glacialis* and *glacialoides*).

Cramp, Bourne, and Saunders, 1974, Seabirds Britain Ireland, pp. 58-67, map 4, table 1 (breeding of *glacialis*).

#### FULMAREUS GLACIALOIDES<sup>1</sup>

##### **Fulmarus glacialoides** (Smith)

*Procellaria glacialoides* A. Smith, 1840, Illus. Zool. South Africa, Aves, pl. 51—Cape seas.

Breeds on the Antarctic Continent and Peninsula (Enderby Land, Mac Robertson Land, Queen Mary Land, Adélie Land, King George V Land, Louis-Philippe Land), and on adjacent islands (Balleny, ? Scott, Peter I), and on the South Sandwich, South Orkney, South Shetland, and Bouvet Islands; ? South Georgia. Migratory: circumpolar in the austral seas between the coasts of the Antarctic Continent and lat. 40° S., chiefly near lat. 60° S. Recorded at a number of localities north of that zone, especially along the west coast of South America.

<sup>1</sup>*Fulmarus antarcticus* Stephens, 1826, in Shaw, General Zool., 13, pt. 1, p. 236—"Antarctic Ocean, pretty far to the south," is indeterminate.—C. J. and J.-L. M.

## FULMAREUS GLACIALIS

**Fulmarus glacialis glacialis** (Linnaeus)<sup>1</sup>

*Procellaria glacialis* Linnaeus, 1761, Fauna Svecica, ed. 2, p. 51; based chiefly on "Mallemucke" of Martens, 1675, Spitzberg. Groenland. Reise Beschreibung, p. 68, pl. N, fig. c—within the Arctic Circle = Spitsbergen *ex* Martens (cf. Mathews, 1934, Ibis, p. 173).

*Procellaria minor* Kjaerbølling, 1852, Danmarks Fugle, p. 324—northern Greenland.

Breeds in the high-arctic north Atlantic region, on Devon Island, Baffin Island, northeastern Greenland, Spitsbergen, Bear Island, Franz Joseph Land, and probably Novaya Zemlya. Migratory: outside the breeding season frequents mainly the low-arctic parts of the Atlantic Ocean, occasionally straggling into the northern parts of the boreal zone.

**Fulmarus glacialis auduboni** Bonaparte<sup>1</sup>

*Fulmarus auduboni* Bonaparte, 1857, Consp. Gen. Avium, 2, p. 187—Newfoundland.

The subspecies has performed a considerable extension of breeding range and population during the nineteenth and twentieth centuries. Now breeds mainly in the low-arctic and boreal north Atlantic region, including northwestern Greenland from Thule district south to Disko Bay, Newfoundland, Jan Mayen, Iceland, Faeroes, British Isles, France (Brittany and Normandy), western Norway. Migratory: outside the breeding season frequents low-arctic and boreal parts of the Atlantic Ocean.

**Fulmarus glacialis rogersii** Cassin

*Fulmarus Rodgersii* Cassin, 1862, Proc. Acad. Nat. Sci. Philadelphia, p. 326—Indian Ocean; error, north Pacific Ocean (cf. Deignan, 1961, Bull. U. S. Nat. Mus., no. 221, p. 9).

*Fulmarus glacialis columba* Anthony, 1895, Auk, 12, p. 105—off San Diego, California.

Breeds in the north Pacific Ocean on the Commander, Kuril, Hall, St. Matthew, Pribilof, Aleutian Islands, and some islands south of the Alaska Peninsula (Semidi Group and Afognak),

<sup>1</sup>As regards the difficulty of attributing the other names given to the Atlantic Fulmar to one or the other subspecies, cf. Salomonsen, 1965, Auk, 82, pp. 327-355.—C. J. and J.-L. M.

probably on Diomede Islands, possibly on Wrangel, Herald, and St. Lawrence islands, coast of Koriakland, and east coast of Kamchatka. Migratory: disperses south to Japan and Baja California.

GENUS **THALASSOICA** REICHENBACH

*Thalassoica* Reichenbach, 1853, *Avium Syst. Nat.* (1852), p. 5. Type, by original designation, *Procellaria antarctica* Gmelin.

cf. Lowe and Kinnear, 1930, *Brit. Antarctic ("Terra Nova") Exped., 1910, Nat. Hist. Rep., Zool., 4, no. 5, pp. 132-134.*  
Orton, 1968, *Emu*, **67**, pp. 225-229.

**THALASSOICA ANTARCTICA**

***Thalassoica antarctica* (Gmelin)**

*Procellaria antarctica* Gmelin, 1789, *Syst. Nat.*, **1**, p. 565; based on "Le Pétrel antarctique ou Damier brun" of Buffon, 1783, *Hist. Nat. Générale*, **24**, *Hist. Nat. Oiseaux*, **9**, p. 311 (ex "Antarctic peterel" of Cook, 1777, *Voyage South Pole*, **1**, p. 252)—within the Antarctic Circle between lat. 36° S. and 61° S.

*Procellaria lugubris* Tschudi, 1856, *Journ. Ornith.*, **4**, p. 185. Synonym of *Procellaria antarctica* Gmelin, *vide* Mathews, 1934, *Novit. Zool.*, **39**, p. 161, not of Bonaparte, 1845, *Atti 6. Riunione Scienziati Italiani* (1844), p. 445, which is *Hydrobates pelagicus* (Linnaeus).

Breeds coastally and within the Antarctic Continent (Enderby Land, Mac Robertson Land, Wilkes Land, Mary Byrd Land, Theron Mountains, Mühlig-Hofmann Mountains, Rockefeller Mountains). Range at sea circumpolar in the pack ice, between the coasts of the Antarctic Continent and lat. 50° S. Recorded also from southern South America, the Falklands, South Africa, Kerguelen Islands, Tasmania (King Island), and New Zealand.

GENUS **DAPTION** STEPHENS

*Daption* Stephens, 1826, in Shaw, *General Zool.*, **13**, pt. 1, p. 239. Type, by original designation, *Procellaria capensis* Linnaeus.

- cf. Prévost, 1964, *Oiseau*, **34**, no. spéc., pp. 91-112 (ecology).  
 Pinder, 1966, *Brit. Antarctic Surv. Bull.*, no. 8, pp. 19-47  
 (breeding).  
 Mougin, 1968, *Oiseau*, **38**, no. spéc., pp. 1-52 (breeding).  
 Beck, 1969, *Brit. Antarctic Surv. Bull.*, no. 21, pp. 33-44  
 (ecology).  
 Isenmann, 1970, *Oiseau*, **40**, no. spéc., pp. 135-141 (breed-  
 ing).  
 Ornith. Soc. N. Z., 1970, *Annot. Checklist Birds N. Z.*,  
 p. 21.  
 Watson, 1974, *Auk*, **91**, pp. 419-421 (correct gender of  
*Daption*).  
 Despin, 1977, *Oiseau*, **47**, pp. 149-157 (breeding).

#### DAPTION CAPENSE

##### **Daption capense capense** (Linnaeus)

*Procellaria capensis* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p.  
 132; based chiefly on "The white and black Spotted Peteril"  
 of Edwards, 1747, *Nat. Hist. Birds*, p. 90, pl. 90, right  
 fig.—Cape of Good Hope.

Wide distribution in the antarctic and subantarctic zones.  
 Breeds on the coasts of the Antarctic Continent and Peninsula,  
 Balleny and Peter I Islands, South Georgia, South Sandwich,  
 South Orkney, South Shetland, Bouvet, Crozet (Possession,  
 ? East), Kerguelen, Heard, and ? Macquarie Islands. Some  
 populations sedentary, others migratory. During winter,  
 ranges at sea to Tropic of Capricorn, reaching farther north  
 along west coasts of South America and Africa. Recorded  
 several times from the Northern Hemisphere (Mexico, Califor-  
 nia, Maine, British Isles, Netherlands, Mediterranean); some  
 stragglers possibly birds released after a period of captivity  
 aboard ships.

##### **Daption capense australe** Mathews

*Daption capense australis* Mathews, 1913, *Austral Avian  
 Rec.*, **1**, p. 187—New Zealand.

Breeds in the New Zealand region on the Snares, Campbell,  
 Bounty, and Antipodes Islands. Not distinguishable at sea  
 from *capense*.

#### GENUS PAGODROMA BONAPARTE

*Pagodroma* Bonaparte, 1856, *Compt. Rend. Acad. Sci.*, Paris,  
**42**, p. 768. Type, by monotypy, *Procellaria nivea* Forster.



- cf. Maher, 1962, *Condor*, **64**, pp. 488-499 (breeding of *nivea*).  
 Brown, 1966, *Austral. Nat. Antarctic Res. Exped., Sci. Rep., ser. B*, **1**, Zool. (publ. no. 89), 63 pp. (breeding of *nivea*).  
 Prévost, 1969, *Oiseau*, **39**, no. spéc., pp. 33-49.  
 Isenmann, 1970, *Oiseau*, **40**, no. spéc., pp. 99-134 (ecology of *confusa*).

PAGODROMA NIVEA<sup>1</sup>**Pagodroma (nivea) nivea** (Forster)

*Procellaria nivea* G. Forster, 1777, *Voyage World*, **1**, pp. 96, 98—lat. 52° S., long. 20° E.

*Procellaria nivea minor* Schlegel, 1863, *Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll.*, livr. 4, *Procellariae*, p. 16—"Glaces du Pole Sud."

Breeds on the Antarctic Continent and Peninsula, Scott Island, South Georgia, South Sandwich, South Orkney, South Shetland, and Bouvet Islands. Breeds in the interior of the Antarctic Continent as far as 300 kilometers from the sea, and as high as 2,000 meters (Tottan Hills, Sør Rondane Mountains, etc.). Migratory: ranges at sea in the antarctic zone, seldom outside the limit of floating ice. Stragglers reported from Falkland and Kerguelen Islands, southern Australia, and North Island, New Zealand.

**Pagodroma (nivea) confusa** Mathews

*Pagodroma confusa* Mathews, 1912, *Birds Australia*, **2**, p. 177—Cape Adare.

At present known to breed only on the Pointe Géologie Archipelago, Adélie Land, and on the Balleny Islands. Not distinguishable at sea from *nivea*.

## GENUS PTERODROMA BONAPARTE

*Pterodroma* Bonaparte, 1856, *Compt. Rend. Acad. Sci., Paris*, **42**, p. 768. Type, by subsequent designation (Coues, 1866, *Proc. Acad. Nat. Sci. Philadelphia*, p. 137), *Procellaria macroptera* A. Smith.

*Cookilaria* Bonaparte, 1856, *Compt. Rend. Acad. Sci., Paris*, **43**, p. 994. New name for *Rhantistes* Reichenbach, 1853,

<sup>1</sup>The taxonomic status of *P. nivea* and *confusa*, species or subspecies, is still enigmatic.—C. J. and J.-L. M.

- Avium Syst. Nat. (1852), p. 4. Type, by original designation, *Procellaria cookii* G. R. Gray.
- Pseudobulweria* Mathews, 1936, Ibis, p. 309. Type, by original designation, *Thalassidroma (Bulweria) macgillivrayi* G. R. Gray.
- Lugensa* Mathews, 1942, Emu, **41**, p. 305. Type, by original designation, *Pterodroma lugens* Kuhl.
- Hallstroma* Mathews, 1943, in Mathews and Hallstrom, Notes Order Procellariiformes, pp. 35, 37 (in keys). Type, by original designation, *Pterodroma neglecta* Schlegel.
- cf. Falla, 1942, Emu, **42**, pp. 111-118 (Pacific forms of *Pterodroma*).
- Murphy and Pennoyer, 1952, Amer. Mus. Novit., no. 1580, 43 pp. (larger forms of *Pterodroma*).
- Warham, 1956, Ibis, **98**, pp. 171-185 (ecology of *macroptera*).
- Bourne, 1957, Ibis, **99**, pp. 184-187 (*mollis* and relatives).
- Bourne, 1964, Notornis, **11**, pp. 139-144 (*magentae*).
- Richdale, 1964, Ibis, **106**, pp. 110-114 (biology of *inexpectata*).
- Wingate, 1964, Auk, **81**, pp. 147-159 (breeding of *cahow*).
- Bourne and Elliott, 1965, Ibis, **107**, pp. 548-550 (taxonomy of *brevirostris*).
- Jouanin and Gill, 1967, Oiseau, **37**, pp. 1-19 (*barau*).
- Warham, 1967, Emu, **76**, pp. 1-22 (ecology of *lessonii*).
- Bartle, 1968, Notornis, **15**, pp. 70-99 (ecology of *pycrofti*).
- Jouanin, Roux, and Zino, 1969, Oiseau, **39**, pp. 161-175 (*mollis*).
- Mougin, 1969, Oiseau, **39**, no. spéc., pp. 58-81 (ecology of *brevirostris*).
- Harris, 1970, Condor, **72**, pp. 76-84 (ecology of *phaeopygia*).
- Jouanin, 1970, Oiseau, **40**, pp. 48-68 (*aterrima*).
- Bourne, 1974, Emu, **74**, pp. 257-258 (small forms of *Pterodroma*, New Zealand area).
- Barré, 1976, Comité Nat. Français Recherches Antarcitiques, no. 40, pp. 61-76 (ecology of *lessonii*).
- Imber, 1976, Ibis, **118**, pp. 51-64 (breeding of *macroptera*).
- Vinson, 1976, Oiseau, **46**, pp. 1-24 (breeding of *arminjoniana*).

Warham, Keeley, and Wilson, 1977, *Auk*, **94**, pp. 1-17 (breeding of *inexpectata*).

Naurois, 1978, *Compt. Rend. Acad. Sci., Paris*, **287**, sér. D, pp. 269-271 (breeding species of New Caledonia).

#### PTERODROMA MACROPTERA<sup>1</sup>

##### ***Pterodroma macroptera macroptera*** (Smith)

*Procellaria macroptera* A. Smith, 1840, *Illus. Zool. South Africa*, Aves, pl. 52—Cape seas.

*Pterodroma macroptera albani* Mathews, 1912, *Austral Avian Rec.*, **1**, p. 30—Rabbit Island, Western Australia.

Breeds on Tristan da Cunha (*sensu stricto*), Gough, Marion, Crozet (East), and Kerguelen Islands, and on islets off the south coast of Western Australia from the vicinity of Albany to Cape Arid. Migratory or rather sedentary according to the breeding localities; circumpolar in the austral seas between lat. 50° S. and 30° S.

##### ***Pterodroma macroptera gouldi*** (Hutton)

*Aestrelata gouldi* Hutton, 1869, *Ibis*, p. 351—New Zealand seas.

Breeds on most islands and many headlands of New Zealand, from the Three Kings Islands in the north throughout the Hauraki Gulf and Bay of Plenty to south of Gisborne; also the Auckland west coast and some headlands as far south as Taranaki. Ranges west to the Tasman Sea and the coast of New South Wales, north to about 30° S., east to the south-central Pacific Ocean. Stragglers observed on Raoul Island, Kermadec Group.

#### PTERODROMA LESSONII

##### ***Pterodroma lessonii*** (Garnot)

*Procellaria Lessonii* Garnot, 1826, *Ann. Sci. Nat., Paris*, **7**, p. 54, pl. 4—"Dans les parages du Cap Horn et de la mer Pacifique par 52° de lat. sept. [= austr.] et 85° de longit."

<sup>1</sup>*P. macroptera, lessonii, incerta*, and probably also *solandri* and *magentae* form a superspecies.—C. J. and J.-L. M.

*Aestrelata lessonii australis* Mathews, 1916, Austral Avian Rec., 3, p. 54—Sydney, New South Wales.  
Breeds on Crozet, Kerguelen, Macquarie, Auckland, and Antipodes Islands. Migratory: circumpolar at sea between the coasts of the Antarctic Continent and lat. 33° S. Straggler Gambier Islands, South Australia, and King Island, Tasmania.

#### PTERODROMA INCERTA

##### **Pterodroma incerta** (Schlegel)

*Procellaria incerta* Schlegel, 1863, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 4, Procellariae, p. 9—"Mers australes, côtes de la Nouvelle Zélande, et Mers de l'Australie."

*Procellaria sandaliata* Mathews (ex Solander MS), 1912, Birds Australia, 2, p. 151—Atlantic Ocean, lat. 37° S., long. 48° W.

*Procellaria satalandia* Mathews, 1933, Bull. Brit. Ornith. Club, 54, p. 25. Substitute name for *Procellaria sandaliata* Mathews, 1912.

Breeds on Tristan da Cunha (*sensu stricto*) and Gough Island. Migratory: ranges at sea between South America and South Africa.

#### PTERODROMA SOLANDRI

##### **Pterodroma solandri** (Gould)

*Procellaria Solandri* Gould, 1844, Proc. Zool. Soc. London, p. 57—no locality = Bass Strait, *vide* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 363.

*Procellaria phillipii* G. R. Gray, 1862, Ibis, p. 246—Norfolk Island.

Breeds on Lord Howe Islands; formerly on Norfolk Island. Migratory: disperses to northwestern Pacific (Japan) and to coast of New South Wales.

#### PTERODROMA MAGENTAE

##### **Pterodroma magentae** (Giglioli and Salvadori)

*Aestrelata Magentae* Giglioli and Salvadori, 1869 (early), Atti Soc. Ital. Sci. Nat., Milan, 11 (1868), p. 451—Pacific Ocean, lat. 39° 38' S., long. 125° 58' W.

Known for long by a unique specimen, caught at sea, the

type in the Museo di Zoologia, Università, Turin. Suggested as identical with the Taiko, which formerly bred in numbers in the interior of the main island of the Chatham Group well into this century. Quite recently 2 live specimens caught in the southwestern area of the main Chatham Island.<sup>1</sup>

### PTERODROMA ROSTRATA<sup>2</sup>

#### **Pterodroma rostrata rostrata** (Peale)

*Procellaria rostrata* Peale, 1848, U.S. Explor. Exped., 8, p. 296—mountains about 6,000 feet on Tahiti, Society Islands.

*Pterodroma rostrata Trouessarti* Brasil, 1917, Bull. Mus. Nat. Hist. Nat., Paris, 23, p. 432—New Caledonia.<sup>3</sup>

Breeds on the Society (Tahiti, Moorea) and Marquesas (Hiva Oa, Tahuata, Nuku Hiva) Islands and on New Caledonia. Partly migratory. Recorded at sea in abundance in the vicinity of the breeding islands, and also in the north-central Pacific during the southern winter. Main contranuptial range west of the breeding islands to the east coast of Australia. One specimen caught in the Ryukyu Islands.

#### **Pterodroma rostrata becki** Murphy

*Pterodroma becki* Murphy, 1928, Amer. Mus. Novit., no. 322, p. 1—Pacific Ocean, lat. 3° S., long. 155° E.

Definitely known by 2 specimens only (American Museum of Natural History, New York), collected east of New Ireland and northwest of Rendova, Solomon Islands. Recorded recently at sea in the vicinity of Bismarck Archipelago and Solomon Islands. Breeding grounds still undiscovered.

#### **Pterodroma (rostrata) aterrima** (Bonaparte)

*Procellaria aterrima* Bonaparte, 1857, Consp. Gen. Avium, 2, p. 191—Réunion.

Formerly known by 4 specimens only: 2, including the type, in the Muséum National d'Histoire Naturelle, Paris, the others in the Rijksmuseum van Natuurlijke Historie, Leiden, and in the University Museum of Zoology, Cambridge, England,

<sup>1</sup>D. E. Crockett, in press.—C. J. and J.-L. M.

<sup>2</sup>*P. rostrata* and *macgillivrayi* form a superspecies.—C. J. and J.-L. M.

<sup>3</sup>Material recently collected suggests that the subspecies *trouessarti* may be valid (Naurois, pers. com.).—C. J. and J.-L. M.

all labeled Réunion. Two additional specimens have recently been caught on Réunion, but the precise breeding grounds are still undiscovered. Subfossil remains have been found on Rodrigues Island.

#### PTERODROMA MACGILLIVRAYI

##### **Pterodroma macgillivrayi** (Gray)

*Thalassidroma (Bulweria) Macgillivrayi* G. R. Gray, ? 1860, Cat. Birds Tropical Islands Pacific (1859), p. 56—Ngau, Fiji Islands.

Unique. Type, an immature, in the British Museum (Natural History), London. Breeding range unknown (? Fiji Islands).

#### PTERODROMA NEGLECTA<sup>1</sup>

##### **Pterodroma neglecta neglecta** (Schlegel)

*Procellaria neglecta* Schlegel, 1863, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 4, Procellariae, p. 10—Sunday Island = Raoul Island, Kermadec Group.<sup>2</sup>

*Pterodroma neglecta quintali* Mathews, 1916, Austral Avian Rec., 3, p. 68—Lord Howe Island.

Breeds on Lord Howe Island, the Kermadec Group, Raivavae and Rapa Islands in the Austral Group, Oeno, Henderson, and Ducie Islands in the Pitcairn Group, Easter Island, and perhaps on some islands of the Tuamotu Group. Migratory: distributed widely at sea across the south Pacific, especially in the subtropical region; crosses the Equator to the north-central Pacific not infrequently. Numerous sight records made at sea from the Hawaiian Islands area south to the Caroline, Marshall, and Phoenix Islands.

##### **Pterodroma neglecta juana** Mathews

*Pterodroma neglecta juana* Mathews, 1935, Bull. Brit. Ornith. Club, 56, pl. 59—Juan Fernández Group.

Breeds on Más a Tierra and Santa Clara Islands of the Juan Fernández Group, and on San Ambrosio and San Félix Islands. Not distinguishable at sea from *neglecta*.

<sup>1</sup>*P. neglecta, arminjoniana, and alba* form a superspecies.—C. J. and J.-L. M.

<sup>2</sup>For *P. philippii* see *P. solandri*.—C. J. and J.-L. M.

## PTERODROMA ARMINJONIANA

**Pterodroma arminjoniana arminjoniana** (Giglioli and Salvadori)

*Aestrelata Arminjoniana* Giglioli and Salvadori, 1869 (January), Ibis, p. 62—near South Trinidad (= Trindade) Island.

*Aestrelata Arminjoniana* Giglioli and Salvadori, 1869 (early), Atti Soc. Ital. Sci. Nat., Milan, 11 (1868), p. 452—South Trinidad (= Trindade) Island.

*Oestrelata wilsoni* Sharpe, 1902, Bull. Brit. Ornith. Club, 12, p. 49—South Trinidad (= Trindade) Island.

*Aestrelata chionophara* Murphy, 1914, Auk, 31, p. 13, pl. 2—Trinidad (= Trindade) Islet.

Breeds in the south Atlantic Ocean on Trindade Island and Martin Vaz Rocks, and in the south Indian Ocean on Round Island, off Mauritius. Rather sedentary: range at sea restricted to the vicinity of the breeding localities. Stragglers have crossed the Equator as far as the Antilles and Ithaca, New York.

**Pterodroma arminjoniana heraldica** (Salvin)

*Oestrelata heraldica* Salvin, 1888, Ibis, p. 357—Chesterfield Islands, western Pacific.

*Pterodroma (Aestrelata) heraldica paschae* Lönnerberg, 1921, in Skottsberg, Nat. Hist. Juan Fernandez Easter Islands, 3, p. 23—Easter Island.

Breeds on ? Raine Island, northeastern Australia, Chesterfield Islands, Tonga, ? Rarotonga, Marquesas (? Nuka Hiva, Ua Pu, Tahuata), Tuamotu Group, Gambier Islands, Pitcairn Group (Oeno, Henderson, Ducie), Easter Island. Rather sedentary: range at sea limited; occasionally recorded north to the central Pacific south of the Hawaiian Islands.

## PTERODROMA ALBA

**Pterodroma alba** (Gmelin)

*Procellaria alba* Gmelin, 1789, Syst. Nat., 1, p. 565; based on "White-breasted Petrel" of Latham, 1785, General Synop. Birds, 3, p. 400—Turtle and Christmas Islands; restricted to Christmas Island by Murphy, 1952, Amer. Mus. Novit., no. 1580, p. 32.

*Procellaria parvirostris* Peale, 1848, U.S. Explor. Exped., 8, p. 298—near Honden Island, Dangerous Archipelago

= Puka Puka Island, Tuamotu Archipelago.

*Oestrelata wortheni* Rothschild, 1902, Bull. Brit. Ornith. Club, **12**, p. 62—Pacific Ocean, lat. 3° S., long. 118° 45' W.

*Aestrelata oliveri* Mathews and Iredale, 1914, Austral Avian Rec., **2**, p. 113—Sunday Island = Raoul Island, Kermadec Group.

*Pterodroma alba cantonia* Mathews, 1942, Emu, **42**, p. 123—Canton Island, Phoenix Group.

Breeds on the Phoenix, Tonga, Line (including Christmas), and Marquesas (Hatutu, Motu Iti, Ua Pu, Fatu Huku) Islands, Pitcairn Group (Oeno, Henderson, Ducie), and perhaps on Raoul Island, Kermadec Group. Rather sedentary. Recorded at sea in small numbers in the central Pacific north to the Hawaiian Islands.

#### PTERODROMA ULTIMA<sup>1</sup>

##### **Pterodroma ultima** Murphy

*Pterodroma ultima* Murphy, 1949, in Mayr and Schüz (eds.), Ornith. Biol. Wissen., p. 89—Oeno Island, south Pacific.

Breeds in the Austral Group (Rapa Island, Bass Rocks), Tuamotu Group (Mururoa, Fangataufa, Maria, Timoe), and Pitcairn Group (Oeno, Henderson, Ducie). Range at sea unknown: sedentary? Has been recorded in the vicinity of the breeding localities and from the Society Islands north to the Leeward Hawaiian Chain.

#### PTERODROMA BREVIROSTRIS<sup>2</sup>

##### **Pterodroma brevirostris** (Lesson)

*Procellaria brevirostris* Lesson, 1831, Traité Ornith., livr. 8, p. 611—no locality. Type from Cape of Good Hope.

<sup>1</sup>*P. ultima*, *brevirostris*, *mollis*, and perhaps *inexpectata* form a superspecies.—C. J. and J.-L. M.

<sup>2</sup>The name *lugens* Kuhl, 1820, Beitr. Zool. Vergl. Anat., Abth. 1, p. 144, wrongly based on Parkinson's drawings, is indeterminate and must be ruled out, though used currently with *brevirostris*; cf. Bourne and Elliott, 1965, Ibis, **107**, pp. 548-550.—C. J. and J.-L. M.



*Pterodroma kidderi okahia* [sic] Mathews, 1935, Bull. Brit.

Ornith. Club, **56**, p. 37—Ohakia = Ohakea, New Zealand. Breeds on the Tristan da Cunha Group (? Inaccessible, ? Tristan da Cunha, Gough), Marion, Crozet (Possession, East), and Kerguelen Islands. Migratory: range at sea probably circumpolar between lat. 70° S. and 40° S. Regularly appears on Australian and New Zealand beaches.

#### PTERODROMA MOLLIS

##### **Pterodroma mollis mollis** (Gould)

*Procellaria mollis* Gould, 1844, Ann. Mag. Nat. Hist., **13**, p. 363—south Atlantic Ocean, lat. 20° S. to 40° S.

*Pterodroma deceptornis* Mathews, 1932, Novit. Zool., **38**, p. 34—lat. 36° 08' S., long. 88° 55' E. = Amsterdam and St. Paul Islands.

Breeds on the Tristan da Cunha Group (Inaccessible, Tristan da Cunha, Nightingale, Gough), Marion Group, Crozet (East), and probably Antipodes Islands. Migratory: ranges at sea in the Atlantic and Indian Oceans between lat. 25° S. and 60° S.

##### **Pterodroma mollis feae** (Salvadori)

*Oestrelata feae* Salvadori, 1899, Ann. Mus. Civ. Genova, **40**, p. 305—San Nicolas Island, Cape Verde Islands.

*Pterodroma mollis deserta* Mathews, 1934, Bull. Brit. Ornith. Club, **54**, p. 179—Desertas Islands.

Breeds on the Cape Verde Islands (Santo Antão, São Nicolau, Fogo, São Tiago), and on Bugio, Desertas Islands, off Madeira. Not distinguishable at sea from *madeira*.

##### **Pterodroma mollis madeira** Mathews

*Pterodroma mollis madeira* Mathews, 1934, Bull. Brit. Ornith. Club, **54**, p. 179—Madeira.

Breeds in the highlands of Madeira. Migratory: ranges at sea along the western African coast as far south as lat. 9° N.

#### PTERODROMA INEXPECTATA

##### **Pterodroma inexpectata** (Forster)

*Procellaria inexpectata* J. R. Forster, 1844, Descr. Animal.

Itinere Maris Australis Terras, p. 204—Antarctic Ocean. Formerly may have bred in the highlands of New Zealand (North and South Islands). Still breeds on islets off Stewart

Island and on the Snares Islands.<sup>1</sup> Highly migratory: wide oceanic range, moving south to the edge of the pack ice and north across the central Pacific as far as Alaska and the Aleutian Islands.

#### PTERODROMA CAHOW<sup>2</sup>

**Pterodroma cahow** (Nichols and Mowbray)

*Aestrelata cahow* Nichols and Mowbray, 1916, Auk, 33, p. 194—southeastern side of Castle Island, Bermuda.

Formerly bred abundantly on Bermuda. A population of the order of perhaps 100 adult birds is now confined to small islets in the Castle Harbour group of islands. Range at sea unknown.

#### PTERODROMA HASITATA

**Pterodroma hasitata hasitata** (Kuhl)

*Procellaria hasitata* Kuhl (*ex* Forster), 1820, Beitr. Zool. Vergl. Anat., Abth. 1, p. 142—no locality.

Formerly bred in the mountains of Guadeloupe and Dominica, and, possibly, in Martinique. Still breeds in fair numbers in the mountains of Hispaniola. Migratory: ranges at sea north to the east coast of the United States, south to the northeastern coast of South America, east to long. 50° W.

**Pterodroma hasitata caribbaea** Carte

*Pterodroma caribbaea* Carte, 1866, Proc. Zool. Soc. London, p. 93, pl. 10—Blue Mountains, Jamaica.

Formerly bred in the Blue Mountains of Jamaica. Extinct?

#### PTERODROMA EXTERNA

**Pterodroma externa externa** (Salvin)

*Oestrelata externa* Salvin, 1875, Ibis, p. 373—*islands of Más Afuera and Juan Fernández.*

*Pterodroma externa tristrani* Mathews, 1931, Bull. Brit.

<sup>1</sup>Antipodes Islands are listed probably erroneously, on the basis of one partially feathered chick in the American Museum of Natural History, New York, mislabeled "Antipodes Islands" instead of "Snares Islands" (J. Warham, pers. com.).—C. J. and J.-L. M.

<sup>2</sup>*P. cahow, hasitata, externa, barauí, and phaeopygia* form a superspecies.—C. J. and J.-L. M.

Ornith. Club, 52, p. 63—Tristan da Cunha.

Breeds on Más Afuera, Juan Fernández Group. Migratory: main wintering area in the central Pacific, between the Equator and the Hawaiian Islands (where individuals are present all year). Also observed in the vicinity of the Marquesas Islands. One record from New Zealand.

**Pterodroma externa cervicalis** (Salvin)

*Oestrelata cervicalis* Salvin, 1891, Ibis, p. 192—Kermadec Islands.

Breeds at high levels on Raoul Island, Kermadec Group. Same main wintering area as *externa*.

PTERODROMA BARAUI

**Pterodroma barau**i (Jouanin)

*Bulweria barau*i Jouanin, 1964, Oiseau, 34, p. 84—Saint-Denis, Réunion.

Breeds in fair numbers on inaccessible inland cliffs of the high mountains of Réunion. One nest recently found on a rocky mountain top on Rodrigues Island (? new colonization).<sup>1</sup> Range at sea unknown.

PTERODROMA PHAEOPYGIA

**Pterodroma phaeopygia phaeopygia** (Salvin)

*Oestrelata phaeopygia* Salvin, 1876, Trans. Zool. Soc. London, 9, p. 507, pl. 88, figs. 1, 3—Chatham Island, Galapagos.

Breeds in the Galapagos Archipelago on Isabela (Albemarle), San Salvador (James), Santa Cruz (Indefatigable), San Cristóbal (Chatham), and Santa María (Floreana or Charles) Islands. Rather sedentary: ranges warm waters from northern Peru to Mexico. Population greatly reduced in recent years.

**Pterodroma phaeopygia sandwichensis** (Ridgway)<sup>2</sup>

*Oestrelata sandwichensis* Ridgway, 1884, in Baird, Brewer, and Ridgway, Mem. Mus. Comp. Zool., 13, p. 395, in text—Hawaiian Islands.

Breeds in small numbers on Maui and Hawaii, Hawaiian Islands (formerly on Kauai, Oahu, Molokai, Lanai, and probably other islands of the group); in danger of extinction.

<sup>1</sup>Cheke, Ibis, in press.—C. J. and J.-L. M.

<sup>2</sup>Doubtfully distinguishable from *phaeopygia*.—C. J. and J.-L. M.

Migratory: ranges at sea in the north Pacific Ocean, between lat. 42° N. and 5° N. A specimen from the Moluccas may indicate a migration to the western Pacific during the contranuptial period or an undetected breeding station.

#### PTERODROMA HYPOLEUCA<sup>1</sup>

##### **Pterodroma hypoleuca** (Salvin)

*Oestrelata hypoleuca* Salvin, 1888, Ibis, p. 359—north Pacific Ocean, "Krusenstern Islands," mythical islands designated by the collector instead of one of the islands in the Leeward Hawaiian Chain; cf. Murphy, 1951, Amer. Mus. Novit., no. 1512, p. 17.

Breeds on the Bonin and Volcano Islands and islands of the Leeward Hawaiian Chain (Kure, Midway, Pearl and Hermes Reef, Lisianski, Laysan, French Frigate Shoals). Migratory: outside breeding season ranges at sea to Taiwan, Ryukyu and Izu Islands, and Sakhalin; also recorded from Marcus Island.

#### PTERODROMA NIGRIPENNIS<sup>2</sup>

##### **Pterodroma nigripennis** (Rothschild)

*Oestrelata nigripennis* Rothschild, 1893, Bull. Brit. Ornith. Club, 1, p. 57—Kermadec Islands.

*Cookilaria hindwoodi* Whitley, 1938, Austral. Mus. Mag., 6, p. 297—Norfolk Island.

Breeds on ? Heron Island, Great Barrier Reef, on ? Lord Howe Island, ? Norfolk Island, New Caledonia; on Raoul, Meyer, Macauley, and Curtis Islands, Kermadec Group; on Great King Island, Three Kings Group, off North Island, New Zealand; on South East Island, Chatham Group; and on Rapa Island and Bass Rocks, Austral Group. Migratory: ranges at sea west to the east coast of Australia, to the south-central Pacific, and north to the Hawaiian Islands, where it is found in considerable numbers between lat. 5° N. and 25° N.

<sup>1</sup>*P. hypoleuca*, *nigripennis*, *axillaris*, *cookii*, *defilippiana*, *longirostris*, and *leucoptera* form a group of small-sized *Pterodroma* sometimes referred to as the "*Cookilaria*" subgenus.—C. J. and J.-L. M.

<sup>2</sup>*P. nigripennis* and *axillaris* form a superspecies. *P. hypoleuca*, often associated with them, is a distinct bird, with a cuneate tail.—C. J. and J.-L. M.

## PTERODROMA AXILLARIS

**Pterodroma axillaris** (Salvin)

*Oestrelata axillaris* Salvin, 1893, Bull. Brit. Ornith. Club, 1, p. 33—Chatham Islands.

Breeds on South East Island, Chatham Islands. Range at sea unknown.

PTERODROMA COOKII<sup>1</sup>**Pterodroma cookii** (Gray)

*Procellaria Cookii* G. R. Gray, 1843, in Dieffenbach, Travels N. Z., 2, p. 199—New Zealand.

*Pterodroma cookii orientalis* Murphy, 1929, Amer. Mus. Novit., no. 370, p. 5—200 miles west of Callao, Peru.

Breeds in New Zealand on Little and Great Barrier Islands, off North Island, and on Codfish Island, off Stewart Island. Highly migratory: winters in the eastern and northern Pacific Ocean to Peru and the Aleutian Islands.

## PTERODROMA DEFILIPPIANA

**Pterodroma defilippiana** (Giglioli and Salvadori)

*Aestrelata defilippiana* Giglioli and Salvadori, 1869, Ibis, p. 63—off coast between Callao, Peru, and Valparaíso, Chile.

Breeds on Más a Tierra and probably Santa Clara Island, Juan Fernández Group, and San Félix Island. Range at sea unknown.

## PTERODROMA LONGIROSTRIS

**Pterodroma longirostris longirostris** (Stejneger)

*Aestrelata longirostris* Stejneger, 1893, Proc. U. S. Nat. Mus., 16, p. 618—Province of Mutzu, Hondo, Japan.

*Pterodroma (Aestrelata) cooki masafuerae* Lönnberg, 1921, in Skottsberg, Nat. Hist. Juan Fernandez Easter Islands, 3, p. 14—Más Afuera Island.

Breeds on Más Afuera Island, Juan Fernández Group. Highly migratory: winters in the subtropical north Pacific between California and Japan, but most birds collected are in molt and the distribution of the 2 races is uncertain.

<sup>1</sup>*P. cookii*, *defilippiana*, *longirostris*, and *leucoptera* form a superspecies.—C. J. and J.-L. M.

**Pterodroma longirostris pycrofti** Falla

*Pterodroma pycrofti* Falla, 1933, Rec. Auckland Inst. Mus.,  
1, p. 176—Taranga, Hen Island, New Zealand.

Breeds on small islands off the northeastern coast of North Island, New Zealand: Stephenson Island, Poor Knights Islands (Aorangi), Hen and Chickens Islands, Stanley Island, and Mercury Islands (Red Mercury, Korapuki, Kawitihu). Distribution at sea unknown: possibly winters in the same area of the north Pacific as *longirostris*.

## PTERODROMA LEUCOPTERA

**Pterodroma leucoptera leucoptera** (Gould)

*Procellaria leucoptera* Gould, 1844, Ann. Mag. Nat. Hist.,  
13, p. 364—Cabbage Tree Island, Port Stephens, New  
South Wales.

Breeds on Cabbage Tree Island, New South Wales. Populations intermediate between *leucoptera* and *brevipes*, or forming undescribed races, occur on the Solomons, New Caledonia, New Hebrides, and in subfossil deposits on Lord Howe Island, and have been collected at sea east to the vicinity of the Galapagos and south on beaches of New Zealand.<sup>1</sup>

**Pterodroma leucoptera brevipes** (Peale)

*Procellaria brevipes* Peale, 1848, U. S. Explor. Exped., 8,  
p. 294—type locality doubtful: reported "latitude 68° S.,  
longitude 95° W.," but probably Samoa Islands, as pointed  
out by Bourne, 1967, Ibis, 109, pp. 155-156.

Breeds on the Fiji Islands and possibly on the Samoa Islands. Range at sea poorly known. Recorded near the Phoenix Islands.

## GENUS HALOBAENA BONAPARTE

*Halobaena* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris,  
42, p. 768. Type, by monotypy, *Procellaria caerulea* Gmelin.

cf. Paulian, 1953, Mém. Inst. Sci. Madagascar, sér. A, 8, pp.  
181-189.

<sup>1</sup>Naurois (1978) has proposed a name for the breeding population of New Caledonia.—C. J. and J.-L. M.

## HALOBAENA CAERULEA

**Halobaena caerulea** (Gmelin)

*Procellaria caerulea* Gmelin, 1789, Syst. Nat., 1, p. 560; based on "Blue Petrel" of G. Forster, 1777, Voyage World, 1, p. 91—"in oceano australi" = Southern Ocean, lat. 58° S.

*Procellaria forsteri* A. Smith, 1840, Illus. Zool. South Africa, Aves, pl. 43—Cape seas. Not *Procellaria forsteri* Latham, 1790, Index Ornith., p. 827, which is *Pachyptila vittata*.

*Procellaria similis* J. R. Forster, 1844, Descr. Animal. Itinere Maris Australis Terras, p. 59—Antarctic Ocean.

Breeds north of the Antarctic Convergence on ? the Marion Group, Crozet (East), Kerguelen, and ? Macquarie Islands, and south of the Antarctic Convergence on South Georgia.<sup>1</sup> The South Orkney breeding record is undoubtedly based on a misidentified egg. Migratory: ranges at sea between the coasts of the Antarctic Continent and lat. 40° S., sometimes farther north. Recorded on the coasts of Australia, New Zealand, South America, and South Africa.

## GENUS PACHYPTILA ILLIGER

*Pachyptila* Illiger, 1811, Prodrum Syst. Mammalium Avium, p. 274. Type, by subsequent designation (Selby, 1840, Cat. Gen. Sub-gen. Types Class Aves, p. 49), *Procellaria forsteri* Latham = *Procellaria vittata* G. Forster.

*Attaprion* Mathews, 1933, Bull. Brit. Ornith. Club, 54, p. 25. Type, by original designation, *Procellaria desolata* Gmelin.

*Salviprion* Mathews, 1943, in Mathews and Hallstrom, Notes Order Procellariiformes, p. 30. Type, by original designation, *Prion vittatus salvini* Mathews.

cf. Mathews, 1937, Emu, 37, pp. 118-121.

Mathews, 1938, Emu, 37, pp. 280-284.

Fleming, 1939, Emu, 38, pp. 396-401.

Falla, 1940, Emu, 40, pp. 218-236.

Fleming, 1941, Emu, 41, pp. 134-155 (phylogeny).

Downes *et al.*, 1959, Austral. Nat. Antarctic Res. Exped.,

<sup>1</sup>J. W. H. Conroy, pers. com.—C. J. and J.-L. M.

- Rep., ser. B, 1, no. 7, pp. 85-96 (ecology of *desolata* and *crassirostris*).
- Tickell, 1962, Falkland Islands Dependencies Surv., Sci. Rep., no. 33, 55 pp. (ecology of *desolata*).
- Richdale, 1965, Trans. Zool. Soc. London, 31, pp. 87-155 (breeding behavior of *turtur* and *vittata*).
- Despin, Mougin, and Segonzac, 1972, Comité Nat. Français Recherches Antarctiques, no. 31, pp. 39-49 (ecology of *salvini*, *belcheri*, and *desolata*).
- Harper, 1972, Notornis, 19, pp. 140-175 (distribution of *belcheri* and *desolata*).
- Derenne and Mougin, 1976, Comité Nat. Français Recherches Antarctiques, no. 40, pp. 149-175 (nesting of *turtur* and *salvini*).
- Harper, 1976, N. Z. Journ. Zool., 3, pp. 351-371 (breeding biology of *turtur*).

#### PACHYPTILA VITTATA

##### ***Pachyptila vittata vittata*** (Forster)

*Procellaria vittata* G. Forster, 1777, Voyage World, 1, pp. 91, 98, note—lat. 47° 10' S.

*Procellaria Forsteri* Latham, 1790, Index Ornith., p. 827—New Zealand.

*Prion vittatus keyteli* Mathews, 1912, Birds Australia, 2, p. 210—Tristan da Cunha.

*Pachyptila vittata balaena* Mathews, 1938, Emu, 37, p. 281—Cottesloe, Western Australia.

Breeds in the New Zealand region on the coasts of Foveaux Strait, islets off Stewart Island, Snares, and Chatham Islands, and in the south Atlantic Ocean on the Tristan da Cunha Group (Inaccessible, Tristan da Cunha, Nightingale, Gough). Range at sea poorly known, perhaps between lat. 60° S. and 40° S. Observed near the coasts of New Zealand, southern and Western Australia, and South Africa.

##### ***Pachyptila vittata macgillivrayi*** (Mathews)<sup>1</sup>

*Prion vittatus macgillivrayi* Mathews, 1912, Birds Australia,

<sup>1</sup>*Prion vittatus gouldi* Mathews, 1912, Birds Australia, 2, pp. 203 (in key), 211—Bass Strait, Victoria, and *Prion vittatus missus* Mathews, 1912, Birds Australia, 2, pp. 203 (in key), 212, pl. 92—Perth, southwestern Australia, are indeterminate.—C. J. and J.-L. M.



2, p. 211—St. Paul Island, Indian Ocean.

Breeds on St. Paul and (formerly) Amsterdam Islands. Not distinguishable at sea from *vittata*.

**Pachyptila vittata salvini** (Mathews)

*Prion vittatus salvini* Mathews, 1912, Birds Australia, 2, p. 212—"Crozets, Marion Island, etc."; restricted to Marion Island by Mathews, 1934, Novit. Zool., 39, p. 172.

*Heteroprion desolatus crozeti* Mathews, 1932, Bull. Brit. Ornith. Club, 52, p. 147—Crozet Archipelago.

*Pachyptila gouldi whittelli* Mathews, 1938, Emu, 37, p. 282—Bunbury, Western Australia.

Breeds on Crozet (Hog, Possession, East), Prince Edward, and Marion Islands. Migratory: ranges at sea east to Australia and New Zealand, where it is abundant during the winter months, and west to South Africa.

PACHYPTILA DESOLATA

**Pachyptila desolata desolata** (Gmelin)

*Procellaria desolata* Gmelin, 1789, Syst. Nat., 1, p. 562; based on "Brown-banded Petrel" of Latham, 1785, General Synop. Birds, 3, p. 409—Desolation Island = Kerguelen Island.

*Heteroprion desolatus mattingleyi* Mathews, 1912, Birds Australia, 2, pp. 223 (in key), 226—Geelong, Victoria.

*Heteroprion desolatus alexanderi* Mathews and Iredale, 1921, Man. Birds Australia, 1, p. 42—Cottesloe beach, Western Australia.

Breeds on Crozet (East) and Kerguelen Islands.

**Pachyptila desolata alter** (Mathews)

*Heteroprion desolatus alter* Mathews, 1912, Birds Australia, 2, p. 231—Auckland Islands.

*Heteroprion desolatus macquariensis* Mathews, 1912, Birds Australia, 2, p. 231—Macquarie Island.

Breeds on Macquarie and Auckland Islands.

**Pachyptila desolata banksi** Smith

*Pachyptila banksi* A. Smith, 1840, Illus. Zool. South Africa, Aves, pl. 55—Cape seas.

*Heteroprion desolatus peringueyi* Mathews, 1912, Birds Australia, 2, p. 230—Pondoland coast, South Africa.

- H. (heteroprion) d. (esolatus) georgia* Mathews, 1932, Bull. Brit. Ornith. Club, **52**, p. 147 (in text)—Stromness Bay, South Georgia. The same bird (same type in the British Museum: no. 1914.3.8.38) was named again by Mathews:
- Pachyptila vittata georgicus* Mathews, 1933, Bull. Brit. Ornith. Club, **53**, p. 214.
- Heteroprion desolatus dispar* Iredale, 1938, Emu, **37**, p. 244—Heard Island.
- Heteroprion desolatus heardi* Mathews, 1942, Emu, **41**, p. 264. New name for *Heteroprion desolatus dispar* Iredale. Breeds on South Georgia, South Sandwich, South Orkney, South Shetland, and Heard Islands, and also in Antarctica (Scott Island and formerly Cape Denison). The 3 subspecies are not distinguishable at sea. The species is circumpolar at sea between the coasts of the Antarctic Continent and lat. 35° S. Recorded frequently on the coasts of South America, South Africa, southern Australia, and New Zealand; accidental Kermadec Islands and New Hebrides.

#### PACHYPTILA BELCHERI

##### **Pachyptila belcheri** (Mathews)

- Heteroprion belcheri* Mathews, 1912, Birds Australia, **2**, p. 215 and text figs., p. 224—Geelong, Victoria.
- ?*Pseudoprion turtur solanderi* Mathews, 1912, Birds Australia, **2**, p. 220—west coast of South America.
- Heteroprion belcheri serventyi* Mathews, 1935, Bull. Brit. Ornith. Club, **55**, p. 160—Cottesloe, Western Australia.
- Pachyptila (Heteroprion) belcheri orientalis* Falla, 1937, Brit. Austral. N. Z. Antarctic Res. Exped. Rep., ser. B, **2**, p. 200—Royal Sound, Kerguelen.
- Heteroprion belcheri lalfa* Mathews, 1939, Bull. Brit. Ornith. Club, **59**, p. 103—Kapiti Island, New Zealand.
- Heteroprion belcheri falklandicus* Mathews, 1939, Bull. Brit. Ornith. Club, **59**, p. 104—Falkland Islands.
- Breeds on Crozet (East) and Kerguelen Islands, and on Grand Jason and New Islands in the Falkland Group. Migratory: circumpolar at sea between lat. 65° S. and 35° S. Recorded frequently on the coasts of South America, South Africa, southern Australia, and New Zealand. Recorded once in the Kermadec Islands.

PACHYPTILA TURTUR<sup>1,2</sup>**Pachyptila turtur** (Kuhl)

*Procellaria turtur* Kuhl, 1820, Beitr. Zool. Vergl. Anat., Abth.

1, p. 143—no locality. *Nomen conservandum*, based on an indeterminable drawing by Parkinson in the Banks Library, British Museum (Natural History), London, labeled "Feb. 1st. 1769. Lat. 59.00"; cf. Lysaght, 1959, Bull. Brit. Mus. (Nat. Hist.), Hist. Ser., 1, p. 274.

*Pachyptila turtur fallai* Oliver, 1930, N. Z. Birds, p. 114—Otago, South Island, New Zealand.

*Pseudoprion turtur steadi* Mathews, 1932, Bull. Brit. Ornith. Club, 52, p. 146—"Stewart Island and small islands near; breeding on Cundy, Woman, and Betsy Islands."

*P.(seudoprion) t.(urtur) oliveri* Mathews, 1932, Bull. Brit. Ornith. Club, 52, p. 147 (in text)—Motunau Island, off South Island, New Zealand.

*Pseudoprion turtur dertrum* Mathews, 1938, Emu, 37, p. 281—Bunbury, Western Australia.

*Pseudoprion turtur armiger* Mathews and Hallstrom, 1943, Notes Order Procellariiformes, p. 23—Poor Knights Islands, New Zealand.

*Pseudoprion turtur benchi* Mathews and Hallstrom, 1943, Notes Order Procellariiformes, p. 23—Bench Island, off Stewart Island, New Zealand.

*Pseudoprion turtur mangarei* Mathews and Hallstrom, 1943, Notes Order Procellariiformes, p. 23—Mangare Island, Chatham Islands.

*Pachyptila turtur subantarctica* Oliver, 1955, N. Z. Birds, ed. 2, p. 119—Antipodes Island.

Breeds on the Falkland, Marion, Crozet (Hog), and ? Macquarie Islands, on islets off Portland, Victoria, on Tasmania, on numerous islands off North, South, and Stewart Islands, New Zealand, on the Snares, Chatham (Mangare, Little Mangare), and Antipodes Islands. Range at sea poorly known; probably between lat. 60° S. and 35° S., mostly in the vicinity of the breeding localities. Recorded once in the Kermadec Islands.

<sup>1</sup>*P. turtur* and *crassirostris* form a superspecies.—C. J. and J.-L. M.

<sup>2</sup>*Pachyptila turtur brevirostris* Gould, 1855, Proc. Zool. Soc. London, p. 88, pl. 93—Madeira, is indeterminable.—C. J. and J.-L. M.

## PACHYPTILA CRASSIROSTRIS

**Pachyptila crassirostris crassirostris** (Mathews)

*Pseudoprion turtur crassirostris* Mathews, 1912, *Birds Australia*, **2**, p. 221—Bounty Island.

Breeds on Bounty Islands. Range at sea unknown.

**Pachyptila crassirostris eatoni** (Mathews)

*Pseudoprion turtur eatoni* Mathews, 1912, *Birds Australia*, **2**, p. 220—Kerguelen Island.

Breeds on Heard, Auckland, and ? Antipodes Islands. Range at sea unknown.

**Pachyptila crassirostris pyramidalis** Fleming

*Pachyptila (Pseudoprion) eatoni pyramidalis* Fleming, 1939, *Emu*, **38**, p. 400—Pyramid Rock, Chatham Islands.

Breeds on Pyramid Rock and Forty Four Islets, Chatham Islands. It is presumably this subspecies that nests on Western Chain, Snares Islands. Range at sea unknown.

## GENUS BULWERIA BONAPARTE

*Bulweria* Bonaparte, 1843, *Nuov. Ann. Sci. Nat. R. Accademia Sci. Istituto Bologna*, **8** (1842), p. 426. Type, by monotypy, *Procellaria bulwerii* Jardine and Selby.

cf. Bourne, 1975, *Ibis*, **117**, p. 535 (generic status).

Olson, 1975, *Ibis*, **117**, pp. 111-113 (generic status).

## BULWERIA BULWERII

**Bulweria bulwerii** (Jardine and Selby)

*Procellaria Bulwerii* Jardine and Selby, 1828, *Illus. Ornith.*, pt. 4, pl. 65 and text—Madeira.

Breeds in the Atlantic Ocean on the Azores (at least Santa Maria), Desertas Islands off Madeira, Cima and Baixo Islands off Porto Santo, Salvage Islands, Canary Islands (at least Tenerife and Montaña Clara), and Cape Verde Islands (Branco, Raza, Rombos); in the Pacific Ocean on Taiwan, small islands off the southeastern coast of China, Bonin, Volcano, extreme northern Marshall (? Taongi), Johnston Islands, Leeward Hawaiian Chain (Midway, Pearl and Hermes Reef, ? Lisianski, Laysan, Gardner Pinnacles, French Frigate Shoals, Necker, Nihoa), Phoenix, and Marquesas (Hatutu, Nuka Hiva, Ua Huka, Ua Pu, Hiva Oa) Islands. Migratory. Atlantic birds

migrate south and west into the Tropics: recorded in Caribbean, Trinidad, off northeastern coast of South America, northwestern Africa, Gulf of Guinea, and Western Cape, South Africa; also recorded in the Mediterranean and several times in the British Isles. Range at sea of Pacific birds poorly known: probably considerable dispersion throughout the Tropics. Recorded from equatorial, central, and western Indian Ocean.

#### BULWERIA FALLAX

#### **Bulweria fallax** Jouanin

*Bulweria fallax* Jouanin, 1955, Oiseau, **25**, p. 155—northwestern Indian Ocean, lat. 12° 30' N., long. 55° E.

Common in the northwestern Indian Ocean (Arabian Sea). Breeding grounds undiscovered, but probably on the coast of southern Arabia. Ranges at sea in the Indian Ocean to lat. 5° S. One record in the Pacific: Lisianski, Leeward Hawaiian Chain. Another record, of 3 birds, in the Adriatic Sea: imported birds?

#### GENUS PROCELLARIA LINNAEUS

*Procellaria* Linnaeus, 1758, Syst. Nat., ed. 10, p. 131. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 78), *Procellaria aequinoctialis* Linnaeus.

*Priofinus* Hombron and Jacquinot, 1844, Compt. Rend. Acad. Sci., Paris, **18**, p. 355. Type, by subsequent designation (Mathews and Iredale, 1920, Austral Avian Rec., **4**, p. 111), *Procellaria aequinoctialis* Linnaeus.

*Adamastor* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, **43**, p. 594. Type, by original designation, *Procellaria haesitata* J. R. Forster = *Procellaria cinerea* Gmelin.

cf. Mathews, 1934, Novit. Zool., **39**, pp. 175-176.

Rowan, A. N. and M. K., and Elliott, 1951, Ibis, **93**, pp. 169-174 (ecology of *conspicillata*).

Southern, 1951, Ibis, **93**, pp. 174-179 (status of *conspicillata*).

Mougin, 1970, Oiseau, **40**, no. spéc., pp. 62-96 (ecology of *aequinoctialis*).

Barrat, 1974, Comité Nat. Français Recherches Antarctiques, no. 33, pp. 19-23 (ecology of *cinerea*).

Baker and Coleman, 1977, Notornis, **24**, pp. 211-231 (breeding cycle of *westlandica*).

PROCELLARIA AEQUINOCTIALIS<sup>1</sup>**Procellaria aequinoctialis aequinoctialis** Linnaeus

*Procellaria aequinoctialis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 132; based on "The Great Peteril" of Edwards, 1747, Nat. Hist. Birds, p. 89, pl. 89—Cape of Good Hope. Type from South Georgia, *vide* Dabbene, 1923, Hornero, 3, p. 5.

*Procellaria aequinoctialis steadi* Mathews, 1912, Birds Australia, 2, pp. 107 (in key), 112—Antipodes and Auckland Islands; type from Antipodes Islands.

Breeds on the Falkland Islands, South Georgia, ? Gough, Prince Edward, Marion, Crozet (Possession, East), Kerguelen, ? Macquarie, Auckland, Campbell, and Antipodes Islands. Migratory: range at sea circumpolar between lat. 65° S. and 30° S., extending farther north along the coasts of South America and South Africa to lat. 15° S.

**Procellaria aequinoctialis conspicillata** Gould

*Procellaria conspicillata* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 362—"very abundant in the Atlantic and Pacific Oceans."

*Procellaria larvata* Lesson, 1845, Écho Monde Savant, col. 971—Cape seas.

Breeds on Inaccessible Island, Tristan da Cunha Group. Formerly probably bred in the Fuegian region and on Amsterdam and St. Paul Islands. Range at sea poorly known; probably restricted to the vicinity of the breeding grounds.

## PROCELLARIA WESTLANDICA

**Procellaria westlandica** Falla

*Procellaria parkinsoni westlandica* Falla, 1946, Rec. Canterbury Mus., 5, p. 111—Barrytown, Westland, South Island, New Zealand.

Known to breed only at type locality and vicinity (30 kilometers of coastal ranges 2 to 3 kilometers inland from Barrytown north to Punakaiki, west coast of South Island); breeds in winter. Ranges at sea from eastern Australia to east of New Zealand.

<sup>1</sup>*P. aequinoctialis*, *westlandica*, and *parkinsoni* form a subgenus *Procellaria*.—C. J. and J.-L. M.

## PROCELLARIA PARKINSONI

**Procellaria parkinsoni** Gray

*Procellaria parkinsoni* G. R. Gray, 1862, Ibis, p. 245—New Zealand.

Breeds in New Zealand on Little Barrier and Great Barrier Islands. Has formerly bred on some ranges of the North and South Islands (Waitakere, Rimutaka, Kaitake, Titiraupenga; Heaphy). Highly migratory, crossing the Pacific to the Galapagos and the west coast of tropical America north to lat. 13° N. off Guatemala. Also recorded off eastern Australia.

PROCELLARIA CINEREA<sup>1</sup>**Procellaria cinerea** Gmelin

*Procellaria cinerea* Gmelin, 1789, Syst. Nat., 1, p. 563; based on "Cinereous Fulmar" of Latham, 1785, General Synop. Birds, 3, p. 405—within the Antarctic Circle = New Zealand seas, lat. 48° S., *vide* Mathews, 1912, Birds Australia, 2, p. 123.

Breeds on ? Inaccessible, Tristan da Cunha, and Gough Islands of the Tristan da Cunha Group, and on Marion, Crozet (Possession), Kerguelen, ? Macquarie, Campbell, and Antipodes Islands. Migratory: range at sea circumpolar between lat. 60° S. (sometimes farther south) and 25° S. (rarely farther north). One doubtful record from Monterey, California.

## GENUS CALONECTRIS MATHEWS AND IREDALE

*Calonectris* Mathews and Iredale, 1915, Ibis, pp. 590, 592.  
Type, by original designation, *Procellaria leucomelas* Temminck.

cf. Murphy, 1924, Bull. Amer. Mus. Nat. Hist., 50, pp. 241–251 (*edwardsii*).

Murphy and Chapin, 1929, Amer. Mus. Novit., no. 384, pp. 3–4 (*diomedea*).

Kuroda, Nagahisa, 1954, Class. Phylogeny Tubinares, 179 pp.

Bourne, 1955, Ibis, 97, pp. 145–149 (races of *diomedea*).

<sup>1</sup>*P. cinerea* forms a monotypic subgenus *Adamastor*.—C. J. and J.-L. M.

Jouanin and Roux, 1966, Bol. Mus. Munic. Funchal, no. 20, pp. 14-28 (*diomedea*, Salvage Islands).

Zino, 1971, Ibis, 113, pp. 212-217 (*diomedea*, Salvage Islands).

Jouanin, Roux, and Zino, 1978, Oiseau, 47 (1977), pp. 351-358 (migration and age of first breeding of *diomedea*, Salvage Islands).

#### CALONECTRIS DIOMEDEA

##### **Calonectris diomedea diomedea** (Scopoli)<sup>1</sup>

*Procellaria diomedea* Scopoli, 1769, Annus I Hist.-Nat., p. 74—no locality; Tremiti Islands, Adriatic Sea, designated by Committee on Nomenclature, Brit. Ornith. Union, 1946, Ibis, 88, p. 534.

*Puffinus diomedea disputans* Mathews, 1937, Bull. Brit. Ornith. Club, 57, p. 123—seas around Kerguelen Island to South Africa.

Breeds in the Mediterranean on the Balearic Islands, islets off the coast of France, Corsica, Sardinia, Zembra Island off Tunisia, Adriatic, Balkans, Turkey, Near East, but apparently not Cyprus or the southern Mediterranean coast from Tunisia to Turkey. Migratory: passing through Strait of Gibraltar, migrates into the Atlantic Ocean to the coasts of western and southern Africa, wandering north to England, southern Germany, and eastern United States (Long Island, New York, and Florida).

##### **Calonectris diomedea borealis** (Cory)<sup>2</sup>

*Puffinus borealis* Cory, 1881, Bull. Nuttall Ornith. Club, 6, p. 84—off Chatham Island, Massachusetts.

Breeds on the Berlengas, off Portugal, Madeira, Desertas, Porto Santo, Salvages, Canaries, and Azores. Highly migratory: ranges west to the east coast of North America from New-

<sup>1</sup>*Calonectris diomedea diomedea* (Scopoli) replaces *Puffinus kuhli* (Boie) of Sharpe, 1899, Hand-list Birds, 1, p. 123.—C. J. and J.-L. M.

<sup>2</sup>The name *Procellaria flavirostris* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 365—off the Cape of Good Hope, in lat. 36° 39' S., long. 10° 03' E., which antedates *Puffinus borealis* Cory, is indeterminate (type lost); cf. Bourne, 1955, Ibis, 97, pp. 145-149.—C. J. and J.-L. M.



foundland and Nova Scotia south to South Carolina, south to Argentina and the Cape seas, north to Brittany, British Isles, southern Baltic. Recorded once in New Zealand.

**Calonectris (diomedea) edwardsii** (Oustalet)

*Puffinus Edwardsii* Oustalet, 1883, Ann. Sci. Nat., Zool., Paris, sér. 6, 16, art. 5, p. 1—Branco, Cape Verde Islands. Breeds on the Cape Verde Islands (Santo Antão, São Vicente, Branco, Razo, São Nicolau, Rombos, Brava, Fogo, São Tiago). Range at sea probably restricted to the vicinity of the breeding islands.

CALONECTRIS LEUCOMELAS

**Calonectris leucomelas** (Temminck)

*Procellaria leucomelas* Temminck, 1835, Planches Color., livr. 99, pl. 587—seas of Japan and Nagasaki Bay. Breeds on small coastal islands of Maritime Territory, USSR, of Japan from Hokkaido south to Kyushu, and of Korea and northern China south to Shantung; also from the Izu Islands to the Bonins, and on the Pescadores. Winters south to Taiwan, Philippines, Borneo, Moluccas, New Guinea, Palau Islands, Bismarck Archipelago, central Coral Sea area, and ? north-eastern Australia. Has been collected once off Sri Lanka (Ceylon); recorded also from California, Hawaiian Islands, Kurils, and possibly Sakhalin.

GENUS PUFFINUS BRISSON

*Puffinus* Brisson, 1760, Ornith., 1, p. 56; 6, pp. 129-130.

Type, by tautonymy, *Puffinus* = *Procellaria puffinus* Brünnich.

*Ardenna* Reichenbach, 1853, Avium Syst. Nat. (1852), p.

4. Type, by original designation, *Puffinus maior* Faber = *Puffinus gravis* O'Reilly.

*Thyellodroma* Stejneger, 1888, Proc. U. S. Nat. Mus., 11,

p. 93, note. Type, by original designation, *Puffinus sphenurus* Gould = *Puffinus chlororhynchus* Lesson.

*Neonectris* Mathews, 1913, Austral Avian Rec., 2, p. 12.

Type, by original designation, *Puffinus brevicaudus* Gould = *Procellaria tenuirostris* Temminck.

*Hemipuffinus* Iredale, 1913, Austral Avian Rec., 2, p. 20.

Type, by original designation, *Puffinus carneipes* Gould.

- Paranectris* Iredale, 1930, Austral. Zool., **6**, p. 115. Type, by original designation, *Procellaria grisea* Gmelin.
- cf. Murphy, 1927, Amer. Mus. Novit., no. 276, pp. 1-15 (*assimilis*, *lherminieri*).
- Murphy, 1930, Amer. Mus. Novit., no. 419, pp. 7-14.
- Serventy, 1939, Emu, **39**, pp. 95-107 (*gavia*, *huttoni*).
- Serventy, 1941, Emu, **40**, pp. 403-408 (identity of *gavia*).
- Fleming and Serventy, 1943, Emu, **43**, pp. 113-125 (*assimilis*).
- Murphy, 1951, Amer. Mus. Novit., no. 1512, 21 pp. (*pacificus*).
- Fleming and Serventy, 1952, Emu, **52**, pp. 17-23 (specific name of Little Shearwater).
- Murphy, 1952, Amer. Mus. Novit., no. 1586, 21 pp. (*puffinus*).
- Kuroda, Nagahisa, 1954, Class. Phylogeny Tubinares, 179 pp.
- Warham, 1955, Western Austral. Nat., **5**, pp. 31-39 (ecology of *assimilis*).
- Marshall and Serventy, 1956, Proc. Zool. Soc. London, **127**, pp. 489-510 (breeding of *tenuirostris*).
- Warham, 1958, Auk, **75**, pp. 1-14 (ecology of *carneipes*).
- Bourne, 1959, Emu, **59**, pp. 212-214 (races of *assimilis*).
- Bourne, 1962, in Palmer (ed.), Handb. North Amer. Birds, **1**, pp. 188-189 (relationships of *puffinus*).
- Richdale, 1963, Proc. Zool. Soc. London, **141**, pp. 1-117 (biology of *griseus*).
- Falla, 1965, Notornis, **12**, pp. 66-70 (*huttoni*, *gavia*).
- Harris, 1966, Ibis, **108**, pp. 17-33 (breeding of *puffinus*).
- King and Gould, 1967, Living Bird, **6**, pp. 163-186 (*newelli*).
- Serventy, 1967, Proc. XIV Int. Ornith. Congr., Oxford (1966), pp. 165-190 (ecology of *tenuirostris*).
- Segonzac, 1970, Oiseau, **40**, pp. 131-135 (ecology of *carneipes*).
- Robinson, 1973, Emu, **73**, pp. 101-106 (*gavia*, *huttoni*).
- Cramp, Bourne, and Saunders, 1974, Seabirds Britain Ireland, pp. 68-72, map 5, tables 2-3 (breeding of *puffinus*).
- King, 1974, in King (ed.), Smithsonian Contrib. Zool., no. 158, pp. 53-95 (pelagic distribution of *pacificus*).

- Swanson and Merritt, 1974, Austral. Bird-Bander, **12**, pp. 3-9 (breeding of *pacificus*).  
Harrow, 1976, Notornis, **23**, pp. 269-288 (distribution and breeding of *huttoni*).

PUFFINUS PACIFICUS<sup>1</sup>**Puffinus pacificus** (Gmelin)

*Procellaria pacifica* Gmelin, 1789, Syst. Nat., **1**, p. 560; based on "Pacific Petrel" of Latham, 1785, General Synop. Birds, **3**, p. 416—Pacific Ocean; restricted to Kermadec Islands by Mathews, 1912, Birds Australia, **2**, p. 80 (but cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, p. 66, note).

*Puffinus chlororhynchus* Lesson, 1831, Traité Ornith., livr. 8, p. 613—no locality. Type from Shark Bay, Western Australia.

*Puffinus cuneatus* Salvin, 1888, Ibis, p. 353—"Krusenstern Islands," mythical islands designated by the collector instead of one of the islands in the Leeward Hawaiian Chain; cf. Murphy, 1951, Amer. Mus. Novit., no. 1512, p. 17. White phase.

Breeds in the Indian Ocean on islets off the coast of Madagascar (near Morombe), on the Seychelles, Amirante, Mascarene Islands, Cargados Carajos Shoals, Chagos Archipelago, and Cocos-Keeling Islands, and on islands off the coast of Western Australia from Forestier Islands to Carnac Island near Fremantle; in the Pacific Ocean on the Pescadore Islands near Taiwan, Bonin, Volcano, Mariana, Marcus (formerly), Wake, Caroline Islands, Idihi Island off Papua New Guinea, Solomon Islands, islands off the coast of eastern Australia from Torres Strait to Montague Island, New South Wales, Chesterfield, Lord Howe, Norfolk, northern Marshall (Taongi, Bikar, Taka, Eniwetok) Islands, New Hebrides, New Caledonia, Fiji, Johnston, Hawaiian (Leeward Hawaiian Chain: Kure, Midway, Pearl and Hermes Reef, Lisianski, Laysan, Gardner Pinnacles, French Frigate Shoals, Necker, Nihoa, and islets of the main Hawaiian group), Phoenix (McKean, Canton, Phoenix), Samoa,

<sup>1</sup>*P. pacificus* and *bulleri* form a subgenus *Thyellodroma*.—C. J. and J.-L. M.

Tonga, Kermadec, Christmas, Society, Austral, Marquesas (Eiao, Hatutu, Motu Iti, Ua Huka), Gambier Islands, Pitcairn Group (Henderson), and Revillagigedo Islands (San Benedicto). Ranges widely throughout the tropical parts of the Indian and Pacific Oceans. Some of the subtropical populations migrate extensively, for example between the Hawaiian Islands and the Pacific coast of Middle America. Tropical populations are apparently nonmigratory.

#### PUFFINUS BULLERI

##### ***Puffinus bulleri* Salvin**

*Puffinus bulleri* Salvin, 1888, Ibis, p. 354—New Zealand. Breeds on Poor Knights, Whale (Matuhora), and possibly other islands off North Island, New Zealand. Highly migratory: moves through tropical Pacific to wintering areas in north Pacific, reaching Japan, Alaska, British Columbia. Recorded from Australia, California, Chile.

#### PUFFINUS CARNEIPES<sup>1</sup>

##### ***Puffinus carneipes* Gould**

*Puffinus carneipes* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 365—small islands off Cape Leeuwin, Western Australia.

Breeds on islands off the southern coast of Western Australia, from Cape Leeuwin to Archipelago of the Recherche; on St. Paul Island, Indian Ocean; on Lord Howe Island, and on islands off the eastern coast of North Island, New Zealand, from Bay of Islands to Cook Strait, and also off New Plymouth. Highly migratory: western birds (Australian and St. Paul Island) migrate west across the Indian Ocean to the Mascarenes and the Seychelles, winter in the Arabian Sea, then return east past the Maldives and Sri Lanka (Ceylon) during June-July, and finally fly southeast to the breeding grounds in October; eastern birds (Lord Howe Island and New Zealand) migrate through the tropical western Pacific past Japan and into the north Pacific north of the Subtropical Convergence, where they spend the southern winter, occurring regularly at sea

<sup>1</sup>*P. carneipes* and *creatopus* form a subgenus *Hemipuffinus*.—C. J. and J.-L. M.

near the Hawaiian Islands during migration months (October and April), probably returning to the breeding grounds through the eastern Pacific.

#### PUFFINUS CREATOPUS

##### **Puffinus creatopus** Coues

*Puffinus creatopus* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 131—San Nicolas Island, California.

Breeds on Más a Tierra and Santa Clara Islands of the Juan Fernández Group, and on Mocha Island (lat. 38° 25' S.), off the coast of Chile. Highly migratory: main migration route in the eastern Pacific north to Alaska, close to the American continental coasts; some stragglers as far west as the Hawaiian and Line Islands.

#### PUFFINUS GRAVIS<sup>1</sup>

##### **Puffinus gravis** (O'Reilly)

*Procellaria Gravis* O'Reilly, 1818, Greenland Adjacent Seas North-west Passage, p. 140, pl. 12, fig. 1—Cape Farewell and Staten Hook to Newfoundland.

Breeds on Inaccessible, ? Tristan da Cunha, Nightingale, and Gough Islands of the Tristan da Cunha Group, and on Kidney Island, Falkland Islands. Highly migratory: spends the boreal summer in the north Atlantic, reaching the Grand Banks, western Europe, and the Arctic Circle. Nonbreeding birds appear to disperse far south off eastern South America; recorded west of the Strait of Magellan.

#### PUFFINUS GRISEUS<sup>2</sup>

##### **Puffinus griseus** (Gmelin)

*Procellaria grisea* Gmelin, 1789, Syst. Nat., 1, p. 564; based on "Grey Petrel" of Latham, 1785, General Synop. Birds, 3, p. 399—Southern Hemisphere between 35° S. and 50° S. = New Zealand, as designated by Mathews, 1912, Birds Australia, 2, p. 95.

<sup>1</sup>*P. gravis* forms a monotypic subgenus *Ardenna*.—C. J. and J.-L. M.

<sup>2</sup>*P. griseus*, *tenuirostris*, and *nativitatis* form a subgenus *Neonectris*.—C. J. and J.-L. M.

Breeds in small numbers on islands off New South Wales and southeastern Tasmania; on shores and small islands off North and South Islands, and in large numbers on many islands of Foveaux Strait and off Stewart Island, New Zealand; on Macquarie, Snares, Auckland, Campbell, Chatham, and Antipodes Islands; in numbers in the Fuegian region: Wollaston, Bayly, and Deceit Islands near Cape Horn, and Kidney Island, Falkland Islands. Highly migratory: ranges widely from the southern Pacific and Atlantic Oceans to the neighborhood of the Arctic Circle, regularly recorded through the central Pacific between the Marshall, Line, and Marquesas Islands, and reaching Japan, Aleutian Islands, west and east coasts of North America (to Alaska and Labrador), Greenland, Iceland, and western Europe. Nonbreeding birds appear to disperse far south in the antarctic waters during the southern summer.

#### PUFFINUS TENUIROSTRIS

##### ***Puffinus tenuirostris*** (Temminck)

*Procellaria tenuirostris* Temminck, 1835, Planches Color., livr. 99, text to pl. 587—seas north of Japan and shores of Korea.

Breeds on islands off the Australian mainland, from the Nuyts Archipelago, South Australia, to Bateman's Bay, New South Wales (220 kilometers south of Sydney), and on islands off Tasmania. Highly migratory: ranges widely over the Pacific Ocean, reaching the coasts of Japan, Kamchatka, Bering Strait, Beaufort Sea, Alaska, British Columbia, and California, returning southwest to the breeding grounds. In the south Pacific, the easternmost record is from the Tuamotu Archipelago. Scattered records from the Indian Ocean, as far as Sri Lanka (Ceylon) and Pakistan. Nonbreeders apparently summer off Antarctica.

#### PUFFINUS NATIVITATIS

##### ***Puffinus nativitatis*** Streets

*Puffinus (Nectris) nativitatis* Streets, 1877, Bull. U. S. Nat. Mus., no. 7, p. 29—Christmas Island, Pacific Ocean.

Breeds on the Bonin (formerly), Marcus (formerly), Wake (formerly), extreme northern Marshall (Taongi) Islands, Leeward Hawaiian Chain (Kure, Midway, Pearl and Hermes

Reef, Lisianski, Laysan, French Frigate Shoals, Nihoa), Johnston, Line (including Christmas), Phoenix, Marquesas, Austral (Rapa), Gambier Islands, Pitcairn Group (Oeno and probably Henderson and Ducie), and Easter Island (Motu Nui). No postbreeding migration recorded, although known to be absent from its breeding grounds during the contranuptial season.

**PUFFINUS PUFFINUS**<sup>1,2</sup>

***Puffinus puffinus newelli*** Henshaw

*Puffinus newelli* Henshaw, 1900, Auk, 17, p. 246—Waihee Valley, Ulani = Maui Island, Hawaii.

Formerly probably bred on all the main Hawaiian Islands. Now greatly reduced, but still breeding on the inland cliffs of Kauai. Probably highly migratory: seen at sea in the north-central Pacific from March to November, then almost entirely absent December through February, suggesting an extensive dispersion or migration to unknown feeding grounds during the contranuptial season, probably to the south and west. Recorded twice on Wake Island, once on Saipan in the Marianas, and once on Johnston Island.

***Puffinus puffinus auricularis*** Townsend

*Puffinus auricularis* C. H. Townsend, 1890, Proc. U. S. Nat. Mus., 13, p. 133—Clarión Island, Revillagigedo Group.

The only known breeding stations are at Clarión, Socorro, and San Benedicto Islands of the Revillagigedo Group, west of Mexico. May have limited dispersal range (almost no data).

***Puffinus puffinus puffinus*** (Brünnich)

*Procellaria puffinus* Brünnich, 1764, Ornith. Borealis, p. 29—Faeroes and Norway.

Breeds Vestmann Islands (Iceland), Faeroes, islands and coasts (chiefly western) of the British Isles, islets off Brittany, inland Madeira, Azores; on western side of the Atlantic on islands off Newfoundland and Penikese Island, Massachusetts; formerly Bermuda. Highly migratory; winters chiefly off the coast of South America from Brazil to Argentina. Recorded from

<sup>1</sup>*P. puffinus*, *gavia*, *huttoni*, *therminieri*, and *assimilis* form a subgenus *Puffinus*.—C. J. and J.-L. M.

<sup>2</sup>*P. puffinus*, *gavia*, and *huttoni* have often been treated as conspecific; in any case, they form a superspecies.—C. J. and J.-L. M.

South Africa, South West Africa (Namibia), South Australia, and New Zealand.

**Puffinus puffinus yelkouan** (Acerbi)

*Procellaria Yelkouan* Acerbi, 1827, Biblioteca Ital., 47, p. 297—the Bosphorus, opposite Bujukdere.

Breeds on islets off Marseilles, France, Corsica, Sardinia, Tunisia (? Zembretta), Italy, Sicily, and in the Adriatic and Aegean Seas. Migratory: ranges throughout the Mediterranean and all its arms, probably mainly southwest in winter; also common in the Black Sea after the breeding season.

**Puffinus puffinus mauretanicus** Lowe

*Puffinus puffinus mauretanicus* Lowe, 1921, Bull. Brit. Ornith. Club, 41, p. 140—Algiers.

Breeds in the western Mediterranean on the Pityusae and on islets off Mallorca and Menorca, Balearic Islands. Migrates through the Strait of Gibraltar up the west coast of Europe to the English Channel, exceptionally to the northern British Isles, Norway, and Denmark, in the late summer.

**Puffinus puffinus opisthomelas** Coues

*Puffinus opisthomelas* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 139—Cape San Lucas, Baja California.

Breeds on islands off the west coast of Baja California (San Martín, Guadalupe, San Benito, Natividad). Ranges widely along the west coast of North America from Sonora to British Columbia.

PUFFINUS GAVIA

**Puffinus gavia** (Forster)

*Procellaria gavia* J. R. Forster, 1844, Descr. Animal. Itinere Maris Australis Terras, p. 148—Queen Charlotte Sound, New Zealand.

*Puffinus reinholdi reinholdi* Mathews, 1912, Birds Australia, 2, pp. 47 (in key), 74, pl. 74—eastern Australian seas; New Zealand.

*Reinholdia reinholdi byroni* Mathews, 1913, Austral Avian Rec., 1, p. 187—Byron Bay, New South Wales; error, Five Islands, south of Woollongong, New South Wales, cf. Mathews, 1916, Bull. Brit. Ornith. Club, 36, p. 89.

*Cinathisma cyaneoleuca* Hull, 1916, Emu, 15, p. 205, pl. 32—Ulladulla, New South Wales.



*Reinholdia reinholdi melanotis* Mathews, 1916, Bull. Brit. Ornith. Club, **36**, p. 89—Kaipara Beach, near Helensville, Waitemata County, North Island, New Zealand.

*Reinholdia reinholdi montaguei* Mathews, 1922, Austral Avian Rec., **5**, p. 3—New Caledonia.

Breeds on islets off North Island and in Cook Strait, New Zealand. Migratory: ranges south and east to Banks Peninsula, South Island, and Chatham Islands, and west to southern Australia in winter. Stragglers recorded from New Caledonia and New Hebrides.

#### PUFFINUS HUTTONI

##### **Puffinus huttoni** Mathews

*Puffinus reinholdi huttoni* Mathews, 1912, Birds Australia, **2**, pp. 47 (in key), 77—Snares Island.

*Puffinus leptorhynchus* Mathews, 1937, Bull. Brit. Ornith. Club, **57**, p. 143—Bunbury, Geographe Bay, Western Australia.

Known to breed only in the Seaward Kaikura Mountains, South Island, New Zealand, between 1,200 and 1,800 meters above sea level. Sedentary in the coastal neighboring seas. Extralimital records reported from southern South Island, New South Wales, Tasmania, and Western Australia (west to Albany).

#### PUFFINUS LHERMINIERI<sup>1</sup>

##### **Puffinus lherminieri lherminieri** Lesson

*Puffinus* [sic] *Lherminieri* Lesson, 1839, Rev. Zool., Paris, **2**, p. 102—Antilles.

Breeds Bermuda, Bahama Islands, Lesser Antilles (Saba Key in the Virgin Islands, Guadeloupe, Désirade, a few of the smaller Leeward Islands, Rocher du Diamant, Martinique, Bird Rock, Barbados, some of the Grenadines); formerly Mona Island off Puerto Rico. Largely nonmigratory: straggles casually to the coast of the United States from the Gulf of Maine to

<sup>1</sup>*P. lherminieri* and *assimilis* are often treated as conspecific. Some melanistic specimens of *lherminieri*, entirely sooty black, are known. *Puffinus atterrimus* [sic] L'Herminier, 1879, Proc. U. S. Nat. Mus., **1** (1878), p. 451, a *nomen nudum*, probably refers to such individuals, as suggested by J. Bond in *litt.*—C. J. and J.-L. M.

southern Florida, becoming regular in waters of southern Florida; one record eastern Ontario.

***Puffinus lherminieri loyemilleri* Wetmore**

*Puffinus lherminieri loyemilleri* Wetmore, 1959, Proc. Biol. Soc. Washington, **72**, pp. 19–21—Tiger Rock, Tiger Cays, off Cabo Valiente, Valiente Peninsula, Bocas del Toro, Panama.

Breeds on islets off the Caribbean coast of Panama. Birds from Crab Cay, off Providentia Island, east of Nicaragua, and from Los Roques Islands, off the coast of Venezuela, are doubtfully assigned to this subspecies. Range at sea unknown; probably nonmigratory.

***Puffinus lherminieri subalaris* Ridgway**

*Puffinus subalaris* Ridgway (ex Townsend MS), 1897, Proc. U. S. Nat. Mus., **19**, p. 650—Dalrymple Rock, Chatham Island, Galapagos Archipelago.

Breeds in the Galapagos Archipelago on Culpepper (Darwin), Wenman (Wolf), Santa Cruz (Indefatigable), South Plaza, San Cristóbal (Chatham), and Española (Hood) Islands, and probably on many of the other islands and their outlying rocks. Disperses far north across the Equator to the coast of Mexico.

***Puffinus lherminieri dichrous* Finsch and Hartlaub**

*Puffinus dichrous* Finsch and Hartlaub, 1867, Beitr. Fauna Central Polynesiens, Ornith., p. 244—McKean Island, Phoenix Group.

*Puffinus lherminieri polynesiae* Murphy, 1927, Amer. Mus. Novit., no. 276, p. 8—Tahiti, Society Islands.

Breeds throughout the central Pacific from the Palau, Mariana, and Caroline Islands to the Phoenix, Samoa, Society (Tahiti), Marquesas (Hatutu, Ua Pu), and Gambier Islands. Migrations not known; ranges at sea usually within 200 kilometers of the breeding islands.

***Puffinus lherminieri gunax* Mathews**

*Puffinus lherminieri gunax* Mathews (ex Solander MS), 1912, Birds Australia, **2**, p. 72—off Townsville, Queensland.

*Puffinus lherminieri gunax* Mathews, 1930, Bull. Brit. Ornith. Club, **50**, p. 55—Melapav (= Meralav or Star Peak) Islet, Banks Group, New Hebrides. New name for *Puffinus nugax* Mathews, not *Procellaria nugax* Bonaparte, 1857, Consp. Gen. Avium, **2**, p. 205.

Probably breeds on the Banks Group, New Hebrides. Range

at sea unknown; probably nonmigratory.

**Puffinus lherminieri heinrothi** Reichenow<sup>1</sup>

*Puffinus* [sic] *heinrothi* Reichenow, 1919, Journ. Ornith.,  
67, p. 225—Blanche Bay, New Britain.

Known only from a handful of specimens, all collected at sea off the northern tip of New Britain, where it possibly breeds. Range at sea not known; probably nonmigratory.

**Puffinus lherminieri bannermani** Mathews and Iredale<sup>2</sup>

*Puffinus bannermani* Mathews and Iredale, 1915, Ibis, p.  
594—North Iwo Jima, Bonin Islands.

Breeds on Bonin and Volcano (Iwo Jima) Islands. Range at sea unknown; probably nonmigratory.

**Puffinus lherminieri bailloni** (Bonaparte)

*Procellaria nugax a. bailloni* Bonaparte, 1857, Consp. Gen.  
Avium, 2, p. 205—Mauritius.

Breeds on the Mascarene Islands. Range at sea unknown; probably nonmigratory; one straggler found at East London, South Africa.

**Puffinus lherminieri nicolae** Jouanin

*Puffinus lherminieri nicolae* Jouanin, 1971, Oiseau (1970),  
40, p. 306—Cousine Island, Seychelles.

Breeds on Aldabra, Seychelles, Amirante, and Maldive Islands, Chagos Archipelago (probably this race). Range at sea unknown; probably nonmigratory.

**Puffinus lherminieri persicus** Hume<sup>3</sup>

*Puffinus Persicus* Hume, 1873, Stray Feathers, 1, p. 5—at  
sea between Guadar and Muscat.

Common in the Arabian Sea. Breeding grounds unknown, but islets off Iranian Baluchistan and the Makran Coast of Pakistan are likely. Probably nonmigratory.

**Puffinus lherminieri boydi** Mathews

*Puffinus lherminieri boydi* Mathews, 1912, Birds Australia,  
2, p. 70—Cape Verde Islands.

Breeds on the Cape Verde Islands (Santo Antão, São Vicente, Branco, Razo, São Nicolau, Rombos, Brava, Fogo, São Tiago). Range at sea unknown; probably nonmigratory.

<sup>1</sup>Possibly a full species.—C. J. and J.-L. M.

<sup>2</sup>Possibly a full species.—C. J. and J.-L. M.

<sup>3</sup>Possibly a full species.—C. J. and J.-L. M.

## PUFFINUS ASSIMILIS

**Puffinus assimilis baroli** (Bonaparte)

*Procellaria baroli* Bonaparte, 1857, *Consp. Gen. Avium*, **2**, p. 204—Mediterranean, Desertas near Madeira, Canary Islands; restricted to Desertas by Bannerman, 1914, *Ibis*, p. 477.

Breeds on Azores, Cima and Baixo off Porto Santo, Desertas (Bugio), Salvage, and Canary (Tenerife, Gran Canaria, Montaña Clara, Graciosa) Islands. Probably nonmigratory, but recorded as wandering to France, British Isles, Denmark, Sardinia, Italy, and North America (Nova Scotia and South Carolina).

**Puffinus assimilis tunneyi** Mathews

*Puffinus assimilis tunneyi* Mathews, 1912, *Birds Australia*, **2**, pp. 47 (in key), 71—Boxer Island, southwestern Australia.

*Alphapuffinus assimilis glauerti* Mathews, 1936, *Bull. Brit. Ornith. Club*, **57**, p. 24—Cottesloe, Western Australia, beach drifted.

Breeds on islets off the coast of southwestern Australia (Houtman Abrolhos Islands, Parrakeet Islet off Rottnest Island, Eclipse Island southwest of King George Sound, Archipelago of the Recherche). Birds breeding on St. Paul Island and ? formerly on Amsterdam Island, south Indian Ocean, are doubtfully assigned to this subspecies. Range at sea unknown.

**Puffinus assimilis assimilis** Gould

*Puffinus assimilis* Gould, 1838, *Synop. Birds Australia*, pt. 4, app., p. 7—New South Wales = Norfolk Island, *vide* Mathews, 1912, *Birds Australia*, **2**, p. 50.

Today known to breed only on Admiralty Islands (Roach), in the Lord Howe Group, and Bird Rocks, Norfolk Island. At Lord Howe breeding has formerly also been reported from Malabar Ridge, Mt. Gower, Rabbit Island, and ? Mutton Bird Island. Range at sea unknown.

**Puffinus assimilis kermadecensis** Murphy

*Puffinus assimilis kermadecensis* Murphy, 1927, *Amer. Mus. Novit.*, no. 276, p. 3—Herald Island, Kermadec Group.

Breeds on Raoul Island, Kermadec Group. Range at sea unknown.

**Puffinus assimilis haurakiensis** Fleming and Serventy

*Puffinus assimilis haurakiensis* Fleming and Serventy,

1943, *Emu*, **43**, p. 119—Lizard Island, Mokohinau Islands, New Zealand.

Breeds on islets off the east coast of North Island, New Zealand. Range at sea unknown.

***Puffinus assimilis elegans*** Giglioli and Salvadori

*Proc. [ellaria] munda* Kuhl (ex Solander MS), 1820, Beitr. Zool. Vergl. Anat., Abth. 1, p. 148—lat. 48° 27' S., long. 93° W., on 25 February 1769.<sup>1</sup>

*Puffinus elegans* Giglioli and Salvadori, 1869, *Ibis*, p. 68—south Atlantic Ocean, lat. 43° 54' S., long. 9° 20' E.

*Nectris munda* Salvin (ex Solander MS), 1876, in Rowley, Ornith. Misc., **4**, p. 236—lat. 48° 27' S., long. 93° W.

*Puffinus assimilis kemp* Mathews, 1912, *Birds Australia*, **2**, p. 69—Chatham Islands.

*Puffinus kuhliana* Mathews, 1933, Bull. Brit. Ornith. Club, **54**, p. 25. New name for Solander's *Nectris munda*.

Breeds on Inaccessible, Tristan da Cunha, Nightingale, and Gough Islands of the Tristan da Cunha Group in the south Atlantic Ocean, and on Auckland, Chatham, and Antipodes Islands in the southwestern Pacific Ocean; perhaps also in the southeastern Pacific Ocean: specimens with enlarged testes have been collected off Chiloé Island, Chile, in June. Range at sea unknown. Some birds collected at sea near Amsterdam and St. Paul Islands, south Indian Ocean, have been assigned to this subspecies, but a breeding specimen collected on St. Paul Island is not referable to it.

***Puffinus assimilis myrtae*** Bourne

*Puffinus assimilis myrtae* Bourne, 1959, *Emu*, **59**, p. 213—Rapa Island, Austral Group.

Winter breeder on Rapa Island, Austral Group, in the south-central Pacific Ocean. Range at sea unknown.

<sup>1</sup>Cf. Bourne, 1959, *Emu*, **59**, p. 214; Lysaght, 1959, Bull. Brit. Mus. (Nat. Hist.), Hist. Ser., **1**, p. 276. The specific name *munda*, in the combinations *Proc. [ellaria] munda* Kuhl 1820 and *Nectris munda* Kuhl 1820, has been placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 484 and the Name No. 485 respectively by the International Commission on Zoological Nomenclature, Opin. 497, 1957, Opin. Decl. Rend., **17**, p. 351.—C. J. and J.-L. M.

FAMILY **HYDROBATIDAE**

- cf. Mathews, 1934, *Novit. Zool.*, **39**, pp. 187-196.  
 Murphy, 1936, *Oceanic Birds South Amer.*, pp. 726-771.  
 Falla, 1937, *Brit. Austral. N. Z. Antarctic Res. Exped. Rep.*, ser. B, **2**, pp. 207-213.  
 Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, pp. 86-106 (New World).  
 Dementiev *et al.*, 1951, *Ptitsy Sovetskogo Soiuza*, **2**, pp. 327-340 (English trans., 1968, *Birds Soviet Union*, **2**, pp. 280-395).  
 Murphy and Snyder, 1952, *Amer. Mus. Novit.*, no. 1596, pp. 1-16 ("Pealea" phenomenon and long-legged Hydrobatidae).  
 Bourne, 1961 ff., *Observations Sea Birds, in Sea Swallow (Annual Rep. Roy. Naval Bird Watching Soc.)*, **14** ff.  
 Palmer (ed.), 1962, *Handb. North Amer. Birds*, **1**, pp. 217-254.  
 Alexander *et al.*, 1965, *Ibis*, **107**, pp. 401-405.  
 Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 31-37.  
 Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 207-224.  
 Bourne, 1967, *Ibis*, **109**, pp. 157-159 (long-distance vagrancy).  
 Ornith. Soc. N. Z., 1970, *Annot. Checklist Birds N. Z.*, pp. 28-30.  
 Prévost and Mougín, 1971, *Guide Oiseaux Mammifères Terres Australes Antarctiques Françaises*, pp. 84-93.  
 Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 140-149.  
 Watson *et al.*, 1971, *Birds Antarctic Subantarctic*, pls. 11, 15.  
 Crossin, 1974, in King (ed.), *Smithsonian Contrib. Zool.*, no. 158, pp. 154-205 (Pacific Ocean).  
 Watson, 1975, *Antarctic Res. Ser. (Amer. Geophys. Union)*, no. 24, pp. 152-161 (Antarctic and Subantarctic).  
 Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 155-178.

GENUS **OCEANITES** KEYSERLING AND BLASIUS

*Oceanites* Keyserling and J. H. Blasius, 1840, *Wirbelthiere*

- Europa's, pp. xciii, 131, 238. Type, by subsequent designation (G. R. Gray, 1841, List Gen. Birds, ed. 2, p. 99), *Procellaria wilsonii* Bonaparte = *Procellaria oceanica* Kuhl.
- Procellata* Bianchi, 1913, Faune Russie, Oiseaux, 1, pt. 2, p. 805. Type, by original designation, *Procellaria oceanica* Kuhl.
- Pealeornis* Mathews, 1932, Bull. Brit. Ornith. Club, 52, p. 132. Type, by original designation, *Pealeornis maoriana* Mathews = *Oceanites oceanicus* (Kuhl).
- cf. Murphy, 1918, Bull. Amer. Mus. Nat. Hist., 38, pp. 117-146.
- Roberts, 1940, Brit. Graham Land Exped. 1934-37, Sci. Rep., 1, pp. 141-194 (*oceanicus*).
- Harris, 1969, Proc. California Acad. Sci., 37, pp. 160-161 (*gracilis*).
- Lacan, 1971, Oiseau, 41, no. spéc., pp. 65-89 (ecology of *oceanicus*).
- Beck and Brown, 1972, Brit. Antarctic Surv. Sci. Rep., no. 69, 54 pp. (ecology of *oceanicus*).

## OCEANITES OCEANICUS

**Oceanites oceanicus oceanicus** (Kuhl)

- Procellaria oceanica* Kuhl, 1820, Beitr. Zool. Vergl. Anat., Abth. 1, p. 136, pl. 10, fig. 1—no locality; South Georgia designated by Murphy, 1918, Bull. Amer. Mus. Nat. Hist., 38, p. 128.
- Oceanites oceanicus chilensis* Alexander, 1928, Birds Ocean, p. 86—islets off Cape Horn. *Nomen nudum*.
- Oceanites oceanicus chilensis* Murphy, 1936, Oceanic Birds South Amer., p. 754—Wollaston Island, Fuegia, Chile.
- Oceanites oceanicus parvus* Falla, 1937, Brit. Austral. N. Z. Antarctic Res. Exped. Rep., ser. B, 2, p. 208—Royal Sound, Kerguelen Island.
- Oceanites oceanicus wollastoni* Mathews, 1937, Emu, 37, p. 141. Alternative name for *O. o. chiliensis* [sic]. *Nomen nudum*.
- Oceanites oceanicus magellanicus* Roberts, 1940, Brit. Graham Land Exped. 1934-37, Sci. Rep., 1, p. 153—Falkland Islands, Tierra del Fuego. New name for *Oceanites oceanicus chilensis* Murphy, 1936, preoccupied by

*Oceanites oceanicus chilensis* Mathews, 1934, *Novit. Zool.*, **39**, p. 191 (ex Alexander, 1928, *Birds Ocean*, p. 86), given as a synonym of *Oceanites oceanicus oceanicus*.

Breeds on Tierra del Fuego, the Falkland Islands, South Georgia, ? Bouvet, ? Crozet, Kerguelen, and Heard Islands. Highly migratory, the species as a whole covering the world oceans, but it is not certain that *oceanicus* ranges as far north as *exasperatus*.

***Oceanites oceanicus exasperatus* Mathews**

*Oceanites oceanicus exasperatus* Mathews, 1912, *Birds Australia*, **2**, p. 11, pl. 68—New Zealand seas.

*Pealeornis maoriana* Mathews, 1932, *Bull. Brit. Ornith. Club*, **52**, p. 132—Banks Peninsula, New Zealand.<sup>1</sup>

Breeds on the South Sandwich, South Orkney, and South Shetland Islands, on the Antarctic Peninsula and on the coasts and islands of the Antarctic Continent: Adélie Land, Enderby Land, Mac Robertson Land, Victoria Land, Queen Maud Land, Wilkes Land, ? Peter I, ? Balleny, and Scott Islands. Highly migratory, reaching the north Atlantic, north Indian, and north Pacific oceans as far as Labrador, British Isles, Arabian Sea, Japan, and California.

OCEANITES GRACILIS

***Oceanites gracilis gracilis* (Elliot)**

*Thalassidroma gracilis* Elliot, 1859, *Ibis*, p. 391—west coast of South America.

Breeding grounds undiscovered. Known at sea off the west coast of South America (Humboldt Current) between the latitudes of Punta Santa Elena, Ecuador, and Valparaíso, Chile.

***Oceanites gracilis galapagoensis* Lowe**

*Oceanites gracilis galapagoensis* Lowe, 1921, *Bull. Brit. Ornith. Club*, **41**, p. 140—Charles (= Santa María) Island, Galapagos Archipelago.

<sup>1</sup>Streaked phase ("Pealea" phenomenon), studied by Murphy and Snyder, 1952, *Amer. Mus. Novit.*, no. 1596, p. 12, known from 3 specimens only: the type in the British Museum (Natural History), London, and 2 others in the Museum National d'Histoire Naturelle, Paris.—C. J. and J.-L. M.



Resident in the waters of the Galapagos Archipelago. Breeding grounds yet to be discovered.

GENUS **GARRODIA** FORBES

*Garrodia* Forbes, 1881, Coll. Sci. Papers Garrod, p. 521, note. Type, by original designation and monotypy, *Thalassidroma nereis* Gould.

cf. Mathews, 1912, Birds Australia, 2, pp. 15-18.

Despin, Mougin, and Segonzac, 1972, Comité Nat. Français Recherches Antarctiques, no. 31, pp. 52-56 (ecology).

**GARRODIA NEREIS****Garrodia nereis** (Gould)

*Thalassidroma Nereis* Gould, 1841, Proc. Zool. Soc. London (1840), p. 178—Bass Strait, Australia.

Breeds on Falkland Islands, South Georgia, ? Gough, Crozet (East), Kerguelen, ? Macquarie, Auckland, ? Campbell Islands, Pyramid Rock and probably other of the Chatham Islands, Antipodes Islands. Range at sea poorly known; apparently restricted to the vicinity of the breeding grounds.

GENUS **PELAGODROMA** REICHENBACH

*Pelagodroma* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 4. Type, by original designation, *Procellaria marina* Latham.

cf. Murphy and Irving, 1951, Amer. Mus. Novit., no. 1506, pp. 1-17.

Bourne, 1953, Bull. Brit. Ornith. Club, 73, pp. 79-82 (races of *marina*).

Warham, 1958, Brit. Birds, 51, pp. 269-272 (breeding of *dulciae*).

Jouanin and Roux, 1965, Bol. Mus. Munic. Funchal, no. 19, pp. 16-30 (ecology of *hypoleuca*).

Richdale, 1965, Trans. Zool. Soc. London, 31, pp. 1-86 (breeding of *maoriana*).

**PELAGODROMA MARINA****Pelagodroma marina hypoleuca** (Moquin-Tandon)

*Thalassidroma hypoleuca* Moquin-Tandon, 1841, in Webb

and Berthelot, Hist. Nat. Îles Canaries, 2, pt. 2, Zool., Ornith., p. 45—Tenerife, Canary Islands.

Breeding definitely known only from the Salvage Islands (Great Salvage and Pitão). Has been taken on Tenerife during the breeding season, but no evidence of breeding. Migratory: ranges at sea into the north Atlantic (both coasts), and coast of western Africa to the Gulf of Guinea.

**Pelagodroma marina eadesi** Bourne

*Pelagodroma marina eadesi* Bourne, 1953, Bull. Brit. Ornith. Club, 73, p. 81—Cima, Cape Verde Islands.

Breeds on Branco Island and Cima, Rombos Islands, Cape Verde Islands. Not distinguishable at sea from *hypoleuca*. Specimens have been found off the Atlantic coast of North America, and one recently in the Netherlands.

**Pelagodroma marina marina** (Latham)

*Procellaria marina* Latham, 1790, Index Ornith., p. 826; based on "Frigate Petrel" of Latham, 1785, General Synop. Birds, 3, p. 410—southern oceans = off the mouth of the Río de la Plata, lat. 35°-37° S., *fide* Murphy, 1924, Bull. Amer. Mus. Nat. Hist., 50, p. 233.

Breeds in the Tristan da Cunha Group (Inaccessible, Nightingale, Gough); the birds which formerly bred on St. Helena and Amsterdam Island are doubtfully assigned to this subspecies. Migratory: disperses widely in warmer seas outside breeding season, Tristan da Cunha birds wandering north toward Ascension Island, west to southern Brazil, and east toward South Africa.

**Pelagodroma marina dulciae** Mathews

*Pelagodroma marina dulciae* Mathews, 1912, Birds Australia, 2, pp. 20 (in key), 21—Breaksea Island, off Albany, Western Australia.

Breeds on islets off the coasts of Western and southern Australia from the Houtman Abrolhos to Bass Strait and the Broughton Islands, New South Wales. Migratory: disperses widely in warmer seas outside breeding season, wintering in particular in the Arabian Sea.

**Pelagodroma marina maoriana** Mathews

*Pelagodroma marina maoriana* Mathews, 1912, Birds Australia, 2, p. 24—Auckland and Chatham Islands. Type from Chatham Islands.

Breeds on many islets off New Zealand and Stewart Island,

and on Auckland and Chatham Islands; formerly on Lord Howe Island. Migratory: New Zealand populations move toward the eastern Pacific (specimens collected at sea near the Galapagos Islands). Doubtfully distinguishable from *marina*.

***Pelagodroma marina albiclunis* Murphy and Irving**

*Pelagodroma marina albiclunis* Murphy and Irving, 1951, Amer. Mus. Novit., no. 1506, p. 15—Sunday Island = Raoul Island, Kermadec Group.

Breeds presumably on Herald and Raoul Islands of the Kermadec Group, but the breeding grounds are still undiscovered. Range at sea poorly known: apparently restricted to the vicinity of the probable breeding grounds.

GENUS **FREGETTA** BONAPARTE<sup>1</sup>

*Fregetta* Bonaparte, 1855, Compt. Rend. Acad. Sci., Paris, **41**, p. 1113. Type, by original designation, *Thalassidroma leucogaster* Gould.

*Pealea* Ridgway, 1886, Auk, **3**, p. 334. Type, by original designation, *Thalassidroma lineata* Peale.

*Fregodroma* Mathews, 1937, Bull. Brit. Ornith. Club, **57**, p. 145. Type, by original designation, *Thalassidroma tropica* Gould.

*Fregolla* Mathews, 1937, Emu, **37**, p. 142. Type, by original designation, *Fregolla melanoleuca*.

*Fregandria* Mathews, 1938, Bull. Brit. Ornith. Club, **59**, p. 10. New name for *Fregolla* Mathews, not *Fregella* Walker, 1854, List Lep. Brit. Mus., **1**, p. 272.

cf. Kinghorn and Cayley, 1922, Emu, **22**, pp. 81-97 (taxonomy).

Mathews, 1937, Emu, **37**, pp. 136-143.

Bourne, 1962, in Palmer (ed.), Handb. North Amer. Birds, **1**, pp. 251-254.

Beck and Brown, 1971, Ibis, **113**, pp. 73-90 (biology of *tropica*).

<sup>1</sup>The systematics of this genus, with distinction of 2 species and the distribution of subspecies between them, is purely tentative. Most of the proposed names are based on specimens taken at sea, and it seems probable that colonies are still to be discovered.—C. J. and J.-L. M.

## FREGETTA TROPICA

**Fregetta tropica tropica** (Gould)

*Thalassidroma tropica* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 366—equatorial regions of Atlantic Ocean = lat. 6° 33' N., long. 18° 6' W., from "a" type preserved in the British Museum (Natural History).

*Thalassidroma melanogaster* Gould, 1844, Ann. Mag. Nat. Hist., 13, p. 367—off St. Paul and Amsterdam Islands, south Indian Ocean.

*Thalassidroma lineata* Peale, 1848,<sup>1</sup> U. S. Explor. Exped., 8, p. 293—Upolu, Samoa; ? error, ? Drake Strait, or ? Bellingshausen Sea in the Antarctic.

*Fregetta tropica australis* Mathews, 1914, Austral Avian Rec., 2, p. 86—New Zealand.

?*Fregetta leucogaster deceptis* Mathews, 1932, Bull. Brit. Ornith. Club, 52, p. 146—waters of New Zealand and in the south Indian Ocean.

Breeds on ? South Georgia, South Orkney, South Shetland, ? Bouvet, Crozet (East), Kerguelen, Auckland, ? Bounty, and Antipodes Islands. Highly migratory: circumpolar at sea between lat. 65° S. and 35° S.; straggles north to the tropical Atlantic, Indian, and Pacific Oceans, where it normally winters within the Tropics near the Equator along the boundaries of the counter currents. Recorded in the Atlantic Ocean off western Africa, in the Indian Ocean near the Maldives and in the Bay of Bengal, in the Pacific Ocean near northern Australia, Solomon, New Hebrides, Samoa, Marquesas Islands, and near San Vicente de Cañete, Peru.

**Fregetta tropica melanoleuca** Salvadori

*Fregetta melanoleuca* Salvadori, 1908, Bull. Brit. Ornith. Club, 21, p. 79—Tristan da Cunha = Gough Island, *vide* Bourne, 1962, in Palmer (ed.), Handb. North Amer. Birds, 1, p. 252.

*Fregodroma leucothysanus* Mathews, 1937, Bull. Brit. Ornith. Club, 57, p. 146—south Indian Ocean, lat. 37° 30' S., long. 42° E.

<sup>1</sup>Streaked phase ("Pealea" phenomenon) studied by Murphy and Snyder, 1952, Amer. Mus. Novit., no. 1596, pp. 3-4.—C. J. and J.-L. M.

Breeds on Gough Island, in the south Atlantic Ocean. Ranges north to the Tropic of Capricorn?

#### FREGETTA GRALLARIA

##### **Fregetta grallaria grallaria** (Vieillot)

*Procellaria grallaria* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 25, p. 418—"Nouvelle-Hollande" = Australia.

*Fregetta tubulata* Mathews, 1912, *Birds Australia*, 2, p. 42; based on Gould, 1844, *Ann. Mag. Nat. Hist.*, 13, pp. 367-368—near the coast of Australia.

*Fregettornis royanus* Mathews, 1914, *Austral Avian Rec.*, 2, p. 86—Lord Howe Island.

*Fregettornis alisteri* Mathews, 1915, *Austral Avian Rec.*, 2, p. 124—Lord Howe Island.

*Fregettornis innominatus* Mathews, 1915, *Austral Avian Rec.*, 2, p. 124—Lord Howe Island.

*Fregettornis insularis* Mathews, 1915, *Austral Avian Rec.*, 2, p. 124—Lord Howe Island.

*Cymodroma howensis* Mathews, 1928, *Birds Norfolk and Lord Howe Islands*, p. 11—Lord Howe Island.

*Fregettornis guttata* Mathews, 1933, *Novit. Zool.*, 39, pp. 44 (in key), 46—Ua Pu Island, Marquesas Group.

Breeds on Admiralty Islands (Roach), Lord Howe Group, and Macauley Island, Kermadec Group. Migratory: occurs in the Tasman Sea and off southern Australian coast; penetrates well into the Coral Sea and probably the central Pacific Ocean. Recorded once in New Zealand, with recent sightings presumably this subspecies.

##### **Fregetta grallaria leucogaster** (Gould)

*Thalassidroma leucogaster* Gould, 1844, *Ann. Mag. Nat. Hist.*, 13, p. 367—south Atlantic Ocean, lat. 36° S., long. 6° 47' E.

*Fregetta lawrencii* Bonaparte, 1855, *Compt. Rend. Acad. Sci.*, Paris, 41, p. 1113—America.

*Fregettornis grallaria tristanensis* Mathews, 1932, *Bull. Brit. Ornith. Club*, 52, p. 123—Inaccessible Island, Tristan da Cunha Group.

Breeds in the Tristan da Cunha Group (Inaccessible, ? Tristan da Cunha, Nightingale, Gough), on St. Paul Island, and perhaps Amsterdam Island. Migratory: ranges at sea north between Brazil and western Africa; one specimen taken at 7° S. Some-

times recorded off South Africa. Range at sea in the Indian Ocean unknown.

***Fregatta grallaria segethi*** (Philippi and Landbeck)

*Thalassidroma Segethi* Philippi and Landbeck, 1860, Archiv Naturgeschichte, **26**, pt. 1, p. 282—coast of Chile.

Breeds on the Juan Fernández Islands (Goat Island, off Más a Tierra). Recorded at sea in the vicinity of these islands, between approximately the latitude of the San Félix Group (lat. 26° S.) and lat. 37° S., and between long. 88° W. and the coast of Chile.

***Fregatta grallaria titan*** Murphy

*Fregatta grallaria titan* Murphy, 1928, Amer. Mus. Novit., no. 322, p. 4—Rapa Island, Austral Group.

Breeds on Rapa Island, Austral Group, in the south-central Pacific Ocean. Range at sea poorly known; specimens taken at sea in the Marquesas Islands and near the Galapagos Archipelago.

GENUS **NESOFREGETTA** MATHEWS

*Nesofregatta* Mathews, 1912, Birds Australia, **2**, p. 31. Type, by original designation, *Fregatta moestissima* Salvin.

cf. Bourne, 1957, Bull. Brit. Ornith. Club, **77**, pp. 40–42 (nomenclature).

Lacan and Mougín, 1974, Oiseau, **44**, pp. 209–213 (ecology).

**NESOFREGETTA FULIGINOSA**

***Nesofregatta fuliginosa*** (Gmelin)

*Procellaria fuliginosa* Gmelin, 1789, Syst. Nat., **1**, 562; based on "Sooty Petrel" of Latham, 1785, General Synop. Birds, **3**, p. 409—Tahiti. Melanistic phase.

*Fregatta amphitrite* Jardin, 1859, Mém. Soc. Sci. Nat. Cherbourg, **6** (1858), p. 172—Marquesas Islands.

*Procellaria albigularis* Finsch, 1878, Proc. Zool. Soc. London (1877), p. 722—Kandavu, Fiji Islands.

*Fregatta moestissima* Salvin, 1879, Proc. Zool. Soc. London, p. 130—Samoa Islands. Melanistic phase.

Breeds on New Hebrides, Fiji, Phoenix, ? Samoa, Line (including Christmas), Austral (Rapa), Marquesas (Hatutu, Ua Huka, Ua Pu, Fatu Hiva), and Gambier (Manui, Motu Teiku) Islands. Range at sea poorly known; observed in the vicinity of the

breeding islands and along the South Equatorial Current toward the eastern Pacific.

GENUS **HYDROBATES** BOIE

*Hydrobates* Boie, 1822, *Isis von Oken*, col. 562. Type, by subsequent designation (Baird, Brewer, and Ridgway, 1884, *Mem. Mus. Comp. Zool.*, 13, p. 403), *Procellaria pelagica* Linnaeus.

- cf. Davis, 1957, *Brit. Birds*, 50, pp. 85-101, 371-384 (breeding).  
 Hémery, 1973, *Alauda*, 41, pp. 329-336 (breeding).  
 Cramp, Bourne, and Saunders, 1974, *Seabirds Britain Ireland*, pp. 73-76, map 6, tables 4-5 (breeding).

**HYDROBATES PELAGICUS**

**Hydrobates pelagicus** (Linnaeus)

*Procellaria pelagica* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 131—"in albo Oceano"; restricted to Sweden by reference to Linnaeus, 1746, *Fauna Svecica*, p. 93.

*Thalassidroma dubia* Mathews, 1933, *Ibis*, p. 541, as synonym of *pelagica* Linnaeus (*ex Tschudi*, 1856, *Journ. Ornith.*, p. 190, *nomen nudum*).

Breeds in the north Atlantic Ocean on Vestmann Islands off Iceland, Faeroes, Lofotens, British Isles (islands and islets off western, northern, and southeastern Ireland, western and northern Scotland—including Outer Hebrides, Orkneys, and Shetlands, Caernarvonshire, Pembrokeshire, ? Devonshire, ? Cornwall, Scilly Islands), Channel Islands, western France (Brittany and islets off Biarritz), islets off the coasts of Spain and probably Portugal, eastern Canaries (? Montaña Clara, Roque del Este), in the Mediterranean on the Costa Brava, Spain, and on islets off the coasts of Spain, Balearic Islands, France, Corsica, Elba, Sardinia, Algeria, Tunisia (Galite Islands), Italy, Lipari Islands, Sicily, Malta, ? islands in the Aegean Sea. Migrates south along the west coast of Africa to South Africa, and thence north along the coast of the Indian Ocean to near the mouth of the Zambezi River; disperses rarely to the Black Sea and the Sea of Azov; wanders to Norway (where it is said to breed or to have bred), Denmark, and Sweden. One record from North America (Sable Island, off Nova Scotia).

GENUS **HALOCYPTENA** COUES

*Halocyptena* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 78. Type, by original designation, *Halocyptena microsoma* Coues.

**HALOCYPTENA MICROSOMA****Halocyptena microsoma** Coues

*Halocyptena microsoma* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 79—San José del Caba, Baja California. Breeds on the San Benito Islands off the Pacific coast of Baja California and on northern islands in the Gulf of California. Migratory: ranges at sea along the Pacific coast to wintering area off Panama, Colombia, and Ecuador; casual interior southern California.

GENUS **OCEANODROMA** REICHENBACH

*Oceanodroma* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 4. Type, by original designation, *Procellaria furcata* Gmelin.

*Cymochorea* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 75. Type, by original designation, *Procellaria leucorhoa* Vieillot.

*Tethysia* Mathews, 1933, Bull. Brit. Ornith. Club, **53**, p. 154. Type, by original designation, *Procellaria tethys* Bonaparte.

*Loomelania* Mathews, 1934, Bull. Brit. Ornith. Club, **54**, p. 119. Type, by original designation, *Procellaria melania* Bonaparte.

*Bianchoma* Mathews, 1943, in Mathews and Hallstrom, Notes Order Procellariiformes, p. 29. Type, by original designation, *Oceanodroma melania matsudairae* Kuroda.

*Thalobata* Mathews, 1943, in Mathews and Hallstrom, Notes Order Procellariiformes, p. 27. Type, by original designation, *Thalassidroma castro* Harcourt.

cf. Grinnell and Test, 1939, Condor, **41**, pp. 170-172 (geographic variation in *furcata*).

Austin, 1952, Bull. Mus. Comp. Zool., **107**, pp. 391-407.

Allan, 1962, Ibis, **103b**, no. 2, pp. 274-295 (ecology of *castro*).

Huntington, 1963, Proc. XIII Int. Ornith. Congr., Ithaca



- (1962), pp. 701-705 (population dynamics of *leucorhoa*).  
 Bailey, Pocklington, and Willis, 1968, *Ibis*, **110**, pp. 27-34 (*Oceanodroma*, Indian Ocean).  
 Clapp and Woodward, 1968, *Proc. U. S. Nat. Mus.*, **124**, no. 3640, pp. 9-10 (*leucorhoa* and *tristrami*, Hawaiian Islands).  
 Harris, 1969, *Proc. California Acad. Sci.*, **37**, pp. 95-160 (*castro* and *tethys*, Galapagos Archipelago).  
 Wilbur, 1969, *Auk*, **86**, pp. 433-442 (breeding of *leucorhoa*).  
 Cramp, Bourne, and Saunders, 1974, *Seabirds Britain Ireland*, pp. 77-80, map 7 (breeding of *leucorhoa*).  
 Ainley, Morrell, and Lewis, 1975, *Living Bird*, **13** (1974), pp. 295-312 (*leucorhoa* and *homochroa*, Farallon Islands).

#### OCEANODROMA TETHYS

##### **Oceanodroma tethys tethys** (Bonaparte)

*Thalassidroma tethys* Bonaparte, 1852, *Tageblatt* 29. *Versammlung Deutscher Naturforscher Aerzte*, Wiesbaden, Beilage, p. 89—Galapagos Islands.

Breeds in the Galapagos Archipelago on Genovesa (Tower) Island, Isla Pitt off the eastern tip of San Cristóbal (Chatham) Island, and probably Roca Redonda north of Isabela (Albemarle) Island. Common in Galapagos waters. Probably mixes with *kelsalli* off Ecuador and Colombia.

##### **Oceanodroma tethys kelsalli** (Lowe)

*Thalassidroma tethys kelsalli* Lowe, 1925, *Bull. Brit. Ornith. Club*, **46**, p. 6—Ancón, Peru.

Endemic of the Humboldt Current, breeding on islands off the coast of Peru (Pescadores and San Gallán). Ranges through the eastern Pacific Ocean north to the waters off Mexico and Baja California and south to the waters off Chile.

#### OCEANODROMA CASTRO

##### **Oceanodroma castro** (Harcourt)

*Thalassidroma castro* Harcourt, 1851, *Sketch Madeira*, p. 123—Desertas Islets, Madeira.

*Thalassidroma jabe-jabe* Bocage, 1875, *Jorn. Sci. Math. Phys. Nat. Lisboa*, **5**, p. 120—Razo, Cape Verde Islands.

*Cymochorea cryptoleucura* Ridgway, 1882, *Proc. U. S. Nat.*

Mus., 4 (1881), p. 337—Kauai, Hawaiian Islands.

*Oceanodroma castro bangsi* Nichols, 1914, Auk, 31, p. 389—lat. 1° N., long. 93° W.

*Cymochorea castro helena* Mathews, 1934, Bull. Brit. Ornith. Club, 55, p. 23—St. Helena Island.

*Cymochorea castro kumagai* Mathews, 1938, Bull. Brit. Ornith. Club, 58, p. 63—Hide Shima, Honshu, Japan.

Breeds on Hide Shima and possibly Sangan Jima off the east coast of Japan, Kauai in the Hawaiian Archipelago, Galapagos Archipelago (Isabela = Albemarle, Genovesa = Tower, San Salvador = James, Rabida = Jervis, Santa Cruz = Indefatigable, San Cristóbal = Chatham, Santa María or Floreana = Charles, Española = Hood), Azores, Madeira, islets off Porto Santo, Desertas, Salvages, Cape Verde Islands (Santo Antão, Branco, Razo, São Nicolau, Rombos, São Tiago), Ascension, St. Helena, and ? São Tomé in the Gulf of Guinea. Pacific birds mainly found at sea in the vicinity of their breeding grounds; some records near the Phoenix Islands. Atlantic birds range along the west coast of Africa into the Gulf of Guinea; stragglers reach the eastern United States and the British Isles.

#### OCEANODROMA MONORHIS

***Oceanodroma monorhis*** (Swinhoe)

*Thalassidroma monorhis* Swinhoe, 1867, Ibis, p. 386—near Amoy, China.

Breeds on islands off northern and northeastern Honshu, northern Kyushu (Okino Shima), southern and western Korea, and Shantung, China; perhaps also in the Ryukyus south to the small islands off northeastern Taiwan. Migratory to the western equatorial region of the Indian Ocean, through the Strait of Malacca, reaching the Greater Sunda Islands, Malay Peninsula, Andaman Islands, Sri Lanka (Ceylon), the Arabian Sea as far west as the Cape Guardafui region, and north in the Red Sea to the Gulf of Aqaba. Also recorded in the Pacific Ocean north to southern Ussuriland (off Vladivostok).

#### OCEANODROMA LEUCORHOA

***Oceanodroma leucorhoa leucorhoa*** (Vieillot)

*Procellaria leucorhoa* Vieillot, 1818, Nouv. Dict. Hist. Nat., nouv. éd., 25 (1817), p. 422—maritime parts of Picardy.

Breeds on islands in the north Atlantic Ocean: Newfoundland, Nova Scotia, Maine, Massachusetts, Vestmann Islands off Iceland, Faeroes, Lofotens, and British Isles (western Ireland, St. Kilda, Eilan Mor in the Flannan Islands, Sula Sgeir, North Rona, Sule Skerry, Foula); and in the north Pacific Ocean from northern Japan (Hokkaido) through the Kurils, Commanders, and Aleutians to islands off the west coast of Alaska. Migratory: Atlantic birds winter mainly within the Tropics, but stray to Cape seas and South America. Stragglers have been recorded from the Baltic and the central Mediterranean, and occur accidentally inland in western Europe (during the autumn, sometimes in large numbers) and eastern North America to the Great Lakes. Pacific birds move south to the Tropics during the contranuptial period, especially in coastal waters. Found in the tropical central Pacific south at least to lat. 15° S., with the Galapagos region probably the main wintering area for eastern Pacific populations, extending west along the Tropical Convergence. Recorded from New Guinea, Australia, New Zealand, Kenya, and the Persian Gulf. The various subspecies not distinguishable at sea.

***Oceanodroma leucorhoa beali* Emerson**

*Oceanodroma beali* Emerson, 1906, Condor, 8, p. 54—Sitka Bay, Alaska.

*Oceanodroma* [sic] *leucorhoa willetti* van Rossem, 1942, Proc. Biol. Soc. Washington, 55, p. 10—Little Middle Island, Coronados Islands, Pacific coast of northern Baja California.

Breeds from southern Alaska (Sitka region) south on islands off the west coast of North America to the Coronados Islands off northern Baja California. Not distinguishable at sea from the other subspecies.

***Oceanodroma leucorhoa chapmani* Berlepsch**

*Oceanodroma monorhis chapmani* Berlepsch, 1906, Auk, 23, p. 185—San Benito Island.

Breeds on the San Benito Islands, off central Baja California. Not distinguishable at sea from the other subspecies.

***Oceanodroma leucorhoa socorroensis* Townsend**

*Oceanodroma socorroensis* C. H. Townsend, 1890, Proc. U. S. Nat. Mus., 13, p. 134—Socorro Island, Revillagigedo Islands.

*Oceanodroma kaedingi* Anthony, 1898, Auk, 15, p. 37—at

sea, near Guadalupe Island, Baja California.  
Breeds on Guadalupe Island, Baja California. Not distinguishable at sea from the other subspecies.

#### OCEANODROMA MACRODACTYLA

##### **Oceanodroma macrodactyla** Bryant

*Oceanodroma leucorhoa macrodactyla* W. E. Bryant, 1887,  
Bull. California Acad. Sci., 2, p. 450—Guadalupe Island,  
Baja California.

Formerly bred on Guadalupe Island, Baja California. Probably extinct.

#### OCEANODROMA MARKHAMI

##### **Oceanodroma markhami** (Salvin)

*Cymochorea markhami* Salvin, 1883, Proc. Zool. Soc. London, p. 430—coast of Peru, lat. 19° 40' S., long. 75° W.

Breeding grounds undiscovered. Common in the coastal and offshore waters of Peru and Chile (Humboldt Current) between northern Peru and lat. 33° S.; disperses into the north Pacific as far as the vicinity of Clipperton Island.

#### OCEANODROMA TRISTRAMI<sup>1</sup>

##### **Oceanodroma tristrami** Salvin

*Oceanodroma tristrami* Salvin, 1896, Cat. Birds Brit. Mus., 25, pp. 347 (in key), 354—Sendai Bay, Honshu, Japan.

*Cymochorea owstoni* Mathews and Iredale, 1915, Ibis, p. 581—Okinose, Sagami Sea, Honshu, Japan.

Breeds on the Volcano Islands (Kita Iwo Jima), the southern Izu Islands (Tori Shima), and the Leeward Hawaiian Chain (? Kure, Midway, Pearl and Hermes Reef, Laysan, French Frigate Shoals, ? Nihoa). Recorded at sea mainly in the vicinity of the breeding grounds. Probably disperses northward; reported from the Bonin Islands and the coast of Honshu.

#### OCEANODROMA MELANIA

##### **Oceanodroma melania** (Bonaparte)

*Procellaria melania* Bonaparte, 1854, Compt. Rend. Acad.

<sup>1</sup>By some regarded as a race of *O. markhami*; cf. Wagstaffe, 1972, Bull. Brit. Ornith. Club, 92, pp. 27-28.—C. J. and J.-L. M.

Sci., Paris, 38, p. 662—coast of California.

Breeds on islands off the coast of California (Sutil, Channel Islands), the Pacific coast of Baja California (Coronados and San Benito Islands), and in the northern Gulf of California (Consag Rock, San Luis Island, Partida Island). Migrates south along the west coast of America to northern Peru.

#### OCEANODROMA MATSUDAIRAE

##### **Oceanodroma matsudairae** Kuroda

*Oceanodroma melania matsudariae* [sic] Nagamichi Kuroda, 1922, Ibis, p. 311—Sagami Bay, Honshu, Japan.

Known to breed only on Kita Iwo Jima, Volcano Islands. Highly migratory, passing through the Indonesian chain to the Indian Ocean, where it is reported in the western equatorial region as far as the coast of Africa. Recorded also off northwestern Australia.

#### OCEANODROMA HOMOCHROA

##### **Oceanodroma homochroa** (Coues)

*Cymochorea homochroa* Coues, 1864, Proc. Acad. Nat. Sci. Philadelphia, p. 77—Farallon Islands, California.

Breeds Marin County, California, islands off California (Farallon, Santa Barbara) and Baja California (Coronados). Ranges north along coast of California, south to Guadalupe and San Benito Islands, Baja California.

#### OCEANODROMA HORNBYI

##### **Oceanodroma hornbyi** (Gray)

*Thalassidroma Hornbyi* G. R. Gray, 1854, Proc. Zool. Soc. London (1853), p. 62—northwest coast of America = west coast of South America, *vide* Murphy, 1936, Oceanic Birds South Amer., p. 741.

Breeds in the coastal desert mountains of northern Chile. Occurs at sea along the west coast of South America (Humboldt Current) between lat. 1° S., off Ecuador, and 32° S., off Chile.

#### OCEANODROMA FURCATA

##### **Oceanodroma furcata furcata** (Gmelin)

*Procellaria furcata* Gmelin, 1789, Syst. Nat., 1, p. 561; based on "Fork-tail Petrel" of Pennant, 1785, Arctic Zool., p.

535, and Latham, 1785, General Synop. Birds, 3, p. 410—icy seas between America and Asia.

Breeds in the Commanders (Mednyy and possibly southern Bering), northern and central Kurils (south to Simushir), probably the southeastern coast of Kamchatka from Cape Kozlov south to Cape Lopatka, and the Aleutians from Attu east to the Sanak Islands. Ranges at sea north in the Bering Sea to the Gulf of Anadyr and Bering Strait, south to Hokkaido, rarely Honshu; reported also from the Bonin, Volcano, Marcus, and Hawaiian Islands. Normal southern limit of the range seem to be lat. 35° N.

**Oceanodroma furcata plumbea** (Peale)

*Thalassidroma plumbea* Peale, 1848, U. S. Explor. Exped., 8, p. 292—coast of Oregon. Cotypes from near Cape Flattery, Washington.

Breeds on islands off the coasts of southern Alaska, Washington, Oregon, and northern California. Range at sea limited to the coast of North America south to southern California.

FAMILY PELECANOIDIDAE

GENUS PELECANOIDES LACÉPÈDE

*Pelecanoides* Lacépède, 1799, Tableaux Mammifères Oiseaux, p. 13. Type, by monotypy, *Procellaria urinatrix* Gmelin.

cf. Murphy and Harper, 1921, Bull. Amer. Mus. Nat. Hist., 44, pp. 495-554.

Mathews, 1934, Novit. Zool., 39, pp. 196-198.

Murphy, 1936, Oceanic Birds South Amer., pp. 771-792.

Falla, 1937, Brit. Austral. N. Z. Antarctic Res. Exped. Rep., ser. B, 2, pp. 214-218 (*urinator*, *georgicus*).

Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 106-110 (New World).

Bourne, 1962 ff., Observations Sea Birds, in Sea Swallow (Annual Rep. Roy. Naval Bird Watching Soc.), 15 ff.

Richdale, 1965, Trans. Zool. Soc. London, 31, pp. 1-86 (ecology of *urinator*).

Bourne, 1967, Ibis, 109, p. 159 (long-distance vagrancy).

Bourne, 1968, Bull. Brit. Ornith. Club, 88, pp. 77-85 (taxonomy).

- Thoresen, 1969, *Notornis*, **16**, pp. 241-260 (breeding behavior of *urinator*).
- Ornith. Soc. N. Z., 1970, *Annot. Checklist Birds N. Z.*, p. 30.
- Prévost and Mougín, 1971, *Guide Oiseaux Mammifères Terres Australes Antarctiques Françaises*, pp. 94-98 (*georgicus*, *urinator*).
- Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 149-152.
- Watson *et al.*, 1971, *Birds Antarctic Subantarctic*, pl. 11 (*georgicus*, *urinator*).
- Watson, 1975, *Antarctic Res. Ser. (Amer. Geophys. Union)*, no. 24, pp. 161-166 (Antarctic and Subantarctic).
- Derenne and Mougín, 1976, *Comité Nat. Français Recherches Antarctiques*, no. 40, pp. 149-175 (nesting of *georgicus*).

## PELECANOIDES GARNOTII

**Pelecanoides garnotii** (Lesson)

*Puffinuria Garnotii* Lesson, 1828, *Man. Ornith.*, **2**, p. 394—coast of Peru between San Gallán Island and Lima.

Endemic of the Humboldt Current, breeding on islands off the west coast of South America from Lobos de Tierra Island (lat. 6° 27' S.), Peru, to Mocha Island (lat. 38° S.), Chile. Sedentary: range at sea limited to the vicinity of the breeding grounds. Southernmost record Chiloé Island (lat. 42° S.), Chile.

## PELECANOIDES MAGELLANI

**Pelecanoides magellani** (Mathews)

*Puffinuria garnotii magellani* Mathews, 1912, *Birds Australia*, **2**, p. 239—Strait of Magellan.

Breeds on islands off the coast of the Fuegian region (Navarino, Deceit, Staten, etc.). Recorded on the Pacific coast of South America from Chiloé Island (lat. 42° 30' S.), Chile, south to Cape Horn; on the Atlantic coast from Puerto Deseado, Argentina, south to Cape Horn; also Falkland Islands.

## PELECANOIDES GEORGICUS

**Pelecanoides georgicus** Murphy and Harper

*Pelecanoides georgica* Murphy and Harper, 1916, *Bull. Amer.*

Mus. Nat. Hist., **35**, p. 66—Cumberland Bay, South Georgia.

Breeds on South Georgia, Marion, Crozet (Hog, Possession, East), Kerguelen, Heard, ? Macquarie, and Auckland Islands. Sedentary: range at sea limited to the vicinity of the breeding grounds. Once recorded from New South Wales.

#### PELECANOIDES URINATOR

##### **Pelecanoides urinator urinator** (Gmelin)

*Procellaria urinatrix* Gmelin, 1789, Syst. Nat., **1**, p. 560; based on "Diving Petrel" of Latham, 1785, General Synop. Birds, **3**, p. 413—Queen Charlotte Sound, South Island, New Zealand.

Breeds on islets off coasts of southeastern Australia, Tasmania, North Island and Cook Strait, New Zealand. Sedentary: ranges in coastal waters of Australia and New Zealand south to Cook Strait.

##### **Pelecanoides urinator chathamensis** Murphy and Harper

*Pelecanoides urinatrix chathamensis* Murphy and Harper, 1916, Bull. Amer. Mus. Nat. Hist., **35**, p. 65—Chatham Islands.

Breeds on Solander Island, islets off Stewart Island, Snares Islands, and Chatham Islands. Sedentary: ranges in coastal waters of New Zealand south of Cook Strait to latitude of Snares Islands.

##### **Pelecanoides urinator exsul** Salvin

*Pelecanoides exsul* Salvin, 1896, Cat. Birds Brit. Mus., **25**, pp. 437 (in key), 438—Kerguelen Island, as determined by Murphy and Harper, 1921, Bull. Amer. Mus. Nat. Hist., **44**, p. 544.

Breeds on South Georgia, Marion, ? Crozet, Kerguelen, Heard, Auckland, Antipodes Islands, and possibly on Macquarie and Campbell Islands. Subspecies circumpolar in the austral seas between lat. 35° S. and 60° S. Ranges of various populations probably limited to the vicinity of the breeding localities. Once recorded from Western Australia.

##### **Pelecanoides urinator dacunhae** Nicoll

*Pelecanoides dacunhae* Nicoll, 1906, Bull. Brit. Ornith. Club, **16**, p. 103—Tristan da Cunha.

*Pelecanoides urinatrix elizabethae* Elliott, 1954, Bull. Brit. Ornith. Club, **74**, p. 23—Gough Island, south Atlantic.



Breeds on Inaccessible, Nightingale, and Gough Islands of the Tristan da Cunha Group. Sedentary: range at sea limited to the vicinity of the breeding grounds.

***Pelecanoides urinator berard*** (Gaimard)

*Procellaria Berard* Gaimard, 1823, Bull. Général Universel Annonces Nouvelles Sci., Paris, 3, p. 53—near the Falkland Islands.

Breeds on the Falkland Islands, ranging north off the Argentine coast to the province of Buenos Aires. Birds recorded from the South Orkneys are doubtfully assigned to this subspecies.

***Pelecanoides urinator coppingeri*** Mathews

*Pelecanoides urinatrix coppingeri* Mathews, 1912, Birds Australia, 2, p. 238—Strait of Magellan. Type from Cockle Cove, Pilot Island, Trinidad Channel, Chile.

Breeding range undiscovered. Known by a handful of specimens only, from the coast and inland channels of southern Chile, between lat. 47° S. and 50° S.

ORDER SPHENISCIFORMES<sup>1</sup>

ROBERT A. FALLA AND JEAN-LOUIS MOUGIN

FAMILY SPHENISCIDAE

- cf. Murphy, 1936, Oceanic Birds South Amer., pp. 329-471.  
 Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 1-14 (New World).  
 Sladen *et al.*, 1964, in Thomson (ed.), New Dict. Birds, pp. 609-615.  
 Stonehouse, 1967, in Cragg (ed.), Advances Biol. Res., 4, pp. 131-196.  
 Ornith. Soc. N. Z., 1970, Annot. Checklist Birds N. Z., pp. 15-18.  
 Prévost and Mougin, 1971, Guide Oiseaux Mammifères Terres Australes Antarctiques Françaises, pp. 19-37.  
 Serventy, D. L. and V., and Warham, 1971, Handb. Austral. Sea-birds, pp. 45-60.  
 Watson *et al.*, 1971, Birds Antarctic Subantarctic, pls. 1-2.  
 Müller-Schwarze, D. and C., 1975, Pinguine (Neue

<sup>1</sup>MS read by F. C. Kinsky.

- Brehm-Bücherei 464), 96 pp.  
 Simpson, 1975, Ann. South Afr. Mus., **69**, pp. 59-72 (variation).  
 Stonehouse (ed.), 1975, Biol. Penguins, 565 pp.  
 Watson, 1975, Antarctic Res. Ser. (Amer. Geophys. Union), no. 24, pp. 63-80 (Antarctic and Subantarctic).  
 Simpson, 1976, Penguins, 162 pp.

GENUS **APTENODYTES** MILLER

- Aptenodytes* J. F. Miller, 1778, Icones Animalium, pt. 4, pl. 23. Type, by monotypy, *Aptenodytes patagonicus* Miller.  
 cf. Stonehouse, 1960, Falkland Islands Dependencies Surv., Sci. Rep., no. 23, 81 pp. (ecology of *patagonicus*).  
 Prévost, 1961, Écologie Manchot Empereur, 204 pp. (*forsteri*).  
 Budd, 1962, Proc. Zool. Soc. London, **139**, pp. 365-388 (population studies of *forsteri*).  
 Isenmann, 1971, Oiseau, **41**, no. spéc., pp. 9-64 (ecology of *forsteri*).  
 Jouventin, 1971, Terre Vie, **25**, pp. 510-586 (ethology of *forsteri*).  
 Conroy and White, 1973, Brit. Antarctic Surv. Bull., **32**, pp. 31-40 (breeding status of *patagonicus*).  
 Barrat, 1976, Comité Nat. Français Recherches Antarctiques, no. 40, pp. 9-52 (biology and ecology of *patagonicus*).

**APTENODYTES PATAGONICUS**

***Aptenodytes patagonicus patagonicus* Miller**

- Aptenodytes patagonica* J. F. Miller, 1778, Icones Animalium, pt. 4, pl. 23—no locality; South Georgia designated by Mathews, 1911, Birds Australia, **1**, p. 274.  
*Apterodita (longirostris)* Scopoli, 1786, Deliciae Florae Faunae Insubricae, **2**, p. 91; based on "Le Manchot de la Nouvelle Guinée" of Sonnerat, 1776, Voyage Nouvelle Guinée, p. 179, pl. 113—New Guinea; error, Tierra del Fuego, not Crozet and Kerguelen Islands as stated by Mathews, 1911, Birds Australia, **1**, p. 272 (cf. Lysaght, 1952, Oiseau, **22**, pp. 120-124).  
*Aptenodytes Pennantii* G. R. Gray, 1844, Ann. Mag. Nat. Hist., **13**, p. 315; based on "The Patagonian Pinguin" of

Pennant, 1768, Philos. Trans. Roy. Soc. London, 58, p. 91, pl. 5—Falkland Islands.

*Aptenodytes rex* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, p. 775. As synonym of *Aptenodytes pennantii* G. R. Gray.

Breeds on South Georgia. Status uncertain in the Cape Horn region. The birds breeding on the Falkland Islands are doubtfully assigned to this subspecies. Not distinguishable at sea from *halli*.

***Aptenodytes patagonicus halli* Mathews**

*Aptenodytes patagonica halli* Mathews, 1911, Birds Australia, 1, p. 272—Macquarie Island.

Breeds in the subantarctic zone of surface waters on Prince Edward, Marion, Crozet, Kerguelen, and Macquarie Islands, and south of the Antarctic Convergence on Heard Island. Movements at sea of the species poorly known; usually not noted outside the subantarctic and low-antarctic zones of surface waters. Straggles south to the South Sandwich, South Orkney, and South Shetland Islands, and to the coast of the Antarctic Continent (Adélie Land); north to South America, Gough Island, Australia (Victoria, Tasmania), Campbell Island, and New Zealand (North and South Islands); one record from South Africa.<sup>1</sup>

<sup>1</sup>*Aptenodytes patagonicus* seems to have been completely exterminated on the Falkland Islands and on Heard Island by the sealers at the end of the nineteenth or at the beginning of the twentieth century (Conroy and White, 1973, Brit. Antarctic Surv. Bull., 32, pp. 31-40). The populations now living on these islands most likely originated from the nearest islands, South Georgia for the birds of the Falkland Islands (*A. p. patagonicus*) and the Kerguelen Islands for those of Heard Island (*A. p. halli*). The situation was perhaps not the same during the last century, and Barrat (1976, Comité Nat. Français Recherches Antarctiques, no. 40, pp. 14-16, and pers. com.), founding his opinion on measurements of ancient specimens, thinks that the Cape Horn region, the Falkland Islands, and Prince Edward, Marion, Crozet, Kerguelen, and Macquarie Islands were then colonized by a subantarctic subspecies, and South Georgia and Heard Island by an antarctic subspecies. This remains to be proved, but in such a case *Apterodita longirostris* Scopoli, *Aptenodytes pennantii* G. R. Gray, and *Aptenodytes rex* Bonaparte would be unused senior synonyms of *Aptenodytes patagonica halli* Mathews.—J.-L. M.

## APTENODYTES FORSTERI

**Aptenodytes forsteri** Gray

*Aptenodytes Forsteri* G. R. Gray, 1844, Ann. Mag. Nat. Hist., 13, p. 315—no locality; antarctic seas, G. R. Gray, 1844, List Birds Brit. Mus., pt. 3, p. 156.

*Aptenodytes excelsior* Mathews and Iredale, 1935, Bull. Brit. Ornith. Club, 55, p. 101. New name for the species figured and described by Mathews, 1928, Birds Norfolk Lord Howe Islands, p. 63, pl. 30, as *Aptenodytes forsteri* G. R. Gray; collected at Cape Royds, McMurdo Bay, Antarctica.

Winter breeder at more than 30 colonies around the shores of the Antarctic Continent and adjacent islands, between lat. 66° S. and 78° S., usually on sea ice. Migratory: ranges at sea in the antarctic zone, seldom outside the limits of floating ice. Rare stragglers reported from Tierra del Fuego, South Georgia, Falkland Islands, South Orkneys, Kerguelen Island, Heard Island, and New Zealand; 3 recorded from 40° 30' S., 54° 34' W., may have been imported.

## GENUS PYGOSCELIS WAGLER

*Pygoscelis* Wagler, 1832, Isis von Oken, col. 281. Type, by monotypy, *Aptenodytes papua* Forster.

*Dasycelis* Mathews, 1934, Bull. Brit. Ornith. Club, 55, p. 74. Type, by original designation, *Aptenodytes antarctica* Forster.

*Pucheramphus* Mathews, 1935, Bull. Brit. Ornith. Club, 55, p. 113. Type, by original designation, *Catarrhactes adeliae* Hombron and Jacquinot.

cf. Bagshawe, 1938, Trans. Zool. Soc. London, 24, pp. 185-306 (ecology of *papua* and *antarctica*).

Roberts, 1940, Brit. Graham Land Exped. 1934-37, Sci. Rep., 1, pp. 195-254 (ecology of *papua*).

Sladen, 1958, Falkland Islands Dependencies Surv., Sci. Rep., no. 17, 97 pp. (ecology of *adeliae*).

Sapin-Jaloustre, 1960, Écologie Manchot Adélie, 211 pp.

Sladen, 1964, in Biologie Antarctique (1st Symp. Sci. Com. Antarctic Res.), pp. 359-365 (distribution of *adeliae* and *antarctica*).

Penney, 1968, in Austin (ed.), Antarctic Res. Ser. (Amer.

- Geophys. Union), no. 12, pp. 83-131 (behavior of *adeliae*).
- Stonehouse, 1970, *Ibis*, **112**, pp. 52-57 (geographic variation in *papua*).
- Zinderen Bakker, Jr., 1971, in Zinderen Bakker, Sr., Winterbottom, and Dyer (eds.), Marion Prince Edward Islands, pp. 251-272 (behavior of *papua*).
- Despin, 1972, *Oiseau*, **42**, no. spéc., pp. 69-83 (ecology of *papua*).
- Conroy *et al.*, 1975, *Brit. Antarctic Surv. Bull.*, no. 40, pp. 23-32 (breeding biology of *antarctica*).
- Spurr, 1975, *Ibis*, **117**, pp. 324-338 (ecology of *adeliae*).
- Derksen, 1977, *Auk*, **94**, pp. 552-566 (breeding behavior of *adeliae*).

## PYGOSCELIS PAPUA

**Pygoscelis papua papua** (Forster)

*Aptenodytes papua* J. R. Forster, 1781, *Comment. Phys. Soc. Reg. Sci. Götting.*, **3** (1780), pp. 134, 140, pl. 3—Falkland Islands.

*Aptenodytes taeniata* Peale, 1848, *U. S. Explor. Exped.*, **8**, p. 264—Macquarie Island.

*Pygosceles wagleri* P. L. Sclater, 1860, *Proc. Zool. Soc. London*, p. 390—Falkland Islands.

Breeds in the subantarctic zone of surface waters on the Falkland, Staten, Prince Edward, Marion, Crozet, Kerguelen, and Macquarie Islands, and south of the Antarctic Convergence on South Georgia and Heard Island. Movements at sea of the species poorly known; probably limited to the vicinity of the breeding grounds. Stragglers reported from Tasmania, Campbell Island, and South Island of New Zealand (Otago and Southland).

**Pygoscelis papua ellsworthi** Murphy

*Pygoscelis papua ellsworthi* Murphy, 1947, *Auk*, **64**, p. 454—Deception Island, South Shetlands.

Breeds in the antarctic zone of surface waters on the South Sandwich, South Orkney, and South Shetland Islands, and on the Antarctic Peninsula. Not distinguishable at sea from *papua*.

PYGOSCELIS ADELIAE<sup>1</sup>**Pygoscelis adeliae** (Hombron and Jacquinot)

*Catarrhactes Adeliae* Hombron and Jacquinot, 1841, Ann. Sci. Nat., Zool., Paris, sér. 2, 16, p. 320—Adélie Land.

Circumpolar. Breeds on almost all the rocky outcrops of the coasts of the Antarctic Continent, Antarctic Peninsula, and adjacent islands (Balleny, Peter I), and on the South Shetland, South Orkney, ? South Sandwich, and Bouvet Islands. Migratory: ranges at sea in the antarctic zone of surface waters, usually within the limits of floating ice, rarely straggling north beyond lat. 60° S. Reported very occasionally from the Falkland Islands, South Georgia, Kerguelen, Heard, and Macquarie Islands, New Zealand (Marlborough), and possibly Australia (2 dubious records: Western Australia and Victoria).

## PYGOSCELIS ANTARCTICA

**Pygoscelis antarctica** (Forster)

*Aptenodytes antarctica* J. R. Forster, 1781, Comment. Phys. Soc. Reg. Sci. Götting., 3 (1780), pp. 134, 141, pl. 4—South Shetlands.

Breeds on the Antarctic Peninsula, on islands adjacent to the Antarctic Continent (Balleny, Peter I), on the South Shetland, South Orkney, South Sandwich Islands, on South Georgia, and on Bouvet Island. A few birds have nested on Heard Island in the recent past, but it is unlikely that the species still breeds there. Migratory: usually observed in the cold waters of the antarctic zone, rarely farther north. Straggles south to the coasts of the Antarctic Continent (Cape Royds, Cape Crozier, Pointe Géologie Archipelago, Haswell Islands, Mawson Station, Lewis Island, Showa), and north to the Falkland, Crozet, Kerguelen, and Macquarie Islands, and to Tasmania.

## GENUS EUDYPTES VIEILLLOT

*Eudyptes* Vieillot, 1816, Analyse, pp. 67, 70. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 77), *Aptenodytes chrysocome* Forster.

*Catadyptes* Mathews, 1934, Bull. Brit. Ornith. Club, 55,

<sup>1</sup>*P. adeliae* and *antarctica* form a superspecies.—J.-L. M.

p. 74. Type, by original designation, *Catarhactes chrysolophus* Brandt.

- cf. Jouanin, 1953, Bull. Mus. Nat. Hist. Nat., Paris, sér. 2, **25**, pp. 530-532 (taxonomy of *chrysocome*).  
 Warham, 1963, Auk, **80**, pp. 229-256 (ecology of *chrysocome*).  
 Napier, 1968, Brit. Antarctic Surv. Bull., no. 16, pp. 71-72 (interbreeding of *sclateri* and *chrysocome*).  
 Warham, 1971, Notornis, **18**, pp. 91-115 (ecology of *chrysolophus schlegeli*).  
 Warham, 1972, Ardea, **60**, pp. 145-184 (ecology of *sclateri*).  
 Warham, 1972, Auk, **89**, pp. 86-105 (ecology of *chrysocome*).  
 Carins, 1974, Emu, **74**, pp. 55-57 (facial characteristics of *chrysocome*).  
 Warham, 1974, Ibis, **116**, pp. 1-27 (ecology of *pachyrhynchus*).  
 Warham, 1974, Journ. Roy. Soc. N. Z., **4**, pp. 63-108 (ecology of *robustus*).  
 Shaughnessy, 1975, Emu, **75**, pp. 147-152 (variation in facial color of *chrysolophus schlegeli*).  
 Barré *et al.*, 1976, Comité Nat. Français Recherches Antarctiques, no. 40, pp. 177-189 (variation in *chrysolophus*).

#### EUDYPTES CHRYSOCOME<sup>1</sup>

##### **Eudyptes chrysocome chrysocome** (Forster)

- Aptenodytes chrysocome* J. R. Forster, 1781, Comment. Phys. Soc. Reg. Sci. Götting., **3** (1780), pp. 133, 135—Tasmania and Falkland Islands = Falkland Islands; further restricted to Kidney Island, Berkeley Sound, East Falkland Island, by Carins, 1974, Emu, **74**, p. 56.  
*Aptenodytes crestata* J. F. Miller, 1784, Icones Animalium, pt. 9, pl. 49—Falkland Islands.  
*Chrysocoma saltator* Stephens, 1826, in Shaw, General Zool., **13**, pt. 1, p. 58, pl. 8; based chiefly on "Pingoin Sauteur"

<sup>1</sup>Replaces *E. crestatus* of Peters, 1931, Check-list Birds World, **1**, p. 31. Cf. Serventy and Whittell, 1952, Emu, **52**, pp. 63-64.—J.-L. M.

of Bougainville, 1771, Voyage Monde, p. 69—Falkland Islands.

*Eudyptes nigrivestis* Gould, 1860, Proc. Zool. Soc. London, p. 418—Falkland Islands.

*Eudyptula Serresiana* Oustalet, 1879, Ann. Sci. Nat., Zool., Paris, sér. 6, 8, art. 4, p. 1—Churruca, Tierra del Fuego.

Breeds on Tierra del Fuego and adjacent islands (Ildefonso, Diego Ramirez), and on the Falkland Islands. Subspecies not distinguishable at sea. Species circumpolar at sea, though movements poorly known; presumably largely limited to vicinity of breeding grounds. Stragglers reported from South America, South Africa, Australia, and New Zealand.

***Eudyptes chrysocome filholi* Hutton**

*Eudyptes filholi* Hutton, 1879, Proc. Linn. Soc. New South Wales, 3 (1878), p. 334—Campbell Island.

Breeds in the subantarctic and low-antarctic zones of surface waters on Prince Edward, Marion, Crozet, Kerguelen, Heard, Macquarie, Auckland, Campbell, Bounty, and Antipodes Islands.<sup>1</sup>

***Eudyptes (chrysocome) moseleyi* Mathews and Iredale<sup>2,3</sup>**

*Eudyptes serresianus moseleyi* Mathews and Iredale, 1921, Man. Birds Australia, 1, p. 11, in text—Inaccessible Island, Tristan da Cunha Group.

Breeds in the subtropical and low-subantarctic zones of surface waters on Inaccessible, Tristan da Cunha, Nightingale, and Gough Islands of the Tristan da Cunha Group, and on Amsterdam and St. Paul Islands.

<sup>1</sup>The birds of Auckland, Campbell, Bounty, and Antipodes Islands have sometimes been referred to as *moseleyi* (a name posterior to *filholi*), but careful examination shows that they are different from the birds of the subtropical and low-subantarctic islands of the Atlantic and Indian Oceans.—J.-L. M.

<sup>2</sup>*Aptenodytes catarractes* Forster, 1781, Comment. Phys. Soc. Reg. Sci. Götting., 3 (1780), pp. 135, 145—"Oceano australi ultra Tropicas, (forsan in insulis a Lusitano Tristan D'Acunha dictis)" is an unused senior synonym.—J.-L. M.

<sup>3</sup>*Aptenodytes gorfua* Bonnaterre, 1791, Tableau Encyl. Method. Trois Règnes Nature, Ornith., livr. 47, p. 68, is indeterminable.—J.-L. M.



EUDYPTES PACHYRHYNCHUS<sup>1,2</sup>**Eudyptes pachyrhynchus** Gray

*Eudyptes pachyrhynchus* G. R. Gray, 1845, in Richardson and J. E. Gray (eds.), *Zool. Voyage Erebus Terror*, 1, Birds, p. 17—Waikowaiti, South Island, New Zealand.

Breeds on South Island, New Zealand (Westland south of Waitangi-toana River, Fiordland, Southland), on Solander, Codfish, and Stewart Islands, and on some outliers. Ranges at sea north occasionally to Bay of Islands and Auckland west coast, and south to the Snares, Auckland, and Campbell Islands. Recorded from Western and South Australia, Tasmania, and the Falkland Islands.

EUDYPTES ROBUSTUS<sup>3</sup>**Eudyptes robustus** Oliver

*Eudyptes robustus* Oliver, 1953, *Emu*, 53, p. 187—Snares Islands.

Breeds on Snares Islands, south of New Zealand. Ranges at sea north to Wairarapa (North Island) and east to Antipodes Islands. Stragglers recorded from Macquarie Island, South Australia (Cape Banks), and Tasmania (Hobart).

EUDYPTES SCLATERI<sup>3</sup>**Eudyptes sclateri** Buller

<sup>1</sup>*E. pachyrhynchus*, *robustus*, and *sclateri* form a superspecies (but see Warham, 1975, in Stonehouse, ed., *Biol. Penguins*, pp. 189-269, for exclusion of *sclateri*).—J.-L. M.

<sup>2</sup>The name *Eudyptes vittata* Finsch, 1875, *Ibis*, p. 112—Dunedin, South Island, New Zealand, is based on types belonging to two species, *E. pachyrhynchus* and *E. sclateri*; cf. Hutton in Ogilvie-Grant, 1905, *Ibis*, pp. 552-553. It thus must be ruled out as indeterminate.—J.-L. M.

<sup>3</sup>The specific name *sclateri*, as published in the binomen *Eudyptes sclateri* Buller 1888, and the specific name *robustus*, as published in the binomen *Eudyptes robustus* Oliver 1953, have been placed on the Official List of Specific Names in Zoology with the Name no. 2571 and the Name No. 2572 respectively, and the specific name *atratus*, as published in the binomen *Eudyptes atratus* Finsch 1875 ex Hutton MS, has been placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 1009, by the International Commission on Zoological Nomenclature, *Opin.* 1056, 1976, *Bull. Zool. Nomencl.*, 33, pp. 16-18.—J.-L. M.

*Eudyptes sclateri* Buller, 1888, Birds N. Z., ed. 2, 2, p. 289—Auckland Islands.

Breeds on Auckland (Disappointment), Campbell, Bounty, and Antipodes Islands, south of New Zealand. Attempted breeding recorded on Otago Peninsula, South Island, New Zealand. Ranges at sea north on both coasts of New Zealand to North Cape and east to Chatham Islands. Frequent straggler to Snares and Macquarie Islands; reported from South Australia. Occasional visitor to Victoria, New South Wales, Tasmania. One straggler settled on West Point Island, Falkland Islands.

#### EUDYPTES CHRYSOLOPHUS

##### ***Eudyptes chrysolophus chrysolophus* (Brandt)**

*Catarhactes chrysolophus* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, 2, col. 315—Falkland Islands.

Breeds in the subantarctic and antarctic zones of surface waters on the Antarctic Peninsula, on the South Shetland, South Orkney, and South Sandwich Islands, on South Georgia, on the Falkland Islands, on Bouvet, Prince Edward, Marion, Crozet, Kerguelen, and Heard Islands, and perhaps on Tierra del Fuego. Ranges at sea usually between lat. 45° S. and 65° S., straggling south to the coasts of the Antarctic Continent (Cape Hallett, Mawson Station, Balleny Islands) and north to the subantarctic islands of New Zealand, South America, and Inaccessible Island, Tristan da Cunha Group; two records from South Africa.<sup>1</sup>

##### ***Eudyptes chrysolophus schlegeli* Finsch**

*Eudyptes schlegeli* Finsch, 1876, Trans. N. Z. Inst., 8, p. 204—Macquarie Island.

*Catadyptes chrysolophus redimitus* Mathews and Iredale,

<sup>1</sup>There is a problem in identifying stray birds. All the criteria available to distinguish between *chrysolophus* and *schlegeli*—face and underwing patterns, extent of the area of naked skin at the gape, lengths of flipper and culmen, etc.—are equivocal; *schlegeli* is on the average larger than *chrysolophus*, but the overlap is important, and the white-faced *chrysolophus* is exactly the same size as *schlegeli*; 35% of the females and 5% of the males of *schlegeli* have the dark face characteristic of *chrysolophus*. Even a combination of several features will not give a definite conclusion in every circumstance. Therefore it is impossible to define precisely the range at sea of *chrysolophus* and *schlegeli*.—J.-L. M.

1935, Bull. Brit. Ornith. Club, 55, p. 102—Macquarie Island.

Breeds on Macquarie Island. White-faced individuals (local mutants or stragglers from Macquarie Island), absolutely similar to true *schlegeli* of Macquarie Island, have been recorded from various breeding localities of *chrysolophus*: Marion, Crozet, Kerguelen, and Heard Islands. They nest at least in the Crozet Archipelago, breeding or interbreeding with typical *chrysolophus*. White-faced stragglers have also been recorded from the Australasian sector, where true *chrysolophus* does not breed (South Australia, Tasmania, New Zealand, and coasts of the Antarctic Continent), and accordingly are probably true *schlegeli*.

#### GENUS MEGADYPTES MILNE-EDWARDS

*Megadyptes* Milne-Edwards, 1880, Ann. Sci. Nat., Zool., Paris, sér. 6, 9, art. 9, p. 56. Type, by monotypy, *Catarrhactes antipodes* Hombron and Jacquinot.

cf. Richdale, 1957, Population Study Penguins, 201 pp. (ecology and population dynamics of *antipodes*).

#### MEGADYPTES ANTIPODES

***Megadyptes antipodes*** (Hombron and Jacquinot)

*Catarrhactes antipodes* Hombron and Jacquinot, 1841, Ann. Sci. Nat., Zool., Paris, sér. 2, 16, p. 320—Auckland Islands.

Breeds on the eastern and southern coasts of the South Island of New Zealand from Banks Peninsula south, and on Stewart, Auckland, and Campbell Islands. Sedentary: observed at sea in the vicinity of the breeding grounds, straggling north to Cook Strait.

#### GENUS EUDYPTULA BONAPARTE

*Eudyptula* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, p. 775. Type, by monotypy, *Aptenodytes minor* Forster.

cf. Hartert, 1928, Novit. Zool., 34, pp. 229-230 (*iredalei*).

O'Brien, 1940, Rec. Canterbury Mus., 4, pp. 311-324 (ecology of *albosignata*).

Richdale, 1940, Emu, 40, pp. 180-217 (ecology of *minor*).

Warham, 1958, Ibis, 100, pp. 605-616 (ecology of *novae-hollandiae*).

Kinsky, 1960, Rec. Dominion Mus., Wellington, 3, pp. 145-218 (ecology of *variabilis*).

Kinsky and Falla, 1976, Nat. Mus. N. Z. Rec., 1, pp. 105-126 (subspecies of *minor*).

#### EUDYPTULA MINOR

##### **Eudyptula minor novaehollandiae** (Stephens)

*Spheniscus Novae Hollandiae* Stephens, 1826, in Shaw, General Zool., 13, pt. 1, p. 68—Port Jackson, New South Wales.

*Aptenodytes australis* J. E. Gray, 1829, in Cuvier, Animal Kingdom (ed. Griffith), 8, p. 563—Sydney, New South Wales.

*Aptenodytes undina* Gould, 1844, Proc. Zool. Soc. London, p. 57—Tasmania.

Breeds on the coasts and islands of southern Australia from the Fremantle area in the west to north of Port Stephens, New South Wales, in the east; Tasmania.

##### **Eudyptula minor iredalei** Mathews

*Eudyptula minor iredalei* Mathews, 1911, Birds Australia, 1, p. 286, pl. 67—Chatham Islands; error, Motuora Island, Hauraki Gulf, North Island, New Zealand, *vide* Kinsky and Falla, 1976, Nat. Mus. N. Z. Rec., 1, p. 119.

Breeds on the coasts and islands of North Island, New Zealand, from North Cape south to Kawhia and east to East Cape.

##### **Eudyptula minor variabilis** Kinsky and Falla

*Eudyptula minor variabilis* Kinsky and Falla, 1976, Nat. Mus. N. Z. Rec., 1, p. 116—Mahina Bay, Wellington Harbour, New Zealand.

Breeds on North Island, New Zealand, south from Cape Egmont and Hawke Bay, and on the coasts and islands of South Island from Karamea on the west through Cook Strait and south to Motunau Island.

##### **Eudyptula minor albosignata** Finsch

*Eudyptula albosignata* Finsch, 1874, Proc. Zool. Soc. London, p. 207—Akaroa, South Island, New Zealand.

Breeds on South Island, New Zealand, on Banks Peninsula and possibly the coast of North Canterbury north to Motunau Island.

##### **Eudyptula minor minor** (Forster)

*Aptenodytes minor* J. R. Forster, 1781, Comment. Phys. Soc.

Reg. Sci. Götting., **3** (1780), pp. 135, 147—Dusky Sound, South Island, New Zealand.

Breeds on the coasts of South Island, New Zealand, from about Karamea on the west and Oamaru on the east south to Foveaux Strait, and on Stewart Island and outlying islands.

**Eudyptula minor chathamensis** Kinsky and Falla

*Eudyptula minor chathamensis* Kinsky and Falla, 1976, Nat.

Mus. N. Z. Rec., **1**, p. 115—Star Keys, Chatham Islands.

Breeds on the Chatham Islands (Chatham, Mangere, Pitt, South East, and Star Keys).

GENUS **SPHENISCUS** BRISSON

*Spheniscus* Brisson, 1760, Ornith., **1**, p. 52; **6**, p. 96. Type, by monotypy, *Diomedea demersa* Linnaeus.

cf. Rand, 1960, South Afr. Dept. Commerce Industry, Div. Fish, Invest. Rep. 41, 28 pp. (distribution, abundance, and feeding habits of *demersus*).

Lévêque, 1963, Terre Vie, **17**, pp. 397-430 (ecology of *mendiculus*).

Korschenewski, 1969, Hornero, **11**, pp. 20-26 (*magellanicus*).

Siegfried *et al.*, 1975, Zoologica Africana, **10**, pp. 87-100 (social behavior at sea of *demersus*).

Frost, Siegfried, and Burger, 1976, Journ. Zool., London, **179**, pp. 165-187 (behavioral adaptations of *demersus*).

Frost, Siegfried, and Cooper, 1976, Biol. Conserv., **9**, pp. 79-99 (*demersus*).

Boersma, 1977, Living Bird, **15** (1976), pp. 43-93 (ecology and behavior of *mendiculus*).

**SPHENISCUS DEMERSUS**<sup>1</sup>

**Spheniscus demersus** (Linnaeus)

*Diomedea demersa* Linnaeus, 1758, Syst. Nat., ed. 10, p.

132; based on "The Black-Footed Penguins" of Edwards,

1747, Nat. Hist. Birds, p. 94, pl. 94—Cape of Good Hope.

Breeds on islands off the southern and southwestern coasts of southern Africa, as far north as Walvis Bay. Rather sedentary: confined at sea to south African coastal waters,

<sup>1</sup>*S. demersus*, *humboldti*, and *magellanicus* form a superspecies.—J.-L. M.

mainly in the region served by the Benguela Current. Seldom occurs more than 50 kilometers from the breeding islands and more than 15 kilometers from the mainland. Stragglers observed as far north as Angola on the west coast and Mozambique on the east coast.

#### SPHENISCUS HUMBOLDTI

##### **Spheniscus humboldti** Meyen

*Spheniscus Humboldti* Meyen, 1834, Nova Acta Acad. Caes. Leopold.-Carol. Nat. Curiosorum, Halle, 16, Suppl., p. 110, pl. 21—Peru.

Breeds on islets off the Pacific coast of South America from Lambayeque, Peru (lat. 6° 30' S.), south to Santiago del Norte, Chile (lat. 34° S.). Range at sea confined to the coastline served by the Humboldt Current, as far south as Valdivia, Chile (lat. 40° S.).

#### SPHENISCUS MAGELLANICUS

##### **Spheniscus magellanicus** (Forster)

*Aptenodytes magellanicus* J. R. Forster, 1781, Comment. Phys. Soc. Reg. Sci. Götting., 3 (1780), pp. 134, 143, pl. 5—Strait of Magellan.

Breeds in South America on the Pacific coast from Aconcagua, Chile (lat. 32° 35' S.) and on the Atlantic coast from Punta Clara, Argentina (lat. 43° 57' S.) south to Tierra del Fuego and Cape Horn; Juan Fernández and Falkland Islands. Ranges at sea north, on the Pacific coast, to Coquimbo, Chile, and, on the Atlantic coast, to Uruguay and Brazil (Rio de Janeiro and accidentally Espírito Santo and Bahia). Stragglers observed in South Georgia and at Hawke Bay, east coast of North Island, New Zealand; specimen from Phillip Island, Victoria, Australia.

#### SPHENISCUS MENDICULUS

##### **Spheniscus mendiculus** Sundevall

*Spheniscus mendiculus* Sundevall, 1871, Proc. Zool. Soc. London, pp. 126, 129—Galapagos Islands.

Breeds on Fernandina (Narborough) and Isabela (Albemarle) Islands in the Galapagos Archipelago. Sedentary: observed at sea in the vicinity of the breeding grounds. One straggler captured on the Pacific coast of Panama.

## ORDER GAVIIFORMES

ROBERT W. STORER

FAMILY GAVIIDAE<sup>1</sup>GENUS GAVIA FORSTER<sup>2</sup>

*Gavia* J. R. Forster, 1788, Enchiridion Hist. Nat., p. 38.

Type, by subsequent designation (J. A. Allen, 1908, Bull. Amer. Mus. Nat. Hist., 24, p. 35), *Colymbus imber* Gunnerus = *Colymbus immer* Brünnich, and by plenary powers (International Commission on Zoological Nomenclature, 1956, Opin. Decl. Rend., 13, p. 3), *Colymbus immer* Brünnich.

cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 14-18.

Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, 2, pp. 241-260 (English trans., 1968, Birds Soviet Union, 2, pp. 282-304).

Gier, 1952, Auk, 69, pp. 40-49 (air sacs of *immer*).

Olson and Marshall, 1952, Occas. Papers, Mus. Nat. Hist., Univ. Minnesota, no. 5, 83 pp. (biology of *immer*).

Wilcox, 1952, Amer. Midland Nat., 48, pp. 513-573 (pelvic musculature of *immer*).

<sup>1</sup>The family-group name Gaviidae Coues, 1903, Key North Amer. Birds, p. 1047 (type genus *Gavia* J. R. Forster, 1788, Enchiridion Hist. Nat., p. 38) has been placed on the Official List of Family-Group Names in Zoology with the Name No. 191, and the family-group names Colymbidae Shaw 1824 (type genus *Colymbus* Linnaeus 1758, incorrectly determined as the genus typified by *Colymbus immer* Brünnich 1764) and Colymbidae Coues 1903 (type genus correctly determined as the genus typified by *Colymbus cristatus* Linnaeus 1758) have been placed on the Official Index of Rejected and Invalid Names in Zoology with the Name No. 216 and the Name No. 217 respectively by the International Commission on Zoological Nomenclature, 1957, Opin. Decl. Rend., 13, pp. 293-294. The earlier establishment of the family-group name Gaviidae by J. A. Allen, 1897, Auk, 14, p. 312, was evidently not brought to the attention of the Commission.—R. W. S.

<sup>2</sup>The generic name *Gavia* Forster 1788 has been placed on the Official List of Generic Names in Zoology with the Name No. 992 by the International Commission on Zoological Nomenclature, Opin. 401, 1956, Opin. Decl. Rend., 13, p. 3.—R. W. S.

- Rand, 1954, *Canadian Field-Nat.*, **68**, pp. 13-15 (downy young).
- Storer, 1956, *Condor*, **58**, pp. 413-426 (ancestry).
- Palmer (ed.), 1962, *Handb. North Amer. Birds*, **1**, pp. 20-61.
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 3-8.
- Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 59-91.
- Tyler, 1969, *Journ. Zool., London*, **158**, pp. 395-412 (egg-shell structure).
- Lehtonen, 1970, *Ann. Zool. Fenn.*, **7**, pp. 25-60 (biology of *arctica*).
- Sjölander and Ågren, 1972, *Wilson Bull.*, **84**, pp. 296-308 (behavior of *immer*).
- Binford and Remsen, 1974, *Western Birds*, **5**, pp. 111-126 (*adamsii*).
- Burn and Mather, 1974, *Brit. Birds*, **67**, pp. 257-296 (*adamsii*).
- Dunker, 1975, *Norwegian Journ. Zool.*, **23**, pp. 149-164 (behavior of *arctica*).
- Remsen and Binford, 1975, *Western Birds*, **6**, pp. 7-20 (*adamsii*).
- Rummell and Goetzinger, 1975, *Auk*, **92**, pp. 333-346 (aggression in *immer*).
- Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 42-65.
- Sjölander and Ågren, 1977, *Condor*, **78** (1976), pp. 454-463 (reproductive behavior of *adamsii*).
- Storer, 1978, *Breviora*, no. 448, 8 pp. (systematics).

#### GAVIA STELLATA

##### **Gavia stellata** (Pontoppidan)

*Colymbus Stellatus* Pontoppidan, 1763, *Danske Atlas*, **1**, p. 621; based on "*Colymbus maximus stellatus*" of Willughby, 1676, *Ornith.*, pl. 62—Tame River, Warwickshire, England, ex Willughby (cf. Laubmann, 1922, *Verh. Ornith. Gesell. Bayern*, **15**, p. 211).

*Colymbus stellatus squamata* Portenko, 1939, *Trudy Nauch.-Issl. Inst. Poliarn. Zemled., Zhivotn. Promysl. Khoz. Ser. Promysl. Khoz. (Leningrad)*, **6**, p. 155—Aagad Island = Ogord Island, lat. 80° 2' N., long. 56° 32' E., Franz Josef Land.

Circumpolar, breeding from Spitsbergen, Franz Josef Land,



New Siberian Islands, Wrangel Island, Prince Patrick Island, northern Ellesmere Island, northern Greenland, and the northern coasts of Eurasia and North America south to Scotland, southern Sweden and Finland, Latvia, to approximately lat. 60° N. in Russia, northern Lake Baykal, Sakhalin, the Kurils and Aleutians, to approximately lat. 52° N. on coastal British Columbia, northern Yukon, southern Mackenzie, northwestern Saskatchewan, James Bay, the north shore of the Gulf of St. Lawrence, Anticosti Island, and perhaps Newfoundland. Has bred in northern Ireland, Vancouver Island, and on the north shore of Lake Superior. Winters largely along coasts south to Portugal, southeastern China, northern Baja California, and Florida (rarely to Morocco, the Mediterranean, Black and Caspian Seas, the coast of Baluchistan, Taiwan, and the lower Great Lakes).

#### GAVIA ARCTICA<sup>1</sup>

##### **Gavia arctica pacifica**<sup>2</sup> (Lawrence)

*Colymbus pacificus* Lawrence, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, p. 889—San Diego, California, and Puget Sound; restricted to San Diego by Grinnell, 1932, Univ. California Publ. Zool., 38, p. 260.

Breeds in arctic eastern Siberia from about the lower Indigirka River east to the Chukchi Peninsula and south to the Anadyr basin; in North America from St. Lawrence Island and Alaska east to Banks, Prince of Wales, and central Baffin Islands and the west coast of the Ungava Peninsula, south to the Alaska Peninsula, southern Mackenzie, northern Alberta, northern Manitoba, and northwestern Ontario. Winters mainly along the Pacific coast of North America from southeastern Alaska to southern Baja California and southern Sonora; less frequently along the coasts of Japan. Rare or accidental inland, in Greenland, and on the Atlantic coast south to New York. (A specimen of this species, but not identifiable to race, was taken in southern Florida.)

<sup>1</sup>The specific name *arcticus*, as published in the binomen *Colymbus arcticus* Linnaeus 1758, has been placed on the Official List of Specific Names in Zoology with the Name No. 1380 by the International Commission on Zoological Nomenclature, 1957, Opin. Decl. Rend., 13, p. 295.—R. W. S.

<sup>2</sup>Sometimes considered a full species.—R. W. S.

**Gavia arctica arctica** (Linnaeus)

*Colymbus arcticus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 135—Europe and North America; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 52.

*Urinator arcticus suschkini* Sarudny, 1912, Messenger Ornith., Moscow, 3, p. 111—Russian Turkistan.

Breeds from northern Scandinavia, about lat. 75° N. in Novaya Zemlya and the Taymyr Peninsula, and the arctic coast of Siberia east to about the Lena River, south to northern Scotland, northern Pomerania, about lat. 54° N. on the Volga, and about lat. 49° N. in western Mongolia. Intergrades with *viridigularis* from about the Lena River and Lake Baykal east. Winters mainly on the north and west coasts of the Black Sea, and in smaller numbers in the southern North and Baltic Seas, along the Atlantic coast to Portugal, and in the Mediterranean, Caspian, and Aral Seas.

**Gavia arctica viridigularis** Dwight

*Gavia viridigularis* Dwight, 1918, Auk, 35, p. 198—Gichega, northeastern Siberia.

Breeds in Siberia east of the range of *arctica* (but not in the Arctic east of about the Indigirka River) and south to Transbaicalia, the lower Amur Valley, northern Sakhalin, and Kamchatka; also in the Cape Prince of Wales region of western Alaska. Sympatric with *pacifica* in Alaska and in the Anadyr region. Winters in the Kurils, Japan, Manchuria, Ussuriland, and probably Korea and northern China. Scattered records from Nome, Alaska, to British Columbia. Reports from East Prussia and the Netherlands may be of intergrades between this race and *arctica*.

**GAVIA IMMER**<sup>1,2</sup>**Gavia immer** (Brünnich)

*Colymbus Immer* Brünnich, 1764, Ornith. Borealis, p. 38—Faeroes.

<sup>1</sup>*G. immer* and *adamsii* form a superspecies.—R. W. S.

<sup>2</sup>The specific name *immer*, as published in the binomen *Colymbus immer* Brünnich 1764, has been placed on the Official List of Specific Names in Zoology with the Name No. 700 by the International Commission on Zoological Nomenclature, Opin. 401, 1956, Opin. Decl. Rend., 13, p. 4.—R. W. S.

*Gavia immer elasson* Bishop, 1921, Auk, 38, p. 367—  
Carpenter Lake, Rolette County, North Dakota.

Breeds from the western Aleutians and Nunivak Island east across North America to Greenland (both coasts), Iceland, and Bear Island, north to the Brooks Range, northwestern Mackenzie, Baffin Island, and Thule and Scoresby Sound, south, at least formerly, to northeastern California, northwestern Montana, North Dakota, northern Iowa, northern Illinois, and northern Pennsylvania to Connecticut. Recorded in summer in Jan Mayen, Spitsbergen, the Faeroes, and northern Scotland. Nonbreeding birds found in summer on salt water south to California and the Gulf of Mexico. Winters on the Pacific coast from the Aleutians south to Baja California and Sonora, on the Great Lakes, and on the Atlantic coast from Newfoundland to southern Florida and the Gulf coast to southern Texas; in small numbers in the North Sea and the eastern Atlantic south to western Morocco. Rare or accidental in the Commander Islands, Cuba, Azores, Madeira, western Mediterranean, Baltic, and Black Seas.

#### GAVIA ADAMSII

##### *Gavia adamsii* (Gray)

*Colymbus adamsii* G. R. Gray, 1859, Proc. Zool. Soc. London, p. 167—Russian America. Type from Alaska.

Breeds from extreme northwestern Russia (Pechenga River), Kolguyev Island, and Novaya Zemlya east across the arctic slope of Siberia and North America to the Melville Peninsula and south to approximately lat. 67° 30' N. in western Siberia (on the lower Kolyma River), at least casually to the north shore of the Sea of Okhotsk (near Magadan), on St. Lawrence Island, to Cape Prince of Wales in western Alaska, and Great Slave and Yathkyed Lakes in Canada. (The extent of the discontinuities in the breeding range requires further documentation.) Winters along the coast of Norway (rarely Sweden), eastern Asia from Kamchatka to northern Hondo, and western North America from southern Alaska to British Columbia (casually to northern Baja California). Has wandered to Colorado, New York, southern Greenland, Italy, Korea, and the New Siberian Islands.

ORDER **PODICIPEDIFORMES**<sup>1</sup>

ROBERT W. STORER

FAMILY **PODICIPEDIDAE**<sup>2</sup>

- cf. Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, pp. 18-40 (New World).
- Dementiev *et al.*, 1951, *Ptitsy Sovetskogo Soiuza*, **2**, pp. 261-286 (English trans., 1968, *Birds Soviet Union*, **2**, pp. 305-334).
- Palmer (ed.), 1962, *Handb. North Amer. Birds*, **1**, pp. 62-113.
- Simmons, 1962, *Bull. Brit. Ornith. Club*, **82**, pp. 109-116 (revision).
- Benson and Irwin, 1963, *Ardea*, **51**, pp. 213-215 (distribution, African forms).
- Storer, 1963, *Proc. XIII Int. Ornith. Congr., Ithaca (1962)*, pp. 562-569 (phylogeny).
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 9-17.
- Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 92-163.
- Storer, 1967, *Condor*, **69**, pp. 469-478 (pattern of downy young).
- Storer, Siegfried, and Kinahan, 1976, *Living Bird*, **14** (1975), pp. 45-57 (sunbathing).
- Blake, 1977, *Man. Neotropical Birds*, **1**, pp. 81-92.
- Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 65-112.

<sup>1</sup>MS read by K. C. Parkes, R. B. Payne, K. E. L. Simmons, and D. W. Snow (African forms).

<sup>2</sup>The family-group name Podicipedidae, derived from Podicepinae of Bonaparte, 1831, *Saggio Distrib. Metod. Animali Vertebrati*, p. 62, has been placed on the Official List of Family-Group Names in Zoology with the Name No. 469, and the family-group name Podicipitidae, likewise derived from Podicepinae of Bonaparte, 1831, *Saggio*, p. 62, has been placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology with the Name No. 462 by the International Commission on Zoological Nomenclature, *Opin.* 981, 1972, *Bull. Zool. Nomencl.*, **29**, pp. 15-18.—R. W. S.

GENUS **ROLLANDIA** BONAPARTE

*Rollandia* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 42, p. 775. Type, by virtual monotypy, *Rollandia leucotis* Bonaparte = *Podiceps rolland* Quoy and Gaimard.

*Centropelma* P. L. Sclater and Salvin, 1869, Exotic Ornith., pt. 12, p. 189. Type, by monotypy, *Podiceps micropterus* Gould.

cf. Storer, 1967, Hornero, 10, pp. 339–350 (behavior of *rolland*).

**ROLLANDIA ROLLAND****Rollandia rolland morrisoni** (Simmons)

*Podiceps chilensis morrisoni* Simmons, 1962, Bull. Brit. Ornith. Club, 82, p. 93—Lake Junín, Peru.

Highlands of Peru, from Junín south, and Bolivia. Specimens from southern Peru and Bolivia approach *chilensis* in size but are nearer to this form.

**Rollandia rolland chilensis** (Lesson)

*Podiceps Chilensis* Lesson, 1828, Man. Ornith., 2, p. 358—Concepción Bay, Chile.

*Podiceps speciosus* Lynch Arribálzaga, 1877,<sup>1</sup> La Ley (Buenos Aires), 2 July, p. 1 (reprinted 1926, Bull. U. S. Nat. Mus., no. 133, p. 44)—Isla de Baradero, Buenos Aires, Argentina. Lowlands of South America south from northern Peru (Lambayeque)<sup>2</sup> on the Pacific slope and from Paraguay and southern Brazil on the Atlantic slope.

**Rollandia rolland rolland** (Quoy and Gaimard)

*Podiceps Rolland* Quoy and Gaimard, 1824, in Freycinet, Voyage Uranie Physicienne, Zool., livr. 4, p. 133—Falkland Islands.

Falkland Islands.

<sup>1</sup>For reasons for considering this a synonym of *chilensis* rather than a form of *dominicus* see Storer, 1975, Bull. Brit. Ornith. Club, 95, pp. 148–151.—R. W. S.

<sup>2</sup>The specimen from Eten, referred by Chubb, 1919, Ibis, p. 256, to "*Podiceps brachyrhynchus*," is an example of this form.—R. W. S.

## ROLLANDIA MICROPTERA

**Rollandia microptera** (Gould)

*Podiceps micropterus* Gould, 1868, Proc. Zool. Soc. London, p. 220—Lake Titicaca.

Lakes Umayo, Titicaca, and Poopó in the Titicaca basin of southern Peru and northern Bolivia.

## GENUS TACHYBAPTUS REICHENBACH

*Tachybaptus* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 3. Type by monotypy, *Colymbus minor* Gmelin = *Colymbus ruficollis* Pallas.

*Limnodytes* Oberholser, 1974, Bird Life Texas, p. 970. Type, by original designation, *Colymbus dominicus* Linnaeus.

cf. Rand, 1936, Bull. Amer. Mus. Nat. Hist., **72**, pp. 314-316 (Madagascar).

Mayr, 1943, Emu, **43**, pp. 3-7 (races of *novaehollandiae*).

Wetmore, 1943, Proc. U. S. Nat. Mus., **93**, pp. 230-232 (races of *dominicus*).

Mayr, 1945, Amer. Mus. Novit., no. 1294, pp. 1-2 (races of *ruficollis*).

Mayr, 1945, Emu, **44**, pp. 231-233 (pattern of downy young).

Voous and Payne, 1965, Ardea, **53**, pp. 9-31 (Madagascar).

Bandorf, 1968, Vogelwelt, Beihefte, Heft 1, pp. 7-61 (behavior of *ruficollis*).

Storer, 1975, Bull. Brit. Ornith. Club, **95**, pp. 148-151 (nomenclature and status of *dominicus*, Argentina).

Storer, 1976, Trans. San Diego Soc. Nat. Hist., **18**, pp. 113-126 (behavior and relationships of *dominicus*).

TACHYBAPTUS NOVAEHOLLANDIAE<sup>1</sup>**Tachybaptus novaehollandiae novaehollandiae** (Stephens)

*Podiceps novae Hollandiae* Stephens, 1826, in Shaw, General Zool., **13**, pt. 1, p. 18—New South Wales.

Lakes in the Snow Mountains, New Guinea, lowlands of southern New Guinea, Australia, and Tasmania. One record

<sup>1</sup>*T. novaehollandiae*, *ruficollis*, and *rufolavatus* form a superspecies.—R. W. S.

from the Moluccas (Ternate). Vagrants, presumably of this subspecies, recorded from Admiralty Islands and New Zealand.

**Tachybaptus novaehollandiae leucosternos** (Mayr)

*Colymbus ruficollis leucosternos* Mayr, 1931, Amer. Mus. Novit., no. 486, p. 2—Dolphin Island, New Hebrides.

New Hebrides: reported from Santa María (Gaua), Dolphin (Dauphin), Espiritu Santo, and Oba (Aoba) Islands; New Caledonia.

**Tachybaptus novaehollandiae rennellianus** (Mayr)

*Colymbus ruficollis longirostris* Mayr, 1931, Amer. Mus. Novit., no. 486, p. 2—Rennell Island.

*Podiceps novaehollandiae rennellianus* Mayr, 1943, Emu, 43, p. 6. New name for *Colymbus ruficollis longirostris*, Mayr, 1931, preoccupied by *Colymbus longirostris* Bonnatte, 1791, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 47, p. 54.

Known only from Rennell Island, Solomon Islands.

**Tachybaptus novaehollandiae javanicus** (Mayr)

*Podiceps novaehollandiae javanicus* Mayr, 1943, Emu, 43, p. 6—Rakukak, Java; altitude 4,000 feet.

Java.

**Tachybaptus novaehollandiae timorensis** (Mayr)

*Podiceps novaehollandiae timorensis* Mayr, 1943, Emu, 43, p. 7—Supul, Timor.

Timor.

**Tachybaptus novaehollandiae fumosus** (Mayr)

*Podiceps novaehollandiae fumosus* Mayr, 1943, Emu, 43, p. 6—Kabruang, Talaud Islands.

Great Sangi Island, Talaud Islands.

**Tachybaptus novaehollandiae incola** (Mayr)

*Podiceps novaehollandiae incola* Mayr, 1943, Emu, 43, p. 5—Ifar, Sentani Lake, northern New Guinea.

Northern New Guinea (Sentani Lake, Sepik River, Bulolo).

TACHYBAPTUS RUFICOLLIS

**Tachybaptus ruficollis ruficollis** (Pallas)

*Colymbus ruficollis* Pallas, 1764, in Vroeg, Cat. Raisonné Coll. Oiseaux, Adumbr., p. 6—Holland.

British Isles, southern Sweden, Lithuania, and western and southern Russia, south to the Mediterranean and northern

Africa, east to Turkey and Palestine. Retreats from northern parts of breeding range in winter. Occasional north to Norway and Finland. Casual in the Faeroes, Azores, Madeira, and Canaries.

**Tachybaptus ruficollis iraquensis** (Ticehurst)

*Podiceps ruficollis iraquensis* Ticehurst, 1923, Bull. Brit. Ornith. Club, 44, p. 28—Iskandariyeh, Euphrates, Iraq.

Marshes of Iraq and southwestern Iran. Birds from Palestine approach this form but are nearest the nominate race.

**Tachybaptus ruficollis capensis** (Salvadori)

*Podiceps capensis* Salvadori, 1884, Ann. Mus. Civ. Genova, 21, p. 252—Rugghe and Lake Cialalakà, Shoa, Ethiopia.

In Asia from the Caucasus, southern Aral Sea, and Lake Balkhash south through Iran (except southwestern part) and India to Sri Lanka (Ceylon) and east to Burma, where it intergrades with *poggei*; in Africa south of the Sahara generally, and north through Ethiopia to the Nile Valley; Madagascar and the Comoro Islands.

**Tachybaptus ruficollis poggei** (Reichenow)

*Colymbus nigricans poggei* Reichenow, 1902, Journ. Ornith., 50, p. 125—Province of Chihli, China.

*Podiceps ruficollis japonicus* Hartert, 1920, Vögel Pal. Fauna, p. 1455—Tokyo, Japan.

*Podiceps ruficollis kunikyonis* Nagamichi Kuroda, 1927, Ibis, p. 722—Minami-Daitojima, Borodino Islands, Okinawa group, middle Ryukyu Islands.

Eastern Asia from central and eastern Manchuria, southwestern Ussuriland, and the southern Kurils through central and eastern China to Indochina, Hainan, and the Malay Peninsula, and through Japan to the Ryukyus and Taiwan, where it intergrades with *philippensis*.

**Tachybaptus ruficollis philippensis** (Bonnaterre)

*Colymbus Philippensis* Bonnaterre, 1791, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 47, p. 58—fresh waters of the Philippines; restricted to Luzon by Rand, 1948, Fieldiana, Zool., 31, p. 202.

Northern Philippine islands of Calayan and Luzon; intermediates between *philippensis* and *cotabato* are found from Mindoro to Negros and Bohol.

**Tachybaptus ruficollis cotabato** (Rand)

*Podiceps ruficollis cotabato* Rand, 1948, Fieldiana, Zool.,



31, p. 201—Liguasan Marsh, near sea level, Cotabato Province, Mindanao Island, Philippine Islands.

Island of Mindanao.

**Tachybaptus ruficollis tricolor** (Gray)

*Podiceps (Sylbeocyclus) tricolor* G. R. Gray, 1861, Proc. Zool. Soc. London (1860), p. 366—Ternate.

Celebes, Moluccas, and northern New Guinea; casual or rare Borneo.

**Tachybaptus ruficollis vulcanorum** (Rensch)

*Podiceps ruficollis vulcanorum* Rensch, 1929, Journ. Ornith., 77, Ergänzungsband 2 (Festschr. Ernst Hartert), p. 205, note—Crater Lake Segare Anak, Lombok; altitude 2,000 meters.

Java, Bali, Lombok, Sumba, Flores, Timor, and the Kai Islands.

**Tachybaptus ruficollis collaris** (Mayr)

*Podiceps ruficollis collaris* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 1—Bougainville Island.

Bougainville Island in the Solomons, New Ireland, New Britain, and the Huon Peninsula of New Guinea, where intermediates with *tricolor* are found.

TACHYBAPTUS RUFOLAVATUS

**Tachybaptus rufolavatus** (Delacour)

*Podiceps rufolavatus* Delacour, 1932, Oiseau, 2, p. 6—Lake Alaotra.

Confined to Lake Alaotra, Madagascar.<sup>1</sup>

TACHYBAPTUS PELZELNII

**Tachybaptus pelzelanii** (Hartlaub)

*Podiceps pelzelanii* Hartlaub, 1861, Ornith. Madagascar, p. 83—Madagascar.

Madagascar.

TACHYBAPTUS DOMINICUS

**Tachybaptus dominicus dominicus** (Linnaeus)

*Colymbus dominicus* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 223; based on "La Grebe de riviere de S. Domingue"

<sup>1</sup>This form may be in the process of being "swamped" by hybridization with the more recently arrived *T. ruficollis capensis*.—R. W. S.

of Brisson, 1760, *Ornith.*, **6**, p. 64, pl. 5, fig. 2—Dominica = Santo Domingo.

Bahama Islands from Eleuthera and Andros to Inagua, Greater Antilles, Virgin Islands, and Cozumel Island.

**Tachybaptus dominicus brachypterus** (Chapman)

*Colymbus dominicus brachypterus* Chapman, 1899, *Bull.*

*Amer. Mus. Nat. Hist.*, **12**, p. 256—Lomita (Ranch), Texas.

Southern Texas and Sinaloa south to Panama.

**Tachybaptus dominicus bangsi** (van Rossem and Hachisuka)

*Colymbus dominicus bangsi* van Rossem and Hachisuka,

1937, *Trans. San Diego Soc. Nat. Hist.*, **8**, p. 323—Santiago,

Baja California, Mexico.

Southern Baja California. Scattered records from southern California and southern Arizona to southern Sonora probably represent this form.

**Tachybaptus dominicus brachyrhynchus** (Chapman)

*Colymbus dominicus brachyrhynchus* Chapman, 1899, *Bull.*

*Amer. Mus. Nat. Hist.*, **12**, p. 255—Chapada, Mato Grosso,

Brazil.

Tropical South America south to Peru, Bolivia, northern Argentina, Paraguay, and southern Brazil. Rare south of lat. 30° S. Early records from central and southern Argentina probably erroneous.<sup>1</sup>

GENUS **PODILYMBUS** LESSON

*Podilymbus* Lesson, 1831, *Traité Ornith.*, livr. 8, p. 595.

Type, by monotypy, *Podiceps carolinensis* Latham = *Colymbus podiceps* Linnaeus.

cf. Glover, 1953, *Wilson Bull.*, **65**, pp. 32-39 (ecology of *podiceps*).

Zusi and Storer, 1969, *Misc. Publ. Mus. Zool., Univ.*

Michigan, no. 139, 49 pp. (head and neck anatomy).

LaBastille, 1974, *Wildlife Monogr.*, **37**, 66 pp. (*gigas*).

**PODILYMBUS PODICEPS**<sup>2</sup>

**Podilymbus podiceps antillarum** Bangs

*Podilymbus podiceps antillarum* Bangs, 1913, *Proc. New*

<sup>1</sup>For *Podiceps speciosus* Lynch Arribázaga 1877 see *Rollandia rolland chilensis*.—R. W. S.

<sup>2</sup>*P. podiceps* and *gigas* form a superspecies.—R. W. S.

England Zool. Club, 4, p. 89—Bueycito, Oriente, Cuba. Resident on suitable bodies of fresh water throughout the West Indies. The resident populations on the Bahamas may be referable to the nominate race.

**Podilymbus podiceps podiceps** (Linnaeus)

*Colymbus Podiceps* Linnaeus, 1758, Syst. Nat., ed. 10, p. 136; based on "The Pied-Bill Dopchick" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 91, pl. 91—Carolina; restricted to South Carolina by Amer. Ornith. Union, 1931, Checklist North Amer. Birds, ed. 4, p. 5.

Breeds from Vancouver Island, central British Columbia, southern Mackenzie, northern Saskatchewan, northern Manitoba, central Ontario, southwestern Quebec, southern New Brunswick, Prince Edward Island, and Nova Scotia south locally through continental North America to western Panama (Bocas del Toro). Winters in the southern part of the breeding range and casually as far north as there is open fresh water; also in the West Indies (Bahamas, Cuba, Virgin Islands). Casual in southern Alaska, southern Baffin Island, northern Labrador, Newfoundland, and Bermuda. Accidental in Great Britain and Azores.

**Podilymbus podiceps antarcticus** (Lesson)

*Podiceps antarcticus* Lesson, 1842, Rev. Zool., Paris, 5, p. 209—Valparaíso, Chile.

Largely resident, from Panama (eastern Panama Province) and the Canal Zone south through South America to approximately lat. 43° S. (Chiloé Island; Chubut), from sea level to (rarely) 3,500 meters elevation; Trinidad and Tobago. Accidental Grenada.

PODILYMBUS GIGAS

**Podilymbus gigas** Griscom

*Podilymbus gigas* Griscom, 1929, Amer. Mus. Novit., no. 379, p. 5—Panajachel, north shore of Lake Atitlán, Guatemala; altitude 5,300 feet.

Confined to Lake Atitlán, Guatemala.

GENUS **POLIOCEPHALUS** SELBY

*Poliocephalus* Selby, 1840, Cat. Gen. Sub-gen. Types Class Aves, p. 47. Type, by monotypy and tautonymy, *Podiceps poliocephalus* Jardine and Selby.

cf. Storer, 1971, *Notornis*, **18**, pp. 175-186 (behavior of *rufopectus*).

**POLIOCEPHALUS POLIOCEPHALUS<sup>1</sup>**

***Poliiocephalus poliocephalus*** (Jardine and Selby)

*Podiceps poliocephalus* Jardine and Selby, 1827, *Illus. Ornith.*, pt. 1, pl. 13 and text—New South Wales.

*Podiceps poliocephalus cloatesi* Mathews, 1912, *Novit. Zool.*, **18**, p. 197—Pt. Cloates, midwestern Australia.

Australia and Tasmania. Casual New Zealand (Snares and South Island, where it has bred).

**POLIOCEPHALUS RUFOPECTUS**

***Poliiocephalus rufopectus*** Gray

*Podiceps (Poliiocephalus) rufopectus* G. R. Gray, 1843, in Dieffenbach, *Travels N. Z.*, **2**, p. 198—North Island, New Zealand.

New Zealand (now very rare South Island).

**GENUS *PODICEPS* LATHAM<sup>2</sup>**

*Podiceps* Latham, 1787, *General Synop. Birds, Suppl.*, p. 294. Type, by subsequent designation (G. R. Gray, 1840, *List Gen. Birds*, p. 76) and under plenary powers of the International Commission on Zoological Nomenclature, 1956, *Opin. Decl. Rend.*, **13**, p. 4, *Colymbus cristatus* Linnaeus.

cf. Parkes, 1952, *Condor*, **54**, pp. 314-315 (variation in *auritus*).

Wetmore and Parkes, 1954, *Journ. Washington Acad. Sci.*, **44**, pp. 126-127 (*major*).

Simmons, 1955, *Avic. Mag.*, **61**, pp. 3-13, 93-102, 131-146, 181-201, 235-253, 294-316 (behavior of *cristatus*).

Bams, 1956, *Proc. K. Nederlandse Akad. Wetensch.*, Am-

<sup>1</sup>*P. poliocephalus* and *rufopectus* form a superspecies.—R. W. S.

<sup>2</sup>The generic name *Podiceps* Latham 1787 has been placed on the Official List of Generic Names in Zoology with the Name No. 993 by the International Commission on Zoological Nomenclature, *Opin.* 401, 1956, *Opin. Decl. Rend.*, **13**, p. 4.—R. W. S.

- sterdam, ser. C, **59**, pp. 82-101, 248-262 (jaw muscles of *cristatus*).
- McAllister, 1958, *Auk*, **75**, pp. 290-311 (behavior of *nigricollis*).
- Storer, 1963, *Condor*, **65**, pp. 279-288 (behavior of *major*).
- Wobus, 1964, *Rothalstaucher* (Neue Brehm-Bücherei 330) 103 pp. (*grisegena*).
- Storer, 1969, *Condor*, **71**, pp. 180-205 (behavior of *auritus*).
- Fjeldså, 1973, *Ornis Scand.*, **4**, pp. 55-86 (distribution and geographic variation of *auritus*).
- Fjeldså, 1973, *Sterna*, **12**, pp. 161-217 (behavior of *auritus*).
- Fjeldså, 1973, *Vidensk. Meddelelser Dansk Naturhist. Forening, Copenhagen*, **136**, pp. 57-95, 117-189 (ecology of *auritus*).
- Melde, 1973, *Haubentaucher* (Neue Brehm-Bücherei 461), 126 pp. (*cristatus*).
- Prinzinger, 1974, *Anzeiger Ornith. Gesell. Bayern*, **13**, pp. 1-34 (behavior of *nigricollis*).
- Simmons, 1974, *Brit. Birds*, **67**, pp. 413-437 (breeding adaptations of *cristatus*).
- Simmons, 1975, *Bristol Ornithologist*, **8**, pp. 89-107 (courtship of *cristatus*).

#### PODICEPS MAJOR<sup>1</sup>

##### **Podiceps major** (Boddaert)

*Colymbus major* Boddaert, 1783, *Table Planches Enlum.*, p. 24; based on "Grebe de Cayenne" of Daubenton, 1765-81, *Planches Enlum.*, pl. 404, fig. 1—Cayenne; error.

South America south from the coast of northern Peru, Paraguay, and extreme southern Brazil (Rio Grande do Sul).  
Accidental Falkland Islands.

#### PODICEPS AURITUS

##### **Podiceps auritus auritus** (Linnaeus)

*Colymbus auritus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 135—Europe and America; restricted to Vaasa, Finland, by Fjeldså, 1973, *Ornis Scand.*, **4**, p. 74.

*Podiceps arcticus* Boie, 1822 (before May), *Tagebuch Reise*

<sup>1</sup> Probably represents a distinct subgenus.—R. W. S.

Norwegen, pp. 308, 350—Nord-Herøy, Norway, *vide* Fjeldså, 1973, *Ornis Scand.*, 4, p. 74.

Breeds from Iceland, the Faeroes, and northern Scotland east to Kamchatka; in Europe from northern Norway and central Finland south to about lat. 55° N.; in Asia from about 62° N. in the west, 59° in the valley of the Yenisey, 65° in the valley of the Lena, 61° along the north shore of the Sea of Okhotsk, and 65° in the valley of the Anadyr south to about 50° in the west, 44° in the region of Lake Balkhash, and 50° from thence east. Winters from open parts of the breeding range south to the Iberian Peninsula, the Black, Caspian, and Aral Seas, and southeastern Iran, and in the east to China (Fukien), Korea, and Japan. Casual in Greenland, Azores, and Mediterranean. Eastern populations may be intermediate between this subspecies and *cornutus*.

**Podiceps auritus cornutus** (Gmelin)

*Colymbus cornutus* Gmelin, 1789, *Syst. Nat.*, 1, p. 591; based on "the Eared Dobchick" of Edwards, 1747, *Nat. Hist. Birds*, p. 96, pl. 96, left fig., and "Horned Grebe" of Latham, 1785, *General Synop. Birds*, 3, p. 287, pl. 91, and Pennant, 1785, *Arctic Zool.*, p. 497—"in America septentrionali"; restricted to Hudson Bay by Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, 13, pt. 1, no. 2, p. 30.

Breeds from central Alaska, northern Yukon, northern Mackenzie, and northern Manitoba south to eastern Washington, northeastern Idaho, northern South Dakota, and central Minnesota. Formerly or sporadically south to the northern parts of Nevada, Utah, Nebraska, Iowa, and Indiana and east to the Gulf of St. Lawrence and Maine. Winters along the Pacific coast from the Aleutians to southern California, along the Atlantic and Gulf coasts from Nova Scotia to southern Texas, and sporadically on the Great Lakes and fresh waters to the south. Casual in the Gulf of California, Greenland, and Bermuda.

**PODICEPS GRISEGENA**

**Podiceps grisegena grisegena** (Boddaert)

*Colymbus grisegena* Boddaert, 1783, *Table Planches Enlum.*, p. 55; based on "Le Jougris" of Daubenton, 1765-81, *Planches Enlum.*, pl. 931—no locality; France designated by Hartert *et al.*, 1912, *Hand-list Brit. Birds*, p. 157.

Breeds from the Netherlands, Denmark, Finland, and northern Russia (to lat. 67° N.), then sharply southeastward to the Kama basin (Ufa), thence northeast to 61° N. in lower Tobol and east to Lake Chany, south to northern Austria, Rumania, Asia Minor, the Caucasus, and locally to eastern France, the northern shore of the Aral Sea, and Semirechia. In winter south to the Mediterranean, northern Iran, and Semipalatinsk. Rare or accidental in Greenland, Spitsbergen, and northern Africa.

**Podiceps grisegena holboellii** Reinhardt

*Podiceps Holbölli* Reinhardt, 1854, Vidensk. Meddelelser Naturhist. Forening Kjöbenhavn (1853), p. 76—Nenortalik, Julianehaab district, Greenland.

In eastern Asia from approximately long. 115° E. east to the Anadyr basin, and from approximately lat. 69° 30' N. in the Kolyma basin south to Amurland, Manchuria, Ussuriland, and Hokkaido. In western North America from north-central Alaska and Yukon, central Mackenzie, northwestern Alberta, central Manitoba, and southwestern Ontario south to the Aleutians, central Washington, north-central Montana, northern and eastern South Dakota, and south-central Minnesota, sporadically to southwestern Oregon, northern Michigan, southern Quebec, and New Hampshire. In winter south on the coast of eastern Asia to Korea, Kyushu, and Fukien, on the Pacific coast of North America from the Pribilofs and Aleutians to southern California, and on the Atlantic coast of North America from the Bay of Fundy to Florida. Casual St. Lawrence Island, Southampton Island, James Bay, Louisiana, the Bahamas, southern Greenland, Iceland, and western Europe.

**PODICEPS CRISTATUS<sup>1</sup>**

**Podiceps cristatus cristatus** (Linnaeus)

*Colymbus cristatus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 135—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 53.

<sup>1</sup>The specific name *cristatus*, as published in the binomen *Colymbus cristatus* Linnaeus 1758, has been placed on the Official List of Specific Names in Zoology with the Name No. 699 by the International Commission on Zoological Nomenclature, Opin. 401, 1956, Opin. Decl. Rend., 13, p. 4.—R. W. S.

Breeds from lat. 66° N. in Sweden and Finland, 60° N. in Russia, 57° N. in western Siberia, and locally east of long. 85° E. to southern Ussuriland, south to northern Africa (northern Morocco, Algeria, Tunisia, Nile delta), northern Turkey, northern Iran, and the Himalayan region to Kansu. Northern populations migratory, moving to southern parts of breeding range and south to southern Iran, northern India, eastern China (south to Hong Kong), and Japan. Casual Taiwan. Occasional records from Senegal probably represent migrant individuals of this race.

**Podiceps cristatus infuscatus** Salvadori

*Podiceps infuscatus* Salvadori, 1884, Ann. Mus. Civ. Genova, 21, p. 251—Lake Kilole, Ethiopia.

Discontinuously distributed in highland lakes from southern Ethiopia to near the Zambia-Tanzania border and in southern Africa south from Transvaal. Status in western Africa uncertain (one breeding record from Gabon).

**Podiceps cristatus australis** Gould

*Podiceps Australis* Gould, 1844, Proc. Zool. Soc. London, p. 135—"Australia and Van Diemen's Land." Type from New Zealand, *vide* Mathews, 1911, Birds Australia, 1, pp. 268-269.

*Podiceps cristatus christiani* Mathews, 1911, Birds Australia, 1, p. 267, pl. 26—Victoria.

Eastern, southeastern, and extreme southwestern Australia, Tasmania; casual in the interior. New Zealand, where now largely confined to South Island.

**PODICEPS NIGRICOLLIS**<sup>1,2</sup>

**Podiceps nigricollis nigricollis** Brehm

*Podiceps nigricollis* C. L. Brehm, 1831, Handb. Naturge-

<sup>1</sup> The specific name *nigricollis*, as published in the binomen *Podiceps nigricollis* Brehm 1831, has been placed on the Official List of Specific Names in Zoology with the Name No. 706, and the specific name *caspicus*, as published in the binomen *Colymbus caspicus* Hablitzl 1783, has been placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 272, by the International Commission on Zoological Nomenclature, Opin. 406, 1956, Opin. Decl. Rend., 13, p. 121.—R. W. S.

<sup>2</sup> *P. nigricollis*, *occipitalis*, and *taczanowskii* form a superspecies.—R. W. S.



schichte Vögel Deutschlands, p. 963—Germany.

Breeds from Britain, Denmark, southern Sweden, and the USSR to approximately lat. 56° N. (valley of the Ob), south to northern Morocco, Algeria, Tunisia, Iraq, and eastern Iran; also in central and eastern Manchuria and southern Ussuriland and eastern Africa from Ethiopia to northern Tanzania. In winter south to the Mediterranean basin, Nile Valley, and Iran east across northern India to Nepal; also from southern Korea and eastern China south to Kwangtung and Japan south to the Ryukyu and Bonin Islands. Casual north to Norway, Finland, the Kola Peninsula; also in Azores, Madeira, Canaries.

**Podiceps nigricollis gurneyi** (Roberts)

*Proctopus nigricollis gurneyi* Roberts, 1919, Ann. Transvaal Mus., 6, p. 118—Lambert's Bay, South Africa.

South Africa from Transvaal to Cape Province; occasional as an off-season visitor north to Angola and Mozambique, especially on the coast.

**Podiceps nigricollis californicus** Heermann

*Podiceps Californicus* Heermann, 1854, Proc. Acad. Nat. Sci. Philadelphia, 7, p. 179—California.

Breeds from south-central British Columbia, central Alberta, south-central Saskatchewan, and southern Manitoba south to northern Baja California, Jalisco, and Puebla. Winters in the southern part of the breeding range and along the Pacific coast from southern British Columbia to Guatemala, and casually east to the Atlantic and Gulf coasts.

**Podiceps nigricollis andinus** (Meyer de Schauensee)

*Colymbus caspicus andinus* Meyer de Schauensee, 1959, Proc. Acad. Nat. Sci. Philadelphia, 111, p. 55—Lake Tota, Boyacá, Colombia; altitude 3,015 meters.

Temperate zone lakes of the Eastern Andes in Boyacá and Cundinamarca, Colombia. Now very rare, and perhaps confined to Lake Tota.

PODICEPS OCCIPITALIS

**Podiceps occipitalis juninensis** Berlepsch and Stolzmann

*P. [odiceps] calliparaeus juninensis* Berlepsch and Stolzmann, 1894, Ibis, p. 112—Lake Junín, Peru.

Andean lakes from southwestern Colombia (southern Cauca, Nariño) to northern Chile (Antofagasta) and northwestern Argentina (Jujuy, Salta); 2,500 to 5,000 meters.

**Podiceps occipitalis occipitalis** Garnot

*Podiceps occipitalis* Garnot, 1826, Ann. Sci. Nat., Paris, 7, p. 50—Falkland Islands.

Temperate zone of southern South America, from north-central Chile (Atacama) and Argentina (San Juan, Santa Fe) south to Tierra del Fuego; Falkland Islands. Sea level to 2,800 meters. Migratory in southern part of range.

**PODICEPS TACZANOWSKII**

**Podiceps taczanowskii** Berlepsch and Stolzmann

*Podiceps taczanowskii* Berlepsch and Stolzmann, 1894, Ibis, p. 109, pl. 4—Lake Junín, Peru.

Known only from Lake Junín, Junín, Peru.

**PODICEPS GALLARDOI**

**Podiceps gallardoi** Rumboll

*Podiceps gallardoi* Rumboll, 1974, Comunicaciones Mus. Argentino Cien. Nat., Buenos Aires, Zool., 4, p. 33—Laguna Las Escarchadas, 50 kilometers east and a little south of Calafate, Santa Cruz, Argentina.

Known only from the type locality. Presumably also breeds on other small lakes in southern Patagonia and winters on salt water.

**GENUS AECHMOPHORUS COUES**

*Aechmophorus* Coues, 1862, Proc. Acad. Nat. Sci. Philadelphia, p. 229. Type, by original designation, *Podiceps occidentalis* Lawrence.

cf. Lawrence, 1950, Condor, 52, pp. 3–16 (feeding activity).  
Deignan, 1961, Bull. U. S. Nat. Mus., no. 221, pp. 7–8 (types).

Dickerman, 1963, Condor, 65, pp. 66–67 (status, Mexico).  
Dickerman, 1973, Condor, 75, pp. 131–132 (Mexico).

**AECHMOPHORUS OCCIDENTALIS**

**Aechmophorus occidentalis occidentalis** (Lawrence)

*Podiceps occidentalis* Lawrence, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, p. 894—Fort Steilacoom, Washington.

Breeds from central British Columbia, north-central Alberta, and south-central Manitoba south to southern California, southwestern Colorado, and southwestern Minnesota. Winters along the Pacific coast of North America from central British Columbia to southern Baja California and on open fresh water in the southern parts of the breeding range. Casual east to the Atlantic and Gulf coasts. Subspecific status of birds wintering on the west coast of Mexico from Sonora to Jalisco remains to be determined.

**Aechmophorus occidentalis clarkii** (Lawrence)

*Podiceps clarkii* Lawrence, 1858, in Baird Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, p. 895—California and New [*sic*] Mexico; restricted to Laguna Santa María, Chihuahua, Mexico, by Dickerman, 1963, Condor, 65, p. 66.

Lakes of the Mexican Plateau from northern Chihuahua to northern Guerrero (Laguna de Tuxpan), and to near sea level in Nayarit. Presumably resident. The population reported breeding on Caballo Lake (or Reservoir), New Mexico, may belong to this subspecies.

ORDER **PELECANIFORMES**<sup>1</sup>

JEAN DORST AND JEAN-LOUIS MOUGIN

cf. van Tets, 1965, Ornith. Monogr. (Amer. Ornith. Union), no. 2, 88 pp.

SUBORDER **PHAETHONTES**

FAMILY **PHAETHONTIDAE**

GENUS **PHAETHON** LINNAEUS

*Phaëthon* Linnaeus, 1758, Syst. Nat., ed. 10, p. 134. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 80), *Phaethon aethereus* Linnaeus.

*Phaëton* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 219 (emendation).

<sup>1</sup>MS read by D. Amadon, E. Eisenmann, R. A. Falla, R. C. Murphy, J. B. Nelson (Sulidae), D. L. Serventy, D. W. Snow (African forms), and G. F. van Tets.

- cf. Murphy, 1936, *Oceanic Birds South Amer.*, pp. 796-807.  
 Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, pp. 110-115 (New World).  
 Gibson-Hill, 1952, *Journ. Bombay Nat. Hist. Soc.*, **49**, pp. 67-80 (Indian Ocean and adjacent areas).  
 Palmer (ed.), 1962, *Handb. North Amer. Birds*, **1**, pp. 255-264 (*aethereus*, *lepturus*).  
 Stonehouse, 1962, *Ibis*, **103b**, pp. 124-161 (breeding of *aethereus* and *lepturus*, Ascension Island).  
 Snow, 1965, *Condor*, **67**, pp. 210-214 (breeding of *aethereus*, Galapagos Archipelago).  
 Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 158-161.  
 Fleet, 1974, *Ornith. Monogr. (Amer. Ornith. Union)*, no. 16, 70 pp. (*rubricauda*, Kure Atoll).  
 Gould, King, and Sanger, 1974, in King (ed.), *Smithsonian Contrib. Zool.*, no. 158, pp. 206-231 (pelagic distribution of *rubricauda*, Pacific Ocean).  
 Diamond, 1975, *Auk*, **92**, pp. 16-39 (biology of *rubricauda* and *lepturus*, Aldabra Atoll).  
 Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 178-183 (*aethereus*).

#### PHAETHON AETHEREUS

##### **Phaethon aethereus mesonauta** Peters

*Phaëthon aethereus mesonauta* Peters, 1930, *Occas. Papers Boston Soc. Nat. Hist.*, **5**, p. 261—Swan Key (= Cay), Almirante Bay, Panama.

*Phaëthon aethereus limatus* Peters, 1930, *Occas. Papers Boston Soc. Nat. Hist.*, **5**, p. 261—Tower Island, Galapagos Archipelago.

Breeds in the eastern Pacific Ocean on islands in the Gulf of California, Tres Mariás Islands and Revillagigedo Islands off Mexico, Malpelo Island off Colombia, La Plata Island off Ecuador, Galapagos Archipelago, and San Lorenzo Island off Peru; in the Caribbean on the coast of Panama (Swan Cay), Culebra Island off Puerto Rico, locally in the Lesser Antilles (Virgin Islands, St. Martin, Saba, Antigua, Montserrat, Saintes, Martinique, St. Vincent, Grenadines), islets off Tobago (Little Tobago, St. Giles), and islands off Venezuela (Los Hermanos, Los Roques); in the Atlantic Ocean on the Cape

Verde Islands and islets off Senegal (Madeleine Islands). Ranges along the Pacific coast of America from Washington to Chile, to the central and western Pacific, through the Caribbean, and casually or rarely through the eastern Atlantic north to Madeira and east to Gabon. Accidental interior southwestern United States.

**Phaethon aethereus aethereus** Linnaeus

*Phaëthon aethereus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 134—Ascension Island.

Breeds in the south Atlantic Ocean on Ascension Island, St. Helena, and Fernando de Noronha.

**Phaethon aethereus indicus** Hume

*Phaeton* [sic] *indicus* Hume, 1876, Stray Feathers, 4, pp. 481-483—Makran Coast, Pakistan.

Breeds Dahlak Archipelago, small islands in the Strait of Bab el Mandeb, Mait Island off northern Somalia, islands near Cape Guardafui and Socotra, probably other islands in the Red Sea and Persian Gulf. Ranges to the coast of western India, Sri Lanka (Ceylon), Laccadive Islands, Madagascar, and the Malay Peninsula.

PHAETHON RUBRICAUDA

**Phaethon rubricauda rubricauda** Boddaert

*Phaeton* [sic] *rubricauda* Boddaert, 1783, Table Planches Enlum., p. 57; based on "Paille-en queue de l'Isle de France" of Daubenton, Planches Enlum., pl. 979—Mauritius.

Breeds in the western Indian Ocean on Aldabra, Cosmoledo, Gloriosas, Agalega Islands, and Mauritius (Round, Serpent Islands).

**Phaethon rubricauda westralis** Mathews

*Phaethon rubricauda westralis* Mathews, 1912, Austral Avian Rec., 1, p. 88—Western Australia. Type from Houtman Abrolhos.

Breeds in the Indian Ocean on Cocos-Keeling and Christmas Islands and on islands off Western Australia; possibly on the Chagos Archipelago.

**Phaethon rubricauda roseotincta** (Mathews)

*Phaëthon rubricauda erubescens* Rothschild, 1900, Avifauna Laysan, pt. 3, p. 296—Kermadec Islands.

*Scaephaethon rubricauda roseotincta* Mathews, 1926, Bull.

Brit. Ornith. Club, 46, p. 60. New name for *Phaëthon rubricauda erubescens* Rothschild, 1900, preoccupied by *Phaeton erubescens* G. R. Gray, 1844, List Specimens Birds Brit. Mus., pt. 3, p. 182, in synonymy of *Phaeton phoenicuros* Gmelin, 1789, Syst. Nat., 1, p. 583.

Breeds in the southwestern Pacific Ocean on Raine, Herald, Coringa, Lord Howe, Norfolk, and Kermadec Islands.

**Phaethon rubricauda melanorhynchos** Gmelin

*Phaëton* [sic] *melanorhynchos* Gmelin, 1789, Syst. Nat., 1, p. 582; based on "Black-billed Tropic Bird" of Latham, 1785, General Synop. Birds, 3, p. 619—Turtle and Palmerston Islands.

*Scaephaethon rubricauda rothschildi* Mathews, 1915, Birds Australia, 4, p. 303—Laysan and Niuhau, Leeward Hawaiian Chain.

Breeds in the Pacific Ocean on the Bonin, Volcano, Mariana, Wake, Marshall, ? Gilbert, New Hebrides, New Caledonia, Fiji, Hawaiian, Phoenix, Samoa, Tonga, Line, Cook, Society, Austral, Marquesas, Tuamotu, Gambier, Oeno, Pitcairn, Henderson, Ducie, Easter, and probably Sala-y-Gómez Islands. Ranges from Japan and Taiwan to Clipperton Island and Revillagigedo Islands.

PHAETHON LEPTURUS

**Phaethon lepturus lepturus** Daudin

*Phaëton* [sic] *lepturus* Daudin, 1802, in Buffon, Hist. Nat. (ed. Didot), Quadr., 14, p. 319—Mauritius.

Breeds in the Indian Ocean on Madagascar (Diégo Suarez), Comoro, Seychelles, Réunion, Mauritius, Rodrigues, and Maldivé Islands, Chagos Archipelago, and Cocos-Keeling Islands.

**Phaethon lepturus fulvus** Brandt

*Phaëthon fulvus* Brandt, 1838, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg, 4, col. 98; 1840, Mém. Acad. Imp. Sci. St.-Petersbourg, sér. 6, 5, pt. 2, Sci. Nat., 3, p. 269—no locality.

Breeds Christmas Island, Indian Ocean.

**Phaethon lepturus dorotheae** Mathews

*Phaethon lepturus dorotheae* Mathews, 1913, Austral Avian Rec., 2, p. 7—Queensland.

Breeds in the Pacific Ocean on the Palau, Mariana, Wake,

Caroline, Marshall, ? Gilbert, Ellice, New Caledonia, Fiji, Hawaiian, Phoenix, Samoa, Tonga, Line, Cook, Society, Austral, Marquesas, and Gambier Islands. Ranges west to Japan and the Philippines, east to Easter Island.

**Phaethon lepturus catesbyi** Brandt

*Phaëthon Catesbyi* Brandt, 1838, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, 4, col. 98; 1840, Mém. Acad. Imp. Sci. St.-Pétersbourg, sér. 6, 5, pt. 2, Sci. Nat., 3, p. 270; based on "The Tropic Bird" of Catesby, 1747, Nat. Hist. Carolina, App., p. 14, pl. 14—locality restricted to Bermuda Islands by Mathews, 1915, Auk, 32, p. 196.

*Phaëton* [sic] *americanus* Ogilvie-Grant, 1898, Bull. Brit. Ornith. Club, 7, p. 24—east and southeast coasts of North America, from Bermuda to the West Indies.

Breeds Bermuda, Bahamas, Cuba, Jamaica, Hispaniola, Puerto Rico, St. Thomas, Barbuda, Dominica, St. Lucia, and St. Vincent. Ranges Caribbean Sea; casual off southeastern United States and Brazil.

**Phaethon lepturus ascensionis** (Mathews)

*Leptophaëthon lepturus ascensionis* Mathews, 1915, Birds Australia, 4, p. 311—Ascension Island.

Breeds in the Atlantic Ocean on Fernando de Noronha, Ascension Island, Annobón, Ilha das Cabres off São Tomé, and probably some islets near Fernando Po, Gulf of Guinea.

SUBORDER **PELECANI**

FAMILY **FREGATIDAE**

GENUS **FREGATA** LACÉPÈDE

*Fregata* Lacépède, 1799, Tableaux Mammifères Oiseaux, p. 15. Type, by subsequent designation (Daudin, 1802, in Buffon, Hist. Nat. (ed. Didot), Quadr., 14, p. 317), *Pelecanus aquila* Linnaeus.

*Aquilus* Mathews, 1920, Birds Australia, Suppl., pt. 1, p. 64, as synonym of *Fregata*; ex Bronn, 1824, Angewandte Naturgeschichte Physiologie, p. 159; *nomen nudum*, based on "Fregatt-vögel."

- cf. Murphy, 1936, Oceanic Birds South Amer., pp. 919-940.  
 Murphy, 1939, Nat. Hist., 44, pp. 132-143.  
 Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist.,

- Zool. Ser., 13, pt. 1, no. 2, pp. 160-166 (New World).  
 Eisenmann, 1962, in Palmer (ed.), Handb. North Amer. Birds, 1, pp. 365-380.  
 Stonehouse, B. and S., 1963, Ibis, 103b, pp. 409-422 (*aquila*, Ascension Island).  
 Sibley, F. C., and Clapp, 1967, Ibis, 110, pp. 328-337 (distribution of *ariel*).  
 Serventy, D. L. and V., and Warham, 1971, Handb. Austral. Sea-birds, pp. 153-157.  
 Diamond, 1973, Condor, 75, pp. 200-209 (breeding and behavior of *magnificens*).  
 Schnell, 1974, Auk, 91, pp. 564-570 (*magnificens*).  
 Diamond, 1975, Ibis, 117, pp. 302-323 (*minor* and *ariel*, Aldabra).  
 Nelson, 1976, Living Bird, 14 (1975), pp. 113-155 (comparative review of breeding biology).  
 Cramp and Simmons (eds.), 1977, Birds Western Palearctic, 1, pp. 239-244 (*magnificens*).

#### FREGATA MAGNIFICENS

##### **Fregata magnificens** Mathews

*Fregata minor magnificens* Mathews, 1914, Austral Avian Rec., 2, p. 120—Barrington, Indefatigable, and Albemarle Islands, Galapagos Archipelago. Type from Barrington Island.

*Fregata minor rothschildi* Mathews, 1915, Birds Australia, 4, p. 280—Aruba, Dutch West Indies.

*Fregata magnificens lowei* Bannerman, 1927, Bull. Brit. Ornith. Club, 48, p. 12—Boa Vista, Cape Verde Islands.

Breeds in the Atlantic Ocean, chiefly on coastal islets, in the Cape Verde Islands, Fernando de Noronha, Bahamas, Cuba, Isle of Pines, Mexico, Belize (British Honduras), Swan and Cayman Islands, Jamaica, Hispaniola, Monito Island off Puerto Rico, Virgin Islands, Barbuda, ? Guadeloupe, Grenadines, ? Bonaire, Venezuela, Tobago, and Brazil (to São Paulo); in the eastern Pacific Ocean on islands off Mexico, Honduras, Panama, Colombia, Ecuador, and in the Galapagos Archipelago. Ranges along the western African coast, the eastern American coast from Newfoundland to Mexico and the Caribbean, the western American coast from Washington to northern Peru; casual interior North America and Argentina; accidental



far at sea and in Europe (Great Britain, Netherlands, Denmark).

#### FREGATA AQUILA

##### **Fregata aquila** (Linnaeus)

*Pelecanus Aquilus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 133; based on "The Frigate Bird" of Albin, 1738, Nat. Hist. Birds, 3, p. 75, pl. 80—Ascension Island.

Breeds in the south Atlantic Ocean on Ascension Island; vagrant to the western African coast.

#### FREGATA MINOR

##### **Fregata minor aldabrensis** Mathews

*Fregata minor aldabrensis* Mathews, 1914, Austral Avian Rec., 2, p. 199—Aldabra Island.

Breeds in the western Indian Ocean on Aldabra, Cosmoledo, Europa, ? Agalega, ? Tromelin Islands, and Cargados Carajos Shoals; formerly Gloriosas Islands. Ranges western Indian Ocean.

##### **Fregata minor minor** (Gmelin)

*Pelecanus minor* Gmelin, 1789, Syst. Nat., 1, p. 572; based on "Lesser Frigate" of Latham, 1785, General Synop. Birds, 3, p. 590—no locality; fixed as eastern half of Indian Ocean by Rothschild, 1915, Novit. Zool., 22, p. 145, and further restricted to Christmas Island by Lowe, 1924, Novit. Zool., 31, p. 306.

Breeds in the Indian Ocean in the Chagos Archipelago and on Cocos-Keeling and Christmas Islands; also Paracel Islands, South China Sea. Ranges eastern Indian Ocean and south-western Pacific Ocean.

##### **Fregata minor palmerstoni** (Gmelin)

*Pelecanus Palmerstoni* Gmelin, 1789, Syst. Nat., 1, p. 573; based on "Palmerston Frigate Pelican" of Latham, 1785, General Synop. Birds, 3, p. 592—Palmerston Island, Pacific Ocean.

*Fregata minor peninsulae* Mathews, 1923, Bull. Brit. Ornith. Club, 44, p. 15—North Queensland.

Breeds in the Pacific Ocean on islands in the Coral Sea, ? New Caledonia, Caroline, Wake, Marshall, ? Gilbert,

Hawaiian, Phoenix, Line (including Christmas), Society, Marquesas, Tuamotu, ? Gambier, Pitcairn, Henderson, Easter (formerly), and Sala-y-Gómez Islands. Ranges Pacific Ocean from Celebes, Australia, and the Marianas east through the Hawaiian Islands and Polynesia.

**Fregata minor ridgwayi** Mathews

*Fregata minor ridgwayi* Mathews, 1914, Austral Avian Rec., 2, p. 120—Culpepper and Wenman Islands, Galapagos Archipelago. Type from Culpepper Island.

Breeds in the eastern Pacific Ocean on the Revillagigedo Islands, Cocos Island, and in the Galapagos Archipelago.

**Fregata minor nicolli** Mathews

*Fregata minor nicolli* Mathews, 1914, Austral Avian Rec., 2, pp. 118—South Trinidad (= Trindade) Island.

Breeds in the south Atlantic Ocean on Trindade and Martin Vaz Islands. Strays to the coast of Brazil; casual South Africa.

FREGATA ARIEL

**Fregata ariel iredalei** Mathews

*Fregata ariel iredalei* Mathews, 1914, Austral Avian Rec., 2, p. 121—Aldabra Island.

Breeds in the western Indian Ocean on Aldabra, Cosmoledo, and Gloriosas (formerly) Islands, Cargados Carajos Shoals, northern atolls in the Maldives, and ? Chagos Archipelago. Ranges western Indian Ocean north to Somalia and India (Bombay); Red Sea (Eritrea).

**Fregata ariel ariel** (Gray)

*Atagen ariel* G. R. Gray (ex Gould MS), 1845, Gen. Birds, 3, p. [669], col. pl. [185]—no locality; Raine Island, Queensland, designated by Mathews, 1914, Austral Avian Rec., 2, p. 121.

Breeds in the central and eastern Indian Ocean on ? Chagos Archipelago, Cocos-Keeling Islands, Christmas Island, and islands off Western Australia; in the Pacific Ocean on islands off northern Australia, ? Papua New Guinea, ? Bismarck Archipelago, New Caledonia and Walpole Island, Gilbert, Fiji, Howland, Phoenix, ? Tonga, Line (including Christmas), ? Cook, Society, Marquesas, and Tuamotu Islands. Ranges eastern Indian Ocean, and Pacific Ocean from eastern Siberia (Sakhalin), Japan, Philippines, and Australia to Polynesia.

**Fregata ariel trinitatis** Miranda-Ribeiro

*Fregata ariel trinitatis* Miranda-Ribeiro, 1919, Arch. Mus. Nac. Rio de Janeiro, **22**, p. 192—South Trinidad (= Trindade) Island.

Breeds in the South Atlantic Ocean on Trindade and Martin Vaz Islands.

## FREGATA ANDREWSI

**Fregata andrewsi** Mathews

*Fregata andrewsi* Mathews, 1914, Austral Avian Rec., **2**, p. 120—Christmas Island, Indian Ocean.

Breeds Christmas Island, eastern Indian Ocean. Ranges eastern Indian Ocean and South China Sea; recorded Nakara, Northern Territory, Australia.

## FAMILY PHALACROCORACIDAE

## SUBFAMILY PHALACROCORACINAE

## GENUS PHALACROCORAX BRISSON

*Phalacrocorax* Brisson, 1760, Ornith., **1**, p. 60; **6**, p. 511.

Type, by tautonymy, *Phalacrocorax* = *Pelecanus carbo* Linnaeus.

*Hydrocorax* Vieillot, 1816, Analyse, p. 63. Type, by subsequent designation (Ogilvie-Grant, 1898, Cat. Birds Brit. Mus., **26**, p. 331), *Pelecanus carbo* Linnaeus.

*Cormoranus* Baillon, 1834, Mém. Soc. Roy. Émulation Abbeville, sér. 2, no. 1 (1833), p. 76. Type, by subsequent designation (Mathews, 1913, List Birds Australia, p. 95), *Pelecanus carbo* Linnaeus.

*Ecmeles* Gistel, 1848, Naturgeschichte Thierreichs, p. 9. New name for *Hydrocorax* Vieillot, 1816, Analyse, p. 63, preoccupied by *Hydrocorax* Brisson, 1760, Ornith., **4**, p. 566.

*Stictocarbo* Bonaparte, 1855, Compt. Rend. Acad. Sci., Paris, **41**, p. 1115. Type, by subsequent designation (Ogilvie-Grant, 1898, Cat. Birds Brit. Mus., **26**, p. 331), *Pelecanus punctatus* Sparrman.

*Microcarbo* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, **43**, p. 577. Type, by original designation, *Pelecanus pygmaeus* Pallas.

- Leucocarbo* Bonaparte, 1857, *Consp. Gen. Avium*, **2**, p. 176.  
Type, by subsequent designation (Ogilvie-Grant, 1898, *Cat. Birds Brit. Mus.*, **26**, p. 331), *Carbo bougainvillii* Lesson.
- Haliëtor* Heine, 1860, *Journ. Ornith.*, **8**, p. 202. Type, by original designation, *Pelecanus pygmaeus* Pallas.
- Nannopterum* Sharpe, 1899, *Hand-list Birds*, **1**, p. 235. Type, by monotypy, *Phalacrocorax harrisi* Rothschild.
- Dilophalieu*s Coues, 1903, *Key North Amer. Birds*, **2**, p. 963. Type, by monotypy, *Hydrocorax dilophus* Vieillot = *Carbo auritus* Lesson.
- Pallasicarbo* Coues, 1903, *Key North Amer. Birds*, **2**, pp. 963, 966. Type, by original designation, *Phalacrocorax perspicillatus* Pallas.
- Viguacarro* Coues, 1903, *Key North Amer. Birds*, **2**, pp. 963, 965. Type, by original designation, *Carbo mexicanus* Brandt.
- Poikilocarbo* Boetticher, 1935, *Vögel Ferner Länder*, **9**, p. 83. Type, by original designation, *Pelecanus gaimardi* Lesson.
- Euleucocarbo* Voisin, 1973, *Notornis*, **20**, p. 268. Type, by original designation, *Leucocarbo (Euleucocarbo) carunculatus* Gmelin.
- Nesocarbo* Voisin, 1973, *Notornis*, **20**, p. 268. Type, by original designation and monotypy, *Leucocarbo (Nesocarbo) campbelli* Filhol.
- cf. Murphy, 1936, *Oceanic Birds South Amer.*, pp. 870-919.  
Falla, 1937, *Brit. Austral. N. Z. Antarctic Res. Exped. Rep.*, ser. B, **2**, pp. 219-233.  
Amadon, 1942, *Amer. Mus. Novit.*, no. 1175, pp. 1-2 (races of *melanoleucus*).  
Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, pp. 137-157 (New World).  
Dementiev *et al.*, 1951, *Ptitsy Sovetskogo Soiuza*, **1**, pp. 21-52 (English trans., 1966, *Birds Soviet Union*, **1**, pp. 18-52).  
Jouanin, 1951, *Proc. X Int. Ornith. Congr., Uppsala (1950)*, pp. 193-198 (South America).  
Oliver, 1955, *N. Z. Birds*, ed. 2, pp. 200-234.  
Snow, 1960, *Ibis*, **102**, pp. 554-575 (breeding biology of *aristotelis*).

- Palmer (ed.), 1962, Handb. North Amer. Birds, **1**, pp. 315-357.
- Snow, 1963, Brit. Birds, **56**, pp. 77-103, 164-185 (behavior of *aristotelis*).
- Johnson, 1965, Birds Chile, **1**, pp. 124-138.
- Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 47-54.
- Bauer and Glutz von Blotzheim, 1966, Handb. Vögel Mitteleuropas, **1**, pp. 238-279.
- Snow, 1966, Ibis, **108**, pp. 265-280 (behavior and ecology of *harrisi*).
- Owre, 1967, Ornith. Monogr. (Amer. Ornith. Union), no. 6, 138 pp. (adaptations for locomotion and feeding, *auritus*).
- Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 90-99 (*olivaceus*, *magellanicus*, *atriceps*, *albiventer*).
- Ornith. Soc. N. Z., 1970, Annot. Checklist Birds N. Z., pp. 32-33.
- Voisin, 1970, Notornis, **17**, pp. 286-290 (specific status of *verrucosus*).
- Serventy, D. L. and V., and Warham, 1971, Handb. Austral. Sea-birds, pp. 161-170.
- Voisin, 1973, Notornis, **20**, pp. 262-271 (*Leucocarbo*).
- Cramp, Bourne, and Saunders, 1974, Seabirds Britain Ireland, pp. 89-97, maps 9-10, table 8 (*carbo*, *aristotelis*).
- Siegfried *et al.*, 1975, Zoologica Africana, **10**, pp. 183-192 (plumage and ecology of southern African species).
- Watson, 1975, Antarctic Res. Ser. (Amer. Geophys. Union), no. 24, pp. 166-172 (Antarctic and Subantarctic).
- Derenne, Mary, and Mougins, 1976, Comité Nat. Français Recherches Antarctiques, no. 40, pp. 191-219 (biology of *albiventer*).
- van Tets, 1976, Proc. XVI Int. Ornith. Congr., Canberra (1974), pp. 121-124 (Australasia and origin of family).
- Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 199-222.
- Morrison and Slack, 1977, Amer. Birds, **31**, pp. 954-959 (status of *olivaceus*).
- Devillers and Terschuren, 1978, Gerfaut, **68**, pp. 53-86 (blue-eyed shags of South America).

PHALACROCORAX CARBO<sup>1</sup>**Phalacrocorax carbo carbo** (Linnaeus)

*Pelecanus Carbo* Linnaeus, 1758, Syst. Nat., ed. 10, p. 133—Europe; restricted to the "rock-nesting form of the north Atlantic Ocean" by Hartert, 1920, Vögel Pal. Fauna, p. 1387.

Breeds in Europe from northern Scandinavia and the Kola Peninsula south to the British Isles, Faeroes, Iceland; in North America, in southern Greenland, Newfoundland, Gulf of St. Lawrence, Nova Scotia. In winter south in the east to the Canary Islands and Mauritania, in the west to Florida.

**Phalacrocorax carbo sinensis** (Blumenbach)

*Pelecanus Sinensis* Blumenbach, 1798, Abbildungen Naturhist. Gegenstände, no. 25, plate and text—China.

*Pelecanus Sinensis* Shaw and Nodder, 1802, Nat. Misc., 13, pl. 529 and text (scientific name published only in index)—China.

Breeds in Europe in northern France (intermediates between *carbo* and *sinensis*), Belgium, Netherlands, Germany, Denmark, coasts of the Baltic Sea, Balkan states, coasts of the Black Sea and the Sea of Azov; in Asia from Turkey to eastern Siberia, Tibet, India, Sri Lanka (Ceylon), Mongolia, China, Korea, southeastern Asia, ? Philippines. Ranges to northern Sudan and in eastern Asia from Kamchatka to Borneo.

**Phalacrocorax carbo hanedae** Kuroda<sup>2</sup>

*Phalacrocorax carbo hanedae* Nagamichi Kuroda, 1925, Tori, 4, p. 438 and col. pl. of head—Haneda, between Tokyo and Yokohama, Japan.

Breeds Hondo, Japan. Recorded from various other Japanese islands, Sakhalin, Kuril Islands, Korea, Quelpart Island.

**Phalacrocorax carbo maroccanus** Hartert

*Phalacrocorax carbo maroccanus* Hartert, 1906, Bull. Brit. Ornith. Club, 16, p. 110—Shorf Elbaz, near Mogador, Morocco.

Breeds coast of northwestern Africa from El Jadida (Mazagan),

<sup>1</sup>*P. carbo, capillatus, nigrogularis, varius, harrisi, auritus, olivaceus, fuscicollis, sulcirostris, penicillatus*, and possibly *capensis* and *neglectus* form a subgenus *Phalacrocorax*. *P. carbo* and *capillatus* form a superspecies.—J. D. and J.-L. M.

<sup>2</sup>Possibly not distinct from *P. carbo sinensis*; not recognized by Dementiev *et al.* (1951) and Vaurie (1965).—J. D. and J.-L. M.

Morocco, to about lat. 23° N.; perhaps northern Mauritania.

**Phalacrocorax carbo lucidus** (Lichtenstein)<sup>1</sup>

*Halieus lucidus* Lichtenstein, 1823, Verzeichniss Doubletten Zool. Mus. Berlin, p. 86—Cape of Good Hope, Cape Province.

*Phalacrocorax lugubris* Rüppell, 1845, Syst. Uebersicht Vögel Nord-Ost-Afrika's, p. 134, pl. 50—Ethiopia.<sup>2</sup>

*Phalacrocorax carbo patricki* Williams, 1966, Bull. Brit. Ornith. Club, 86, p. 48—Kazinga Channel, Lake Edward, western Uganda; altitude 3,000 feet.<sup>3</sup>

Breeds Cape Verde Islands, along coast of Africa from Mauritania to South Africa; also inland waters: Lake Chad, Sudan, Ethiopia to central African lakes (Victoria, Albert, Kivu, Manyara), Zambia, Malawi.

**Phalacrocorax carbo novaehollandiae** Stephens

*Phalacrocorax Novae Hollandiae* Stephens, 1826, in Shaw, General Zool., 13, pt. 1, p. 93; based on "New-Holland Shag" of Latham, 1824, General Hist. Birds, 10, p. 431—New Holland = New South Wales.

*Carbo carbo steadi* Mathews and Iredale, 1913, Ibis, p. 411—New Zealand.

Breeds Australia, Tasmania, New Zealand, Chatham Islands. Recorded Papua New Guinea, Lord Howe, Norfolk, Macquarie, Snares, and Campbell Islands.

PHALACROCORAX CAPILLATUS

**Phalacrocorax capillatus** (Temminck and Schlegel)

*Carbo capillatus* Temminck and Schlegel, 1850, in Siebold, Fauna Japonica, Aves, pl. 83—Japan.

*Carbo filamentosus* Temminck and Schlegel, 1850, in Siebold, Fauna Japonica, Aves, p. 129—Japan.<sup>4</sup>

<sup>1</sup> Possibly specifically distinct.—J. D. and J.-L. M.

<sup>2</sup> Review of specimens fails to substantiate supposed separating characters (C. W. Benson *in litt.*).—J. D. and J.-L. M.

<sup>3</sup> Cf. Urban and Jefford, 1974, Bull. Brit. Ornith. Club, 94, pp. 104-107.—J. D. and J.-L. M.

<sup>4</sup> Reichenbach, 1850 (December), Avium Syst. Nat., no. 4, Novit., col. 6, and Bonaparte, 1857, Consp. Gen. Avium, 2, p. 168, both chose *capillatus* of these two simultaneously published names, to be followed in this choice by the great majority of subsequent authors.—J. D. and J.-L. M.

Breeds Japan, Korea. Recorded along east coast of Asia from Ussuriland to Taiwan.

#### PHALACROCORAX NIGROGULARIS

**Phalacrocorax nigrogularis** Ogilvie-Grant and Forbes

*Phalacrocorax nigrogularis* Ogilvie-Grant and Forbes, 1899, Bull. Liverpool Mus., 2, p. 3—Socotra.

Breeds islands in the Persian Gulf; possibly south coast of Arabia and Socotra Island. Straggler Gulf of Aden and Red Sea.

#### PHALACROCORAX VARIUS

**Phalacrocorax varius hypoleucos** (Brandt)

*Carbo hypoleucos* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg, 3, col. 55—no locality = South Australia, *fide* Mathews 1912, Novit. Zool., 18, p. 241.

*Phalacrocorax varius perthi* Mathews, 1912, Austral Avian Rec., 1, p. 88—Perth, Western Australia.

*Phalacrocorax varius nitidus* Serventy, 1940, Emu, 40, p. 87—Abrolhos Islands, Western Australia.

Breeds Australia (more rarely in tropical north); no authentic recent records for Tasmania (abundant northern shores prehistoric times).

**Phalacrocorax varius varius** (Gmelin)

*Pelecanus varius* Gmelin, 1789, Syst. Nat., 1, p. 576; based on "Pied Shag" of Latham, 1785, General Synop. Birds, 3, p. 605—Queen Charlotte Sound, New Zealand.

Breeds New Zealand, including Stewart Island. Straggler Snares Islands.

#### PHALACROCORAX HARRISI

**Phalacrocorax harrisi** Rothschild

*Phalacrocorax harrisi* Rothschild, 1898, Bull. Brit. Ornith. Club, 7, p. 52—Narborough Island, Galapagos Archipelago.

Breeds Fernandina (Narborough) and Isabela (Albemarle) Islands, Galapagos Archipelago. Unrecorded outside breeding range.

#### PHALACROCORAX AURITUS

**Phalacrocorax auritus cincinatus** (Brandt)

*Carbo cincinatus* Brandt, 1837, Bull. Sci. Acad. Imp. Sci.



St.-Pétersbourg, 3, col. 55—Kodiak Island, Alaska.

Breeds Carlisle Island in Aleutian Islands, and along Pacific coast of Alaska (Alaska Peninsula, Kodiak Island, Kenai Peninsula). In winter south to southern British Columbia.

**Phalacrocorax auritus albociliatus** Ridgway

*Phalacrocorax dilophus albociliatus* Ridgway, 1884, Proc. Biol. Soc. Washington, 2, p. 95—Pacific coast of North America from Farallon Islands, California, to Cape San Lucas, Baja California; Revillagigedo Islands.

Breeds along Pacific coast of North America from southern British Columbia south to Baja California, on islands in Gulf of California, on the Revillagigedo Islands, and interior of western United States from Washington to Arizona. Ranges to coast of Sinaloa, Mexico.

**Phalacrocorax auritus auritus** (Lesson)

*Carbo auritus* Lesson, 1831, Traité Ornith., livr. 8, p. 605; based on *Hydrocorax dilophus* of Vieillot, 1825, in Vieillot and Oudart, Galerie Oiseaux, 2, pl. 275 (not of Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 85)—New Zealand; error, North America.

Breeds from Alberta, ? James Bay, and Newfoundland south to Utah, New Mexico, ? Texas, Ontario, and Massachusetts. In winter south to Gulf coast, Mexico, and Cuba. Straggler to Bermuda.

**Phalacrocorax auritus floridanus** (Audubon)

*Carbo floridanus* Audubon, 1835, Birds Amer., pl. 252—southern Florida, *vide* Audubon, 1835, Ornith. Biogr., 3, p. 387.

Breeds in southern United States from North Carolina south to Florida and west to Texas; in Bahamas, Cuba, and Isle of Pines. In winter to Caribbean, Yucatán, Belize (British Honduras).

PHALACROCORAX OLIVACEUS<sup>1</sup>

**Phalacrocorax olivaceus mexicanus** (Brandt)

*Carbo mexicanus* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, 3, col. 56—Mexico.

*Phalacrocorax olivaceus chancho* van Rossem and Hachisu-

<sup>1</sup>*Procellaria brasiliiana* Gmelin, 1789, Syst. Nat., 1, p. 564, is indeterminate.—J. D. and J.-L. M.

ka, 1939, Proc. Biol. Soc. Washington, **52**, p. 9—Dow Ranch, 7 miles east of Tesia, lower Mayo River, Sonora, Mexico.<sup>1</sup>

Breeds from New Mexico, north-central Texas, southwestern Louisiana, and northwestern Mexico south to Nicaragua; also Bahamas (Watling Island), Cuba, Isle of Pines.

**Phalacrocorax olivaceus olivaceus** (Humboldt)

*Pelecanus olivaceus* Humboldt, 1805, in Humboldt and Bonpland, Recueil Observ. Zool. Anat. Comp., **1**, p. 6—banks of the Magdalena River, lat. 8° 55' N., Colombia.

*Hydrocorax vigua* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., **8**, p. 90; based on "Zaramagullon nero," no. 423, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, **3**, p. 395—Paraguay.

*Phalacrocorax olivaceus hornensis* Murphy, 1936, Oceanic Birds South Amer., p. 915—Bertrand Island, south of Navarino Island, Chile.

Breeds coasts and inland waters of Central America and South America from Costa Rica to Tierra del Fuego.

**PHALACROCORAX FUSCICOLLIS**

**Phalacrocorax fuscicollis** Stephens

*Phalacrocorax fuscicollis* Stephens, 1826, in Shaw, General Zool., **13**, pt. 1, p. 91—Bengal.

Breeds India, Sri Lanka (Ceylon), Burma, Thailand, Cambodia, Cochinchina.

**PHALACROCORAX SULCIROSTRIS**

**Phalacrocorax sulcirostris** (Brandt)

*Carbo sulcirostris* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Petersbourg, **3**, col. 56—"Terres australes" = New South Wales, *vide* Mathews, 1912, Novit. Zool., **18**, p. 240.

*Carbo purpuragula* Peale, 1848, U. S. Explor. Exped., **8**, p. 269—Manua Bay, New Zealand.

*Mesocarbo ater territorii* Mathews, 1915, Birds Australia, **4**, p. 176—Hermit Hill, Northern Territory.

Breeds from Borneo and Java through the Moluccas to New Guinea; Australia, Tasmania; New Zealand (North Island).

<sup>1</sup>The birds of northwestern Mexico merely represent the extreme of a cline.—J. D. and J.-L. M.

## PHALACROCORAX PENICILLATUS

**Phalacrocorax penicillatus** (Brandt)

*Carbo penicillatus* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, **3**, col. 55—no locality.

Breeds Pacific coast of North America from southern British Columbia south to Baja California; islands in Gulf of California.

PHALACROCORAX CAPENSIS<sup>1</sup>**Phalacrocorax capensis** (Sparrman)

*Pelecanus capensis* Sparrman, 1788, Mus. Carlsonianum, fasc. 3, no. 61 and pl.—False Bay, Cape of Good Hope.

Breeds coasts of South West Africa (Namibia) and western Cape Province. Ranges from Congo River south to Natal.

## PHALACROCORAX NEGLECTUS

**Phalacrocorax neglectus** (Wahlberg)

*Graculus neglectus* Wahlberg, 1855, Öfversigt K. Vetenskaps-Akad. Förhandlingar, Stockholm, **12**, p. 214—  
islands off the coast of South West Africa.

Breeds coast of South West Africa (Namibia) south from Swakopmund; Cape Province.

PHALACROCORAX PUNCTATUS<sup>2</sup>**Phalacrocorax punctatus punctatus** (Sparrman)

*Pelecanus* [sic] *punctatus* Sparrman, 1786, Mus. Carlsonianum, fasc. 1, no. 10 and pl.—Queen Charlotte Sound, South Island, New Zealand.

Breeds North Island, New Zealand, on several islands of inner Hauraki Gulf, along Auckland west coast (Oaia Island, Te Henga, Girdwood Point); South Island on Marlborough Sounds, D'Urville Island, Banks Peninsula, Otago Peninsula and cliffs east of Palmerston; ranges short distances from breeding grounds.

<sup>1</sup>*P. capensis* and *neglectus* are possibly members of the subgenus *Stictocarbo*.—J. D. and J.-L. M.

<sup>2</sup>*P. punctatus*, *aristotelis*, *perspicillatus*, *urile*, *pelagicus*, and *gaimardi* form a subgenus *Stictocarbo*.—J. D. and J.-L. M.

**Phalacrocorax punctatus oliveri** Mathews

*Stictocarbo steadi* Oliver, 1930, Trans. Proc. N. Z. Inst., **61**, p. 139—Otago, South Island, New Zealand.

*Phalacrocorax oliveri* Mathews, 1930, Bull. Brit. Ornith. Club, **51**, p. 18. New name for *Stictocarbo steadi* Oliver, 1930, preoccupied by *Carbo carbo steadi* Mathews and Iredale, 1913, Ibis, p. 411—New Zealand.

Breeds along west coast of South Island, New Zealand (Steeple, Perpendicular Point, Open Bay Islands); Stewart Island, including inshore islands.

**Phalacrocorax punctatus featherstoni** Buller<sup>1</sup>

*Phalacrocorax featherstoni* Buller, 1873, Ibis, p. 90—Chatham Islands.

Breeds Chatham Islands.

## PHALACROCORAX ARISTOTELIS

**Phalacrocorax aristotelis aristotelis** (Linnaeus)

*Pelecanus aristotelis* Linnaeus, 1761, Fauna Svecica, ed. 2, p. [23]—Sweden.

Breeds coasts of Iceland, Faeroes, British Isles, Norway to the Murman Coast of the Kola Peninsula, northwest coast of France, Atlantic coast of Spain, Portugal. Some dispersal in winter to south and southeast.

**Phalacrocorax aristotelis desmarestii** (Payraudeau)

*Carbo Desmarestii* Payraudeau, 1826, Ann. Sci. Nat., Paris, **8**, p. 464—coasts of Sardinia, Elba, Montecristo, Capraia, Corsica.

Breeds islands and coasts of the Mediterranean from the Balearic Islands to western Turkey and Cyprus; northwest coast of the Black Sea to Crimea. Some postbreeding dispersal (recorded Belgium).

**Phalacrocorax aristotelis riggenbachi** Hartert<sup>2</sup>

*Phalacrocorax graculus riggenbachi* Hartert, 1923, Novit. Zool., **30**, p. 132—Cape Blanco north, west coast of Morocco.

Breeds west coast of Morocco from El Jorf Lastar (Cap Blanc), near El Jadida (Mazagan), south to Puerto Cansado.

<sup>1</sup>Possibly specifically distinct.—J. D. and J.-L. M.

<sup>2</sup>Possibly not separable from *desmarestii*; cf. Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, p. 53.—J. D. and J.-L. M.

## PHALACROCORAX PERSPICILLATUS

**Phalacrocorax perspicillatus** Pallas

*Phalacrocorax perspicillatus* Pallas, 1811, Zoographia Rosso-Asiat., 2, p. 305—Bering Island.

Formerly bred Bering Island, Commander Islands, north Pacific. Extinct by about 1850. Specimens in Dresden, Helsinki, Leiden, Leningrad, London.

PHALACROCORAX URILE<sup>1</sup>**Phalacrocorax urile** (Gmelin)

*Pelecanus Urile* Gmelin, 1789, Syst. Nat., 1, p. 575; based on "Red-faced Corvorant" of Pennant, 1785, Arctic Zool., p. 584, and "Red-faced Shag" of Latham, 1785, General Synop. Birds, 3, p. 601—Kamchatka.

Breeds Moyururi Island, off east coast of Hokkaido, Japan, Commander (Medny), Pribilof, and Aleutian Islands. Largely sedentary, but has been reported in winter from the Kurils and Honshu. No modern records from Kamchatka.

## PHALACROCORAX PELAGICUS

**Phalacrocorax pelagicus pelagicus** Pallas

*Phalacrocorax pelagicus* Pallas, 1811, Zoographia Rosso-Asiat., 2, p. 303—eastern Kamchatka and the Aleutian Islands.

Breeds from Wrangel Island, north coast of Siberia east to Bering Strait, and Chamisso Island, Kotzebue Sound, Alaska, south through islands in the Bering Sea to the Commanders and Aleutians, Kamchatka, coasts of the Sea of Okhotsk, Sakhalin, Kurils, Hokkaido, northern Honshu, along coasts of Alaska and British Columbia to Queen Charlotte Islands. Winters south to Kyushu, coasts of Korea and China to Kwangtung, and Vancouver Island; occurs Izu Islands; straggler to Taiwan, Hawaiian Islands, north to Point Barrow, Alaska.

**Phalacrocorax pelagicus resplendens** Audubon

*Phalacrocorax Resplendens* Audubon, 1838, Birds Amer., 4, pl. 412, left fig.—Cape Disappointment, Washington, *vide* Audubon, 1839, Ornith. Biog., 5, p. 149.

<sup>1</sup>*P. urile* and *pelagicus* form a superspecies.—J. D. and J.-L. M.

Breeds Pacific coast of North America from southern British Columbia (Sidney Island, near Victoria) to Baja California.

#### PHALACROCORAX GAIMARDI

##### **Phalacrocorax gaimardi** (Lesson and Garnot)

*Carbo Gaimardi* Lesson and Garnot, 1828, in Duperrey, Voyage Coquille, Zool., Atlas, 1, livr. 7, pl. 48 (21 June); 1830, 1, livr. 7, p. 601—"Lima, au Pérou" = San Lorenzo Island, roadstead of Lima, *vide* Lesson, 1831, *Traité Ornith.*, livr. 8, p. 605.

*Pelecanus Gaimardi* "Garnot" Lesson, 1828 (June), *Man. Ornith.*, 2, p. 373—Callao Bay, Peru.<sup>1</sup>

Breeds Pacific coast of South America from Macabi and Guañape Islands, Peru, to Chiloé Island, Chile; also near Puerto Deseado, Santa Cruz, Argentina. Recorded Strait of Magellan; accidental Falkland Islands.

#### PHALACROCORAX MAGELLANICUS<sup>2</sup>

##### **Phalacrocorax magellanicus** (Gmelin)

*Pelecanus magellanicus* Gmelin, 1789, *Syst. Nat.*, 1, p. 576; based on "Magellanic Shag" of Latham, 1785, *General Synop. Birds*, 3, p. 604—Tierra del Fuego and Staten Island.

Breeds coasts of South America from Valdivia, Chile, and Punta Tombo, Chubut, Argentina, south to Cape Horn region; Falkland Islands. Accidental north to Valparaíso and Buenos Aires.

#### PHALACROCORAX BOUGAINVILLII

##### **Phalacrocorax bougainvillii** (Lesson)

*Carbo Bougainvillii* Lesson, 1837, in Bougainville, *Journ. Navig. Thétis Espérance*, 2, p. 331—Valparaíso, Chile.

<sup>1</sup>Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, 13, pt. 1, no. 2, p. 151, note, point out that it is impossible to ascertain whether the plate in the Coquille atlas or Lesson's account in the Manuel was published first. They note, however, that the plate is cited by Lesson in the Manuel.—J. D. and J.-L. M.

<sup>2</sup>*P. magellanicus, bougainvillii, atriceps, albiventer, carunculatus, campbelli*, and *fuscescens* form a subgenus *Leucocarbo*.—J. D. and J.-L. M.

Breeds small islands Pacific coast of South America from northern Peru to Pupuya Inlet, Chile; also Punta Tombo, Chubut, Argentina. Strays north rarely to Panama and Colombia (Buenaventura Bay) and south along the Chilean coast.

#### PHALACROCORAX ATRICEPS<sup>1</sup>

##### **Phalacrocorax atriceps atriceps** King

*Phalacrocorax atriceps* King, 1828, Zool. Journ., 4, p. 102—  
Strait of Magellan.

*Phalacrocorax atriceps bransfieldensis* Murphy, 1936, Oceanic Birds South Amer., p. 889—South Shetlands.

Breeds along coast of southern Chile from Mocha Island to Strait of Magellan; on islands in Lago Yehuin and Lago Turbio (= Laguna Deseada), Tierra del Fuego; Cape Horn islands; in Argentina along coast north to Santa Cruz River and on inland lakes in Neuquén and Río Negro; South Orkney and South Shetland Islands; Antarctic Peninsula. Strays north to Uruguay.

##### **Phalacrocorax atriceps georgianus** Lönnerberg

*Phalacrocorax atriceps georgianus* Lönnerberg, 1906, K. Svensk. Vetenskapsakad. Handlingar, Stockholm, 40, no. 5, p. 69, pl. 2, figs. 4-5—South Georgia.

Breeds Shag Rocks, South Georgia, South Sandwich Islands.

##### **Phalacrocorax atriceps nivalis** Falla

*Phalacrocorax (Leucocarbo) atriceps nivalis* Falla, 1937, Brit. Austral. N. Z. Antarctic Res. Exped. Rep., ser. B, 2, p. 226—Atlas Cove, Heard Island.

Breeds Heard Island.

#### PHALACROCORAX ALBIVENTER

##### **Phalacrocorax albiventer albiventer** (Lesson)

*Carbo albiventer* Lesson, 1831, Traité Ornith., livr. 8, p. 604—Falkland Islands.

Breeds along east coast of Argentina from Punta Tombo, Chubut, south to Tierra del Fuego (including Lago Turbio = Laguna Deseada, Chile), islands south of Strait of Magellan and Beagle Channel, Falkland Islands. In winter north to Uruguay.

<sup>1</sup>*P. atriceps* and *albiventer* form a superspecies.—J. D. and J.-L. M.

**Phalacrocorax albiventer melanogenis** (Blyth)

*Hypoleucus melanogenis* Blyth, 1860, Journ. Asiatic Soc. Bengal, **29**, p. 101—Crozet Islands.

*Phalacrocorax vanhoeffeni* Reichenow, 1904, Ornith. Monatsber., **12**, p. 46—Crozet Islands.

Breeds Marion, Crozet, and Kerguelen (rare) Islands.

**Phalacrocorax albiventer verrucosus** (Cabanis)<sup>1</sup>

*Halieus (Hypoleucus) verrucosus* Cabanis, 1875, Journ. Ornith., **23**, p. 450—Kerguelen.

Breeds Kerguelen Islands.

**Phalacrocorax albiventer purpurascens** (Brandt)

*Carbo purpurascens* Brandt, 1837, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, **3**, col. 56—no locality.

*Phalacrocorax traversi* Rothschild, 1898, Bull. Brit. Ornith. Club, **8**, p. 21—Macquarie Island.

Breeds Macquarie Island.

## PHALACROCORAX CARUNCULATUS

**Phalacrocorax carunculatus carunculatus** (Gmelin)

*Pelecanus carunculatus* Gmelin, 1789, Syst. Nat., **1**, p. 576; based on "Carunculated Shag" of Latham, 1785, General Synop. Birds, **3**, p. 603—Queen Charlotte Sound, New Zealand, and Staten Island, *ex* Latham.

Breeds islands of Marlborough Sounds district, Cook Strait, New Zealand.

**Phalacrocorax carunculatus chalconotus** (Gray)

*Graculus chalconotus* G. R. Gray, 1845, in Richardson and J. E. Gray (eds.), Zool. Voyage Erebus Terror, **1**, Birds, p. 20, pl. 21—Otago, South Island, New Zealand.

Breeds coasts of Otago, South Island, New Zealand; Stewart Island. Dimorphic subspecies.

**Phalacrocorax carunculatus onslowi** Forbes

*Phalacrocorax onslowi* Forbes, 1893, Ibis, p. 533—Chatham Islands.

Breeds Chatham Islands.

<sup>1</sup> Possibly a distinct species.—J. D. and J.-L. M.



## PHALACROCORAX CAMPBELLI

**Phalacrocorax campbelli colensoi** Buller

*Phalacrocorax colensoi* Buller, 1888, Birds N. Z., ed. 2, 2, p. 161—Auckland Islands.

Breeds Auckland Islands. Variable subspecies, with black-necked phase approaching *campbelli*.

**Phalacrocorax campbelli campbelli** (Filhol)

*Urile Campbelli* Filhol, 1878, Bull. Soc. Philomath. Paris, sér. 7, 2, p. 132—Campbell Island.

Breeds Campbell Island.

**Phalacrocorax campbelli ranfurlyi** Ogilvie-Grant

*Phalacrocorax ranfurlyi* Ogilvie-Grant, 1901, Bull. Brit. Ornith. Club, 11, p. 66—Bounty Islands.

Breeds Bounty Islands. Straggler Antipodes Islands.

## PHALACROCORAX FUSCESCENS

**Phalacrocorax fuscescens** (Vieillot)

*Hydrocorax fuscescens* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 86—"Australasie" = Tasmania, *vide* Mathews, 1913, List Birds Australia, p. 96.

*Phalacrocorax leucogaster* Gould, 1838, Synop. Birds Australia, pt. 4, app., p. 7—South Australia. Not *Hydrocorax leucogaster* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 90.

*Hypoleucus gouldi* Salvadori, 1882, Ann. Mus. Civ. Genova, 18, p. 404. New name for *Phalacrocorax leucogaster* Gould. Breeds islands from Recherche Archipelago, Western Australia, to western Victoria, Bass Strait, and Tasmania. Vagrant New South Wales.

PHALACROCORAX MELANOLEUCOS<sup>1</sup>**Phalacrocorax melanoleucos melanoleucos** (Vieillot)

*Hydrocorax melanoleucos* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 88—"Australasie" = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 241.

<sup>1</sup>*P. melanoleucos*, *niger*, *pygmaeus*, and *africanus* form a subgenus *Microcarbo*.—J. D. and J.-L. M.

*Carbo melanoleucus melvillensis* Mathews, 1912, Austral Avian Rec., 1, p. 74—Melville Island, Northern Territory. Breeds eastern Java, Bali, Celebes, Lesser Sunda Islands, Moluccas, Aru Islands, New Guinea, Palau, Solomon (except Rennell), Santa Cruz Islands, New Caledonia, Australia, Tasmania.

**Phalacrocorax melanoleucos brevicauda** Mayr

*Phalacrocorax melanoleucos brevicauda* Mayr, 1931, Amer. Mus. Novit., no. 486, p. 3—Rennell Island. Breeds Rennell Island, Solomon Islands.

**Phalacrocorax melanoleucos brevirostris** Gould

*Phalacrocorax brevirostris* Gould, 1837, Proc. Zool. Soc. London, p. 26—no locality = New Zealand. Breeds New Zealand (including Stewart Island), Campbell Island. Straggler Snares and Auckland Islands. Dimorphic subspecies.

PHALACROCORAX NIGER<sup>1</sup>

**Phalacrocorax niger** (Vieillot)

*Hydrocorax niger* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 8, p. 88—East Indies = Bengal. Breeds India, Sri Lanka (Ceylon), southwestern China, Burma, Thailand, Indochina, Sumatra, Java, Borneo. Vagrant Afghanistan, Malay Peninsula.

PHALACROCORAX PYGMAEUS

**Phalacrocorax pygmaeus** (Pallas)

*Pelecanus pygmeus* [sic] Pallas, 1773, Reise Verschiedene Provinzen Russischen Reichs, 2, p. 712, pl. G—Caspian Sea. Breeds Albania, Macedonia, Rumania, Bulgaria, Greece, Black, Caspian, and Aral Seas, Asia Minor east to Iran. Formerly bred Hungary and Algeria. Vagrant to France, Germany, southern Sweden, Czechoslovakia, Italy, northern Tunisia.

PHALACROCORAX AFRICANUS

**Phalacrocorax africanus africanus** (Gmelin)

*Pelecanus africanus* Gmelin, 1789, Syst. Nat., 1, p. 577;

<sup>1</sup>Possibly conspecific with *P. pygmaeus* (Pallas).—J. D. and J.-L. M.

based on "African Shag" of Latham, 1785, General Synop. Birds, 3, p. 606—Africa.

Breeds coasts and inland waters of most of Africa (except range of *coronatus*) from Mauritania (Banc d'Arguin), ? Egypt, Sudan, Eritrea to Cape Province; São Tomé, Zanzibar, Pemba.

**Phalacrocorax africanus pictilis** Bangs

*Phalacrocorax africanus pictilis* Bangs, 1918, Bull. Mus. Comp. Zool., 61, p. 500—Miandrivazo, Madagascar.

Madagascar.

**Phalacrocorax africanus coronatus** (Wahlberg)<sup>1</sup>

*Graculus coronatus* Wahlberg, 1855, Öfversigt K. Vetenskaps-Akad. Förhandlingar, Stockholm, 12, p. 214—Possession Island, South West Africa.

Breeds African coast from Benguela, Angola, to East London, South Africa.

SUBFAMILY ANHINGINAE<sup>2</sup>

GENUS ANHINGA BRISSON

*Anhinga* Brisson, 1760, Ornith., 1, p. 60; 6, p. 476. Type, by tautonymy and monotypy, *Anhinga* = *Plotus anhinga* Linnaeus.

*Notoplotus* Mathews, 1920, Birds Australia, Suppl., pt. 1, p. 62. Type, by original designation, *Plotus novaehollandiae* Gould.

cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 157-160 (New World).

Meanley, 1954, Wilson Bull., 66, pp. 81-88 (breeding of *leucogaster*).

Allen, 1961, Wilson Bull., 73, pp. 115-124 (breeding behavior of *leucogaster*).

Owre, 1962, Wilson Bull., 74, pp. 194-196 (breeding behavior of *leucogaster*).

Palmer (ed.), 1962, Handb. North Amer. Birds, 1, pp. 357-365.

Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, p. 55.

Owre, 1967, Ornith. Monogr. (Amer. Ornith. Union), no.

<sup>1</sup>Sometimes regarded as specifically distinct.—J. D. and J.-L. M.

<sup>2</sup>Regarded by some as a distinct family.—J. D. and J.-L. M.

6, 138 pp. (adaptations for locomotion and feeding, *anhinga*).

Harriott, 1970, *Florida Naturalist*, **43**, pp. 138-143 (breeding of *leucogaster*).

Vestjens, 1975, *Emu*, **75**, pp. 121-131 (breeding of *rufa*).

White, 1975, *Bull. Brit. Ornith. Club*, **95**, pp. 57-59 (status in Wallacea).

Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 222-226 (*melanogaster*).

#### ANHINGA ANHINGA<sup>1</sup>

##### **Anhinga anhinga leucogaster** (Vieillot)

*Plotus leucogaster* Vieillot, 1816, *Nouv. Dict. Hist. Nat.*, nouv. éd., **1**, p. 545—Florida.

*Anhinga anhinga minima* van Rossem, 1939, *Ann. Mag. Nat. Hist.*, ser. 11, **4**, p. 439—Acaponeta, Nayarit, Mexico.

Breeds United States from southern Oklahoma, Arkansas, Tennessee, and North Carolina south to Texas and Florida; Mexico and Central America to Panama; Cuba, Isle of Pines. Straggler west to Arizona and north to Nebraska, southern Ontario, and Long Island, New York.

##### **Anhinga anhinga anhinga** (Linnaeus)

*Plotus Anhinga* Linnaeus, 1766, *Syst. Nat.*, ed. 12, **1**, p. 218—"in America australi"; restricted to Rio Tapajós, Pará, Brazil, by Griscom and Greenway, 1941, *Bull. Mus. Comp. Zool.*, **88**, p. 103.

Breeds South America from Colombia, Ecuador, Venezuela, Trinidad, Tobago, and the Guianas southeast of the Andes to Buenos Aires (delta of Río de la Plata), Argentina.

#### ANHINGA MELANOGASTER

##### **Anhinga melanogaster melanogaster** Pennant

*Anhinga melanogaster* Pennant, 1769, *Ind. Zool.*, p. 13, pl. 12—Ceylon and Java.

Breeds India, Sri Lanka (Ceylon), Burma, Thailand, Indochina, Sumatra, Java, Borneo, Philippines, Celebes. Formerly ? Malay Peninsula; recorded from Palau Islands.

<sup>1</sup>*A. anhinga* and *melanogaster* form a superspecies.—J. D. and J.-L. M.

**Anhinga melanogaster rufa** (Daudin)<sup>1</sup>

- Plotus rufus* Daudin, 1802, in Buffon, Hist. Nat. (ed. Didot), Quadr., 14, p. 319—Senegal.
- Plotus Novae-Hollandiae* Gould, 1847, Proc. Zool. Soc. London, p. 34—rivers of the whole of the southern coast of Australia = New South Wales, *vide* Mathews, 1913, List Birds Australia, p. 97.
- Plotus Chantrei* Oustalet, 1882, Ann. Sci. Nat., Zool., Paris, sér. 6, 13, art. 7, p. 7—Lake of Antioch.
- Anhinga vulsini* Bangs, 1918, Bull. Mus. Comp. Zool., 61, p. 501—Maevetanana, Madagascar.
- Anhinga rufa papua* Rand, 1938, Amer. Mus. Novit., no. 990, p. 1—Lake Daviumbu, middle Fly River, New Guinea. Breeds Africa from Senegal, Sudan, and Ethiopia south to Cape Province, Madagascar, southern Turkey (formerly), southeastern Iraq, New Guinea (including Fergusson Island), Australia. Accidental New Zealand.

## FAMILY SULIDAE

## GENUS SULA BRISSON

- Sula* Brisson, 1760, Ornith., 1, p. 60; 6, p. 494. Type, by tautonymy, *Sula* = *Sula leucogaster* Boddaert.
- Morus* Vieillot, 1816, Analyse, p. 63. Type, by monotypy, "Fou de Bassan" Buffon = *Pelecanus bassanus* Linnaeus.
- Pseudosula* Boetticher, 1955, Anzeiger Ornith. Gesell. Bayern, 4, p. 375. Type, by original designation, *Sula neboxii* Milne-Edwards.
- cf. Murphy, 1936, Oceanic Birds South Amer., pp. 827-870.
- Wetmore, 1939, Smithsonian Misc. Coll., 98, no. 2, pp. 1-5 (subspecies of *leucogaster*).
- Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 122-136 (New World).
- Gibson-Hill, 1950, Bull. Raffles Mus., no. 23, pp. 65-76 (*abbotti*).
- Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, 1, pp. 64-67 (English trans., 1966, Birds Soviet Union, 1, pp. 64-68).

<sup>1</sup>Sometimes regarded as specifically distinct.—J. D. and J.-L. M.

- Warham, 1958, *Emu*, **58**, pp. 339-369 (breeding of *serrator*).
- Broekhuysen, Liversidge, and Rand, 1961, *Ostrich*, **32**, pp. 1-19 (distribution of *capensis*).
- Dorward, 1962, *Ibis*, **103b**, pp. 174-220 (comparative biology of *dactylatra* and *leucogaster*), 221-234 (behavior of *dactylatra*, *sula*, *leucogaster*).
- Palmer (ed.), 1962, *Handb. North Amer. Birds*, **1**, pp. 280-315.
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 44-46.
- Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 226-238 (*bassana*).
- Simmons, 1967, *Living Bird*, pp. 187-212 (ecological adaptations of *leucogaster*).
- Wodzicki, 1967, *Trans. Roy. Soc. N. Z.*, **8**, pp. 149-162; **9**, pp. 17-31 (population and distribution of *serrator*).
- Simmons, 1968, *Bull. Brit. Ornith. Club*, **88**, pp. 15-20 (behavior of *sula*).
- Kepler, 1969, *Publ. Nuttall Ornith. Club*, no. 8, 105 pp. (breeding biology of *dactylatra*).
- Reinsch, 1969, *Basstölpel (Neue Brehm-Bücherei 412)*, 111 pp. (*bassana*).
- Simmons, 1970, in Crook (ed.), *Social Behaviour Birds Mammals*, pp. 37-77 (ecology of *leucogaster*).
- Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 171-181.
- Jarvis, 1972, *Ostrich*, **43**, pp. 211-216 (systematics of *capensis*).
- Jarvis, 1972, *Zoologica Africana*, **7**, pp. 75-83 (behavior of *capensis*).
- Cramp, Bourne, and Saunders, 1974, *Seabirds Britain Ireland*, pp. 81-88, map 8, tables 6-7 (*bassana*).
- Bourne, 1976, *Ibis*, **118**, pp. 119-123 (skeletal proportions and distribution).
- Nettleship, 1976, *Wilson Bull.*, **88**, pp. 300-313 (North America).
- Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 183-198.
- Nelson, 1978, *Sulidae*, 1024 pp.

SULA BASSANA<sup>1</sup>**Sula bassana** (Linnaeus)

*Pelecanus Bassanus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 133—"Scotia, America"; restricted to Bass Rock, off Scotland, by Hartert, 1920, Vögel Pal. Fauna, p. 1406.

Breeds in Western Hemisphere on islands in Gulf of St. Lawrence and off Newfoundland; in Eastern Hemisphere in Iceland, Faeroes, Norway (north to Finnmark), British Isles, Channel Islands, Rouzic Island off Brittany. In winter south to Gulf of Mexico, coast of western Africa to Senegal, Mediterranean, Azores, Madeira, Canaries. Vagrant inland North America to Great Lakes, Greenland, Murman Coast of USSR, Cape Verde Islands.

## SULA CAPENSIS

**Sula capensis** (Lichtenstein)

*Dysporus capensis* Lichtenstein, 1823, Verzeichniss Doubletten Zool. Mus. Berlin, p. 86—Cape of Good Hope.

Breeds on islands off coasts of southern Africa from Hollam's Bird Island, South West Africa (Namibia), to Algoa Bay, Cape Province. In winter north to Gulf of Guinea in the west and Mombasa, Kenya, in the east. Straggler Amsterdam Island.

## SULA SERRATOR

**Sula serrator** (Gray)

*Sula australis* Gould, 1841, Proc. Zool. Soc. London (1840), p. 177—Tasmania.

*Pelecanus serrator* G. R. Gray, 1843, in Dieffenbach, Travels N. Z., 2, p. 200. New name for *Sula australis* Gould, 1841, preoccupied by *Sula australis* Stephens, 1826, in Shaw, General Zool., 13, pt. 1, p. 104.

*Sulita serrator rex* Mathews and Iredale, 1921, Man. Birds Australia, 1, p. 77—New Zealand.

Breeds on islands off southeastern Australia, in Bass Strait, off southern Tasmania, and mainly off coasts of New Zealand

<sup>1</sup>*S. bassana*, *capensis*, and *serrator* form a subgenus *Morus*, or possibly a distinct genus. They also form a superspecies.—J. D. and J.-L. M.

from extreme north to Foveaux Strait (also Cape Kidnappers on mainland). Ranges northwest to Pt. Cloates, Western Australia, north to Mackay, Queensland, east to Chatham Islands, south to Auckland Islands and Campbell Island.

#### SULA NEBOUXII<sup>1</sup>

##### ***Sula neboxii neboxii*** Milne-Edwards

*Sula neboxii* Milne-Edwards, 1882, Ann. Sci. Nat., Zool., Paris, sér. 6, 13, art. 4, p. 37, pl. 14—Pacific coast of America. Type assumed from Chile.

Breeds on islands off Pacific coast of America from Gulf of California to northern Peru. Ranges south to Ancón, Peru, casually north to northwestern United States.

##### ***Sula neboxii excisa*** Todd

*Sula neboxii excisa* Todd, 1948, Proc. Biol. Soc. Washington, 61, p. 49—Seymour Island, Galapagos Archipelago.

Galapagos Archipelago, breeding on most islands south of Equator; has bred Genovesa (Tower) Island.

#### SULA VARIEGATA

##### ***Sula variegata*** (Tschudi)

*Dysporus variegatus* Tschudi, 1843, Archiv Naturgeschichte, 9, pt. 1, p. 390—coasts and islands of Pacific Ocean; 1846, Untersuchungen Fauna Peruana, Ornith., p. 313— islands off coast of Peru.

Breeds on islands off Pacific coast of South America from Gulf of Guayaquil, Ecuador, south to Concepción, Chile. Ranges from southwestern Colombia to Chiloé Island, Chile.

#### SULA DACTYLATRA

##### ***Sula dactylatra dactylatra*** Lesson

*Sula dactylatra* Lesson, 1831, Traité Ornith., livr. 8, p. 601—Ascension Island.

Breeds Bahamas, Monito Island off Puerto Rico, Virgin Islands, Grenadines, small islands off Yucatán and Venezuela; in Atlantic on Fernando de Noronha, Abrolhos Archipelago, Ascension Island. Ranges Caribbean, and Atlantic to coasts

<sup>1</sup>*S. neboxii, variegata, dactylatra, sula, leucogaster, and abbotti* form a subgenus *Sula*.—J. D. and J.-L. M.



of southeastern United States and South America south to Rio de Janeiro.

***Sula dactylatra melanops* Heuglin**

*Sula melanops* Heuglin, 1859, Ibis, p. 351, pl. 10, figs. 2-3—Bur-da-Rebschi = Mait Island, Somalia.

Breeds Kuria Muria Islands off Muscat and Oman, Mait and Kal Farun Islands off Somalia, Latham Island south of Zanzibar, Assumption and Gloriosa Islands (formerly), Cosmoledo, Seychelles, Amirante, Farquhar, Tromelin Islands, Réunion, Mauritius, Cargados Carajos Shoals, possibly Chagos Archipelago.

***Sula dactylatra personata* Gould**

*Sula personata* Gould, 1846, Proc. Zool. Soc. London, p. 21—north and northeast coasts of Australia = Raine Island, northeastern Australia, *vide* Mathews, 1913, List Birds Australia, p. 99.

*Sula dactylatra bedouti* Mathews,<sup>1</sup> 1913, Austral Avian Rec., 1, p. 189—Bedout Island, Western Australia.

Breeds Cocos-Keeling Islands, Indian Ocean, islands off Western Australia (Bedout, Adele), Gunung Api in the Banda Sea, islets and reefs in the Coral Sea off Queensland, Lord Howe, Norfolk, Mariana, Marshall, Fiji, Kermadec, Hawaiian, Phoenix, Samoa, Line, Tuamotu, Pitcairn, Henderson, Ducie, and Easter Islands. Formerly bred Pulau Perak off Malaya.

***Sula dactylatra granti* Rothschild**

*Sula granti* Rothschild, 1902, Bull. Brit. Ornith. Club, 13, p. 7—Culpepper Island, Galapagos Archipelago.

*Sula dactylatra californica* Rothschild, 1915, Bull. Brit. Ornith. Club, 35, p. 43—San Benedicto Island, Revillagigedo Islands.

Breeds on islands off Pacific coast of Mexico, including Alijos Rocks, Revillagigedo Islands, Clipperton Island; Galapagos Archipelago, Malpelo Island off Colombia, La Plata Island off Ecuador, San Félix and San Ambrosio Islands off Chile.

SULA SULA

***Sula sula sula* (Linnaeus)**

*Pelecanus Sula* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p.

<sup>1</sup>Regarded by some as subspecifically distinct.—J. D. and J.-L. M.

218; based on "The Booby" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 87, pl. 87—"in Pelago indico"; Barbados, West Indies, designated by Grant and Mackworth-Praed, 1933, Bull. Brit. Ornith. Club, **53**, pp. 185-187.

Breeds in West Indies on Little Cayman and Little Swan Islands, small islands off Hispaniola and Puerto Rico, Virgin Islands, Dominica, Grenadines, islands off Belize (British Honduras) and Venezuela, in Atlantic Ocean on Fernando de Noronha, ? Ascension Island. Ranges coasts of Caribbean and northern Brazil.

### ***Sula sula rubripes* Gould**

*Sula rubripes* Gould, 1838, Synop. Birds Australia, pt. 4, app., p. 7—New South Wales = Raine Island, northern Queensland, *vide* Mathews, 1915, Birds Australia, **4**, p. 210.

*Sula nicolli* Grant and Mackworth-Praed, 1933, Bull. Brit. Ornith. Club, **53**, p. 118—Gloriosa Island, Indian Ocean. Breeds in Indian Ocean on Aldabra, Cosmoledo, Gloriosa (formerly), Farquhar, Agalega, Tromelin Islands, Mauritius (formerly), Cargados Carajos Shoals (formerly), Chagos Archipelago, Cocos-Keeling and Christmas Islands; in Pacific Ocean on Paracel Islands and Spratly Island in South China Sea, Manuk Island in Banda Sea, islands off northeastern Australia, Palau, Mariana, Marcus, Wake, Caroline, Marshall, Gilbert, Fiji, Hawaiian, Phoenix, Samoa, Line, Society, Austral, Marquesas, Tuamotu, Gambier, Pitcairn, Henderson Islands.

### ***Sula sula websteri* Rothschild**

*Sula websteri* Rothschild, 1898, Bull. Brit. Ornith. Club, **7**, p. 52—Clarión Island, Revillagigedo Islands. Breeds Revillagigedo Islands off Mexico, Cocos Island off Costa Rica, Galapagos Archipelago.

## SULA LEUCOGASTER

### ***Sula leucogaster leucogaster* (Boddaert)**

*Pelecanus Leucogaster* Boddaert, 1783, Table Planches Enlum., p. 57; based on "Le Fou, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 973—Cayenne. Breeds Bahamas, islands off Caribbean coast of Middle America and South America, Cuba, Hispaniola, Puerto Rico, Virgin Islands, Redonda, Dominica, Grenadines (Carriacou), Tobago,

coast of Brazil from Bahia to Paraná, Fernando de Noronha, St. Paul Rocks, Ascension Island, Cape Verde Islands, Guinea (Alcatraz), islets in the Gulf of Guinea off Principe, São Tomé, and Annobón. Ranges Caribbean, Atlantic coast of South America to southern Brazil, Atlantic coast of Africa from Senegal to mouth of Congo; casual east coast of United States, Bermuda, Azores.

***Sula leucogaster plotus* (Forster)**

*Pelecanus Plotus* J. R. Forster, 1844, Descr. Animal. Itinere Maris Australis Terras, p. 278—near New Caledonia.

*Sula leucogaster rogersi* Mathews, 1913, Austral Avian Rec., 1, p. 189—Bedout Island, Western Australia.

*Sula leucogaster yamashinae* Neumann, 1932, Anzeiger Ornith. Gesell. Bayern, 2, p. 146—Chichi Jima, Bonin Islands.

Breeds on Farasan Islands and islands off coast of Sudan, Red Sea; on Mait Island, off Somalia, Gulf of Aden; in Indian Ocean on Cosmoledo, Amirante Islands, ? Cargados Carajos Shoals, Chagos Archipelago, ? Maldive, Cocos-Keeling, Christmas Islands, Pulau Perak off Malaya, islands off Western Australia; in Pacific Ocean on islands in Gulf of Siam and off northeastern Australia, Bonin, Volcano, Palau, Mariana, Wake, Caroline, Marshall, ? Gilbert Islands, New Caledonia, Fiji, Hawaiian, Phoenix, Tonga, Line, Society, Austral, Marquesas, Tuamotu, Gambier Islands.

***Sula leucogaster brewsteri* Goss**

*Sula brewsteri* Goss, 1888, Auk, 5, p. 242—San Pedro Mártir Island, Gulf of California.

*Sula leucogaster nesiotetes* Heller and Snodgrass, 1901, Condor, 3, p. 75—Clipperton Island.

*Sula leucogastra albiceps* van Rossem, 1938, Trans. San Diego Soc. Nat. Hist., 9, p. 9—Isabel Island, western Mexico.

Breeds on islands in Gulf of California, Isabel and Tres Mariás Islands off Nayarit, Mexico, Revillagigedo Islands, Clipperton Island. Casual southeastern California, western Arizona, coast of Mexico to Jalisco and Colima.

***Sula leucogaster etesiaca* Thayer and Bangs**

*Sula etesiaca* Thayer and Bangs, 1905, Bull. Mus. Comp. Zool., 46, p. 92—Gorgona Island, Colombia.

*Sula leucogaster plotus* (nec *Pelecanus plotus* J. R. Forster,

1844) Fisher and Wetmore, 1931, Proc. U. S. Nat. Mus., 79, p. 30—Cocos Island.

Breeds on Bird Island, Gulf of Fonseca, Honduras, Santa Catalina Islands and Cocos Island off Costa Rica, Pearl Islands off Panama, Gorgona Island off Colombia. Casual coasts of Costa Rica and Ecuador; one record Galapagos Archipelago.

#### SULA ABBOTTI

##### *Sula abbotti* Ridgway

*Sula abbotti* Ridgway, 1893, Proc. U. S. Nat. Mus., 16, p. 599—Assumption Island.

Breeds in eastern Indian Ocean on Christmas Island; apparently formerly in western Indian Ocean on Assumption Island, Mauritius and Rodrigues in the Mascarene Islands, and possibly on Gloriosa Island and in the Chagos Archipelago.

#### FAMILY PELECANIDAE

##### GENUS PELECANUS LINNAEUS

*Pelecanus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 132. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 80), *Pelecanus onocrotalus* Linnaeus.

*Cyrtopelicanus* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 7. Type, by original designation, *Pelecanus trachyrhynchus* Latham = *Pelecanus erythrorhynchus* Gmelin.

*Leptopelicanus* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 7. Type, by original designation, *Pelecanus fuscus* Gmelin = *Pelecanus occidentalis* Linnaeus.

*Sacrificator* Boetticher, 1950, Verh. Deutschen Zoologen Mainz (1949), p. 65. Type, by original designation, *Pelecanus crispus* Bruch.

cf. Murphy, 1936, Oceanic Birds South Amer., pp. 807-827. Wetmore, 1945, Auk, 62, pp. 577-586 (races of *occidentalis*).

Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 115-122 (New World).

Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, 1, pp. 52-63 (English trans., 1966, Birds Soviet Union, 1, pp. 52-64).

Palmer (ed.), 1962, Handb. North Amer. Birds, 1, pp. 264-280.

- Schaller, 1964, *Condor*, **66**, pp. 3-23 (breeding behavior of *erythrorhynchos*).
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 42-43.
- Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 279-297.
- Burke and Brown, 1970, *Ibis*, **112**, pp. 499-512 (breeding of *rufescens*).
- Serventy, D. L. and V., and Warham, 1971, *Handb. Austral. Sea-birds*, pp. 181-183.
- Schreiber and Risebrough, 1972, *Wilson Bull.*, **84**, pp. 119-135 (*occidentalis*).
- Brown, Powell-Cotton, and Hopcraft, 1973, *Ibis*, **115**, pp. 352-374 (breeding of *onocrotalus*).
- Din and Eltringham, 1974, *Ibis*, **116**, pp. 28-43 (ecology of *onocrotalus* and *rufescens*), 477-493 (breeding of *rufescens*).
- Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 226-238.
- Schreiber, 1977, *Ornith. Monogr. (Amer. Ornith. Union)*, no. 22, 86 pp. (behavior of *occidentalis*).

PELECANUS ONOCROTALUS<sup>1</sup>***Pelecanus onocrotalus* Linnaeus**

*Pelecanus Onocrotalus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 132; based on "The Pelican" of Edwards, 1747, *Nat. Hist. Birds*, p. 92, pl. 92—Africa, Asia; Caspian Sea, Russia, suggested as restricted type locality by Grant and Mackworth-Praed, 1933, *Bull. Brit. Ornith. Club*, **53**, p. 189.

*Pelecanus roseus* Gmelin, 1789, *Syst. Nat.*, **1**, p. 570; based on "Rose-coloured Pelican" of Latham, 1785, *General Synop. Birds*, **3**, p. 579—Manila, Philippine Islands.

Breeds southeastern Europe: Hungary (formerly), Greece, coast of Black Sea from Bulgaria to Sea of Azov and delta of Volga; Asia: ? eastern Turkey, from Aral Sea to Lakes Balkhash, Sasyk Kul, and Ala Kul in Kazakhstan, Kuwait, Iran (Lake Urmia), ? southern coast of Caspian Sea, India (Rann of Kutch),

<sup>1</sup>*P. onocrotalus*, *rufescens*, *philippensis*, and *conspicillatus* form a subgenus *Pelecanus*.—J. D. and J.-L. M.

Cochinchina; Africa: Mauritania (islands off coast, Aftout-es-Sahel—? irregular), Senegal (delta of Senegal River—? irregular), Nigeria (Wase Rock), Cameroon (Abou Toumour), Chad (Kapsikis), Ethiopia (Lake Shala), Kenya (Lake Elmenteita—recently), Tanzania (Lake Natron—sporadic, Lake Rukwa), Zambia (Lake Mweru, Kafue Flats), Botswana (Lakes Ngami, Makarikari—? both irregular), South West Africa (Etosha Pan, near Walvis Bay—? both irregular), South Africa (Lake St. Lucia, islands off Cape Province). Ranges from Mediterranean to southeastern China and Malay Peninsula; in Africa fresh waters and coasts from Senegal to Nigeria and Red Sea to Cape Province.

#### PELECANUS RUFESCENS

##### ***Pelecanus rufescens* Gmelin**

*Pelecanus rufescens* Gmelin, 1789, Syst. Nat., 1, p. 571; based on "Red-backed Pelican" of Latham, 1785, General Synop. Birds, 3, p. 584—West Africa.

Africa from Senegal (south of Dakar) on the west south to South West Africa (Walvis Bay—? sporadic), on the east from the Red Sea and Ethiopia south to South Africa (Lake St. Lucia); Madagascar. Casual coast of southwestern Arabia.

#### PELECANUS PHILIPPENSIS<sup>1</sup>

##### ***Pelecanus philippensis crispus* Bruch**

*Pelecanus crispus* Bruch, 1832, Isis von Oken, col. 1109—Dalmatia.

Breeds southeastern Europe: Hungary (formerly), Albania, Greece, coast of Black Sea from Bulgaria to Sea of Azov; Asia: Turkey, Caspian Sea, Seistan, Aral Sea, lakes and rivers of Kazakhstan, lakes in southeastern Mongolia, northern China (formerly). In winter to southern Iran and northern

<sup>1</sup>The reasons for retaining the well-known name *philippensis* for this species and not adopting the name *roseus* Gmelin, 1789, so long associated with *P. onocrotalus*, the White or Roseate Pelican, have been explained by Chapin and Amadon, 1952, Ostrich, 23, p. 123.—J. D. and J.-L. M.

India, casually to Italy, Egypt, southern Iraq, Korea, southeastern China, southern Japan.

***Pelecanus philippensis philippensis* Gmelin**

*Pelecanus philippensis* Gmelin, 1789, Syst., Nat., 1, p. 571; based on "Le Pélican des Philippines" of Brisson, 1760, Ornith., 6, p. 527, pl. 46—Philippine Islands.

Breeds India, Sri Lanka (Ceylon), ? Burma, southern China, Hainan, Sumatra, Java, Philippines. Occurs Thailand, Cambodia, Laos, Malay Peninsula, Hong Kong.

PELECANUS CONSPICILLATUS

***Pelecanus conspicillatus* Temminck**

*Pelecanus conspicillatus* Temminck, 1824, Planches Color., livr. 47, pl. 276—Australia = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 244.

*Pelecanus conspicillatus westralis* Mathews, 1912, Novit. Zool., 18, p. 244—Perth, Western Australia.

Breeds Australia coastally and sporadically inland in the east. Strays to Lesser Sunda Islands, Ambon, Tanimbar, New Guinea, Solomon Islands, New Hebrides, New Zealand.

PELECANUS ERYTHRORHYNCHOS<sup>1</sup>

***Pelecanus erythrorhynchus* Gmelin**

*Pelecanus erythrorhynchus* Gmelin, 1789, Syst. Nat., 1, p. 571; based on "Rough-billed Pelican" of Latham, 1785, General Synop. Birds, 3, p. 586—Hudson Bay and New York.

Breeds British Columbia, Alberta, Saskatchewan, Manitoba, southwestern Ontario, Washington, Oregon, California, Idaho, Nevada, Utah, Montana, Wyoming, North and South Dakota, southeastern Texas; formerly Colorado, Minnesota, Iowa. Winters from California, central Arizona, Gulf states, and Florida south coastally through Mexico to Guatemala. Recorded from northern Mackenzie District, James Bay, southern Quebec, Nova Scotia, New Brunswick, most states east of Mississippi River, Bahamas, Cuba.

<sup>1</sup>*P. erythrorhynchus* forms a subgenus *Cyrtopelicanus*.—J. D. and J.-L. M.

PELECANUS OCCIDENTALIS<sup>1</sup>**Pelecanus occidentalis occidentalis** Linnaeus<sup>2</sup>

*Pelecanus occidentalis* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 215; based chiefly on "The Pelican of America" of Edwards, 1747, Nat. Hist. Birds, p. 93, pl. 93—Jamaica, ex Sloane, 1725, Voyage Jamaica, 2, p. 322.

Breeds? Bahamas, southern Cuba, Jamaica, Haiti, Dominican Republic, Puerto Rico, Virgin Islands, St. Martin, Barbuda, islands off coast of Venezuela. Casual Surinam, northeastern Brazil.

**Pelecanus occidentalis carolinensis** Gmelin

*Pelecanus carolinensis* Gmelin, 1789, Syst. Nat., 1, p. 571; based on "Charles-town Pelican" of Latham, 1785, General Synop. Birds, 3, p. 585, and Pennant, 1785, Arctic Zool., p. 580—Charleston Harbor, South Carolina.

Breeds Atlantic and Gulf coasts of southern United States from North Carolina to Texas (reintroduced Louisiana 1968), northern Bahamas, northern Cuba, probably coasts of Mexico and Central America to Panama. Casual interior southeastern United States, Bermuda, West Indies, northeastern Brazil.

**Pelecanus occidentalis californicus** Ridgway

*Pelecanus californicus* Ridgway, in Baird, Brewer, and Ridgway, Mem. Mus. Comp. Zool., 13, pp. 132 (in key), 143<sup>3</sup>—coast of California from San Francisco Bay to Cape St. Lucas. Type from La Paz, Baja California.

Breeds on islands off coasts of California, Baja California, and Nayarit, from Monterey to Tres Marias Islands. Casual north to southern British Columbia, inland to Arizona, west to Guadalupe Island, south to Colima.

**Pelecanus occidentalis murphyi** Wetmore

*Pelecanus occidentalis murphyi* Wetmore, 1945, Auk, 62, p. 583—Pelado Island, Santa Elena Bay, Ecuador.

Breeds on islands off Pacific coast of Colombia and Ecuador. Ranges south to Talara, Peru.

<sup>1</sup>*P. occidentalis* forms a subgenus *Leptopelicanus*.—J. D. and J.-L. M.

<sup>2</sup>The subspecific status of birds breeding in the Bahamas, Cuba, Mexico, Central America, Caribbean, and South America is still uncertain.—J. D. and J.-L. M.

<sup>3</sup>*Pelecanus (fuscus?) californicus* on p. 143.—J. D. and J.-L. M.



***Pelecanus occidentalis urinator* Wetmore**

*Pelecanus occidentalis urinator* Wetmore, 1945, Auk, **62**, p. 582—Hood Island, Galapagos Archipelago.  
Galapagos Archipelago.

***Pelecanus occidentalis thagus* Molina**

*Pelecanus Thagus* Molina, 1782, Saggio Storia Nat. Chili, p. 240—Chile.  
Breeds on coasts and islands from northern Peru to central Chile. Casual south to Tierra del Fuego.

## ORDER CICONIIFORMES

## SUBORDER ARDEAE

FAMILY ARDEIDAE<sup>1</sup>

ROBERT B. PAYNE

- cf. Kuroda, Nagamichi, 1936, Birds Island Java, pp. 542-561 (Indonesia).  
Ripley, 1944, Bull. Mus. Comp. Zool., **94**, pp. 318-321 (western Sumatra islands).  
Austin, 1948, Bull. Mus. Comp. Zool., **101**, pp. 36-44 (Korea).  
Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, pp. 166-242 (New World).  
Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuz, **2**, pp. 393-475 (English trans., 1968, Birds Soviet Union, **2**, pp. 456-553).  
Amadon and Woolfenden, 1952, Amer. Mus. Novit., no. 1564, pp. 7-16 (Australian region).  
Bock, 1956, Amer. Mus. Novit., no. 1779, 49 pp. (generic review).  
Meyerriecks, 1960, Publ. Nuttall Ornith. Club, no. 2, 166 pp. (behavior 4 North American species).

<sup>1</sup>MS read by D. Amadon, W. J. Bock, E. Eisenmann (New World forms), E. Mayr, D. W. Mock, K. C. Parkes, R. Schodde (Australian forms), D. W. Snow (African forms), R. W. Storer, and G. van Tets (Australian forms). For further comments the author wishes to thank C. W. Benson, M. D. Bruce, R. W. Dickerman, T. R. Howell, M. P. S. Irwin, J. R. Jehl, R. T. Paul, and K. H. Voous.

- Meyerriecks, 1962, in Palmer (ed.), *Handb. North Amer. Birds*, **1**, pp. 381-508.
- Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, pp. 56-76.
- Bauer and Glutz von Blotzheim, 1966, *Handb. Vögel Mitteleuropas*, **1**, pp. 298-387.
- Rand and Gilliard, 1967, *Handb. New Guinea Birds*, pp. 39-47.
- Haverschmidt, 1968, *Birds Surinam*, pp. 11-26.
- Ornith. Soc. N. Z., 1970, *Annot. Checklist Birds N. Z.*, pp. 34-35.
- Curry-Lindahl, 1971, *Ostrich*, Suppl. no. 9, pp. 53-70 (systematic relationships).
- Moreau, 1972, *Pal.-Afr. Bird Migration Systems*, pp. 224-228 (ringing recoveries).
- McClure, 1974, *Migration Survival Birds Asia*, pp. 72-92.
- Medway and Wells, 1976, *Birds Malay Peninsula*, **5**, pp. 84-93.
- Payne and Risley, 1976, *Misc. Publ. Mus. Zool., Univ. Michigan*, no. 150, 119 pp. (skeletal characters and systematic relationships).
- Blake, 1977, *Man. Neotropical Birds*, **1**, pp. 154-187.
- Cramp and Simmons (eds.), 1977, *Birds Western Palearctic*, **1**, pp. 245-320 (distribution and ringing recoveries).
- Hancock and Elliott, 1978, *Hérons World*, 304 pp.

#### SUBFAMILY ARDEINAE

#### GENUS SYRIGMA RIDGWAY

- Syrigma* Ridgway, 1878, *Bull. U. S. Geol. Geogr. Surv. Territories*, **4**, pp. 224, 247. Type, by original designation, *Ardea sibilatrix* Temminck.
- cf. Humphrey and Parkes, 1963, *Proc. XIII Int. Ornith. Congr., Ithaca (1962)*, pp. 84-90.
- Short, 1969, *Wilson Bull.*, **81**, pp. 330-331 (behavior).
- Kahl, 1971, *Wilson Bull.*, **83**, pp. 302-303 (behavior).

#### SYRIGMA SIBILATRIX

- Syrigma sibilatrix** (Temminck)  
*Ardea sibilatrix* Temminck, 1824, *Planches Color.*, livr. 46, pl. 271—Brazil and Paraguay.

*Syrigma sibilatrix fostersmithi* Friedmann, 1949, Smithsonian Misc. Coll., 111, no. 9, p. 1—Caicara, Monagas, Venezuela.<sup>1</sup>

Upper Orinoco region of Colombia and Venezuela, Bolivia, Paraguay, southeastern Brazil, Uruguay, northeastern Argentina south to Buenos Aires.

GENUS **PILHERODIUS** BONAPARTE

*Pilherodius* Bonaparte, 1855, Consp. Gen. Avium, 2, p. 139. Type, by monotypy, *Ardea alba* var.  $\beta$  Gmelin = *Ardea pileata* Boddaert.

**PILHERODIUS PILEATUS**

***Pilherodius pileatus*** (Boddaert)

*Ardea pileata* Boddaert, 1783, Table Planches Enlum., p. 54; based on "Heron blanc, hupé de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 907—Cayenne.

Eastern Panama, Colombia, Venezuela, the Guianas, and east of the Andes south to northern Bolivia, northern Paraguay, and southeastern Brazil (Santa Catarina).

GENUS **ARDEA** LINNAEUS

*Ardea* Linnaeus, 1758, Syst. Nat., ed. 10, p. 141. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 60), *Ardea cinerea* Linnaeus.

*Casmerodius* Gloger, 1842, Gemeinnütziges Hand- und Hilfsbuch Naturgeschichte, p. 412. Type, by subsequent designation (Salvadori, 1882, Ornitologia Papuasias Molucche, 3, p. 349), *Ardea egretta* Gmelin.

*Pyrhrherodia* Finsch and Hartlaub, 1870, Vögel Ost-Afrikas, p. 676. Type, by monotypy, *Ardea purpurea* Linnaeus.

cf. Parkes, 1955, Ann. Carnegie Mus., 33, pp. 287-293 (*cinerea-herodias* complex).

Mayr, 1956, Auk, 73, pp. 71-77 (*occidentalis*).

Meyerrieks, 1957, Auk, 74, pp. 469-478 (*occidentalis*).

Cottrille and Cottrille, 1958, Misc. Publ. Mus. Zool., Univ. Michigan, no. 102, 15 pp. (behavior of *herodias*).

<sup>1</sup>Additional material is necessary to substantiate the validity of this form.—R. B. P.

- Johansen, 1958, Journ. Ornith., **99**, pp. 69-72 (Asiatic forms of *cinerea* and *purpurea*).
- North, 1963, Journ. East Afr. Nat. Hist. Soc., **24**, pp. 33-63 (behavior of *melanocephala*).
- Hitchcock, 1964, CSIRO Div. Wildlife Res., Tech. Paper no. 7, 40 pp. (ringing recoveries of *alba*).
- Spillner, 1968, Beitr. Vogelkunde, **14**, pp. 29-74 (behavior of *cinerea*).
- Bancroft, 1969, Auk, **86**, pp. 141-142 (mixed nesting of *occidentalis* and *herodias*).
- Milstein, Presst, and Bell, 1970, Ardea, **58**, pp. 171-257 (behavior of *cinerea*).
- Pratt, 1970, Condor, **72**, pp. 407-416 (breeding biology of *herodias* and *alba*).
- Seton, 1973, Emu, **73**, pp. 9-11 (*sumatrana*).
- Gallagher, 1974, Bull. Brit. Ornith. Club, **94**, pp. 122-126 (wintering range of *alba*).
- Tomlinson, 1974, Ostrich, **45**, pp. 209-223 (behavior of *purpurea*).
- Mock, 1976, Wilson Bull., **88**, pp. 185-230 (behavior of *herodias*).
- Tomlinson, 1976, Ostrich, **47**, pp. 161-178 (behavior of *alba*).
- Wiese, 1976, Auk, **93**, pp. 709-724 (behavior of *alba*).
- Medway and Wells, 1977, Bull. Brit. Ornith. Club, **96**, pp. 21-22 (*cinerea*, Malay Peninsula).
- Walmsley, 1977, Station Biologique Tour Valat 1974-1975, pp. 41-43 (ringing recoveries).
- Mock, 1978, Condor, **80**, pp. 159-172 (behavior of *alba*).

ARDEA CINEREA<sup>1</sup>**Ardea cinerea cinerea** Linnaeus

*Ardea cinerea* Linnaeus, 1758, Syst. Nat., ed. 10, p. 143—Europe; restricted to Sweden by Hartert, 1920, Vögel Pal. Fauna, p. 1229.

*Ardea rectirostris* Gould, 1843, Proc. Zool. Soc. London, p. 22—New South Wales; restricted to India by Ripley, 1961, Synop. Birds India Pakistan, p. 12.

British Isles, Norway to lat. 70° N., Sweden, Finland, east

<sup>1</sup>*A. cinerea*, *herodias*, and *cocoi* form a superspecies.—R. B. P.

across USSR to Ussuriland and Sakhalin, south to southern Spain, France, central Italy, Balkans, Turkey, Iran, Russian Turkistan, India, Sri Lanka (Ceylon); sub-Saharan Africa from Senegal east to the Red Sea and south to Cape Province, breeding in Nigeria, Kenya, Uganda, Tanzania, Zambia, Rhodesia (Zimbabwe), and South Africa. Formerly bred in Sardinia, Israel, Iraq, and northern Africa. Winters from British Isles and Central Europe, Iran, Baluchistan, and Sind south to tropical and southern Africa, northern India, ? Japan, ? eastern China; many European birds winter in western Africa, Russian birds to Egypt and Sudan, bird ringed Volga delta to Kenya. Casual Iceland, Faeroes, Spitsbergen, and Ascension Island; accidental Greenland, Martinique, Montserrat (Lesser Antilles), and Trinidad.

***Ardea cinerea jouyi* Clark**

*Ardea cinerea jouyi* Clark, 1907, Proc. U. S. Nat. Mus., 32, p. 468—Seoul, Korea.

*Ardea cinerea altirostris* Mees, 1971, Zool. Mededelingen Rijksmus. Nat. Hist. Leiden, 45, p. 225—Sedari, east of Tjitaroem delta, Krawang, western Java.

Mongolia, China, Korea, Japan, Taiwan, Hainan, Burma, Thailand, Indochina, Malay Peninsula, Sumatra, Java, possibly Lesser Sunda Islands (Sumbawa). Winters from China, Japan, Ryukyus, and Taiwan south to Thailand and the Philippines. Three records from Australia and one (? subspecies—immature plumage) from New Zealand; recoveries in Thailand of birds ringed in southeastern Siberia, and one in Luzon of bird ringed as nestling in Korea. Intergrades with nominate *cinerea* from Transbaicalia to Ussuriland and probably Manchuria.

***Ardea cinerea firasa* Hartert**

*Ardea cinerea firasa* Hartert, 1917, Bull. Brit. Ornith. Club, 38, p. 6—Antinosy country, southwestern Madagascar = near Fort Dauphin, southeastern Madagascar.

Madagascar, Aldabra, ? Comoros. Aldabra birds are intermediate between *cinerea* and *firasa*.

***Ardea cinerea monicae* Jouanin and Roux**

*Ardea cinerea monicae* Jouanin and Roux, 1963, Oiseau, 33, p. 104—Isle Ariel, Banc d'Arguin, Mauritania.

Ariel and western Kianone Islands, coast of northern Mauritania. Wanders to Senegal (Richard Toll).

## ARDEA HERODIAS

***Ardea herodias fannini* Chapman**

*Ardea herodias fannini* Chapman, 1901, Bull. Amer. Mus. Nat. Hist., **14**, p. 87—Skidegate, Graham Island, Queen Charlotte Islands.

Pacific coast of North America from southeastern Alaska (Yakutat Bay) south through Queen Charlotte Islands and coastal British Columbia to coastal Washington. Wanders inland. Winters in breeding range.

***Ardea herodias herodias* Linnaeus**

*Ardea herodias* Linnaeus, 1758, Syst. Nat., ed. 10, p. 143; based on "The Ash-colour'd Heron from North-America" of Edwards, 1750, Nat. Hist. Birds, p. 135, pl. 135—America = Hudson Bay ex Edwards.

*Ardea lessonii* Wagler, 1831, Isis von Oken, col. 531—Mexico.

*Ardea wardi* Ridgway, 1882, Bull. Nuttall Ornith. Club, **7**, p. 5—Oyster Bay, Florida; corrected to Estero Bay by Holt, 1925, Auk, **42**, p. 267.<sup>1,2</sup>

*Ardea herodias treganzai* Court, 1908, Auk, **25**, p. 291—Egg Island, Great Salt Lake, Utah.<sup>3</sup>

*Ardea herodias adoxa* Oberholser, 1912, Proc. U. S. Nat. Mus., **43**, p. 544—Curaçao.

*Ardea herodias hyperonca* Oberholser, 1912, Proc. U. S. Nat. Mus., **43**, p. 550—Baird, northern California.

<sup>1</sup>Southern birds average larger than northern birds, but the eastern variation in size is clinal, and no subspecies need be recognized in continental North America except in the Pacific northwest and in Florida.—R. B. P.

<sup>2</sup>The type of *wardi* was taken on 5 January 1881. It is not known whether this was a local breeding bird or a wintering bird from a more northern population. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, p. 171, list *wardi* as a synonym of *A. h. occidentalis*. The only distinguishing feature of the *occidentalis* breeding population is the high proportion of white-phase birds; in size the birds of peninsular Florida overlap with those of Florida Bay and the Keys. As far as is known, many blue-phase birds breeding in the Keys may be morphologically indistinguishable from the birds of inland peninsular Florida.—R. B. P.

<sup>3</sup>Western birds have pale necks but color intergrades considerably in eastern Texas and Oklahoma.—R. B. P.

*Ardea herodias oligista* Oberholser, 1912, Proc. U. S. Nat. Mus., 43, p. 553—San Clemente Island, California.

*Ardea herodias sancti-lucae* Thayer and Bangs, 1912, Proc. New England Zool. Club, 4, p. 83—Espiritu Santo Island, Baja California, Mexico.<sup>1</sup>

Northern and eastern North America from Alberta and Washington east of the Cascades to James Bay, Gulf of St. Lawrence, and northeastern United States south through Oregon, California, Baja California, the Great Basin, Great Plains, and Mississippi Valley to eastern Texas, the Gulf coast, and Florida (except for the southwestern coast and the Florida Bay area). In Mexico breeds in Sinaloa (Isla Las Tunas), Nayarit (Isla Mexcaltitán), and locally in Tamaulipas, Campeche, and Yucatán.<sup>2</sup> Winters throughout breeding range in North America (sparsely in the north) and south through Middle America to Colombia and Venezuela and through the West Indies to Trinidad and Tobago. Some nonbreeding birds remain in winter quarters. Ringed young in northeastern United States recovered after migrating to Tamaulipas, Oaxaca, Yucatán, Guatemala, Belize (British Honduras), Nicaragua, Panama, and Cuba.

#### ***Ardea herodias occidentalis* Audubon**

*Ardea occidentalis* Audubon, 1835, Birds Amer., pl. 281—keys near Key West, Florida, *vide* Audubon, 1835, Ornith. Biogr., 3, p. 542.

*Ardea würdemannii* Baird, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, p. 669—southern Florida.<sup>3</sup>

*Ardea repens* Bangs and Zappey, 1905, Amer. Naturalist, 39, p. 186—Ciénaga, Isle of Pines.<sup>4</sup>

Florida Keys and islets of Florida Bay; uncommon extreme

<sup>1</sup>Birds of southern Baja California and, to a lesser extent, Sinaloa and Nayarit are paler.—R. B. P.

<sup>2</sup>Bird taken as nestling near Progreso on 7 December 1918, kept for four years in the Bronx Zoo, New York City, and preserved as AMNH 325350, appears to be the only specimen of a definitely local *Ardea herodias* from Yucatán.—R. B. P.

<sup>3</sup>*A. würdemannii* is a whitish-headed, dark color form of *A. h. occidentalis*. Dark-headed birds also breed in this area.—R. B. P.

<sup>4</sup>Specimen appears to be a juvenile, perhaps from Florida.—R. B. P.

southern coastal Florida,<sup>1</sup> resident; visitor to West Indies (Cuba, Isle of Pines, Jamaica, Puerto Rico, St. Thomas, Anegada, St. Vincent). Only documented breeding records in West Indies are Camagüey Province, Cuba, and St. Thomas, Virgin Islands, both based on eggs, not breeding adult specimens. White-phase birds reported to breed on islands off coast of Venezuela (Isla Los Roques)<sup>2</sup> and observed but not breeding in Yucatán. Nonbreeding birds throughout West Indies to Bahamas and Guadeloupe, also to northern Florida, occasionally north to Georgia and west at least to Alabama along Gulf coast.

***Ardea herodias cognata* Bangs**

*Ardea herodias cognata* Bangs, 1903, Proc. New England Zool. Club, 3, p. 100—Santa Cruz (Indefatigable) Island, Galapagos Archipelago.  
Resident Galapagos Archipelago.

ARDEA COCOI

***Ardea cocoi* Linnaeus**

*Ardea Cocoi* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 237; based chiefly on "Le Héron hupé de Cayenne" of Brisson, 1760, Ornith., 5, p. 400—Cayenne.  
Eastern Panama (Darién; casual eastern Panamá Province) and South America from Colombia, Venezuela, Trinidad, and the Guianas south to Chile (Magallanes) and Argentina (Chubut); accidental Falkland Islands.

ARDEA PACIFICA

***Ardea pacifica* Latham**

*Ardea pacifica* Latham, 1801, Index Ornith., Suppl., p. 45—New South Wales.  
Australia. Uncommon southern New Guinea and Tasmania, accidental New Zealand.

<sup>1</sup>The local distribution and variation of the breeding birds of extreme southern mainland Florida remain to be determined.—R. B. P.

<sup>2</sup>Breeding specimens were not examined; possibly these are morphologically distinguishable from the Florida birds.—R. B. P.



## ARDEA MELANOCEPHALA

**Ardea melanocephala** Vigors and Children

*Ardea melanocephala* Anon. = Vigors and Children, 1826, in Denham and Clapperton, Narrative Travels Discoveries Northern Central Africa, App. no. 21, p. 201—no locality; ? near Lake Chad.

Africa from Senegal to Nigeria, Sudan, and Ethiopia, south through eastern, south-central, and southern Africa to Cape Province, in nonforested regions. Occasional visitor Madagascar.

## ARDEA HUMBLOTI

**Ardea humbloti** Milne-Edwards and Grandidier

*Ardea humbloti* Milne-Edwards and Grandidier, 1885, Hist. Nat. Madagascar, Oiseaux, 1, p. 546—eastern Madagascar. East coast of Madagascar.

ARDEA IMPERIALIS<sup>1</sup>**Ardea imperialis** Stuart Baker

*Ardea insignis* Hume, 1878, Stray Feathers, 6, p. 470—Sikkim terai, Bhutan duars, etc.

*Ardea imperialis* Stuart Baker, 1929, Bull. Brit. Ornith. Club, 49, p. 40. New name for *Ardea insignis* Hume, 1878, preoccupied by *Ardea insignis* Hodgson, 1844, in J. E. Gray (ed.), Zool. Misc., p. 86 (*nomen nudum*).

Locally along the eastern Himalayan foothills from Nepal and Sikkim through India (Bihar), Bangladesh, northeastern Assam to Burma (Mali Hka near Putao, northern Chin Hills, Arakan; few records from Mandalay, Toungoo, and Pegu districts).

## ARDEA SUMATRANA

**Ardea sumatrana** Raffles

*Ardea Sumatrana* Raffles, 1822, Trans. Linn. Soc. London, 13, p. 325—Sumatra.

*Ardea fusca* Blyth, 1844, Ann. Mag. Nat. Hist., 13, p. 176—Arakan.

<sup>1</sup>*A. imperialis* and *sumatrana* form a superspecies.—R. B. P.

*Ardea sumatrana mathewsae* Mathews, 1912, Novit. Zool., 18, p. 230—Cooktown; corrected to Bellenden Ker, Queensland, by Amadon and Woolfenden, 1952, Amer. Mus. Novit., no. 1564, p. 8.

Burma (Arakan, Tenasserim), Thailand (islets off Trat, both coasts of peninsula), southern Vietnam, Malay Peninsula, Sumatra, western Sumatra islands, Java, Borneo, Philippines (Mindoro, Palawan, Bantayan, Negros, Bohol, Sulu Archipelago), Celebes, Lesser Sunda Islands (Bali, Flores, Timor), Timor, Moluccas, New Guinea, and northern Australia.

#### ARDEA GOLIATH

##### **Ardea goliath** Cretzschmar

*Ardea goliath* Cretzschmar, 1827, in Rüppell, Atlas Reise Nördl. Afrika, Vögel (1826), p. 39, pl. 26—Bahr el Abiad = White Nile.

*Ardea nobilis* Blyth, 1844, Ann. Mag. Nat. Hist., 13, p. 175—the salt-water lake above Calcutta.

Africa from Senegal, Gambia, and Guinea-Bissau through western Africa, Zaire, Sudan, Ethiopia, south through Angola, Zambia, Malawi, Mozambique, Botswana, Rhodesia (Zimbabwe), Transvaal, Natal; uncommon in eastern Cape Province. Also Iraq, islands off African and Arabian coasts south of Red Sea, Madagascar. Uncommon in Baluchistan, Sind, Uttar Pradesh, Bangladesh, Assam, and Sri Lanka (Ceylon); accidental in Egypt (Red Sea), Israel, Syria (last century), Aden.

#### ARDEA PURPUREA

##### **Ardea purpurea purpurea** Linnaeus

*Ardea purpurea* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 236—"in Oriente"; restricted to France by Stresemann, 1920, Avifauna Macedonica, p. 226.

*Ardea purpurea bournei* Naurois, 1966, Oiseau, 36, p. 89—S. Domingos, Ilha de São Tiago, Cape Verde Archipelago.<sup>1</sup> Palaeartic from France, Iberian Peninsula, Netherlands, and West Germany east to southeastern Russia, Turkey, Iraq, Iran,

<sup>1</sup>Additional observations of breeding individuals are required to confirm that breeding birds are uniformly paler than continental birds or visiting nonbreeding birds in the Cape Verde Archipelago.—R. B. P.

Kazakhstan, ? Afghanistan; northern Africa (Morocco to Tunisia); formerly bred Sicily. Also sub-Saharan Africa, breeding in Senegal, ? Nigeria, Kenya, Uganda, Tanzania, Zambia, Malawi, ? Zambezi River in Mozambique, Rhodesia (Zimbabwe), Botswana, and South Africa; Cape Verde Islands. Wanders to British Isles, Scandinavia, Azores, Madeira, Canaries. Palaearctic birds ringed in France and Netherlands recovered in Mauritania, Senegal, Gambia, Mali, Niger, Sierra Leone, Ivory Coast, Ghana, and Benin (Dahomey), birds from western Russia in Nigeria, Cameroon, and western Sudan.

***Ardea purpurea madagascariensis* Oort**

*Ardea purpurea madagascariensis* Oort, 1910, Notes Leyden Mus., 32, p. 83—Madagascar.

Madagascar and Seychelles (Praslin Island).

***Ardea purpurea manilensis* Meyen**

*Ardea purpurea* var. *manilensis* Meyen, 1834, Nova Acta Acad. Caes. Leopold.-Carol. Nat. Curiosorum, Halle, 16, Suppl., p. 102—Philippines.

*Phoyx purpurea ussuriana* Shulpin, 1928, Annuaire Mus. Zool. Acad. Sci. URSS, 28 (1927), p. 399—mouth of the Lefu River, Lake Khanka, southern Ussuriland.

Manchuria and southern Ussuriland, eastern China, southern Ryukyus, Taiwan, India, Sri Lanka (Ceylon), Burma, Andaman and Nicobar Islands, Thailand, Indochina, Malay Peninsula, Sumatra, western Sumatra islands, Java, Kangean, Borneo, Philippines, Celebes, and Lesser Sunda Islands (Bali, Lombok, Sumbawa, Flores, Roti). Migratory in north, wintering southern Ryukyus, China from Yangtze River south, Taiwan, migratory through Korea and Japan. Birds ringed near Vladivostok recovered in South Korea, Thailand, Malaya.

**ARDEA ALBA**

***Ardea alba alba* Linnaeus**

*Ardea alba* Linnaeus, 1758, Syst. Nat., ed. 10, p. 144—Europe.

Breeds in central and southeastern Europe, Turkey, western and northern Asia to southeastern Siberia, Mongolia, northern China, and northern Japan; casual in southern Japan. Winters to central Africa (ringed Russian bird recovered in the Central African Empire), Persian Gulf, Pakistan, northern India, southern Korea, and southern China.

***Ardea alba modesta* Gray**

*Ardea modesta* J. E. Gray, 1831, Zool. Misc., p. 19—India.

*Herodias alba maoriana* Mathews and Iredale, 1913, Ibis, p. 404—New Zealand.

Pakistan, India, Sri Lanka (Ceylon), Bangladesh, Manchuria, Korea, southern Japan, eastern China, Burma, Andaman Islands, Thailand, Indochina, Malay Peninsula, Sumatra, Java, Borneo, Philippines, Celebes, Sula Islands, Lesser Sunda Islands (Flores, Timor), Moluccas (Morotai, Ternate), New Guinea, Solomon Islands (Bougainville, Rennell), Australia, and New Zealand. Winters from Ryukyus to southeastern China and through southern part of breeding range to Macquarie Island and Chatham Islands south and east of New Zealand; wanders north to Hokkaido and Kurils. Winter records from Persian Gulf and Lord Howe Island. Birds ringed in Korea and Japan recovered in Philippines, Australian bird recovered in New Guinea.

***Ardea alba melanorhynchos* Wagler**

*Ardea Melanorhynchos* Wagler, 1827, Syst. Avium, Addit.—Senegambia.

Africa from Senegal and Sudan south to Cape Province; Madagascar.

***Ardea alba egretta* Gmelin**

*Ardea Egretta* Gmelin, 1789, Syst. Nat., 1, p. 629; based chiefly on "La Grande Aigrette" of Buffon, 1780, Hist.

Nat. Générale, 22, Hist. Nat. Oiseaux, 7, p. 377—Santo

Domingo, Falkland Islands, South America to Louisiana.

North America from southern Oregon, eastern Great Plains, southern Great Lakes, and New York south through Middle America; South America to Strait of Magellan and Patagonia. Disperses northward in North America to Great Basin, Great Plains, southern Ontario, southern Quebec. Winters throughout warmer parts of range. Accidental Tierra del Fuego and Falkland Islands.

GENUS **EGRETTA** FORSTER

*Egretta* T. Forster, 1817, Synop. Cat. Brit. Birds, p. 59. Type, by monotypy, *Ardea garzetta* Linnaeus.

*Demigretta*<sup>1</sup> Blyth, 1846, Journ. Asiatic Soc. Bengal, 15,

<sup>1</sup> Often emended to *Demiegretta* (cf. Sharpe, 1895, Bull. Brit. Ornith. Club, 3, p. 11).—R. B. P.

- p. 372. Type, by monotypy, *Demigretta concolor* Blyth = *Ardea sacra* Gmelin.
- Bubulcus* Bonaparte (ex Pucheran MS), 1855 (April), Compt. Rend. Acad. Sci., Paris, **40**, p. 722. Type, by tautonymy, *Ardea ibis* "Hasselquist" (=Linnaeus) = *Ardea bubulcus* Audouin.
- Florida* Baird, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, **9**, pp. xxi, xlv, 659, 671. Type, by monotypy, *Ardea caerulea* Linnaeus.
- Hydranassa* Baird, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, **9**, p. 660. Type, by original designation, *Ardea ludoviciana* Wilson = *Egretta ruficollis* Gosse.
- Dichromanassa* Ridgway, 1878, Bull. U. S. Geol. Geogr. Surv. Territories, **4**, pp. 224, 246. Type, by original designation, *Ardea rufa* Boddaert = *Ardea rufescens* Gmelin.
- Leucophoyx* Sharpe, 1894, Bull. Brit. Ornith. Club, **3**, p. 39. Type, by original designation, *Ardea candidissima* Gmelin = *Ardea thula* Molina.
- Melanophoyx* Sharpe, 1894, Bull. Brit. Ornith. Club, **3**, p. 38. Type, by original designation, *Ardea calceolata* Du Bus de Gisignies = *Ardea ardesiaca* Wagler.
- Mesophoyx* Sharpe, 1894, Bull. Brit. Ornith. Club, **3**, p. 38. Type, by original designation, *Ardea intermedia* Wagler.
- Notophoyx* Sharpe, 1895, Bull. Brit. Ornith. Club, **5**, p. 13. Type, by original designation, *Ardea novaehollandiae* Latham.
- Hemigarzetta* Mathews, 1914, Birds Australia, **3**, p. 448. Type, by original designation, *Herodias eulophotes* Swinhoe.
- cf. Steinbacher, F., 1936, Ornith. Monatsber, **44**, pp. 19-22 (relationships in *gularis-dimorpha-cineracea-garzetta* complex).
- Mayr and Amadon, 1941, Amer. Mus. Novit., no. 1144, 11 pp. (variation in *sacra*).
- Coomans de Ruiter, 1948, Limosa, **21**, pp. 69-83 (*picata*).
- Berlioz, 1959, Ostrich, Suppl. no. 3, pp. 415-417 (*garzetta, dimorpha, gularis*).
- Milon, 1959, Ostrich, Suppl. no. 3, pp. 250-259 (*dimorpha*).
- Sterbetz, 1961, Seidenreih (Neue Brehm-Bücherei 292), 131 pp. (*garzetta*).
- Vaurie, 1963, Bull. Brit. Ornith. Club, **83**, pp. 164-166 (systematics of *ibis*).

- Skead, 1966, Ostrich, Suppl. no. 6, pp. 109-139 (life history of *ibis*).
- Dusi, 1967, Wilson Bull., **79**, pp. 223-235 (migration of *caerulea*).
- Helbig, 1968, Beitr. Vogelkunde, **13**, pp. 397-454 (behavior of *garzetta*, *thula*, *ibis*).
- Purchase, 1968, CSIRO Div. Wildlife Res., Tech. Paper no. 14, 52 pp. (ringing recoveries of *garzetta*).
- Blaker, 1969, Ostrich, **40**, pp. 75-129 (behavior of *ibis*).
- Blaker, 1969, Ostrich, **40**, pp. 150-155 (behavior of *garzetta* and *intermedia*).
- Naurois, 1969, Mém. Mus. Nat. Hist. Nat., Paris, nouv. sér., sér. A, Zool., pp. 84-229 (sympatry of breeding *gularis* and *garzetta*, coastal western Africa).
- Siegfried, 1970, Ostrich, **41**, pp. 122-135 (mortality and dispersal of *ibis*).
- Benson, 1971, Bull. Brit. Ornith. Club, **91**, p. 7 (*ibis seychellarum*).
- Benson and Penny, 1971, Philos. Trans. Roy. Soc. London, ser. B, **260**, pp. 433-444 (*ibis* and *dimorpha*, Aldabra and Malagasy region).
- Benson *et al.*, 1971, Birds Zambia, pp. 385-386 (ringing recoveries).
- Crosby, 1972, Bird-Banding, **43**, pp. 205-212 (range of *ibis*, New World).
- Murton, 1972, Biol. Conserv., **4**, pp. 89-96 (ecology and status of *eulophotes*).
- Recher and Recher, 1972, Emu, **72**, pp. 85-90 (feeding behavior of *sacra*).
- Siegfried, 1972, Ostrich, **43**, pp. 43-55 (breeding biology of *ibis*).
- Harris, 1973, Condor, **75**, p. 268 (*ibis*, Galapagos).
- Holyoak, 1973, Ibis, **115**, pp. 419-420 (color dimorphism in *sacra*).
- Parkes, 1973, Nemouria, no. 11, pp. 14-15 (*garzetta*, Philippines).
- White, 1974, Bull. Brit. Ornith. Club, **94**, pp. 9-11 (*novae-hollandiae*, Wallacea).
- Irwin, 1975, Bonner Zool. Beitr., **26**, pp. 155-163 (*ardesiaca*, *vinaceigula*).
- Mees, 1975, Zool. Mededelingen Rijksmus. Nat. Hist. Leiden, **49**, pp. 118-119 (*intermedia*).

- Priolo, 1976, Riv. Ital. Ornitologia, **46**, pp. 253-256 (*gularis*, Mediterranean).  
 Voisin, 1976-77, Oiseau, **46**, pp. 387-423, **47**, pp. 65-103 (behavior of *garzetta*).  
 Rodgers, 1977-78, Wilson Bull., **89**, pp. 266-285, **90**, pp. 45-59 (behavior of *tricolor*).

## EGRETTA RUFESCENS

**Egretta rufescens rufescens** (Gmelin)

*Ardea rufescens* Gmelin, 1789, Syst. Nat., **1**, p. 628; based chiefly on "L'Aigrette rousse, de la Louisiane" of Daubenton, 1765-81, Planches Enlum., pl. 902—Louisiana.

*Dichromanassa rufescens colorata* Griscom, 1926, Amer. Mus. Novit., no. 235, p. 9—Culebra Cay, Ascension Bay, eastern Quintana Roo.

Gulf coast of United States: Texas coastal islands, Louisiana (Chandeleur Islands), Florida (Tampa Bay to Florida Bay and Lower Keys); Mexico: Tamaulipas (Laguna Madre), Veracruz (Laguna de Tamiahua), Yucatán Peninsula and nearby islands, Chiapas (Mar Muerto, Arriaga); West Indies: Bahamas, Cuba, Hispaniola. Formerly bred Atlantic coast of Florida south from Cape Canaveral. Resident through most of range; occasional inland in southeastern United States, rarely to north-eastern states and southern Great Lakes; nonbreeding records in Belize (British Honduras), Guatemala, Costa Rica, Caribbean coastal Colombia (Magdalena, Guajira) and Venezuela (Zulia, Falcón, Sucre), nearby islands (Aruba, Curaçao, Bonaire, Las Aves, Los Roques, La Tortuga, Margarita), and inland to Colón, Táchira.

**Egretta rufescens dickeyi** (van Rossem)

*Dichromanassa rufescens dickeyi* van Rossem, 1926, Condor, **28**, p. 246—San Luis Island, Gulf of California.

Breeds in Baja California south from Scammon Lagoon and in Gulf of California. Nonbreeding records north to southern California and Arizona and south from Sinaloa to Guatemala and El Salvador.<sup>1</sup>

<sup>1</sup>Dark-phase birds are nearly all darker than the dark-phase birds of the Gulf of Mexico, and white-phase birds are uncommon.—R. B. P.

## EGRETTA PICATA

**Egretta picata** (Gould)

*Ardea (Herodias) picata* Gould, 1845, Proc. Zool. Soc. London, p. 62—Port Essington, Northern Territory Australia. Celebes, southern Moluccas, Tanimbar, Aru Islands, New Guinea, northern Australia.

## EGRETTA VINACEIGULA

**Egretta vinaceigula** (Sharpe)

*Melanophoyx vinaceigula* Sharpe, 1895, Bull. Brit. Ornith. Club, 5, p. 13—Potchefstroom, Transvaal. Southern Africa. The 5 known specimens are from the type locality, from Kabuta, Caprivi Strip, and from Xugana and Okavango, Botswana. Sight records are from Caprivi Strip, northern Botswana, and Kafue River flats in Zambia.

## EGRETTA ARDESIACA

**Egretta ardesiaca** (Wagler)

*Ardea ardesiaca* Wagler, 1827, Syst. Avium, *Ardea*, no. 20—Senegambia. Africa from Senegal and Guinea-Bissau through western Africa to Ghana, Nigeria, and Chad, southern Sudan, Ethiopia, and Kenya, through eastern Zaire, Angola, Zambia, Malawi, Caprivi Strip, Botswana, Rhodesia (Zimbabwe) to Transvaal and Natal; also Pemba and Zanzibar.

## EGRETTA TRICOLOR

**Egretta tricolor ruficollis** Gosse

*Egretta ruficollis* Gosse, 1847, Birds Jamaica, p. 338—Burnt Savanna River, Jamaica. North America from Maine south through Florida, Gulf coast states, rarely in southern Great Plains (Kansas), Gulf and Caribbean coasts of Mexico and Pacific mainland coast of Mexico from San Blas south, coastal Central America, Panama, Colombia, and northwestern Venezuela; West Indies; Aruba, Curaçao, Bonaire. Occasional through eastern United States. Northern populations winter mainly from Gulf coast south.

**Egretta tricolor occidentalis** (Huey)

*Hydranassa tricolor occidentalis* Huey, 1927, Trans. San



Diego Soc. Nat. Hist., 5, p. 83—Scammon Lagoon, Baja California, Mexico.

Baja California. Wanders north to southern California, Oregon, and Arizona; winters south at least to Sinaloa, Mexico.

**Egretta tricolor tricolor** (Müller)

*Ardea tricolor* P. L. S. Müller, 1776, Linné Natursystem, Suppl., p. 111; based on "La Demi-Aigrette" of Buffon, 1780, Hist. Nat. Générale, 22, Hist. Nat. Oiseaux, 7, p. 378, and "Héron bleuâtre à ventre blanc, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 350—America = Cayenne ex Buffon.

*Hydranassa tricolor rufimentum* Hellmayr, 1906, Novit. Zool., 13, p. 50—Caroni Swamp, Trinidad.

Ecuador, Peru (Tumbes, Mollendo), eastern Venezuela, Trinidad, the Guianas, northeastern Brazil (to Piauí).

EGRETTA INTERMEDIA

**Egretta intermedia brachyrhyncha** (Brehm)

*Herodias brachyrhynchus* A. E. Brehm, 1854, Journ. Ornith., 2, p. 80—Blue Nile.

Africa south of the Sahara. Breeds western Africa in the Senegal delta, Mali, Chad (Lake Chad and Fort Lamy), and Nigeria; also observed in Bijagós Islands, Sierra Leone, and Ghana. Occasional Dead Sea (Jordan) and Cape Verde Islands. More common as breeding bird in eastern and southern Africa from Central African Empire, Sudan, Ethiopia, and southern Somalia south through eastern Africa, Zambia, Malawi, Angola, and Rhodesia (Zimbabwe) to Cape Province. Bird ringed as juvenile at Rondevlei, Cape Province, recovered at Mongu, Zambia.

**Egretta intermedia intermedia** (Wagler)

*Ardea intermedia* Wagler, 1829, Isis von Oken, col. 659—Java.

*Herodias plumiferus* Gould, 1848, Proc. Zool. Soc. London (1847), p. 221—New South Wales.

*Egretta intermedia palleuca* Deignan, 1947, Proc. Biol. Soc. Washington, 60, p. 97—Muang Chiang Rai, Chiang Rai Province, Thailand.

Pakistan, India, and Sri Lanka (Ceylon) east to China, Taiwan, Korea (? breeding), southern Kuril Islands, Japan, Bonin Islands, Burma, Andaman Islands, Thailand, Indochina, Java,

northern and eastern Australia (uncommon in southeast). Nonbreeding birds in Malay Peninsula, Sumatra, Borneo, Kangean, Phillipines, Celebes, Lesser Sunda Islands (Bali, Palau Dao, Sumba), Buru, Ceram, New Guinea region, New Britain, Solomon Islands (San Cristóbal). Northern birds migratory; several ringed in Japan recovered in Phillipines. Other wintering records to Micronesia: Carolines (Palau, Yap, Truk) and Marianas (Saipan, Rota, Guam).

#### EGRETTA IBIS

##### ***Egretta ibis ibis*** (Linnaeus)

*Ardea Ibis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 144; based on "Ardea (Ibis)" of Hasselquist, 1757, Iter Palaestinum, p. 248—Egypt.

*Bubulcus ruficrista* Bonaparte, 1855, Consp. Gen. Avium, 2, p. 125—Madagascar or Zanzibar; restricted to Madagascar by Clancey, 1959, Bull. Brit. Ornith. Club, 79, p. 14.

*Ardeola ibis seychellarum* Salomonsen, 1934, Proc. Zool. Soc. London, p. 221—Seychelles.<sup>1</sup>

Southern Europe (Iberian Peninsula, Camargue), Turkey, Iran, Caspian Sea, southwestern Arabia, Africa, São Tomé, Madagascar, Comoro Islands, Aldabra, Seychelles, Mauritius. Recently invaded New World, now widespread: southeastern Canada, uncommon in Newfoundland, British Columbia, Northwest Territories, and throughout United States (where most common in original area of invasion in southeast), Baja California, Mexico, Central America, West Indies (Cuba, Jamaica, Hispaniola, Puerto Rico, Virgin Islands), Colombia, Venezuela, Guianas (where first reported in New World), Ecuador, Peru, Bolivia, northern Chile, Galapagos Archipelago; introduced from Florida to Tern Island, French Frigate Shoals, Leeward Hawaiian Chain, and Howland Island. Occasional Ascension Island and Tristan da Cunha. Partly migratory in temperate regions; young ringed in Georgia and Florida recovered in Mexico and Central America, and young ringed in Transvaal and Natal recovered in Zambia, Uganda, and Central African Empire.

<sup>1</sup>Additional material is necessary to confirm this form; only one known specimen in breeding plumage.—R. B. P.

**Egretta ibis coromanda** (Boddaert)

*Cancroma Coromanda* Boddaert, 1783, Table Planches Enlum., p. 54; based on "Crabier, de la Côte de Coromandel" of Daubenton, 1765-81, Planches Enlum., pl. 910—Coromandel.

Pakistan, India, Nepal, Sri Lanka (Ceylon), Maldives, Bangladesh, Ussuriland, Korea, Japan, Ryukyu and Bonin Islands, eastern China, Burma, Andaman and Nicobar Islands, Thailand, Indochina, Philippines, Celebes, Moluccas, Australia, and New Zealand. Northern birds migratory; birds ringed in Japan recovered in Philippines and Taiwan birds recovered in Japan, Philippines, Borneo (Sabah), and Carolines (Palau Islands). Other nonbreeding records Malay Peninsula, Sumatra, New Guinea, Carolines (Truk), Marianas (Tinian, Guam), New Caledonia.

## EGRETTA NOVAEHOLLANDIAE

**Egretta novaehollandiae** (Latham)

*Ardea novae Hollandiae* Latham, 1790, Index Ornith., p. 701—New Holland = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 231.

*Notophox novaehollandiae nana* Amadon, 1942, Amer. Mus. Novit., no. 1175, p. 3—Waiem River, Tao, northeastern New Caledonia.

*Notophox novaehollandiae austera* Ripley, 1964, Bull. Peabody Mus. Nat. Hist., Yale Univ., no. 19, p. 13—Wamena, Baliem Valley, Netherlands New Guinea (Irian Jaya); altitude 5,000 feet.

Lesser Sunda Islands (Lombok, Sumbawa, Flores, Madu, Sumba, Sawu, Roti, Timor, Romang, Babar, breeding on Flores and Roti), New Guinea, Louisiade Archipelago, Australia, Tasmania, New Caledonia, Loyalty Islands (Lifu), Lord Howe Island, Norfolk Island, and New Zealand. Records from northern Celebes, Moluccas, Tanimbar, and Kai Islands may be nonbreeding migrants. Accidental Ndendi, Santa Cruz Islands.

## EGRETTA CAERULEA

**Egretta caerulea** (Linnaeus)

*Ardea caerulea* Linnaeus, 1758, Syst. Nat., ed. 10, p. 143; based chiefly on "The Blew Heron" of Catesby, 1731, Nat.

Hist. Carolina, pt. 4, p. 76, pl. 76—North America = South Carolina *ex* Catesby.

North America from lower Mississippi Valley, Atlantic and Gulf states, coastal Mexico (Sonora south and Gulf of Mexico) and inland from Isthmus of Tehuantepec and Yucatán; Central America; West Indies; South America from Colombia, Venezuela, and the Guianas to western Peru (Tumbes, Lima, and Mollendo), Brazil, and Uruguay. Wanders north to southeastern Canada. Birds from central Alabama migrate through Florida to the Greater and Lesser Antilles, Trinidad, Venezuela, and the Guianas; birds from the Mississippi River west migrate south to Mexico, Central America, and Panama. Winters from coasts of southeastern United States and Baja California south.

#### EGRETTA THULA<sup>1</sup>

##### ***Egretta thula thula*** (Molina)

*Ardea Thula* Molina, 1782, Saggio Storia Nat. Chili, p. 235—Chile.

Eastern United States from New Hampshire (Isles of Shoals) south through eastern and southern states, Mexico, Central America, Greater Antilles (Cuba, Jamaica, Hispaniola, Puerto Rico), Curaçao, and South America south to Peru, Bolivia, central Chile, and northern Argentina. Wanders as far as Alaska, Tristan da Cunha, and the Strait of Magellan.

##### ***Egretta thula brewsteri*** Thayer and Bangs

*Egretta candidissima brewsteri* Thayer and Bangs, 1909, Proc. New England Zool. Club, 4, p. 40—San José Island, Baja California.

*Egretta thula arileuca* Oberholser, 1974, Bird Life Texas, p. 106—mouth of Bear River, North Bay, Great Salt Lake, Utah.

United States west of Great Plains; Baja California. Migrates as far south as Guerrero, Mexico.

#### EGRETTA GARZETTA

##### ***Egretta garzetta garzetta*** (Linnaeus)

*Ardea Garzetta* Linnaeus, 1766, Syst. Nat., ed. 12, 91, p.

<sup>1</sup>*E. thula, garzetta, gularis, and dimorpha* form a superspecies.—R. B. P.

237—"in Oriente"; restricted to Malalbergo, River Reno, south of Ferrara, northeastern Italy, by Grant and Mackworth-Praed, 1933, *Bull. Brit. Ornith. Club*, **53**, p. 194.<sup>1</sup>

Southern Europe; southern and central Asia east to Pakistan, India, China, Taiwan, Hainan, Japan; Africa (breeding records in Morocco, Mauritania, Senegal, Guinea-Bissau, Ghana, Nigeria, Egypt, Kenya, Tanzania, Zanzibar, Zambia, Malawi, Botswana, South Africa). Wanders to northern Europe, central Russia, Korea, Madeira, Canary Islands, Azores, occasionally to Americas (Newfoundland, Martinique, Barbados, Trinidad). Migratory in northern part of range. Recoveries of ringed European birds in western Africa and Trinidad, Russian bird in Persian Gulf, birds from Japan and Taiwan in Philippines.

**Egretta garzetta nigripes** (Temminck)

*Ardea nigripes* Temminck, 1840, *Man. Ornith.*, ed. 2, 4, p. 376—"L'Archipel des Indes" = Sunda Islands.

*Herodias immaculata* Gould, 1846, *Birds Australia*, pt. 25, pl. and text—"Northern portion of Australia" = Port Essington, Northern Territory, *vide* Mathews, 1912, *Novit. Zool.*, **18**, p. 231.

Sumatra, Java, Kangean, Borneo, Lesser Sunda Islands, Moluccas, New Guinea, Louisiade Archipelago, Solomon Islands, Palau Islands, northern, western, and eastern Australia, and New Zealand.<sup>2</sup> Birds ringed in Australia recovered in New Guinea and New Zealand.

EGRETTA GULARIS

**Egretta gularis gularis** (Bosc)

*Ardea gularis* Bosc, 1792, *Actes Soc. Hist. Nat. Paris*, **1**, p. 4, pl. 2—Senegal River.

Breeds on islands and coasts of tropical western Africa from Mauritania (Banc d'Arguin) through Senegal, Guinea-Bissau,

<sup>1</sup>*Ardea (Herodias) cineracea* Cabanis, 1868, *Journ. Ornith.*, **16**, p. 414—East Africa, may refer to *E. garzetta* or to *E. gularis*; cf. F. Steinbacher, 1936, *Ornith. Monatsber.*, **44**, p. 20. Measurements of coastal and offshore Tanzania birds (Benson and Penny, 1971, *Philos. Trans. Roy. Soc. London*, ser. B, **260**, p. 443) suggest they are inseparable from southern *E. g. garzetta*.—R. B. P.

<sup>2</sup>Resident birds of the Philippines and northern Celebes are intermediate in foot color between *garzetta* and *nigripes* (Parkes, 1973, *Nemouria*, no. 11, pp. 14-15).—R. B. P.

Sierra Leone, Ghana to Nigeria (Opobo). Also found south along coasts of Cameroon, Rio Muni, and Gabon, and occasionally inland to flood plains of Niger River. Also breeds or occurs on islands in Gulf of Guinea (Fernando Po, Principe, São Tomé, Annobón). Occasional Azores, Cape Verde Islands, Spain; sight records of dark egrets in southern France, Sicily, and Hungary may be of this form.

**Egretta gularis schistacea** (Ehrenberg)

*Ardea schistacea* Ehrenberg, 1828, *Symbolae Physicae*, Aves, pt. 1, pl. 6, and text, sig. i (1833)—Red Sea.<sup>1</sup>

*Ardea Asha* Sykes, 1832, *Proc. Com. Sci. Corresp. Zool. Soc. London*, pt. 2, p. 157—Dukhun = Deccan, India.

Coasts of Red Sea, Gulf of Aden, Persian Gulf, northern coast of Arabian Sea, Indian Ocean coast of Pakistan and western India, Laccadives, Sri Lanka (Ceylon). Occasional specimens apparently referable to this form have been collected inland in eastern Africa (Lake Turkana = Lake Rudolf, Lake Albert, Nile River).

EGRETTA DIMORPHA

**Egretta dimorpha** Hartert

*Egretta dimorpha* Hartert, 1914, *Bull. Brit. Ornith. Club*, 35, p. 14—West Madagascar = southeast coast of Madagascar.

*Egretta garzetta assumptionis* Grant and Mackworth-Praed, 1933, *Bull. Brit. Ornith. Club*, 53, p. 193—Assumption Island, Indian Ocean.

Madagascar and Aldabra Islands; formerly Assumption Island. Also sight records or single specimens from Comoro Islands and Réunion.

EGRETTA EULOPHOTES

**Egretta eulophotes** (Swinhoe)

*Herodias eulophotes* Swinhoe, 1860, *Ibis*, p. 64—Amoy, China.

Coastal China (Fukien, Kwangtung); also specimens from northern Korea, Shantung, Kiangsu, Taiwan, Hong Kong, and

<sup>1</sup>Sigs. a and b of text and all plates of Aves section of *Symbolae Physicae* published 1828, remaining sigs. published 1833 (*Brit. Mus., Nat. Hist.*, 1904, *Cat. Books Manuscripts*, p. 515).—R. B. P.

Hainan. Migrates to Malay Peninsula, western Sumatra islands, Borneo, Philippines, and Celebes. Straggler to southern Ussuriland, Japan (Hokkaido, Honshu, Sado, Tsushima, Danjo Islands), and Okinawa.

#### EGRETTA SACRA

##### **Egretta sacra sacra** (Gmelin)

*Ardea sacra* Gmelin, 1789, Syst. Nat., 1, p. 640; based on "Sacred Heron" of Latham, 1785, General Synop. Birds, 3, p. 92—Tahiti.

Coasts of Burma, southeastern China, Taiwan, southern Japan, Ryukyu, Andaman, Nicobar, Cocos-Keeling, and Christmas Islands, Thailand, Indochina, Malay Peninsula, Sumatra, Natuna Islands, Belitung Island, Java, Borneo, Kangean, Philippines, Celebes, Lesser Sunda Islands (Bali, Lombok, Sumbawa, Flores, Timor), Tanimbar, Moluccas, New Guinea, New Britain, Solomon Islands, Australia, Tasmania, New Zealand, Mariana, Caroline, Nauru, Marshall, Gilbert, Fiji, Howland, Phoenix, Tokelau, Samoa, Tonga, Line, Cook, Society, Austral, Marquesas, Tuamotu, and Pitcairn (Oeno) Islands.

##### **Egretta sacra albolineata** (Gray)

*Ardea (Herodias) albolineata* G. R. Gray, 1859, Proc. Zool. Soc. London, p. 166—Isle of Pines, off coast of New Caledonia.

*Egretta brevipes* Verreaux and Des Murs, 1862, Rev. Mag. Zool., Paris, sér. 2, 14, p. 130—New Caledonia.

New Caledonia and the Loyalty Islands.

#### GENUS ARDEOLA BOIE

*Ardeola* Boie, 1822, Isis von Oken, col. 559. Type, by monotypy, *Ardea ralloides* Scopoli.

*Butorides* Blyth, 1852, Cat. Birds, Mus. Asiatic Soc. Bengal (1849), p. 281. Type, by monotypy, *Ardea javanica* Horsfield.

*Erythrocnus* Sharpe, 1894, Bull. Brit. Ornith. Club, 3, p. 39. Type, by original designation, *Ardea rufiventris* Sundevall.

*Erythrocnus* Sharpe, 1898, Cat. Birds Brit. Mus., 26, p. 200, correcting *Erythrocnus* Sharpe, 1894.

- cf. Hindwood, 1933, *Emu*, **33**, pp. 27-43, 97-102, pls. 4-13, 24-25 (breeding biology of *striata*, Australia).
- Mayr, 1940, *Amer. Mus. Novit.*, no. 1056, pp. 4-7 (*striata* in Australia, New Guinea, south Pacific).
- Mayr, 1943, *Emu*, **43**, pp. 7-12 (*striata* in Australia, Indonesia, Philippines, southeastern Asia).
- Ripley, 1944, *Bull. Mus. Comp. Zool.*, **94**, p. 319 (*striata*, western Sumatra islands).
- Smythies, 1953, *Birds Burma*, ed. 2, pp. 531-535 (local distribution of *ralloides*, *grayii*, *bacchus*).
- Kumerloeve, 1960, *Acta Ornith.*, Warsaw, **5**, pp. 301-306 (*ralloides*, Asia Minor).
- Lamba, 1963, *Pavo*, **1**, pp. 35-43 (nesting of *grayii*).
- Salomonsen, 1966, *Vidensk. Meddelelser Dansk Naturhist. Forening København*, **129**, pp. 279-283 (*striata*, Melanesia and Papua).
- Uys and Clutton-Brock, 1966, *Puku*, **4**, pp. 171-180 (breeding of *rufiventris*).
- Benson, 1967, *Atoll Res. Bull.*, **118**, pp. 67-68 (*striata*, Aldabra).
- Benson and Dowsett, 1969, *Puku*, **5**, p. 217 (*idae* wintering in Africa).
- Dickerman and Gavino T., 1969, *Living Bird*, **8**, pp. 95-111 (colonial nesting of *striata*).
- Ripley, 1969, *Ibis*, **111**, pp. 101-102 (*striata*, western Indian Ocean).
- Benson *et al.*, 1970, *Arnoldia*, **4**, no. 40, p. 3 (African *ralloides*).
- Stoddard, Benson, and Peake, 1970, *Atoll Res. Bull.*, **136**, pp. 121-145 (*striata*, Assumption Island).
- Benson and Penny, 1971, *Philos. Trans. Roy. Soc. London*, ser. B, **260**, pp. 431-433, 444-447 (*idae*, *striata* *crawfordi*).
- Bourne, 1971, *Atoll Res. Bull.*, **149**, pp. 175-208 (*albolimbata* and related forms).
- Parkes, 1971, *Nemouria*, no. 4, pp. 2-3 (*striata*, Philippines).
- Binford and Zimmerman, 1974, *Bull. Brit. Ornith. Club*, **94**, pp. 101-102 (distribution of *rufiventris*).
- Payne, 1974, *Bull. Brit. Ornith. Club*, **94**, pp. 81-88 (variation and relationships in New World *striata*).



Prigogine, 1975, Gerfaut, **65**, pp. 59-94 (*ralloides*, central Africa).

Snow, B. K., 1975, Living Bird, **13** (1974), pp. 51-72 (*striata sundevalli*).

Prigogine, 1976, Bull. Brit. Ornith. Club, **96**, pp. 96-97 (*idae*, central Africa).

#### ARDEOLA RALLOIDES<sup>1</sup>

##### **Ardeola ralloides** (Scopoli)

*Ardea ralloides* Scopoli, 1769, Annus 1 Hist.-Nat., p. 88—"In Carniolica" = Carniola.

*Ardeola ralloides paludivaga* Clancey, 1968, *Arnoldia*, **3**, no. 37, p. 3—mouth of Luapula River, at lat. 9° 24' S., long. 28° 30' E., Zambia/Zaire border.

Southern Europe east to southern Russia, Turkey, Syria, Israel, Iraq, Iran, Transcaspia, Russian Turkistan; northern Africa (Morocco to Tunisia, Egypt), throughout sub-Saharan Africa, Madagascar. Wanders after breeding (British Isles, Netherlands, Germany, Austria). Northern birds migrate to tropical Africa; Yugoslav-ringed birds recovered in Nigeria and Cameroon, a bird from France in Guinea.

#### ARDEOLA GRAYII

##### **Ardeola grayii** (Sykes)

*Ardea Grayii* Sykes, 1832, Proc. Com. Sci. Corresp. Zool. Soc. London, pt. 2, p. 158—Dukhun = Deccan, India.

*Ardeola grayii phillipsi* Scheer, 1960, *Senckenbergiana Biologica*, **41**, p. 145—Hitadu, Addu Atoll, Maldives, Indian Ocean.

Persian Gulf, Pakistan, India, Laccadive and southern Maldives (Suvadiva, Addu) Islands, Sri Lanka (Ceylon), Bangladesh, Burma (plains), Andaman and Nicobar Islands.

<sup>1</sup>*A. ralloides*, *grayii*, *bacchus*, and *speciosa* form a superspecies, though with some overlap between *grayii* and *bacchus*, the former being the more abundant species eastward through central Burma. *A. ralloides* occurs throughout the range of *idae* (Madagascar), so *idae* is not regarded as a member of this zoogeographic superspecies.—R. B. P.

## ARDEOLA BACCHUS

**Ardeola bacchus** (Bonaparte)

*Buphus bacchus* Bonaparte, 1855, Consp. Gen. Avium, 2, p. 127—Malay Peninsula.

Central Manchuria (to Sungari River) and Inner Mongolia south through China (to Yunnan), Bangladesh, Assam, Manipur, Burma (mainly north and east), Andaman Islands, Indochina, Hainan. Winters south to Thailand, Malay Peninsula, Sumatra, western Sumatra islands, Java, Borneo, and Celebes. Has wandered to Kyakhta (southwestern Transbaikalia), Amurland, and southern Ussuriland; straggler to Japan, Ryukyu Islands, Taiwan.

## ARDEOLA SPECIOSA

**Ardeola speciosa continentalis** Salomonsen

*Ardeola speciosa continentalis* Salomonsen, 1933, Ornith. Monatsber., 41, p. 41—Bangkok.

Thailand (central plains), Cambodia, Cochinchina; also recorded from Burma (Tenasserim).

**Ardeola speciosa speciosa** (Horsfield)

*Ardea speciosa* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 189—Java.

Malacca, Singapore, Sumatra, Java, Borneo, Kangean, Celebes, Salajar, Butung, Bali, Lombok, Sumbawa, Sumba.

## ARDEOLA IDAE

**Ardeola idae** (Hartlaub)

*Ardea Idae* Hartlaub, 1860, Journ. Ornith., 8, p. 167—east coast of Madagascar.

Madagascar and Aldabra, possibly Mafia Island (breeding plumage). Wanders or migrates locally in Madagascar; one record Assumption Island. Migrates regularly to eastern and central Africa: Kenya, Uganda, Rwanda, Burundi, Zaire (Kivu, East Kasai, Katanga = Shaba), Tanzania, Zanzibar, Zambia, Rhodesia (Zimbabwe).

## ARDEOLA RUFIVENTRIS

**Ardeola rufiventris** (Sundevall)

*Ardea rufiventris* Sundevall, 1851, Öfversigt K. Vetenskaps-

Akad. Förhandlingar, Stockholm, 7 (1850), p. 110—"Caf-fraria" = Mooi River, near Potchefstroom, Transvaal.

Central and southern Africa in Zaire (Kasai, Kivu), Uganda, Kenya, Tanzania, Angola, Zambia, Malawi, Mozambique, northern South West Africa (Namibia), northern Botswana, Rhodesia (Zimbabwe), and eastern South Africa.

#### ARDEOLA STRIATA

##### **Ardeola striata anthonyi** (Mearns)

*Ardea virescens anthonyi* Mearns, 1895, Auk, 12, p. 257—  
Seven Wells, Salton River, northern Baja California.

Western North America from coastal Oregon, California, and northern Baja California east to Utah, Arizona, and northern Sonora. Winters sparsely in southern part of range south through western Mexico (Guerrero, Chiapas).

##### **Ardeola striata frazari** (Brewster)

*Ardea virescens frazari* Brewster, 1888, Auk, 5, p. 83—La Paz, Baja California.

Southern Baja California, south from about lat. 27° 20' N. Resident.

##### **Ardeola striata virescens** (Linnaeus)

*Ardea virescens* Linnaeus, 1758, Syst. Nat., ed. 10, p. 144; based on "The small Bittern" of Catesby, 1731, Nat. Hist. Carolina, pt. 4, p. 80, pl. 80—America; restricted to coast of South Carolina by Oberholser, 1912, Proc. U. S. Nat. Mus., 42, pp. 534, 537.

*Cancroma maculata* Boddaert, 1783, Table Planches Enlum., p. 54; based on "Crabier tacheté, de la Martinique" of Daubenton, 1765-81, Planches Enlum., pl. 912—Martinique.

*Butorides virescens margaritophilus* Oberholser, 1912, Proc. U. S. Nat. Mus., 42, p. 553—San Miguel Island = Isla del Rey, Pearl Islands, Panama.

*Butorides virescens mesatus* Oberholser, 1912, Proc. U. S. Nat. Mus., 42, p. 548—Managua, Nicaragua.

Central and eastern North America from South Dakota, Minnesota, Ontario, and Nova Scotia south through both western and eastern Mexico, Central America, and West Indies to central Panama (including Pearl Islands). Winters sparsely in northern part of range, mainly Florida, southern Texas, and Mexico south to Bahamas, Greater and Lesser Antilles,

Swan Islands, eastern Panama and islands to south (Coiba, Pearl Islands), Cocos Island, northern Colombia, Ecuador, northern Venezuela, and Surinam.

***Ardeola striata bahamensis* (Brewster)**

*Ardea bahamensis* Brewster, 1888, Auk, 5, p. 83—Watling's Island, Bahamas = San Salvador, Bahamas.

Bahama Islands. Resident.

***Ardeola striata*<sup>1</sup> *striata* (Linnaeus)**

*Ardea striata* Linnaeus, 1758, Syst. Nat., ed. 10, p. 144—Surinam.

*Ardea cyanura* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 421; based on "Garza cuello aplomado," no. 358, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 177 (adult)—Paraguay.<sup>2</sup>

*Butorides robinsoni* Richmond, 1896, Proc. U. S. Nat. Mus., 18, p. 655—Margarita Island, off coast of Venezuela.

*Butorides virescens curacensis* Oberholser, 1912, Proc. U. S. Nat. Mus., 42, p. 553—St. Patrick, Curaçao.

*Butorides striatus patens* Griscom, 1929, Bull. Mus. Comp. Zool., 69, p. 156—near Panama City, Panama.

Eastern Panama and South America from Colombia, Venezuela, Trinidad, and the Guianas south to Ecuador, Peru, Bolivia, Chile, Brazil, Paraguay, Uruguay, and Argentina south to La Pampa and Buenos Aires. Nonwintering birds of central and eastern Panama, Aruba, Curaçao, Bonaire, Los Roques Islands, Margarita Island, and Tobago, as well as occasional specimens from Cocos Island, Colombia, Venezuela, Surinam, Trinidad, and the Windward Islands, Lesser Antilles, are intermediate in color between *virescens* and *striata*.

***Ardeola striata sundevalli* (Reichenow)**

*Ardea (Butorides) Sundevalli* Reichenow, 1877, Journ. Ornith., 25, p. 253—Galapagos Archipelago.

<sup>1</sup>Selected by first reviser action (Hartert, 1920, Vögel Pal. Fauna, pp. 1249-1251) over simultaneously published *virescens*.—R. B. P.

<sup>2</sup>*Ardea fuscicollis* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 410, based on "Garza cuello pardo," no. 359, of Azara, 1805, Apuntamientos, 3, p. 180—Paraguay, appears on an earlier page, but is a description of a young bird, and the description is inadequate to distinguish the supposed color differences between adults of the described forms within South America.—R. B. P.

Galapagos Archipelago.<sup>1</sup>**Ardeola striata atricapilla** (Afzelius)

*Ardea atricapilla* Afzelius, 1804, K. Vetenskaps Acad. Nya Handlingar, Stockholm, **25**, p. 264—Sierra Leone.

Africa from Senegal and Sierra Leone to Sudan and Ethiopia south to South Africa; Principe and São Tomé, Gulf of Guinea.

**Ardeola striata rutenbergi** (Hartlaub)

*Ardea rutenbergi* Hartlaub, 1880, Proc. Zool. Soc. London, p. 39—Mohambo, northern Madagascar. Madagascar.<sup>2</sup>

**Ardeola striata brevipes** (Ehrenberg)

*Ardea*, *Nycticorax*, *brevipes* Ehrenberg, 1833, Symbolae Physicae, Aves, pt. 1, sig. m, note 2—banks of the Nile and coasts of the Red Sea.

Coasts of the Red Sea and Somalia.

**Ardeola striata crawfordi** (Nicoll)

*Butorides crawfordi* Nicoll, 1906, Bull. Brit. Ornith. Club, **16**, p. 105—Assumption Island.

Aldabra and Amirante Islands, Indian Ocean.

**Ardeola striata rhizophorae** (Salomonsen)

*Butorides striatus rhizophorae* Salomonsen, 1934, Proc. Zool. Soc. London, p. 219—Mayotte, Comoro Islands.

Comoro Islands, Indian Ocean.

**Ardeola striata degens** (Hartert)

*Butorides striatus degens* Hartert, 1920, Vögel Pal. Fauna, p. 1251—Praslin Island, Seychelles.

Seychelles, Indian Ocean.

**Ardeola striata albolimbata** (Reichenow)

*Butorides albolimbatus* Reichenow, 1900, Ornith. Monatsber., **8**, p. 140—Diego Garcia, Chagos Archipelago.

<sup>1</sup>This population is variable, with many adults uniform slate-gray below, some pale gray with streaked neck, and others intermediate. Birds with pale underparts differ from *striata* by their darker (gray-brown, not rufous) sides of upper breast. The occurrence of intermediate birds suggests secondary intergradation between an old dark differentiate and more recent immigrants from the South American mainland.—R. B. P.

<sup>2</sup>Darker than *atricapilla* on the average, but with overlaps in color and in size.—R. B. P.

*Butorides albidulus* Bangs, 1913, Proc. Biol. Soc. Washington, **26**, p. 93—Suadiva Atoll, southern Maldive Islands.

*Butorides striatus didii* Phillips and Sims, 1958, Bull. Brit. Ornith. Club, **78**, p. 51—Male Island, North Male Atoll, Maldive Archipelago.

Diego Garcia Island, Chagos Archipelago, and Maldive Islands, Indian Ocean.<sup>1</sup>

***Ardeola striata chloriceps* (Bonaparte)<sup>2</sup>**

*Ardea chloriceps* Bonaparte, 1855, Consp. Gen. Avium, **2**, p. 129—India; restricted to Hitaura, Chisapani Garhi district, Nepal, by Biswas, 1959, Current Sci., **28**, p. 288.

Indian subcontinent from Sind, Punjab, and Kashmir to eastern Assam and Manipur; Laccadive Islands; Sri Lanka (Ceylon).

***Ardeola striata javanica* (Horsfield)**

*Ardea Javanica* Horsfield, 1821, Trans. Linn. Soc. London, **12**, p. 190—Java.

*Butorides striatus abbotti* Oberholser, 1932, Bull. U. S. Nat. Mus., no. 159, p. 14—Pulo Lankawi, western Malay Peninsula.

Burma, Thailand, Malay Peninsula, Sumatra, Java, Borneo, Kangean, Bali; Réunion, Mauritius, Rodrigues Island.<sup>3</sup>

<sup>1</sup>Birds of Diego Garcia are distinctly paler than *chloriceps* of India, birds of the southern atolls of the Maldives are intermediate, and those of the central and northern Maldives are very similar to, though slightly paler than, the Indian birds. Available specimens are few, and the pattern of variation appears to be largely a clinal one, with paler birds on the more southerly islands.—R. B. P.

<sup>2</sup>The forms *chloriceps*, *javanica*, and *carcinophila* are rather similar. Series collected in the 1940s and 1950s show birds from Java (Batavia = Djakarta) to be more bluish (less grayish) and less streaked on the throat (no streaking in 6 of 8 birds) than Indian birds. The specimen available to me from Sri Lanka (Ceylon) is smaller (wing chord 166 mm.) than any of the 22 from India (167–179 mm.). Old bird skins from Bali and Kangean are somewhat darker and browner than the recent Java specimens.—R. B. P.

<sup>3</sup>The form *javanica* is so similar to *chloriceps* that it is difficult to assign the birds from the western Indian Ocean (Réunion, Mauritius, Rodrigues) to either; they are similar to both.—R. B. P.

**Ardeola striata amurensis** (Schrenck)

*Ardea (Butorides) virescens* var. *amurensis* Schrenck, 1860,

Reisen Forschungen Amur-Lande, 1, p. 441—Amurland. Amur Valley, eastern Manchuria, Ussuriland, Sakhalin, Korea, and northern China to Shantung, Japan, Ryukyu and Bonin Islands. Migratory, wintering to southern China, northern Indochina, Taiwan, Philippines, Natuna Islands, northern Borneo, and Palau Islands (Babethuap, Koror).

**Ardeola striata actophila** (Oberholser)

*Butorides javanicus actophilus* Oberholser, 1912, Smithsonian Misc. Coll., 60, no. 7, p. 1—North Pagai, western Sumatra islands.

*Butorides javanicus icastopterus* Oberholser, 1912, Smithsonian Misc. Coll., 60, no. 7, p. 1—Simeulue, western Sumatra islands.

*Butorides striatus connectens* Stresemann, 1930, Ornith. Monatsber., 38, p. 48—Yao-shan, Kwangsi, China.

China from the Yangtze River south to northern Burma, northern Thailand, and northern Indochina. Winters partly within breeding range but also migrates as far south as Nicobar Islands, western Sumatra islands (Simeulue, Pagai), and western Borneo (Riam).

**Ardeola striata spodiogaster** (Sharpe)

*Butorides spodiogaster* Sharpe, 1894, Bull. Brit. Ornith. Club, 3, p. 17—Andaman and Nicobar Islands.

*Butorides striatus sipora* Chasen and Kloss, 1926, Ibis, p. 277—Sipura and North Pagai, western Sumatra islands.

Andaman and Nicobar Islands and western Sumatra islands (Simeulue, Nias, Sipura, North Pagai).

**Ardeola striata carcinophila** (Oberholser)

*Butorides striatus carcinophilus* Oberholser, 1924, Journ. Washington Acad. Sci., 14, p. 294—Casiguran, Luzon, Philippines.

*Butorides striatus carcinophonus* Oberholser, 1924, Journ. Washington Acad. Sci., 14, p. 294—Palau Alanga, eastern Borneo = a reef off Maratua Island in the Celebes Sea.

*Butorides striatus banggaiensis* Eck, 1976, Zool. Abh. Staatl. Mus. Tierkunde Dresden, 34, p. 61—Peleng, Banggai Islands.

Taiwan, Philippine Islands (Luzon, Negros, Cebu, Samar,

Mindanao), Celebes, and islands of Celebes Sea. Winters throughout range.<sup>1</sup>

**Ardeola striata steini** (Mayr)

*Butorides striatus steini* Mayr, 1943, *Emu*, **43**, p. 10—Dilly = Dili, Timor.

Lesser Sunda Islands (Sumba, Flores, Alor, Timor).

**Ardeola striata moluccarum** (Hartert)

*Butorides striatus moluccarum* Hartert, 1920, *Vögel Pal. Fauna*, p. 1251—Buru.

Moluccas (Obi, Buru, Ambon, Ceram) and Kai Islands (Add, Oeboer, Tocal, Tual).<sup>2</sup>

**Ardeola striata papuensis** (Mayr)

*Butorides striatus papuensis* Mayr, 1940, *Amer. Mus. Novit.*, no. 1056, p. 6—Numfoor Island, Geelvink Bay, New Guinea.

Coast of Geelvink Bay, New Guinea, and nearby islands of Numfoor, Biak, and Japen; also Waigeo and Aru Islands.

**Ardeola striata idenburgi** (Rand)

*Butorides striatus idenburgi* Rand, 1941, *Amer. Mus. Novit.*, no. 1102, p. 1—Idenburg River, Dutch New Guinea.

Interior lowlands of northern New Guinea.

**Ardeola striata rogersi** (Mathews)

*Butorides rogersi* Mathews, 1911, *Bull. Brit. Ornith. Club*, **27**, p. 101—Onslow, Ashburton River, Western Australia.

Coastal Western Australia from Ashburton River to Shark Bay.<sup>3</sup>

<sup>1</sup>Philippine birds taken May to September vary considerably within each island in darkness of cheek, neck, and breast. Most are darker than any of the aforementioned forms, others are nearly as brown as the southern Moluccas birds. Birds of Taiwan and Celebes (all summer birds and some wintering birds) are very dark gray on neck and breast, matching many Philippine birds. Considerable overlap occurs in wing length and culmen length among birds in these areas.—R. B. P.

<sup>2</sup>Local populations may be differentiated on some of these islands (Mayr, 1940, *Amer. Mus. Novit.*, no. 1056, pp. 5-6). Birds of the eastern islands approach *papuensis* in color.—R. B. P.

<sup>3</sup>Birds from Shark Bay (Boolathanna, Carnarvon, Wooramel) are grayer than the rufous type of *rogersi* but browner than *cinerea*, and birds from the intermediate localities of Brickhouse and Pt.



**Ardeola striata cinerea** (Mayr)

*Butorides striatus cinereus* Mayr, 1943, *Emu*, **43**, p. 9—  
Derby, King Sound, northwestern Australia.  
Coastal Western Australia from King Sound to De Grey River.

**Ardeola striata stagnatilis** (Gould)

*Ardetta stagnatilis* Gould, 1848, *Proc. Zool. Soc. London*  
(1847), p. 221—Port Essington, Northern Territory.  
Northern Australia from Melville Island east through coastal  
Arnhem Land to Groote Eylandt and McArthur River.

**Ardeola striata littleri** (Mathews)

*Butorides javanica littleri* Mathews, 1912, *Novit. Zool.*, **18**,  
p. 233—Cooktown, northern Queensland.  
*Butorides striatus flyensis* Salomonsen, 1966, *Vidensk.*  
*Meddelelser Dansk Naturhist. Forening København*, **129**,  
p. 283—Lake Daviumbu, Upper Fly River, British Papua,  
New Guinea.

Coastal northern Queensland (Cape York to Cooktown), proba-  
bly intergrading with *macrorhyncha*.<sup>1</sup> Also southern New  
Guinea.<sup>2</sup>

**Ardeola striata macrorhyncha** (Gould)

*Ardetta macrorhyncha* Gould, 1848 (14 November), *Proc.*  
*Zool. Soc. London*, p. 39—east coast of Australia = Gosford,  
New South Wales, *vide* Mathews, 1912, *Novit. Zool.*, **18**,  
p. 233.

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Cloates are intermediate in color between the Ashburton River and the Shark Bay birds. The foregoing description of variation makes unnecessary the taxonomic description of another subspecies of *A. striata*. The specimens available (American Museum of Natural History, New York) indicate that rufous *rogersi* is a localized form of distinct color linked through intermediate populations with the Shark Bay birds; there is no evidence of color dimorphism within a single locality.—R. B. P.

<sup>1</sup>The few specimens available of eastern and northern coastal Australian birds are inadequate to test whether the various color forms *rogersi*, *cinerea*, *stagnatilis*, *littleri*, and *macrorhyncha* intergrade in a continuous manner; they appear to do so.—R. B. P.

<sup>2</sup>Birds from southern New Guinea localities Penzaia (between Wanikuna and Morehead River) and Lake Daviumbu are as brown as Cape York birds (*littleri*) or Aru Island birds (*papuensis*); birds from Daru are paler and approach the color of *idenburgi* but have less heavily streaked throats.—R. B. P.

Southern Queensland and coastal New South Wales; New Caledonia; Loyalty Islands (Ouvéa).

**Ardeola striata solomonensis** (Mayr)

*Butorides striatus solomonensis* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 6—Vangunu Island, Solomon Islands.

*Butorides striatus diminutus* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 6—Lomlom Island, Reef Islands.

New Hanover; New Ireland; Solomon Islands (Bougainville, Shortland, Fauro, Choiseul, Vella Lavella, Kolombongara, New Georgia, Narovo, Tetipari, Vangunu, Tiara, Molakobi, Santa Isabel, Savo, Tulagi, Florida, Guadalcanal, Malaita, San Cristóbal, Gower); Santa Cruz Islands (Nepan in Swallow group, Utupua, Santa Cruz); Torres Islands (Hiw); Banks Islands (Lomlom in Reef group); New Hebrides (Espíritu Santo); western Fiji Islands.

**Ardeola striata patruelis** (Peale)

*Ardea patruelis* Peale, 1848, U. S. Explor. Exped., 8, p. 216—Tahiti.

Tahiti, Society Islands.

GENUS **AGAMIA** REICHENBACH

*Agamia* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 16. Type, by original designation and monotypy, *Agamia picta* Reichenbach = *Ardea agami* Gmelin.

cf. Wetmore, 1965, Smithsonian Misc. Coll., 150, pt. 1, pp. 95-97.

**AGAMIA AGAMI**

**Agamia agami** (Gmelin)

*Ardea Agami* Gmelin, 1789, Syst. Nat., 1, p. 629; based on "Le Héron agami" of Buffon, 1780, Hist. Nat. Générale, 22, Hist. Nat. Oiseaux, 7, p. 382, and "Le Heron Agami de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 859—Cayenne.

Forests of southern Mexico (Veracruz, Chiapas, Quintana Roo), Guatemala, Belize (British Honduras), Honduras, Costa Rica, Panama, and tropical South America from Colombia, Venezuela, Trinidad, and the Guianas to Ecuador, Peru, Bolivia, and Brazil (Amazonia and Mato Grosso).

## SUBFAMILY NYCTICORACINAE

## TRIBE NYCTICORACINI

## GENUS NYCTANASSA STEJNEGER

*Nyctanassa* Stejneger, 1887, Proc. U. S. Nat. Mus., **10**, p. 295, note. Type, by original designation, *Ardea violacea* Linnaeus.

cf. Adams, 1955, Condor, **57**, pp. 55-60 (osteology).

Wetmore, 1965, Smithsonian Misc. Coll., **150**, pt. 1, pp. 100-103.

## NYCTANASSA VIOLACEA

**Nyctanassa violacea violacea** (Linnaeus)

*Ardea violacea* Linnaeus, 1758, Syst. Nat., ed. 10, p. 143; based on "The Crested Bittern" of Catesby, 1731, Nat. Hist. Carolina, pt. 4, p. 79, pl. 79—North America = Carolina ex Catesby.

*Ardea cayennensis* Gmelin, 1789, Syst. Nat., **1**, p. 626; based on "Le Bihoreau de Cayenne" of Buffon, 1780, Hist. Nat. Générale, **22**, Hist. Nat. Oiseaux, **7**, p. 439, and Daubenton, 1765-81, Planches Enlum., pl. 899—Cayenne.

North America from Kansas, Michigan, Ohio, Connecticut, Rhode Island, and New York south to Gulf coast, eastern Mexico south through Central America to Caribbean coast of Panama, West Indies from Bahamas to Greater and Lesser Antilles, Trinidad, and Tobago, and northern South America in Colombia and Venezuela. Wanders north to Ontario and Maine. Winters Gulf coast of United States, West Indies, eastern Mexico to Veracruz, Nicaragua, Costa Rica, Caribbean coast of Panama, Colombia, Venezuela, Ecuador, and Peru.<sup>1</sup>

**Nyctanassa violacea bancrofti** Huey

*Nyctanassa violacea bancrofti* Huey, 1927, Condor, **29**, p.

<sup>1</sup>Birds of the Lesser Antilles and Tobago are distinctly thicker-billed and deeper-billed than other Caribbean populations. The bill shape as seen dorsally differs from that of *bancrofti*. Birds of the Greater Antilles are very pale in juvenal plumage. Birds of coastal Caribbean South America and some offshore islands (Margarita Island) have thin bills, but bill shape varies and overlaps with bill shape of birds from eastern United States.—R. B. P.

167 and fig.—Scammon Lagoon, Baja California.

*Nyctanassa violacea gravirostris* van Rossem, 1943, Occas. Papers Mus. Zool., Louisiana State Univ., no. 15, p. 266—Socorro Island, Revillagigedo Islands.

Baja California, Socorro Island, Tres Mariás Islands, and Pacific coast from Mazatlán, Mexico, south to Guatemala, El Salvador, and Nicaragua.

***Nyctanassa violacea caliginis* Wetmore<sup>1</sup>**

*Nyctanassa violacea caliginis* Wetmore, 1946, Proc. Biol. Soc. Washington, **59**, p. 49—San José Island, Pearl Islands, Panama.

Pacific coast of western and central Panama, Pearl Islands, Cocos Island, Canal Zone, Caribbean coast of Panama (Almirante, Bocas del Toro, to Puerto Obaldia, San Blas).

***Nyctanassa violacea pauper* (Sclater and Salvin)**

*Nycticorax pauper* P. L. Sclater and Salvin, 1870, Proc. Zool. Soc. London, p. 327—Santa Cruz (Indefatigable) Island, Galapagos Archipelago.

Galapagos Archipelago.

GENUS **NYCTICORAX** FORSTER

*Nycticorax* T. Forster, 1817, Synop. Cat. Brit. Birds, p. 59.

Type, by tautonymy and monotypy, *Nycticorax infaustus* Forster = *Ardea nycticorax* Linnaeus.

*Caltherodius* Bonaparte, 1855, Consp. Gen. Avium, **2**, p. 139.

Type, by monotypy, *Ardea cucullata* Lichtenstein = *Ardea leuconotus* Wagler.

*Gorsachius* Bonaparte, 1855, Consp. Gen. Avium, **2**, p. 138.

Type, by monotypy, *Nycticorax goisagi* Temminck.<sup>2</sup>

*Oroanassa* Peters, 1930, Proc. Boston Soc. Nat. Hist., **39**, p. 276. Type, by original designation, *Nycticorax magnificus* Ogilvie-Grant.

cf. Hachisuka, 1926, Ibis, pp. 585–592 (*goisagi*, *melanolphus*).

<sup>1</sup>The juvenal plumage of *caliginis* (very dark and streaked in the head) is much more distinctive than is bill shape.—R. B. P.

<sup>2</sup>*Gorsachius* G. R. Gray, 1855, Cat. Gen. Subgen. Birds Brit. Mus., p. 114, ex Bonaparte, 1854, Ann. Sci. Nat., Zool., Paris, sér. 4, **1**, p. 141, is a *nomen nudum* (Stuart Baker, 1930, Fauna Brit. India, Birds, ed. 2, **8**, p. 566).—R. B. P.

- Kloss, 1927, *Ibis*, pp. 526-527 (variation in *melanolophus*).  
 van Rossem, 1936, *Auk*, **53**, pp. 322-323 (rufous phase of *nycticorax*).  
 Amadon, 1942, *Amer. Mus. Novit.*, no. 1175, pp. 4-8 (variation in *caledonicus*).  
 Adams, 1955, *Condor*, **57**, pp. 55-60 (osteology of *nycticorax*).  
 Wetmore, 1965, *Smithsonian Misc. Coll.*, **150**, pt. 1, pp. 99-100 (*nycticorax*).  
 Hoogerwerf, 1966, *Ardea*, **54**, pp. 81-87 (variation in *caledonicus* and hybridization with *nycticorax*).  
 Irwin and Benson, 1967, *Arnoldia*, **3**, no. 8, pp. 1-2 (*leuconotus*).  
 Maxwell and Putnam, 1968, *Wilson Bull.*, **80**, pp. 467-478 (behavior of *nycticorax*).  
 Voisin, 1970, *Oiseau*, **40**, pp. 307-339 (behavior of *nycticorax*).  
 White, 1973, *Bull. Brit. Ornith. Club*, **93**, pp. 175-176 (superspecies *nycticorax* and *caledonicus*).

#### NYCTICORAX NYCTICORAX<sup>1</sup>

##### *Nycticorax nycticorax nycticorax* (Linnaeus)

*Ardea Nycticorax* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 142—southern Europe.

*Ardea Hoactli* Gmelin, 1789, *Syst. Nat.*, **1**, p. 630; based on "Le Héron hupé du Mexique" of Brisson, 1760, *Ornith.*, **5**, p. 418, and "L'Hocti" of Buffon, 1780, *Hist. Nat. Générale*, **22**, *Hist. Nat. Oiseaux*, **7**, p. 382 (*ex Hernandez*, 1651, *Nova Plant. Animal. Mineral. Mex. Hist.*, *Hist. Animal. Mineral.*, p. 13, "Hoacton" = young, and p. 26, "Hoactli" = adult)—"in novae Hispaniae lacubus" = Valley of Mexico.

Continental Europe east to India, Sri Lanka (Ceylon), China, Japan, Taiwan, Ryukyu Islands (? breeding), Burma, Thailand, Indochina, Malay Peninsula, Sumatra, Java, Borneo, Celebes; Africa north of the Sahara and from Senegal to Sudan and Somalia south to South Africa; Madagascar; North America from southern Canada southward, Middle America, West Indies, South America from Colombia, Venezuela, and Surinam

<sup>1</sup>*N. nycticorax* and *caledonicus* form a superspecies.—R. B. P.

to Peru, northern Chile, and northeastern Argentina; Hawaiian Islands. Northern populations migratory: recoveries of birds from United States south to Panama, European and Russian birds throughout western Africa to Sudan, and to Mozambique, Japanese birds in Taiwan and Philippines, Taiwan birds in western Java and Mindanao. Records from Philippines, Lesser Sunda Islands, and Micronesia (Palau, Mariana, and Caroline Islands) are of wintering, not breeding, birds.

**Nycticorax nycticorax obscurus** Bonaparte<sup>1</sup>

*Nycticorax obscurus* Bonaparte, 1855, Consp. Gen. Avium, 2, p. 141—Chile and Patagonia. Type from Chile.

*Nycticorax cyanocephalus falklandicus* Hartert, 1914, Bull. Brit. Ornith. Club, 35, p. 15—Falkland Islands.

Highlands of Chile (Atacama) south to Strait of Magellan and Tierra del Fuego, and Argentina south from Mendoza and Río Negro; Falkland Islands.

NYCTICORAX CALEDONICUS

**Nycticorax caledonicus manillensis** Vigors

*Nycticorax Manillensis* Vigors, 1831, Proc. Com. Sci. Corresp. Zool. Soc. London, pt. 1, p. 98—Manila, Philippines.

*Nycticorax minahassae* A. B. Meyer and Wigglesworth, 1894, Journ. Ornith., 42, p. 115—Kema, Minahassa Peninsula, Celebes.

Java, northern Borneo (? breeding), Philippines, Celebes. Birds of eastern Indonesia are variable and average intermediate between *manillensis* and *hilli*.<sup>2</sup>

**Nycticorax caledonicus hilli** Mathews

*Nycticorax caledonicus hilli* Mathews, 1912, Novit. Zool., 18, p. 233—Parry's Creek, northwestern Australia.

Lesser Sunda Islands, Moluccas, New Guinea, western Bismarck Archipelago (Ninigo, Anchorite = Kaniet, Admiralty

<sup>1</sup>*Ardea cyanocephala* Molina, 1782, Saggio Storia Nat. Chili, pp. 235, 344—Chile, is indeterminable; cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, p. 212, note 1.—R. B. P.

<sup>2</sup>Limited interbreeding between *N. nycticorax nycticorax* and *N. caledonicus manillensis* occurs in western Java (Pulau Dua) and apparently also in Celebes (Hoogerwerf, 1966, *Ardea*, 54, pp. 81-87).—R. B. P.

Islands); Australia, New Zealand. Straggler Lord Howe Island.

**Nycticorax caledonicus mandibularis** Ogilvie-Grant

*Nycticorax mandibularis* Ogilvie-Grant, 1888, Proc. Zool.

Soc. London, p. 203—Aola, Guadalcanal, Solomon Islands.

*Nycticorax caledonicus cancrivorus* Neumann, 1930, Ornith.

Monatsber., **38**, p. 18—Uatom (= Watom) Island, off  
Gazelle Peninsula, New Britain.

Eastern Bismarck Archipelago and Solomon Islands. Birds  
of New Hanover and New Britain are intermediate between  
*hilli* and *mandibularis*.

**Nycticorax caledonicus crassirostris** Vigors

*Nycticorax crassirostris* Vigors, 1839, in Beechey, Zool.

Voyage Pacific Behring's Straits, p. 27—Bonin Islands.

Bonin Islands (Chichi Jima and Nakundo Jima). Extinct.<sup>1</sup>

**Nycticorax caledonicus pelewensis** Mathews

*Nycticorax caledonicus pelewensis* Mathews, 1926, Bull. Brit.

Ornith. Club, **46**, p. 60—Palau Islands.

Palau Islands and Caroline Islands (Uala, Truk).

**Nycticorax caledonicus caledonicus** (Gmelin)

*Ardea caledonica* Gmelin, 1789, Syst. Nat., **1**, p. 626; based

on "Caledonian Night Heron" of Latham, 1785, General

Synop. Birds, **3**, p. 55—New Caledonia.

New Caledonia.

NYCTICORAX LEUCONOTUS

**Nycticorax leuconotus** (Wagler)

*Ardea Leuconotus* Wagler, 1827, Syst. Avium, *Ardea*, no.

33—Senegambia.

*Caltherodias leuconotus natalensis* Roberts, 1933, Ann.

Transvaal Mus., **15**, p. 271—Natal.

Africa from Senegal and Guinea-Bissau to Sudan and Ethiopia,  
south through Zaire, Angola, Zambia, Malawi, eastern Rhode-  
sia (Zimbabwe), and Mozambique to Natal and eastern Cape  
Province.

<sup>1</sup>Known from 3 specimens collected in 1827, 1828, and 1889 (Ornith.  
Soc. Japan, 1974, Check-list Japanese Birds, ed. 5, p. 28). There  
appears to be no evidence of breeding sympatry of *N. nycticorax*  
*nycticorax* and *N. caledonicus crassirostris*, as *N. nycticorax nycticorax*  
is a nonbreeding visitor to the Bonins (Momiyama, 1930, Bull.  
Biogeogr. Soc. Japan, **1**, pp. 158-159).—R. B. P.

## NYCTICORAX MAGNIFICUS

**Nycticorax magnificus** (Ogilvie-Grant)

*Nycticorax magnificus* Ogilvie-Grant, 1899, Ibis, p. 586—  
Five-finger Mountain, Hainan.

Mountains of central Fukien, China, and Hainan.

NYCTICORAX GOISAGI<sup>1</sup>**Nycticorax goisagi** Temminck

*Nycticorax goisagi* Temminck, 1835, Planches Color., livr.  
98, pl. 582 and text—Japan.

Japan. Migratory, wintering in Ryukyu Islands, Taiwan, southern China, Philippine Islands, northern Celebes, and Halmahera.<sup>2</sup> Reported from Sakhalin (Kaiba-to = Moneron Island) and Palau Islands (Koror).

## NYCTICORAX MELANOLOPHUS

**Nycticorax melanolophus** (Raffles)

*Ardea melanolopha* Raffles, 1822, Trans. Linn. Soc. London,  
13, p. 326—western Sumatra.

*Butio Kutteri* Cabanis, 1881, Journ. Ornith., 29, p. 425—  
Philippines.

*Gorsachius melanolophus minor* Hachisuka, 1926, Ibis, p.  
592—Katchall Island, Nicobar Islands.

*Gorsachius melanolophus rufolineatus* Hachisuka, 1926,  
Ibis, p. 591—Iwahig, Palawan.

India, Sri Lanka (Ceylon), Burma, southern China, Taiwan, southern Ryukyu Islands, Nicobar Islands, Thailand, Indochina, Sumatra, Java, Borneo, Philippines. Straggler Palau Islands.

## TRIBE COCHLEARIINI

## GENUS COCHLEARIUS BRISSON

*Cochlearius* Brisson, 1760, Ornith., 1, p. 48; 5, p. 506. Type,  
by tautonymy, *Cochlearius* = *Cancroma cochlearia* Linnaeus.

<sup>1</sup>*N. goisagi* and *melanolophus* form a superspecies.—R. B. P.

<sup>2</sup>One juvenile from Taiwan, down still on feathers, apparently migrant from Japan.—R. B. P.



- cf. Wetmore, 1960, *Smithsonian Misc. Coll.*, **139**, no. 11, pp. 9-10 (systematic position).  
 Wetmore, 1965, *Smithsonian Misc. Coll.*, **150**, pt. 1, pp. 116-119 (Panama).  
 Cracraft, 1967, *Auk*, **84**, pp. 529-533 (systematic position).  
 Dickerman and Juarez L., 1971, *Ardea*, **59**, pp. 1-16 (breeding biology).  
 Sibley and Ahlquist, 1972, *Bull. Peabody Mus. Nat. Hist., Yale Univ.*, no. 39, p. 85 (systematic position).  
 Dickerman, 1973, *Bull. Brit. Ornith. Club*, **93**, pp. 111-114 (review of subspecies).  
 Mock, 1976, *Living Bird*, **14** (1975), pp. 185-214 (behavior).

## COCHLEARIIUS COCHLEARIIUS

**Cochlearius cochlearius zeledoni** (Ridgway)

*Cancroma zeledoni* Ridgway, 1885, *Proc. U. S. Nat. Mus.*, **8**, p. 93—Mazatlán, Sinaloa, Mexico.

Pacific coastal areas of Mexico from Mazatlán, Sinaloa, south at least to Río Papaguayo, Guerrero.

**Cochlearius cochlearius phillipsi** Dickerman

*Cochlearius cochlearius phillipsi* Dickerman, 1973, *Bull. Brit. Ornith. Club*, **93**, p. 113—about 8 kilometers east of Atasta, Campeche, Mexico.

Gulf and Caribbean coastal zone from La Pesca, Tamaulipas, Mexico, south to Belize (British Honduras).

**Cochlearius cochlearius ridgwayi** Dickerman

*Cochlearius cochlearius ridgwayi* Dickerman, 1973, *Bull. Brit. Ornith. Club*, **93**, p. 113—Coyoles, Yoro, Honduras.

Pacific coastal areas of Chiapas, Mexico, and Guatemala; Caribbean lowlands of Honduras; probably also this form in El Salvador.

**Cochlearius cochlearius panamensis** Griscom

*Cochlearius zeledoni panamensis* Griscom, 1926, *Amer. Mus. Novit.*, no. 235, p. 11—Corozal, Canal Zone, Panama.

Costa Rica and Panama (except southeastern Darién); also in Colombia (Acandí). Intergrades with *ridgwayi* in Guanaacaste, Costa Rica.

**Cochlearius cochlearius cochlearius** (Linnaeus)

*Cancroma Cochlearia* Linnaeus, 1766, *Syst. Nat.*, ed. 12,

1, p. 233; based on "La Cuillière" of Brisson, 1760, Ornith., 5, p. 506—Cayenne.

Río Jaqué in southeastern Darién, Panama, and South America from Colombia, Venezuela, Trinidad, and the Guianas south to eastern Ecuador, eastern Peru, Bolivia, and Brazil (Amazonia to Mato Grosso, São Paulo, and Rio de Janeiro). Recorded once from northern Argentina (Río Iguazú, Misiones).

### SUBFAMILY TIGRISOMATINAE

#### GENUS *TIGRISOMA* SWAINSON

*Tigrisoma* Swainson, 1827, Zool. Journ., 3, p. 362. Type, by original designation, *Ardea tigrina* Gmelin = *Ardea lineata* Boddaert.

*Heterocnus* Sharpe, 1895, Bull. Brit. Ornith. Club, 5, p. 14. Type, by original designation and monotypy, *Tigrisoma cabanisi* Heine.

cf. Miller, 1924, Bull. Amer. Mus. Nat. Hist., 50, p. 328 (powder-down and generic relationships).

Dathe, 1941, Zool. Garten Leipzig, Neue Folge, 13, pp. 288-292 (behavior of *lineatum*).

Pinto, 1946, Papéis Avulsos, Dept. Zool., São Paulo, 7, pp. 45-50 (plumages of *lineatum*).

Dawn, 1964, Auk, 81, pp. 230-231 (nesting of *mexicanum*).

Wetmore, 1965, Smithsonian Misc. Coll., 150, pt. 1, pp. 102-112 (Panama species).

Eisenmann, 1966, Hornero, 10 (1965), pp. 225-234 (review of *lineatum* and *fasciatum*).

#### TIGRISOMA MEXICANUM

##### *Tigrisoma mexicanum* Swainson

*Tigrisoma mexicana* Swainson, 1834, in Murray, Encycl. Geogr., p. 1383—Real del Monte, Hidalgo, Mexico.

*Tigrisoma Cabanisi* Heine, 1859, Journ. Ornith., 7, p. 407—Mexico.

*Heterocnus cabanist* [sic] *fremitus* van Rossem and Hachisuka, 1937, Proc. Biol. Soc. Washington, 50, p. 161—Guirocoba, Sonora, Mexico.

Mexico from southern Sonora and Sinaloa, Colima, Hidalgo, and southern Tamaulipas south through Central America to the Pacific coast of Panama (east to Chimán). One record

from the Caribbean coast of Panama (Permé, San Blas) and one from Colombia (Río Atrato).

#### TIGRISOMA FASCIATUM

##### **Tigrisoma fasciatum salmoni** Sclater and Salvin

*Tigrisoma salmoni* P. L. Sclater and Salvin, 1875, Proc. Zool. Soc. London, p. 38, fig. 2—Cauca River, Colombia.

*Tigrisoma salmoni brevirostre* Stolzmann, 1926, Ann. Zool. Mus. Polonici Hist. Nat., 5, p. 206—valley of Marcapata, southeastern Peru.

Costa Rica, Panama, Colombia, Venezuela, Ecuador, Peru, and Bolivia.

##### **Tigrisoma fasciatum fasciatum** (Such)

*Ardea Fasciata* Such, 1825, Zool. Journ. 2, p. 117—Brazil. Southeastern Brazil (Mato Grosso and Rio de Janeiro to Rio Grande do Sul) and northeastern Argentina (Misiones).

##### **Tigrisoma fasciatum pallescens** Olrog

*Tigrisoma salmoni pallescens* Olrog, 1950, Acta Zool. Lilloana, 9, p. 471—Quebrada El Pilón, Río Los Alisos, Salta, Argentina.

Northwestern Argentina (Jujuy, Salta, and Tucumán).

#### TIGRISOMA LINEATUM

##### **Tigrisoma lineatum lineatum** (Boddaert)

*Ardea lineata* Boddaert, 1783, Table Planches Enlum., p. 52; based on "L'Onoré rayé, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 860—Cayenne.

Costa Rica, Panama, Colombia, Ecuador, Peru, Venezuela, Trinidad, the Guianas, and Brazil (Amazon basin). Recorded once from Chiapas, Mexico, and once from southeastern Honduras (Río Coco).

##### **Tigrisoma lineatum marmoratum** (Vieillot)

*Ardea marmorata* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 415; based on "Garza jaspeada," no. 353, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata, 3, p. 160—Paraguay.

*Heterocnus bolivianus* Lönnberg, Ibis, 1903, p. 462—Tatarendá, Tarija, Bolivian Chaco.

Central and southeastern Bolivia, eastern, south-central, and southern Brazil, Paraguay, northern Uruguay, Argentina

south to Santiago del Estero, Santa Fe, and Entre Ríos. Intergrades with *lineatum* in southern Amazon basin.

GENUS **ZONERODIUS** SALVADORI

*Zonerodius* Salvadori, 1882, Ann. Mus. Civ. Genova, **18**, p. 336. Type, by monotypy, *Ardea heliosyla* Lesson.  
cf. Rand, 1942, Bull. Amer. Mus. Nat. Hist., **79**, p. 428.

**ZONERODIUS HELIOSYLUS**

**Zonerodius heliosylus** (Lesson)

*Ardea Heliosyla* Lesson, 1828, in Duperrey, Voyage Coquille, Zool., Atlas, **1**, livr. 7, pl. 44 (21 June); 1830, **1**, livr. 16, p. 722—New Guinea.  
New Guinea, Salawati, and Aru Islands.

GENUS **TIGRIORNIS** SHARPE

*Tigriornis* Sharpe, 1895, Bull. Brit. Ornith. Club, **5**, p. 14.  
Type, by original designation and monotypy, *Tigrisoma leucolopha* Jardine.  
cf. Chapin, 1932, Bull. Amer. Mus. Nat. Hist., **65**, pp. 422-424.  
Brosset, 1971, Alauda, **39**, pp. 113-114.

**TIGRIORNIS LEUCOLOPHUS**

**Tigriornis leucolopha** (Jardine)

*Tigrisoma leucolopha* Jardine, 1846, Ann. Mag. Nat. Hist., **17**, p. 86—Old Calabar River or Bonny River, Nigeria.  
Western Africa from Sierra Leone to Cameroon, Gabon, Central African Empire, and Zaire.

SUBFAMILY **BOTAURINAE**

TRIBE **ZEBRILINI**

GENUS **ZEBRILUS** BONAPARTE

*Zebrilus* Bonaparte, 1855 (April), Compt. Rend. Acad. Sci., Paris, **40**, p. 723. Type, by subsequent designation (G. R. Gray, 1855, Cat. Gen. Subgen. Birds Brit. Mus., Addenda, p. 2), *Ardea undulata* Gmelin.

## ZEBRILUS UNDULATUS

**Zebrilus undulatus** (Gmelin)

*Ardea undulata* Gmelin, 1789, Syst. Nat., 1, p. 637; based on "Le Petit Butor de Cayenne" of Buffon, 1780, Hist. Nat. Générale, 22, Hist. Nat. Oiseaux, 7, p. 430, and "petit Butor, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 763—Cayenne.

South America from eastern Colombia (Arauca), Venezuela, Guianas, Brazil (Amazonia south to Mato Grosso) to eastern Ecuador, eastern Peru, and northern Bolivia (Tumi Chucua, Beni).

## TRIBE BOTAURINI

## GENUS IXOBRYCHUS BILLBERG

*Ixobrychus* Billberg, 1828, Synop. Faunae Scand., ed. 2, 1, pt. 2, p. 166. Type, by subsequent designation (Stone, 1907, Auk, 24, p. 192), *Ardea minuta* Linnaeus.

*Dupetor* Heine and Reichenow, 1890, Nomencl. Mus. Heineani Ornith., p. 308. Type, by monotypy, *Ardea flavicollis* Latham.

cf. Hartert, 1920, Vögel Pal. Fauna, pp. 1256-1261.

Mayr, 1945, Amer. Mus. Novit., no. 1294, pp. 4-5 (*flavicollis*).

D'Ombraïn, 1955, Emu, 55, pp. 216-218 (behavior of young *flavicollis*).

Loke, 1955, Journ. Bombay Nat. Hist. Soc., 52, pp. 687-691; 53, pp. 1-5 (breeding of *cinnamomeus* and *sinensis*).

Bradley and Wolff, 1958, in Wolff, Nat. Hist. Rennell Island, p. 90 (*flavicollis*).

Weller, 1961, Wilson Bull., 73, pp. 11-35 (breeding biology of *exilis*).

Benson, 1970, Bull. Brit. Ornith. Club, 90, pp. 170-171 (*sinensis*, Seychelles).

Benson *et al.*, 1970, Arnoldia, 4, no. 40, p. 3 (migration of *sturmii*).

Dickerman, 1973, Auk, 90, pp. 689-691 (Mexican and Guatemalan *exilis*).

White, 1975, Bull. Brit. Ornith. Club, 95, pp. 106-107 (*flavicollis*).

## IXOBRYCHUS INVOLUCRIS

***Ixobrychus involucris* (Vieillot)**

*Ardea involucris* Vieillot, 1823, in Bonnaterre and Vieillot, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 93, p. 1127; based on "Garza varia," no. 361, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 185—Paraguay.

Northern South America (including breeding records) in Colombia, Venezuela, Trinidad, Guyana, and Surinam, and southern South America in southern Bolivia, southern Brazil, Paraguay, and Uruguay south to Chile (Llanquihue) and northern Patagonia.

IXOBRYCHUS EXILIS<sup>1</sup>***Ixobrychus exilis exilis* (Gmelin)**

*Ardea exilis* Gmelin, 1789, Syst. Nat., 1, p. 645; based on "Minute Bittern" of Latham, 1785, General Synop. Birds, 3, p. 66—Jamaica.

*Ixobrychus exilis hesperis* Dickey and van Rossem, 1924, Bull. Southern California Acad. Sci., 23, p. 11—Buena Vista Lake, Kern County, California.

Eastern Oregon east to southeastern Canada, south to lower Colorado River, Baja California, and Gulf of Mexico; coastal Tamaulipas to Veracruz, Campeche, and Yucatán, and Mexican Plateau; Belize (British Honduras), Guatemala, El Salvador, Nicaragua, Costa Rica; West Indies. Winters from Gulf of Mexico south through Mexico to Panama and Colombia, and in West Indies. Accidental Azores and Iceland.

***Ixobrychus exilis pullus* van Rossem**

*Ixobrychus exilis pullus* van Rossem, 1930, Trans. San Diego Soc. Nat. Hist., 6, p. 227—Tóbari Bay, Sonora, Mexico. Coastal mangroves of southern Sonora, Mexico, from Kino Bay to Tóbari Bay.

***Ixobrychus exilis erythromelas* (Vieillot)**

*Ardea erythromelas* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 422; based on "Garza roxa y negra," no. 360, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 182—Paraguay.

Panama (Canal Zone, Chagres River), Colombia (Cauca Valley,

<sup>1</sup>*I. exilis*, *minutus*, and *sinensis* form a superspecies.—R. B. P.

Santa Marta region), Venezuela (Guárico, Miranda), Trinidad, Guianas, eastern Brazil, Bolivia (Beni), Paraguay, and northern Argentina (Misiones, Corrientes).

***Ixobrychus exilis bogotensis* Chapman**

*Ixobrychus exilis bogotensis* Chapman, 1914, Bull. Amer. Mus. Nat. Hist., **33**, p. 171—Suba Marshes, Bogotá, Colombia.

Colombia (savanna of Bogotá to Antioquia).

***Ixobrychus exilis limoncochae* Norton**

*Ixobrychus exilis limoncochae* Norton, 1965, Breviora, no. 230, p. 3—Limoncocha, 300 meters, Río Napo, eastern Ecuador.

Eastern Ecuador.

***Ixobrychus exilis peruvianus* Bond**

*Ixobrychus exilis peruvianus* Bond, 1955, Auk, **72**, p. 208—Végueta, Lima, Peru.

Coastal Peru from Libertad (Pacasmayo, Trujillo) south to Arequipa (Mollendo).

IXOBRYCHUS MINUTUS

***Ixobrychus minutus minutus* (Linnaeus)**

*Ardea minuta* Linnaeus, 1766, Syst. Nat., ed. 12, **1**, p. 240—"Helvetia, Aleppo"; restricted to Switzerland by Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, p. 57.

Central and southern Europe east to western Siberia, eastern Mediterranean, Near East, Iraq, Iran, Sind, Kashmir, northwestern India, Russian Turkistan to Sinkiang; northern Africa in Morocco, northern Tunisia, and Egypt. Winters Africa (to Cape Province), Iraq, Iran, Pakistan, India. Has wandered to Iceland, Faeroes, British Isles, Scandinavia, Finland, Azores, Madeira, Canaries. Several recoveries of ringed European birds south of the Sahara in western Africa, 2 recoveries of European birds in Zaire.

***Ixobrychus minutus payesii* (Hartlaub)**

*Ardea Payesii* Hartlaub, 1858, Journ. Ornith., **6**, p. 42—Casamance River, Senegal.

Africa from Senegal through western Africa (Nigeria, Cameroon) east to Sudan, Ethiopia, and Somalia, south to Angola, South West Africa (Namibia), and South Africa. Recorded once in Darfur and once in Canary Islands.

**Ixobrychus minutus podiceps** (Bonaparte)

*Ardeola (Ardea) podiceps* Bonaparte, 1855, *Consp. Gen. Avium*, **2**, p. 134—Madagascar.

Madagascar. One specimen recorded from Zanzibar.

**Ixobrychus minutus novaezelandiae** (Potts)

*Ardeola Novae Zelandiae* Potts, 1871, *Trans. N. Z. Inst.*, **3**, p. 99—Westland, South Island, New Zealand.

*Ixobrychus minutus dubius* Mathews, 1912, *Novit. Zool.*, **18**, p. 234—Herdman's Lake, southwestern Australia.

*Ixobrychus minutus alisteri* Mathews, 1913, *Austral Avian Rec.*, **1**, p. 188—New South Wales.

Australia from northern and eastern Queensland, New South Wales, and Victoria to South Australia and Western Australia (southwestern part north to Murchison River). Recorded from southern New Guinea (Fly River) and Lord Howe Island. Former straggler to South Island, New Zealand.

## IXOBRYCHUS SINENSIS

**Ixobrychus sinensis** (Gmelin)

*Ardea Sinensis* Gmelin, 1789, *Syst. Nat.*, **1**, p. 642; based on "Chinese Heron" of Latham, 1785, *General Synop. Birds*, **3**, p. 99—China.

*Ardea lepida* Horsfield, 1821, *Trans. Linn. Soc. London*, **13**, p. 190—Java.

*Ardetta luteola* Stejneger, 1887, *Proc. U. S. Nat. Mus.*, **10**, p. 290—Wakayama, Kii, Hondo, Japan.

*Ardetta bryani* Seale, 1901, *Occas. Papers Bishop Mus.*, **1**, no. 3, p. 27—Guam.

*Ixobrychus sinensis astrologus* Wetmore, 1918, *Proc. Biol. Soc. Washington*, **31**, p. 83—Paete, Laguna, Luzon, Philippine Islands.

*Ixobrychus sinensis moorei* Wetmore, 1919, *Bull. Mus. Comp. Zool.*, **63**, p. 173—Uala, Truk group, central Caroline Islands.

*Ixobrychus sinensis pelewensis* Momiyama, 1932, *Bull. Biogeogr. Soc. Japan*, **2**, p. 333—Babelthuap, Palau Islands.

*Ixobrychus sinensis yapensis* Momiyama, 1932, *Bull. Biogeogr. Soc. Japan*, **2**, p. 333—Yap, western Caroline Islands.

Southeastern Siberia, southern Manchuria, central and eastern China, Sakhalin, Japan, Ryukyu and Bonin Islands, Taiwan,



Kashmir, India, Sri Lanka (Ceylon), Seychelles, Maldive, Andaman, and Nicobar Islands, southeastern Asia, Indonesia, Philippines, New Guinea, Ninigo Islands, New Britain, Micronesia (Palau, Mariana, Caroline Islands). Occasional Korea, accidental Western Australia (Kalgoorlie).

#### IXOBRYCHUS EURHYTHMUS

***Ixobrychus eurhythmus*** (Swinhoe)

*Ardetta eurhythma* Swinhoe, 1873, Ibis, p. 74, pl. 2—Amoy and Shanghai, China.

Southeastern Siberia, Manchuria, Korea, China south to Kwangtung, Japan, Ryukyu and Bonin Islands. Winters in southeastern China and Indochina south and east to Malay Peninsula, Sumatra, Java, Borneo, Philippines (Luzon, Mindoro, Negros, Samar, Mindanao), Celebes, and Palau Islands.

#### IXOBRYCHUS CINNAMOMEUS

***Ixobrychus cinnamomeus*** (Gmelin)

*Ardea cinnamomea* Gmelin, 1789, Syst. Nat., 1, p. 643; based on "Cinnamon Heron" of Latham, 1785, General Synop. Birds, 3, p. 77—China.

Manchuria, central and eastern China south to Hainan, Ryukyu Islands, Taiwan, India, Sri Lanka (Ceylon), Maldive, Andaman, and Nicobar Islands, southeastern Asia, Sumatra, Java, Borneo, Philippines, Celebes, Lesser Sunda Islands.

#### IXOBRYCHUS STURMII

***Ixobrychus sturmii*** (Wagler)

*Ardea Sturmii* Wagler, 1827, Syst. Avium, *Ardea*, no. 37—Senegambia.

Africa south of the Sahara. Migratory in seasonal parts of range. One record last century in Canary Islands.

#### IXOBRYCHUS FLAVICOLLIS

***Ixobrychus flavicollis flavicollis*** (Latham)

*Ardea flavicollis* Latham, 1790, Index Ornith., p. 701—India.

*Dupetor flavicollis major* Yamashina, 1931, Dôbutsu. Zasshi, 51, p. 182—Taiwan.

Eastern Pakistan, Nepal, India, Bangladesh, Sri Lanka (Ceylon), Maldive Islands, central and southern China, Taiwan,

southeastern Asia, Sumatra, Nias, Java, Borneo, Labuan, Philippines (Luzon, Marinduque, Negros, Cebu, Samar, Mindanao), Celebes. Birds in southern part of range may be largely wintering migrants. Migrant record from Guam. Bird ringed in Malaya (Kuala Lumpur) recovered in eastern India (Manipur).

**Ixobrychus flavicollis australis** (Lesson)

*Ardea australis* Lesson, 1831, *Traité Ornith.*, livr. 8, p. 572—"du Voyage de Peron"; Timor designated by Peters, 1931, *Check-list Birds World*, 1, p. 123.

*Ardetta gouldi* Bonaparte, 1855, *Consp. Gen. Avium*, 2, p. 132—New South Wales.

*Ardeirallus nesophilus* Sharpe, 1894, *Bull. Brit. Ornith. Club*, 3, p. 32—Duke of York Island.

Moluccas (Morotai, Halmahera, Batjan, Buru, Ceram, Ambon), Timor, Australia (western, northern, eastern coastal areas), Kai and Aru Islands, New Guinea, Bismarck Archipelago (Ninigo Islands: Ahu, Hermit Islands: Luf, Admiralty Islands: Manus, Vitu Islands, New Britain, New Hanover, New Ireland, Duke of York Islands, Lihir and Feni Islands).

**Ixobrychus flavicollis woodfordi** (Ogilvie-Grant)

*Ardeiralla woodfordi* Ogilvie-Grant, 1888, *Proc. Zool. Soc. London*, p. 202—Aloa, Guadalcanal, Solomon Islands.

*Dupetor flavicollis pallidior* Mayr, 1931, *Amer. Mus. Novit.*, no. 486, p. 5—Rennell Island.

Solomon Islands (including Rennell Island).

GENUS **BOTAURUS** STEPHENS

*Botaurus* Stephens, 1819, in Shaw, *General Zool.*, 11, pt. 2, p. 592. Type, by subsequent designation (G. R. Gray, 1840, *List Gen. Birds*, p. 66), *Ardea stellaris* Linnaeus.

cf. Portielje, 1926, *Ardea*, 15, pp. 1-15 (behavior of *stellaris*).  
Dickerman, 1961, *Wilson Bull.*, 73, pp. 333-335 (*pinnatus*).  
Slud, 1964, *Bull. Amer. Mus. Nat. Hist.*, 128, pp. 43-44 (*pinnatus*).

Gaukler and Kraus, 1965, *Vogelwelt*, 86, pp. 129-146 (breeding biology of *stellaris*).

Gentz, 1965, *Grosse Dommel* (Neue Brehm-Bücherei 345), 80 pp. (*stellaris*).

## BOTAURUS PINNATUS

**Botaurus pinnatus caribaeus** Dickerman

*Botaurus pinnatus caribaeus* Dickerman, 1961, Wilson Bull.,  
73, p. 333—Cantemo, Tabasco, Mexico.

Southern Mexico (Veracruz, Tabasco, Quintana Roo).

**Botaurus pinnatus pinnatus** (Wagler)

*Ardea pinnata* Wagler, 1829, Isis von Oken, col. 662—Bahia,  
Brazil.

El Salvador, Nicaragua, Costa Rica, Colombia, western Ecuador, Venezuela, Trinidad, Guianas, eastern and southern Brazil, Paraguay, Uruguay, and northern Argentina.

## BOTAURUS LENTIGINOSUS

**Botaurus lentiginosus** (Rackett)

*Ardea lentiginosa* Rackett, 1813, in Pulteney, Cat. Birds  
Shells Plants Dorsetshire, ed. 2, p. 14—Piddletown, Dorset,  
England.

*Botaurus lentiginosus peeti* Brodkorb, 1936, Occas. Papers  
Mus. Zool., Univ. Michigan, no. 333, p. 2—Black Point  
Cutoff, Sonoma County, California.

Central British Columbia east to southern Ungava and south to southern California, the Ohio Valley, and Delaware Bay, locally in southern Great Plains (Oklahoma, Texas) and southeastern United States. Winters in southern part of range to Mexico, Central America south through Costa Rica, and West Indies. One record from Panama. Occasional in British Isles; accidental in Greenland, Iceland, Faeroes, Norway, Spain, Azores, and Canary Islands.

BOTAURUS STELLARIS<sup>1</sup>**Botaurus stellaris stellaris** (Linnaeus)

*Ardea stellaris* Linnaeus 1758, Syst. Nat., ed. 10, p. 144—  
Europe; restricted to Sweden by Linnaeus, 1761, Fauna  
Svecica, ed. 2, p. 58.

Southern England and southern Scandinavia east to eastern Siberia and Japan (Hokkaido), south to northwestern Africa (northern Morocco to northern Tunisia), Albania, Bulgaria, Turkey, Iran, Transcaspia, Afghanistan, Mongolia, and China

<sup>1</sup>*B. stellaris* and *poiciloptilus* form a superspecies.—R. B. P.

(Hopeh). Winters from western and central Europe to northern tropical Africa (Nigeria, Zaire, Sudan, Ethiopia), Black Sea, Caspian Sea, east coast of Arabia, Pakistan, northern India, Japan, Korea, and China. Has wandered to Iceland, southern India, Burma, Ryukyu Islands, Taiwan, Malay Peninsula, Philippines (Luzon).

***Botaurus stellaris capensis* (Schlegel)**

*Ardea stellaris capensis* Schlegel, 1863, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 3, Ardeae, p. 48—Tatakon, South Africa, restricted to Wynberg, Cape Province, by Clancey, 1964, Birds Natal Zululand, p. 41. Angola, Zambia, Mozambique (San Pedro = Miruro), Botswana (Lake Ngami) south to Natal and Cape Province.

**BOTAURUS POICILOPTILUS**

***Botaurus poiciloptilus* (Wagler)**

*Ardea poiciloptila* Wagler, 1827, Syst. Avium, *Ardea*, no. 28, note—New South Wales.

*Botaurus poiciloptilus mathewsi* Hachisuka, 1931, Bull. Brit. Ornith. Club, 52, p. 41—New Caledonia.

Southern Australia, Tasmania, New Caledonia, Loyalty Islands (Ouvéa), and New Zealand. Recorded from Lord Howe Island.

**SUBORDER SCOPI**

**FAMILY SCOPIDAE<sup>1</sup>**

**M. PHILIP KAHL**

**GENUS SCOPUS BRISSON**

*Scopus* Brisson, 1760, Ornith., 1, p. 48; 5, p. 503. Type, by tautonymy, *Scopus* = *Scopus umbretta* Gmelin.

cf. Cowles, 1930, Auk, 47, pp. 159-176 (life history).

Kahl, 1967, Ibis, 109, pp. 25-32 (behavior).

Kahl, 1967, Ostrich, 38, pp. 27-30 (thermal regulation).

**SCOPUS UMBRETTA**

***Scopus umbretta umbretta* Gmelin**

*Scopus umbretta* Gmelin, 1789, Syst. Nat., 1, p. 618; based

<sup>1</sup>MS read by D. W. Snow.

on "Tufted Umbre" of Latham, 1785, General Synop. Birds, 3, p. 30, pl. 77—Senegal.

*Scopus umbretta bannermani* C. B. Grant, 1914, Bull. Brit. Ornith. Club, 35, p. 27—Mt. Leganisho, southwestern Kenya; altitude 6,600 feet.

*Scopus umbretta tenuirostris* Rand, 1936, Amer. Mus. Novit., no. 827, p. 1—Tananarive, Madagascar.

Entire Ethiopian region, except the area occupied by *minor*; southwestern Arabia; Madagascar.

**Scopus umbretta minor** Bates

*Scopus umbretta minor* Bates, 1931, Ibis, p. 302—near Bonthe, Sherbro Island, Sierra Leone.

Coastal belt of western Africa from Sierra Leone to southeastern Nigeria.

SUBORDER **CICONIAE**

FAMILY **CICONIIDAE**<sup>1</sup>

M. PHILIP KAHL

cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, pp. 242-249 (New World).

Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, 2, pp. 376-393 (English trans., 1968, Birds Soviet Union, 2, pp. 437-455).

Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 83-86.

Kahl, 1971, Living Bird, 10, pp. 151-170.

Kahl, 1972, Journ. Zool., London, 167, pp. 451-461.

Blake, 1977, Man. Neotropical Birds, 1, pp. 187-190.

Cramp and Simmons (eds.), 1977, Birds Western Palearctic, 1, pp. 320-337.

TRIBE **MYCTERIINI**

GENUS **MYCTERIA** LINNAEUS

*Mycteria* Linnaeus, 1758, Syst. Nat., ed. 10, p. 140. Type, by monotypy, *Mycteria americana* Linnaeus.

*Ibis* Lacépède, 1799, Tableaux Mammifères Oiseaux, p. 18.

<sup>1</sup>MS read by D. W. Snow.

Type, by tautonymy, *Ibis candidus* Daudin = *Tantalus ibis* Linnaeus.

cf. Palmer (ed.), 1962, Handb. North Amer. Birds, 1, pp. 508-515.

Kahl, 1972, *Ibis*, 114, pp. 15-29 (comparative ethology).

#### MYCTERIA AMERICANA

##### **Mycteria americana** Linnaeus

*Mycteria americana* Linnaeus, 1758, Syst. Nat., ed. 10, p. 140; based on "Tabiru guacu" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 200—"America calidiore" = Brazil ex Marcgrave.

Breeds from Georgia south through Florida, Greater Antilles, Middle America, and South America east of the Andes to Paraguay and southern Brazil.

#### MYCTERIA CINEREA

##### **Mycteria cinerea** (Raffles)

*Tantalus cinereus* Raffles, 1822, Trans. Linn. Soc. London, 13, p. 327—Sumatra.

Cambodia, Malay Peninsula, Sumatra, Java.

#### MYCTERIA IBIS

##### **Mycteria ibis** (Linnaeus)

*Tantalus Ibis* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 241—Egypt.

Africa from Senegal to Sudan and south to Natal; Madagascar.

#### MYCTERIA LEUCOCEPHALA

##### **Mycteria leucocephala** (Pennant)

*Tantalus leucocephalus* Pennant, 1769, Ind. Zool., p. 11, pl. 10—Ceylon.

India, Sri Lanka (Ceylon), southeastern China, Burma, Thailand, Cambodia, Vietnam.

#### GENUS ANASTOMUS BONNATERRE

*Anastomus* Bonnaterre, 1791, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 47, p. xciii. Type, by subsequent designation (G. R. Gray, 1841, List Gen. Birds, ed.

2, p. 87), *Ardea oscitans* Boddaert.

cf. Kahl, 1972, Journ. Ornith., 113, pp. 121-137 (comparative ethology).

#### ANASTOMUS OSCITANS

##### **Anastomus oscitans** (Boddaert)

*Ardea oscitans* Boddaert, 1783, Table Planches Enlum., p. 55; based on "Le Bec-ouvert, de Pondichery" of Daubenton, 1765-81, Planches Enlum., pl. 932—Pondicherry.

India, Sri Lanka (Ceylon), Thailand, Cambodia, Vietnam.

#### ANASTOMUS LAMELLIGERUS

##### **Anastomus lamelligerus lamelligerus** Temminck

*Anastomus lamelligerus* Temminck, 1823, Planches Color., livr. 40, pl. 236—Senegal.

Africa from Senegal (formerly), Sierra Leone, and Mali east to Sudan and Ethiopia, south to northern South West Africa (Namibia) and Transvaal.

##### **Anastomus lamelligerus madagascariensis** Milne-Edwards

*Anastomus madagascariensis* Milne-Edwards, 1880, Compt. Rend. Acad. Sci., Paris, 91, p. 1037—Madagascar.

Madagascar.

#### TRIBE CICONIINI

##### GENUS CICONIA BRISSON

*Ciconia* Brisson, 1760, Ornith., 1, p. 48; 5, p. 361. Type, by tautonymy, *Ciconia* = *Ardea ciconia* Linnaeus.

*Sphenorhynchus* Lichtenstein, 1823, Verzeichniss Doubletten Zool. Mus. Berlin, p. 76. Type, by monotypy, *Ciconia abdimii* Lichtenstein.

*Dissoura* Cabanis, 1850, Preuss. Staats-Anzeiger, Beilage, p. 1484. Type, by subsequent designation (Sharpe, 1898, Cat. Birds Brit. Mus., 26, p. 294), *Ardea episcopus* Boddaert.

*Euxenura* Ridgway, 1878, Bull. U. S. Geol. Geogr. Surv. Territories, 4, pp. 249-250. Type, by monotypy, *Ardea maguari* Gmelin.

cf. Schüz, 1942, Zeitschr. Tierpsychol., 5, pp. 1-37 (behavior of *ciconia*).

- Bauer and Glutz von Blotzheim, 1966, Handb. Vögel Mitteleuropas, **1**, pp. 387-427.
- Hornberger, 1967, Weisstorch (Neue Brehm-Bücherei 375), 156 pp. (*ciconia*).
- Haedo Rossi, 1969, Acta Zool. Lilloana, **25**, pp. 19-42 (breeding of *maguari*).
- Kahl, 1971, Condor, **73**, pp. 220-229 (breeding of *maguari*).
- Kahl, 1971, Ostrich, **42**, pp. 233-241 (breeding of *abdimii*).
- Kahl, 1972, Zeitschr. Tierpsychol., **30**, pp. 225-252 (comparative ethology).
- Schröder and Burmeister, 1974, Schwarzstorch (Neue Brehm-Bücherei 468), 64 pp. (*nigra*).
- Scott, 1975, Ostrich, **46**, pp. 201-207 (breeding of *episcopus*).

#### CICONIA NIGRA

##### **Ciconia nigra** (Linnaeus)

*Ardea nigra* Linnaeus, 1758, Syst. Nat., ed. 10, p. 142—northern Europe; restricted to Sweden by Peters, 1931, Check-list Birds World, **1**, p. 129.

Breeds from Portugal, northwestern Spain, and Germany east through the Balkans, Ukraine, Crimea, and Siberia to Mongolia, Manchuria, Ussuriland, Korea, northern China; Africa from Zambia (east of long. 26° E.) and Malawi south to Cape Province. Northern birds winter in Africa (to about lat. 3° S.), Middle East, northern India, and from southern Japan and eastern China to Burma, Thailand, and Indochina.

#### CICONIA ABDIMII

##### **Ciconia abdimii** Lichtenstein

*Ciconia Abdimii* Lichtenstein, 1823, Verzeichniss Doubletten Zool. Mus. Berlin, p. 76—Dongola, Sudan.

Breeds Africa from Senegal to Eritrea, south to Uganda and western Kenya; southwestern Arabia and Yemen. Migrates across the Equator south to Transvaal and Orange Free State.

#### CICONIA EPISCOPUS

##### **Ciconia episcopus microscelis** Gray

*Ciconia microscelis* G. R. Gray, 1848, Gen. Birds, **3**, p. [561],



col. pl. 151—no locality; Africa designated by Reichenow, 1901, *Vögel Afrikas*, 1, p. 348.

Senegal to Sudan and Eritrea, south to Angola and eastern Cape Province.

***Ciconia episcopus episcopus*** (Boddaert)

*Ardea episcopus* Boddaert, 1783, Table Planches Enlum., p. 54; based on "Heron, de la côte de Coromandel" of Daubenton, 1765-81, Planches Enlum., pl. 906—Coromandel Coast.

*Dissoura neglecta* Finsch, 1904, Ornith. Monatsber., 12, p. 94—Java, Lombok, Sumbawa, Philippines, Celebes.

India and Sri Lanka (Ceylon) east to Vietnam, Malay Peninsula, Sunda Islands (except Borneo), Philippines, Celebes.

***Ciconia episcopus stormi*** (Blasius)

*Melanopelargus episcopus stormi* W. Blasius, 1896, Mitt. Geogr. Gesell. Naturhist. Mus. Lübeck, ser. 2, pts. 10-11, p. 120—Pontianak, western Borneo.

Borneo; recorded Malay Peninsula, Sumatra.

CICONIA MAGUARI

***Ciconia maguari*** (Gmelin)

*Ardea Maguari* Gmelin, 1789, Syst. Nat., 1, p. 623; based on "Maguari" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 204—northeastern Brazil.<sup>1</sup>

South America from Colombia, Venezuela, and the Guianas to Argentina (Chubut).

CICONIA CICONIA

***Ciconia ciconia ciconia*** (Linnaeus)

*Ardea Ciconia* Linnaeus, 1758, Syst. Nat., ed. 10, p. 142—Europe, Asia, Africa; restricted to Sweden by Linnaeus, 1861, Fauna Svecica, ed. 2, p. 58.

Breeds Portugal and Spain and from Netherlands, Alsace, southern Sweden, and Denmark east and south to European Russia (from Gulf of Finland), Balkans, Turkey, Iraq, northern and western Iran; Morocco, Algeria, Tunisia; extreme southern

<sup>1</sup>*Ardea galeata* Molina, 1782, Saggio Storia Nat. Chili, pp. 235, 344, has a composite nature and is indeterminable; see Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, p. 245, note 1.—M. P. K.

Cape Province, South Africa. Winters chiefly in tropical and subtropical Africa south to Cape Province.

**Ciconia ciconia asiatica** Severtsov

*Ciconia alba asiatica* Severtsov, 1873, *Izvestiia Imp. Obshchestva Liubitelei Estest. Antrop. Etnogr.*, Moscow, **8**, pt. 2 (1872), p. 113—Turkistan.

Breeds Turkistan. Winters in eastern Iran, Pakistan, and India.

**Ciconia ciconia boyciana** Swinhoe

*Ciconia boyciana* Swinhoe, 1873, *Proc. Zool. Soc. London*, p. 513—Yokohama.

Breeds Amur and lower Ussuri River region of Siberia and Manchuria; Korea; formerly Japan. Winters south to Fukien, China, occasionally Taiwan, southern Ryukyu Islands; has wandered north to southern Yakutia, south to eastern India.

TRIBE LEPTOPTILINI

GENUS EPHIPIORHYNCHUS BONAPARTE

*Ephippiorhynchus* Bonaparte, 1855, *Consp. Gen. Avium*, **2**, p. 106. Type, by monotypy, *Mycteria senegalensis* Shaw.

*Xenorhynchus* Bonaparte, 1855, *Consp. Gen. Avium*, **2**, p. 106. Type, by subsequent designation (Salvadori, 1882, *Ornitologia Papuasias Molucche*, **3**, p. 377), *Mycteria australis* Shaw.

cf. Kahl, 1973, *Condor*, **75**, pp. 17-27 (comparative ethology).

EPHIPIORHYNCHUS ASIATICUS

**Ephippiorhynchus asiaticus asiaticus** (Latham)

*Mycteria asiatica* Latham, 1790, *Index Ornith.*, p. 670—India.

India and Sri Lanka (Ceylon) east to Vietnam and northern Malay Peninsula (one breeding record).

**Ephippiorhynchus asiaticus australis** (Shaw)

*Mycteria australis* Shaw, 1800, *Trans. Linn. Soc. London*, **5**, p. 33—New Holland = New South Wales, *vide* Mathews, 1912, *Novit. Zool.*, **18**, p. 229.

Southern New Guinea, islands in Torres Strait, northwestern, northern, and eastern Australia.

## EPHIPPIORHYNCHUS SENEGALENSIS

**Ephippiorhynchus senegalensis** (Shaw)

*Mycteria Senegalensis* Shaw, 1800, Trans. Linn. Soc. London, 5, p. 35, pl. 3—Senegal.

Senegal to Sudan and Ethiopia, south to northern South West Africa (Namibia) and northern Transvaal.

GENUS **JABIRU** HELLMAYR

*Jabiru* Hellmayr, 1906, Abh. K. Bayer. Akad. Wissen., Math.-Phys. Kl., 22, p. 711. Type, by original designation and monotypy, *Ciconia mycteria* Lichtenstein.

cf. Kahl, 1973, Condor, 75, pp. 17-27 (comparative ethology).

## JABIRU MYCTERIA

**Jabiru mycteria** (Lichtenstein)

*Ciconia mycteria* Lichtenstein, 1819, Abh. K. Akad. Wissen. Berlin, Phys. Kl. (1816-17), p. 163; based on "Jabirú" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 200—Brazil.

Southern Mexico, Central America, and South America, mostly east of the Andes, to northern Argentina (Formosa and Corrientes).

GENUS **LEPTOPTILOS** LESSON

*Leptoptilos* Lesson, 1831, Traité Ornith., livr. 8, p. 583. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 67), *Ardea dubia* Gmelin.

cf. Kahl, 1966, Behaviour, 27, pp. 76-106 (comparative ethology of *crumeniferus*).

Kahl, 1972, Ardea, 60, pp. 97-111 (comparative ethology of *dubius* and *javanicus*).

Pomeroy, 1977, Ardea, 65, pp. 1-24 (biology of *crumeniferus*).

## LEPTOPTILOS JAVANICUS

**Leptoptilos javanicus** (Horsfield)

*Ciconia Javanica* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 188—Java.

Eastern and southern India, Sri Lanka (Ceylon) to Vietnam, Malay Peninsula, Sumatra, Java, Borneo.

LEPTOPTILOS DUBIUS<sup>1</sup>

**Leptoptilos dubius** (Gmelin)

*Ardea dubia* Gmelin, 1789, Syst. Nat., 1, p. 624; based on "Gigantic Crane" of Latham, 1785, General Synop. Birds, 3, p. 45—India.

Northeastern India, Burma, Thailand, Indochina.

LEPTOPTILOS CRUMENIFERUS

**Leptoptilos crumeniferus** (Lesson)

*Ciconia crumenifera* Lesson, 1831, Traité Ornith., livr. 8, p. 585—Senegal.

Senegal to Sudan and Ethiopia, south to South West Africa (Namibia), Botswana, Rhodesia (Zimbabwe), Natal.

FAMILY BALAENICIPITIDAE<sup>2</sup>

M. PHILIP KAHL

GENUS BALAENICEPS GOULD

*Balaeniceps* Gould, 1850, Athenaeum, no. 1207, p. 1315.  
Type, by original designation, *Balaeniceps rex* Gould.

cf. Böhm, 1930, Zeitschr. Morph. Ökol. Tiere, 17, pp. 677-718  
(comparative anatomy).

Cottam, 1957, Bull. Brit. Mus. (Nat. Hist.), Zool., 5, pp. 49-71 (comparative osteology).

Burton and Benson, 1961, Northern Rhodesia Journ., 4, pp. 411-426.

Kahl, 1967, Ostrich, 38, pp. 27-30 (thermal regulation).

Fischer, 1970, Schuhschnabel (Neue Brehm-Bücherei 425), 88 pp.

Sibley and Ahlquist, 1972, Bull. Peabody Mus. Nat. Hist., Yale Univ., no. 39, pp. 73-80, 84-86 (relationships).

Feduccia, 1977, Nature, 266, pp. 719-720 (relationships).

<sup>1</sup>*L. dubius* and *crumeniferus* form a superspecies.—M. P. K.

<sup>2</sup>MS read by D. W. Snow.

## BALAENICEPS REX

**Balaeniceps rex** Gould

*Balaeniceps rex* Gould, 1850, Athenaeum, no. 1207, p. 1315—upper White Nile.

Central African Empire, northern Cameroon, southern Sudan, Ethiopia, eastern Zaire, Rwanda, Burundi, Uganda, western Tanzania, northern Zambia. Ancient Egypt.

FAMILY THRESKIORNITHIDAE<sup>1,2</sup>

JOACHIM STEINBACHER

cf. Chapin, 1932, Bull. Amer. Mus. Nat. Hist., **65**, pp. 473-488 (Congo region).

Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, pp. 249-273 (New World).

Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, **2**, pp. 357-376 (English trans., 1968, Birds Soviet Union, **2**, pp. 414-437).

Amadon and Woolfenden, 1952, Amer. Mus. Novit., no. 1564, pp. 1-6 (*Plegadis*, *Threskiornis*, *Platalea*).

Amadon, 1953, Bull. Amer. Mus. Nat. Hist., **100**, pp. 406-408 (*Bostrychia*, *Lophotibis*).

Parkes, 1955, Ann. Carnegie Mus., **33**, pp. 287-293 (North America).

Carrick, 1962, CSIRO Wildlife Res., **7**, pp. 71-88 (Australian ibises).

Palmer (ed.), 1962, Handb. North Amer. Birds, **1**, pp. 515-541.

Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 77-82.

Bauer and Glutz von Blotzheim, 1966, Handb. Vögel Mitteleuropas, **1**, pp. 427-454.

<sup>1</sup>MS read by D. W. Snow (African forms) and E. Eisenmann (New World forms).

<sup>2</sup>An application has been filed with the International Commission on Zoological Nomenclature, under Art. 23(d) (ii), to place the family-group name Threskiornithidae Richmond 1917 (Proc. U. S. Nat. Mus., **53**, p. 636) on the Official List of Family-Group Names in Zoology, giving it precedence over older names that may be considered synonymous; application submitted 22 July 1975 by E. Eisenmann, E. Mayr, and K. C. Parkes.—J. S.

- Holyoak, 1970, Bull. Brit. Ornith. Club, **90**, pp. 67-73 (Old World ibises).  
 Ornith. Soc. N. Z., 1970, Annot. Checklist Birds N. Z., pp. 35-36.  
 Milon *et al.*, 1973, Faune Madagascar, Oiseaux, pp. 57-62.  
 Blake, 1977, Man. Neotropical Birds, **1**, pp. 191-204.  
 Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 337-357.

## SUBFAMILY THRESKIORNITHINAE

## GENUS EUDOCIMUS WAGLER

- Eudocimus* Wagler, 1832, Isis von Oken, col. 1232. Type, by subsequent designation (Reichenow, 1877, Journ. Ornith., **25**, p. 145), *Scolopax rubra* Linnaeus.  
*Guara* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 14. Type, by original designation, *Scolopax rubra* Linnaeus.  
 cf. Beebe, 1914, Zoologica, **1**, pp. 241-248 (*albus*).  
 Zahl, 1950, Nat. Geogr., **97**, pp. 633-661 (sympatry of *albus* and *ruber*, Venezuela).  
 Parkes, 1951, Proc. Biol. Soc. Washington, **64**, p. 61 (generic name).  
 French and Haverschmidt, 1970, Living Bird, **9**, pp. 147-165 (*ruber*, Surinam).  
 Spaans, 1975, Biol. Conserv., **7**, pp. 245-253 (breeding of *ruber*, northeastern South America).

EUDOCIMUS ALBUS<sup>1</sup>**Eudocimus albus** (Linnaeus)

- Scolopax alba* Linnaeus, 1758, Syst. Nat., ed. 10, p. 145; based on "The White Curlew" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 82, pl. 82 (adult)—America = Carolina ex Catesby.  
 Gulf coast of United States and Atlantic coast from Virginia to Florida, Greater Antilles, central Baja California south along coasts of Mexico and Central America to northwestern South America, south to northwestern Peru and east to Vene-

<sup>1</sup>*E. albus* and *ruber* form a superspecies, with some overlap in Venezuela.—J. S.

zuela. Wanders to interior of Mexico, Trinidad, and north to northern United States.

#### EUDOCIMUS RUBER

##### **Eudocimus ruber** (Linnaeus)

*Scolopax rubra* Linnaeus, 1758, Syst. Nat., ed. 10, p. 145; based chiefly on "The Red Curlew" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 84, pl. 84—America = Bahamas *ex* Catesby.

Northern and eastern Colombia, eastern Ecuador, Trinidad, Guianas, coastal Brazil from Pará to São Paulo and Paraná. Accidental Texas, Louisiana, Alabama, Florida, Jamaica, and Grenada.

#### GENUS PHIMOSUS WAGLER

*Phimosus* Wagler, 1832, Isis von Oken, col. 1233. Type, by monotypy, *Ibis nudifrons* Spix.

cf. Laubmann, 1939, Vögel Paraguay, 1, pp. 102-103 (*infuscatus*).

Gyldenstolpe, 1945, K. Svensk. Vetenskapsakad. Handlingar, Stockholm, ser 3, 23, no. 1, pp. 43-44 (*infuscatus*, northern Bolivia).

#### PHIMOSUS INFUSCATUS

##### **Phimosus infuscatus berlepschi** Hellmayr

*Phimosus berlepschi* Hellmayr, 1903, Verh. Zool.-Bot. Gesell. Wien, 53, p. 247—Orinoco River region.

Northeastern Colombia, eastern Ecuador (Napo), Venezuela, Guyana, Surinam, northwestern Brazil (Rio Branco region).

##### **Phimosus infuscatus nudifrons** (Spix)

*Ibis nudifrons* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 69, pl. 86—"Ad litora lacuum fl. St. Francisci." Type from Rio São Francisco, Bahia, Brazil.

Brazil south of the Amazon from Mato Grosso east to Piauí and south to São Paulo and Rio Grande do Sul.

##### **Phimosus infuscatus infuscatus** (Lichtenstein)

*Ibis infuscata* Lichtenstein, 1823, Verzeichniss Doubletten Zool. Mus. Berlin, p. 75; based on "Afeytado," no. 365, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Para-

guay Rio Plata, 3, p. 201—Paraguay.  
Bolivia (Beni, Santa Cruz), Paraguay, Uruguay, and Argentina  
south to Córdoba and Buenos Aires.

GENUS **PLEGADIS** KAUP

*Plegadis* Kaup, 1829, Skizzirte Entwickelungs-Geschichte  
Europäisch. Thierwelt, p. 82. Type, by monotypy, *Tantalus*  
*falcinellus* Linnaeus.

cf. Ryder, 1967, Bird-Banding, 38, pp. 257-277 (*chihi*, North  
America).

Post, 1970, Kingbird, 20, pp. 3-8 (*falcinellus*, New York).

Kumerloeve, 1971, Zool. Abh. Staatl. Mus. Tierkunde  
Dresden, 30, pp. 243-246 (*falcinellus*, Near East).

Gochfeld, 1973, Condor, 75, pp. 474-478 (*falcinellus* and  
*chihi*, northern South America).

White, 1974, Bull. Brit. Ornith. Club, 94, pp. 9-11 (*falci-*  
*nellus*, Wallacea).

Burger and Miller, 1977, Auk, 94, pp. 664-676 (breeding  
ecology of *falcinellus* and *chihi*).

**PLEGADIS FALCINELLUS**<sup>1</sup>

***Plegadis falcinellus*** (Linnaeus)

*Tantalus Falcinellus* Linnaeus, 1766, Syst. Nat., ed. 12, 1,  
p. 241; based on "Numenius rostro arcuato" of W. H.  
Kramer, 1756, Elenchus Veg. Animal. Austriam In-  
feriorem Observatorum, p. 350, and "Le Courly verd" of  
Brisson, 1760, Ornith., 5, p. 326, fig. 2 (immature)—"Aus-  
tria, Italia"; Neusiedler See, Lower Austria (*ex* Kramer)  
suggested by Hellmayr and Conover, 1948, Publ. Field  
Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 2, p. 264.

*Ibis peregrina* Bonaparte, 1855, Consp. Gen. Avium, 2, p.  
159—Java and Celebes.

In Europe, southeastern France, northern Italy, Austria, Hun-  
gary, Balkans, Crimea, lower Volga, and Ural Rivers; acciden-  
tal or casual elsewhere. In Asia, from Transcaucasia, Turkey,  
and Iraq east to Burma and eastern China; also Java, Philip-  
pines (Mindanao), ? Celebes, Australia; vagrant Tibet, Sri

<sup>1</sup>*P. falcinellus* and *chihi* form a superspecies, with overlap in  
Louisiana and (formerly) Florida.—J. S.



Lanka (Ceylon), Hong Kong, Cambodia, Cochinchina, Borneo, New Guinea, Tasmania, New Zealand. In Africa, widely distributed as a migrant; breeds locally in the Niger inundation (Mali), from Kenya south to South West Africa (Namibia), Cape Province, and Madagascar. In North America, formerly only Louisiana, Florida, and Greater Antilles; in recent years rapidly extending breeding range north along the Atlantic coast to Maine, dispersing after the breeding season north to southern Canada. Casual Bermuda, various West Indian islands, Costa Rica, Panama, northern Colombia. Breeding Venezuela (Aragua); visitor Trinidad.

#### PLEGADIS CHIHI

##### **Plegadis chihi** (Vieillot)<sup>1</sup>

*Numenius chihi* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 8, p. 303; based on "Cuello jaspeado," no. 364, of Azara, 1805, *Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata*, 3, p. 197—Paraguay and campos of Buenos Aires, Argentina.

In North America, western United States from Oregon, Utah, Colorado, and Nebraska south to Alabama, Louisiana, Texas, and Mexico; wanders north to British Columbia and east to Michigan, Ohio, New York, and New Jersey; winters to Guatemala, El Salvador, and Costa Rica (one record); casual Florida (formerly bred) and Alabama. In South America, northern Venezuela, ? southern Peru, eastern Bolivia, south-eastern Brazil, and Paraguay south to central Chile and central Argentina, wandering north to Colombia and south to Strait of Magellan. Accidental Hawaiian Islands.

#### PLEGADIS RIDGWAYI

##### **Plegadis ridgwayi** (Allen)

*Falcinellus Ridgwayi* J. A. Allen, 1876, *Bull. Mus. Comp. Zool.*, 3, p. 355—Lake Titicaca, Peru.

Highlands (puna zone) of Peru (Junín) south to Bolivia (La

<sup>1</sup>*Scolopax Guarauna* Linnaeus, 1766, *Syst. Nat.*, ed. 12, 1, p. 242, is referable to *Aramus scolopaceus* (Gmelin); see Hellmayr and Conover, 1942, *Field Mus. Nat. Hist. Publ.*, Zool. Ser., 13, pt. 1, no. 1, p. 301, n. 1 (also 1948, pt. 1, no. 2, p. 266, n. 2).—J. S.

Paz, Cochabamba, Oruro), extreme northern Chile, and northwestern Argentina (Jujuy, Salta).

GENUS **CERCIBIS** WAGLER

*Cercibis* Wagler, 1832, Isis von Oken, col. 1232. Type, by monotypy, *Ibis oxycercus* Spix.

**CERCIBIS OXYCERCA**

***Cercibis oxycerca* (Spix)**

*Ibis oxycercus* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 69, pl. 87—"in Provincia Pará." Type from Amazonia.

Llanos of Colombia east of the Andes, Venezuela, Guyana, Amazonian Brazil south to northwestern Mato Grosso.

GENUS **THERISTICUS** WAGLER

*Theristicus* Wagler, 1832, Isis von Oken, col. 1231. Type, by monotypy, *Tantalus melanopis* Gmelin.

*Harpiprion* Wagler, 1832, Isis von Oken, col. 1232. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 67), *Ibis plumbeus* Temminck = *Ibis caerulescens* Vieillot.

cf. Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 102-105 (*melanopis*).

**THERISTICUS CAERULESCENS**

***Theristicus caerulescens* (Vieillot)**

*Ibis caerulescens* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 16, p. 18; based on "Curucáu aplomado," no. 363, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 195—Paraguay.

Southern Brazil in Mato Grosso and Rio Grande do Sul, Bolivia, Paraguay, Uruguay, northern Argentina (casually to Córdoba and Buenos Aires).

**THERISTICUS CAUDATUS<sup>1</sup>**

***Theristicus caudatus caudatus* (Boddaert)**

*Scolopax caudatus* Boddaert, 1783, Table Planches Enlum.,

<sup>1</sup>*T. caudatus* and *melanopis* form a superspecies.—J. S.

p. 57; based on "Courly à col blanc, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 976—Cayenne. Colombia south to Valle del Cauca and Meta, northern Venezuela from Zulia to Managas, Guyana, French Guiana, south to Mato Grosso, Brazil. Casual eastern Panama.

***Theristicus caudatus hyperorius* Todd**

*Theristicus caudatus hyperorius* Todd, 1948, Proc. Biol. Soc. Washington, 61, p. 50—Buena Vista, Bolivia.

Lowlands of eastern Bolivia, southeastern Brazil, Paraguay, Uruguay, and Argentina south to northern Buenos Aires.

**THERISTICUS MELANOPIS**

***Theristicus melanopis branickii* Berlepsch and Stolzmann**

*Theristicus branickii* Berlepsch and Stolzmann, 1894, Ibis, p. 404—Maraynioc, Pariayacú, Junín, Peru.

Highlands (puna zone) of Ecuador (Antisana, Cotopaxi), Peru (Junín, Huancavelica, Ayacucho, Cuzco, Puno), northwestern Bolivia (La Paz), and extreme northern Chile.

***Theristicus melanopis melanopis* (Gmelin)**

*Tantalus melanopis* Gmelin, 1789, Syst. Nat., 1, p. 653; based on "Black-faced Ibis" of Latham, 1785, General Synop. Birds, 3, p. 108, pl. 79—"in insula *novi anni*" = New Year's Island, near Staten Island, *ex* Latham.

Coastal Peru from Lima south, Chile from Antofagasta south to Tierra del Fuego, Argentina from Neuquén and Río Negro south to the Cape Horn region. In winter Patagonian birds migrate north to northern Argentina. Accidental Falkland Islands.

**GENUS MESEMBRINIBIS PETERS**

*Mesembrinibis* Peters, 1930, Occas. Papers Boston Soc. Nat. Hist., 5, p. 256. Type, by original designation, *Tantalus cayennensis* Gmelin.

**MESEMBRINIBIS CAYENNENSIS**

***Mesembrinibis cayennensis* (Gmelin)**

*Tantalus cayennensis* Gmelin, 1789, Syst. Nat., 1, p. 652; based on "Courly verd, de Cayenne" of Daubenton, 1765-81, Planches Enlum., p. 820—Cayenne.

Caribbean Costa Rica, Panama, northern and eastern Colombia, southern Venezuela (Orinoco and Apure basins), Guianas, eastern Ecuador, eastern Peru, eastern Bolivia, Brazil from Amazonia south, Paraguay, northeastern Argentina (Misiones).

GENUS **BOSTRYCHIA** REICHENBACH

*Bostrychia* Reichenbach, 1853, *Avium Syst. Nat.* (1852), p. 14. Type, by monotypy, *Ibis carunculata* Rüppell.

*Hagedashia* Bonaparte, 1855, *Consp. Gen. Avium*, 2, p. 152. Type, by tautonymy, *Tantalus hagedash* Latham.

*Lampribus* Elliot, 1877, *Proc. Zool. Soc. London*, pp. 483 (in key), 507. Type, by monotypy, *Ibis olivacea* Du Bus de Gisignies.

cf. Chapin, 1923, *Amer. Mus. Novit.*, no. 84, pp. 1-9 (*olivacea*).  
Skead, 1951, *Ibis*, 93, pp. 360-382 (*hagedash*).

Raseroka, 1975, *Ostrich*, 46, pp. 208-212 (*hagedash*).

**BOSTRYCHIA HAGEDASH**

***Bostrychia hagedash brevirostris*** (Reichenow)

*Theristicus brevirostris* Reichenow, 1907, *Ornith. Monatsber.*, 15, p. 147—Alén, southern Cameroon = Equatorial Guinea.

*Hagedashia hagedash erlangeri* Neumann, 1909, *Ornis*, 13, p. 193—Dogge, southern Somalia.

Senegal south through Zaire and Angola to northern South West Africa (Namibia), Kenya and southern Somalia south through Tanzania, Zambia, and Malawi to northern Mozambique (Beira) and northern Botswana.

***Bostrychia hagedash nilotica*** Neumann

*Bostrychia hagedash nilotica* Neumann, 1909, *Ornis*, 13, p. 193—Kimo, northwest of Addis Ababa, Ethiopia.

Sudan, Ethiopia, northeastern Zaire, Uganda, northwestern Tanzania.

***Bostrychia hagedash hagedash*** (Latham)

*Tantalus Hagedash* Latham, 1790, *Index Ornith.*, p. 709—Cape of Good Hope.

Rhodesia (Zimbabwe), southern Mozambique (from Gorongosa), eastern South Africa.

## BOSTRYCHIA CARUNCULATA

**Bostrychia carunculata** (Rüppell)

*Ibis carunculata* Rüppell, 1837, Neue Wirbelthiere Fauna Abyssinien, Vögel, p. 49, pl. 19—Taranta Mountains, Ethiopia.

Highlands of Ethiopia and Eritrea.

## BOSTRYCHIA OLIVACEA

**Bostrychia olivacea olivacea** (Du Bus de Gisignies)

*Ibis olivacea* Du Bus de Gisignies, 1838, Bull. Acad. Roy. Sci. Lettres Beaux-Arts Belgique, 4 (1837), p. 105 and pl. —“côte de Guinée” = upper Guinea, as determined by Chapin, 1923, Amer. Mus. Novit., no. 84, pp. 1-3.

Sierra Leone to Ivory Coast.

**Bostrychia olivacea cupreipennis** (Reichenow)

*Theristicus cupreipennis* Reichenow, 1903, Ornith. Monatsber., 11, p. 134—Cameroon.

Cameroon, Gabon, northern Zaire.

**Bostrychia olivacea rothschildi** (Bannerman)

*Lampribus rothschildi* Bannerman, 1919, Bull. Brit. Ornith. Club, 40, p. 6—Roça Infante D. Henrique, Principe Island, Gulf of Guinea.

Principe Island, Gulf of Guinea. Extinct?

**Bostrychia olivacea bocagei** (Chapin)

*Lampribus bocagei* Chapin, 1923, Amer. Mus. Novit., no. 84, p. 5, figs. 2A, 3A—Rio de São Tomé, São Tomé.

Island of São Tomé, Gulf of Guinea.

**Bostrychia olivacea akleyorum** (Chapman)

*Oreoibis akleyorum* Chapman, 1912, Bull. Amer. Mus. Nat. Hist., 31, p. 235, pls. 23-24—south slope of Mt. Kenya, altitude, 9,000 ft.

Mt. Kenya and Aberdare Mountains, Kenya; Mt. Kilimanjaro, Usambara Mountains, and probably Mt. Meru, Tanzania.

## BOSTRYCHIA RARA

**Bostrychia rara** (Rothschild, Hartert, and Kleinschmidt)

*Lampribus rara* Rothschild, Hartert, and Kleinschmidt, 1897,

Novit. Zool., 4, p. 377—Denkera, Ghana.  
Liberia to Cameroon, Gabon, Zaire, northeastern Angola.

GENUS **LOPHOTIBIS** REICHENBACH

*Lophotibis* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 14. Type, by original designation, *Tantalus cristatus* Boddaert.

cf. Appert, 1966, Journ. Ornith., 107, pp. 315-322.

**LOPHOTIBIS CRISTATA**

**Lophotibis cristata cristata** (Boddaert)

*Tantalus cristatus* Boddaert, 1783, Table Planches Enlum., p. 51; based on "Courly hupé, de Madagascar" of Daubenton, 1765-81, Planches Enlum., pl. 841—Madagascar.

Eastern Madagascar.

**Lophotibis cristata urschi** Lavauden

*Lophotibis cristata urschi* Lavauden, 1929, Alauda, 1, p. 233—Ankarafantsika and 100 kilometers southeast of Majunga, western Madagascar.

Western Madagascar.

GENUS **THRESKIORNIS** GRAY

*Threskornis* G. R. Gray, 1842, List Gen. Birds, ed. 2, App., p. 13. Type, by original designation, *Tantalus aethiopicus* Latham.

*Carphibis* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 14. Type, by original designation, *Ibis spinicollis* Jameson.

cf. Carrick, 1959, CSIRO, Wildlife Res., 4, pp. 69-92 (*aethiopicus strictipennis* and *spinicollis*, Australia).

Carrick, 1962, CSIRO, Wildlife Res., 7, pp. 7-188 (breeding, movements, conservation, Australia).

Benson, 1967, Atoll Res. Bull., 118, pp. 67-90 (*abbotti*).

Waterman, Close, and Condon, 1971, South Austral. Ornith., 26, pp. 7-11 (*spinicollis*, South Australia).

Urban, 1974, Ibis, 116, pp. 263-277 (breeding of *aethiopicus*, Ethiopia).

- McGilligan, 1975, *Emu*, **75**, pp. 199–212 (*spinicollis*, Australia).  
 Purchase, 1976, *Emu*, **76**, p. 89 (*spinicollis*, Australia).

## THRESKIORNIS AETHIOPICUS

**Threskiornis aethiopicus aethiopicus** (Latham)

*Tantalus aethiopicus* Latham, 1790, Index Ornith., p. 706—  
 “Aethiopia” = ? Egypt (cf. Bruce, 1790, Travels Source Nile, **5**, p. 172, pl. [35]).

Senegal east to Sudan, Eritrea, and Somalia, south to Cape Province; marshes of southern Iraq. In Africa partly migratory, moving north to breed. Casual Black and Caspian Seas, lower Volga River. Formerly common Egypt.

**Threskiornis aethiopicus bernieri** (Bonaparte)

*Ibis bernieri* Bonaparte, 1855, *Consp. Gen. Avium*, **2**, p. 151—Madagascar.

Madagascar.

**Threskiornis aethiopicus abbotti** (Ridgway)

*Ibis abbotti* Ridgway, 1893, *Proc. U. S. Nat. Mus.*, **16**, p. 599—Aldabra Island.

Aldabra Island.

**Threskiornis aethiopicus melanocephalus** (Latham)

*Tantalus melanocephalus* Latham, 1790, Index Ornith., p. 709—India.

Nepal, India, Sri Lanka (Ceylon), southern Manchuria south to Cambodia, Annam, Cochinchina, Malay Peninsula, Java. Occasional winter visitor eastern Asiatic islands from Japan to Philippines.

**Threskiornis aethiopicus moluccus** (Cuvier)

*Ibis molucca* Cuvier, 1829, *Règne Animal, nouv. éd.*, **1**, p. 520, note—Moluccas.

Moluccas (Ceram, Great Kai Island), southern New Guinea (intermediate between *moluccus* and *strictipennis*).

**Threskiornis aethiopicus strictipennis** (Gould)

*Ibis strictipennis* Gould, 1838 (April), *Synop. Birds Australia*, pt. 4, app., p. 7—Australia.

Australia. Vagrant Tasmania and New Zealand.

**Threskiornis aethiopicus pygmaeus** Mayr

*Threskiornis aethiopicus pygmaeus* Mayr, 1931, Amer. Mus. Novit., no. 486, p. 6—Rennell Island, Solomon Islands. Rennell and Bellona Islands, Solomon Islands.

## THRESKIORNIS SPINICOLLIS

**Threskiornis spinicollis** (Jameson)

*Ibis spinicollis* Jameson, 1835, Edinburgh New Philos. Journ., 19, p. 213—Murray River, New South Wales. Australia. Vagrant Tasmania, southern New Guinea, Lord Howe Island, Norfolk Island.

## GENUS GERONTICUS WAGLER

*Geronticus* Wagler, 1832, Isis von Oken, col. 1232. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 67), *Tantalus calvus* Boddaert.

cf. Wackernagel, 1964, Ornith. Beob., 61, pp. 49–56 (*eremita*).  
Smith, K. D., 1970, Bull. Brit. Ornith. Club, 90, pp. 18–24 (*eremita*).

Siegfried, 1971, Biol. Conserv., 3, pp. 88–91 (*calvus*).

Siegfried, 1972, Bull. Brit. Ornith. Club, 92, pp. 102–103 (*eremita*, discrete populations).

Rencurel, 1974, Alauda, 42, pp. 143–158 (*eremita*, north-western Africa).

Hamel, 1975, Vogelwelt, 96, pp. 213–221 (*eremita*).

Hirsch, 1976, Ornith. Beob., 73, pp. 225–235 (*eremita*).

Schenker, 1977, Ornith. Beob., 74, pp. 13–30 (*eremita*, former range in Europe).

Kumerloeve, 1978, Ann. Naturhist. Mus. Wien, 81, pp. 319–349 (*eremita*, history and present status).

GERONTICUS EREMITA<sup>1</sup>**Geronticus eremita** (Linnaeus)

*Upupa Eremita* Linnaeus, 1758, Syst. Nat., ed. 10, p. 118—Switzerland.

Breeds Morocco and southeastern Turkey (Birecik); possibly Algeria, Syria, northern Iraq, Yemen. South in winter to Spanish Sahara, eastern Sudan, Ethiopia, Eritrea, southern

<sup>1</sup>*G. eremita* and *calvus* form a superspecies.—J. S.



Arabia. Casual Cape Verde Islands, Azores, southern Spain, Tunisia, Somalia. Formerly bred Europe (southwestern Germany, Switzerland, Austria, ? Yugoslavia, ? Hungary); extinct by seventeenth century. Ancient Egypt.

#### GERONTICUS CALVUS

##### **Geronticus calvus** (Boddaert)

*Tantalus Calvus* Boddaert, 1783, Table Planches Enlum., p. 52; based on "Courly à tête nue, du Cap du bonne-Esperance" of Daubenton, 1765-81, Planches Enlum., pl. 867—Cape of Good Hope.

Southeastern highlands of South Africa (Transvaal, Orange Free State, Basutoland, Natal).

#### GENUS PSEUDIBIS HODGSON

*Pseudibis* Hodgson, 1844, in J. E. Gray (ed.), Zool. Misc., p. 86. Type, by monotypy, *Ibis papillosa* Temminck.

*Thaumatibis* Elliot, 1877, Proc. Zool. Soc. London, pp. 483 (in key), 489. Type, by original designation, *Ibis gigantea* Oustalet.

cf. Int. Union Conservation Nature (IUCN), 1966, Red Data Book, 2 (Aves), p. 45 (*gigantea*).

#### PSEUDIBIS PAPILLOSA

##### **Pseudibis papillosa papillosa** (Temminck)

*Ibis papillosa* Temminck, 1824, Planches Color., livr. 51, pl. 304 and text—India and Ceylon.

Pakistan, Nepal, India south to Mysore, east to Assam and ? Arakan, Burma.

##### **Pseudibis papillosa davisoni** (Hume)

*Geronticus Davisoni* Hume, 1875, Stray Feathers, 3, p. 300—Pakchan estuary, Tenasserim.

Burma, western Yunnan, Thailand, Laos, Cambodia, southern Annam, Cochinchina, ? Malay Peninsula. Casual Borneo.

#### PSEUDIBIS GIGANTEA

##### **Pseudibis gigantea** (Oustalet)

*Ibis gigantea* Oustalet, 1877, Bull. Soc. Philomath. Paris, sér. 7, 1, p. 25—Mekong River, Cambodia.

Lowlands of central and peninsular Thailand, central and southern Laos, Cambodia, Cochinchina, ? Malay Peninsula.

GENUS **NIPPONIA** REICHENBACH

*Nipponia* Reichenbach, 1853, *Avium Syst. Nat.* (1852), p. 14. Type, by monotypy, *Ibis temminckii* Reichenbach = *Ibis nippon* Temminck.

cf. Int. Union Conservation Nature (IUCN), 1966, *Red Data Book*, 2 (Aves), p. 44.

Yamashina, 1969, *Yearbook World Wildlife Fund* 1968, pp. 147-148, 240.

Ornith. Soc. Japan, 1974, *Check-list Japanese Birds*, ed. 5, pp. 37-38.

**NIPPONIA NIPPON**

***Nipponia nippon*** (Temminck)

*Ibis nippon* Temminck, 1835, *Planches Color.*, livr. 93, pl. 551—Japan.

Formerly from eastern Manchuria south to Anhwei and Chekiang, west to western Shensi and southern Kansu, Japan; in winter south to Hainan. Now nearly extinct—known only from very small breeding population Sado Island, Japan.

SUBFAMILY **PLATALEINAE**

GENUS **PLATALEA** LINNAEUS

*Platalea* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 139. Type, by subsequent designation (G. R. Gray, 1840, *List Gen. Birds*, p. 67), *Platalea leucorodia* Linnaeus.

*Ajaia* Reichenbach, 1853, *Avium Syst. Nat.* (1852), p. 16. Type, by original designation, *Ajaia rosea* Reichenbach = *Platalea ajaja* Linnaeus.

*Platibis* Bonaparte, 1855, *Compt. Rend. Acad. Sci.*, Paris, 40, p. 724. Type, by monotypy, *Platalea flavipes* Gould.

cf. Allen, R. P., 1942, *Roseate Spoonbill*, 160 pp. (*ajaja*).

Hoogerwerf, 1951-52, *Limosa*, 24, pp. 91-99; 25, pp. 118-131.

Brouwer, 1964, *Zool. Mededelingen Rijksmus. Nat. Hist.*

- Leiden, **39**, pp. 481-521 (*leucorodia*, Europe).  
Vespremeanu, 1968, *Ardea*, **56**, pp. 160-177 (*leucorodia*,  
Rumania).  
Whitelaw, 1968, *Ostrich*, **39**, pp. 236-241 (*alba*).

## PLATALEA LEUCORODIA

**Platalea leucorodia leucorodia** Linnaeus

*Platalea Leucorodia* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 139; based on "The Spoonbill" of Albin, 1734, *Nat. Hist. Birds*, **2**, p. 61, pl. 66—Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 57.

*Platalea major* Temminck and Schlegel, 1849, in Siebold, *Fauna Japonica, Aves*, p. 119, pl. 75—Japan.

Breeds locally in Europe: southern Spain, Netherlands, eastern Austria, Hungary, Balkans, southern USSR; in Asia from southwestern Siberia and Turkey east to northern China, India, Sri Lanka (Ceylon). Formerly bred more widely in Europe (recent tentative breeding again France, northern Germany, Czechoslovakia). Regular visitor to British Isles (bred south-eastern England to seventeenth century). Winters south to Mediterranean, Kenya and Uganda, Persian Gulf, north coast of Arabian Sea, India, southeastern China, southern Japan. Accidental Greenland, Scotland, Scandinavia.

**Platalea leucorodia balsaci** Naurois and Roux

*Platalea leucorodia balsaci* Naurois and Roux, 1974, *Oiseau*, **44**, p. 77—Zira Island, Banc d'Arguin, Mauritania.

Islands off the coast of Mauritania, centering on the Banc d'Arguin.

**Platalea leucorodia archeri** Neumann

*Platalea leucorodia archeri* Neumann, 1928, *Journ. Ornith.*, **76**, p. 783—Dahlak Island, Red Sea.

Coasts of Red Sea and Somalia, Socotra.

**Platalea leucorodia regia** Gould

*Platalea regia* Gould, 1838, *Synop. Birds Australia*, pt. 4, app., p. 7—east coast of New South Wales.

Java, Australia except southwest, New Zealand (Okarito, South Island). Wanders to Borneo, Celebes, Timor, Moluccas, New Guinea, Rennell Island (Solomon Islands).

## PLATALEA MINOR

**Platalea minor** Temminck and Schlegel

*Platalea minor* Temminck and Schlegel, 1849, in Siebold, Fauna Japonica, Aves, p. 120, pl. 76—Japan. Korea, central Manchuria, probably eastern China south to Fukien. Winters Kwangtung, Hainan, Indochina, formerly Japan. Accidental Philippines.

## PLATALEA ALBA

**Platalea alba** Scopoli

*Platalea alba* Scopoli, 1786, Deliciae Florae Faunae Insubricae, 2, p. 92; based on "La Spatule blanche de L'Isle de Luçon" of Sonnerat, 1776, Voyage Nouvelle Guinée, p. 89, pl. 51—Luzon, Philippines; error, Cape of Good Hope. Africa from Gambia and Sudan south to Cape Province; Madagascar.

## PLATALEA FLAVIPES

**Platalea flavipes** Gould

*Platalea flavipes* Gould, 1838, Synop. Birds Australia, pt. 4, app., p. 7—New South Wales. Australia. Vagrant Lord Howe Island and New Zealand (Kaitaia, North Island).

## PLATALEA AJAJA

**Platalea ajaja** Linnaeus

*Platalea Ajaja* Linnaeus, 1758, Syst. Nat., ed. 10, p. 140; based chiefly on "Aiaia" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 204—"in America australi" = Rio São Francisco, eastern Brazil, *ex* Marcgrave, designated by Berlepsch, 1908, Novit. Zool., 15, p. 301. Southern United States (Texas, Louisiana, Florida), Bahamas (Great Inagua), Cuba, Isle of Pines, Hispaniola and adjacent islands, Mexico (except Plateau region), Central America, northern and eastern Colombia, Venezuela, Guianas, Brazil, Ecuador, extreme northwestern and eastern Peru, eastern Bolivia, Chile (formerly), Paraguay, Uruguay, Argentina south to Córdoba and Buenos Aires. Casual or accidental various parts of United States, through West Indies, southern Patagonia, Falkland Islands.

ORDER PHOENICOPTERIFORMES<sup>1</sup>

M. PHILIP KAHL

## FAMILY PHOENICOPTERIDAE

- cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 2, pp. 273-278 (New World).  
 Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuza, **2**, pp. 341-349 (English trans., 1968, Birds Soviet Union, **2**, pp. 396-405).  
 Allen, R. P., 1956, Flamingos, 300 pp. (*Phoenicopterus r. ruber*).  
 Palmer (ed.), 1962, Handb. North Amer. Birds, **1**, pp. 542-550.  
 Brown, 1973, Mystery Flamingos, ed. 2, 143 pp. (*Phoenicopterus ruber roseus*, *Phoeniconaias minor*).  
 Kear and Duplaix-Hall (eds.), 1975, Flamingos, 246 pp. (symposium).  
 Kahl, 1976, XII Bull. Int. Council Bird Preservation (1975), pp. 220-222 (distribution and numbers).  
 Blake, 1977, Man. Neotropical Birds, **1**, pp. 205-208.  
 Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 358-368 (*Phoenicopterus ruber roseus*, *Phoeniconaias minor*).

## GENUS PHOENICOPTERUS LINNAEUS

- Phoenicopterus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 139.  
 Type, by monotypy, *Phoenicopterus ruber* Linnaeus.

## PHOENICOPTERUS RUBER

**Phoenicopterus ruber ruber** Linnaeus

*Phoenicopterus ruber* Linnaeus, 1758, Syst. Nat., ed. 10, p. 139; based chiefly on "The Flamingo" of Catesby, 1731, Nat. Hist. Carolina, pt. 4, p. 73, pl. 73—"Africa, America, rarius in Europa" = Bahamas, *ex* Catesby, designated by Berlepsch, 1908, Novit. Zool., **15**, p. 312.

Yucatán, Bahamas, Cuba, Hispaniola, Bonaire (Netherlands Antilles), Galapagos Archipelago. Nonbreeding birds widely distributed in Caribbean region; wanderers recorded from

<sup>1</sup>MS read by D. W. Snow.

Bermuda and mouth of Amazon. Breeding formerly more widespread through Caribbean.

**Phoenicopterus ruber roseus** Pallas

*Phoenicopterus roseus* Pallas, 1811, Zoographia Rosso-Asiat.,

2, p. 207—"ad ostia Volgae et Rhymini" = Ural River.<sup>1</sup>

In Europe breeds southern France, irregularly southern Spain, Kazakh SSR (east of Caspian and near Aral Sea). In Africa southern Morocco, Mauritania, Tunisia, some Rift Valley lakes of eastern Africa, South West Africa (Namibia), Botswana, South Africa. ? Formerly Cape Verde Islands. In Asia Turkey, southern Iraq, Kuwait, Iran, southeastern Afghanistan, northwestern India. Has wandered to British Isles, Scandinavia, Finland, central Russia, Lake Baykal, Madagascar.

PHOENICOPTERUS CHILENSIS

**Phoenicopterus chilensis** Molina

*Phoenicopterus chilensis* Molina, 1782, Saggio Storia Nat.

Chili, pp. 242, 344—Chile.

Breeds in South America from south-central Peru along the Andes in Bolivia, Chile, and Argentina to about lat. 52° S.; also in the pampas of central Argentina. Nonbreeding birds found southern Brazil, Paraguay, Uruguay, eastern Argentina. Stragglers to northern coastal Peru, Falkland Islands.

GENUS PHOENICONAIAS GRAY

*Phoeniconaias* G. R. Gray, 1869, Ibis, pp. 440, 442. Type, by monotypy, *Phoenicopterus minor* Geoffroy.

PHOENICONAIAS MINOR

**Phoeniconaias minor** (Geoffroy)

*Phoenicopterus minor* Geoffroy, 1798, Bull. Sci. Soc. Philomath. Paris, 1, pt. 2, p. 98 and pl., figs. 1-3—no locality = Senegal, *vide* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 25, p. 520.

Breeds Mauritania, some Rift Valley lakes of eastern Africa, South West Africa (Naribia), ? Botswana, northwestern India.

<sup>1</sup>*Phoenicopterus antiquorum* Temminck, though used by many authors, was first published 1820, and is a *nomen nudum*.—M. P. K.

Occurs locally throughout sub-Saharan Africa, Madagascar, central India. Straggler to southern Spain.

GENUS **PHOENICOPARRUS** BONAPARTE

*Phoenicoparrus* Bonaparte, 1856, Compt. Rend. Acad. Sci., Paris, 43, p. 992. Type, by original designation, *Phoenicopterus andinus* Philippi.

**PHOENICOPARRUS ANDINUS**

**Phoenicoparrus andinus** (Philippi)

*Phoenicopterus andinus* Philippi, 1854, Anales Univ. Chile, p. 337—salt lake near Altos de Pingopingo, Antofagasta, Chile.

Puna zone of Andes in southern Peru, Bolivia, northern Chile, and northwestern Argentina.

**PHOENICOPARRUS JAMESI**

**Phoenicoparrus jamesi** (Sclater)

*Phoenicopterus jamesi* P. L. Sclater, 1886, Proc. Zool. Soc. London, p. 399, pl. 36, p. 400, fig. 3—Sitani, at foot of Isluga volcano, Tarapacá, Chile.

Puna zone of Andes in southern Peru, northeastern Chile, western Bolivia, and northwestern Argentina. Recorded from Chubut, Argentina.

ORDER **FALCONIFORMES**

ERWIN STRESEMANN AND DEAN AMADON<sup>1</sup>

Foreword

In 1960 or thereabouts, when a revised edition of Volume I (1931) of this *Check-list* was first proposed, the late Dr. Erwin Stresemann of Berlin was asked to undertake the order Falconiformes. He wrote a draft manuscript, generously made it available to the undersigned and others, but never revised it. With the resumption of plans to publish the volume

<sup>1</sup>The authors are sincerely indebted to the numerous authorities who have helped them with various points, and especially to G. W. Cottrell for his indefatigable editorial labors.

mentioned, Dr. Ernst Mayr, the general editor of the project, accepted my offer to do so.

In some of his earlier research Dr. Stresemann adopted broad species and to a lesser extent broad generic limits. With age he swung the other way and in his manuscript list of the Falconiformes recognized more species and genera than had Peters in 1931! I have attempted to steer a middle course, but list below all major deviations from Stresemann's manuscript. As to subspecies, I follow Stresemann except where I am aware of later revisions or have studied a species myself.

**Higher categories:** Following recent opinion, the falcons are elevated to a suborder, Falcones. The suborder Cathartae may not belong in the Falconiformes, but again it may, and it is best left there. The suborder Sagittarii, too, may not belong in this order. If it does, it is presumably allied to the Accipitres, not the Falcones, and I place it after the former suborder.

The ospreys are now often considered to be a subfamily, Pandioninae, not a family. I do so, and consider it the only subfamily in the Accipitridae, other than the nominate one. As I have noted elsewhere, there are so many groups of uncertain position, several of one genus only, in the Accipitridae, that it is misleading to divide the family into numerous subfamilies. Stresemann (MS), however, recognized no fewer than eleven.

In the Falconidae I recognize two subfamilies: the nominate Falconinae and the Polyborinae.

**Genera recognized by Stresemann, not by me:** *Erythrotriorchis*, *Helicolestes*, *Ibycter*, *Megatriorchis*, *Micronisus*, *Nesierax*, *Pseudogyps*, *Rupornis*, *Sarcogyps*, *Torgos*, *Trigonoceps*, and *Urubitinga*. The allocation of these names may be determined from the index.

**Genera synonymized by Stresemann, but recognized by me:** *Geranoaetus* (placed in *Buteo*) and *Lophoaetus* (placed in *Spizaetus*).

**Taxa regarded as species by Stresemann, but as subspecies by me:** Most of these are allopatric forms, difficult to assess, but surely Stresemann erred in calling some of them species. In the following alphabetical list, they are treated as subspecies: *Accipiter francesii brutus*, *Accipiter francesii griveaudi*, *Accipiter francesii pusillus*, *Accipiter (novaehollandiae) griseogularis*, *Accipiter tachiro unduliventer*, *Aquila*



*pomarina hastata*, *Aquila (rapax) nipalensis*, *Buteo (brachyurus) albigula*, *Buteo buteo japonicus*, *Buteogallus (anthracinus) gundlachii*, *Chondrohierax (uncinatus) wilsonii*, *Circaetus gallicus beaudouini*, *Circaetus gallicus pectoralis*, *Falco (cherrug) altaicus*, *Falco (peregrinus) pelegrinoides*, *Gyps (indicus) tenuirostris*, *Hieraaetus morphnoides weiskei*, *Leucopternis albicollis ghiesbreghti*, *Melierax (canorus) poliopterus*, *Phalcoboenus (megalopterus) carunculatus*, *Phalcoboenus (megalopterus) megalopterus*, *Polyborus plancus cheriway*, *Polyborus (plancus) lutosus*, *Spilornis (cheela) holospilus*, *Spilornis (cheela) kinabaluensis*, *Spilornis (cheela) klossi*, *Spilornis (cheela) minimus*, *Spilornis (cheela) rufipectus*, *Spizaetus (cirrhatius) limnaeetus*. The use of parentheses to enclose the species names of some of these, and of certain others in the text, indicates that a subspecies is what Amadon and Short (1976, Syst. Zool., **25**, pp. 161-167) have called a "megasubspecies," that is, a subspecies (or cluster of subspecies) known or judged to be approaching species status. Many such were described or have at one time or other been listed as full species.

**Taxa considered subspecies, or synonyms, or omitted by Stresemann, but here listed as species:** *Accipiter cooperii* (not as race of *A. bicolor*); *Buteogallus subtilis* (not as race of *B. anthracinus*); *Cathartes melambrotus* (omitted); *Circus cinereus* (not as race of *C. cyaneus*); *Falco kreyenborgi* (omitted); *Micrastur buckleyi* (not as synonym of *M. semitorquatus*); *Falco amurensis* (not as race of *F. vespertinus*).

**Superspecies:** Superspecies have been indicated in footnotes to conform with usage elsewhere in this *Check-list*, rather than by the convention of brackets.

**Sequence of genera and species:** The sequence, with a few mostly minor exceptions that will be discussed elsewhere, is that adopted in Brown and Amadon (1968) and discussed in Chapter 1 of that work. This does not depart radically from that used by Stresemann, except that the genera of kites are placed first in the Accipitridae; Stresemann had them last. As to species sequence, for the largest genus in the family, *Accipiter*, I follow Wattel's recent monograph. Stresemann's sequence in the genus *Falco* has been reversed, to begin with the kestrels and conclude with such specialized species as *F. peregrinus* and its close allies.

**Geographical ranges:** Most of the many recent changes

in the names of countries have been adopted. What began as minor alterations of the ranges became more extensive and many of them have been rewritten.

**References:** Those given here are extensively supplemented in Brown and Amadon (1968).

Finally, let me pay tribute to one of the keenest minds ever devoted to ornithology. It was a pleasure to know Erwin Stresemann, and I am glad that our only previous venture into print together concerned a raptor, the mysterious *Falco kreyenborgi*.

DEAN AMADON

### References

- cf. Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., **13**, pt. 1, no. 4, 364 pp. (New World).  
 Friedmann, 1950, Bull. U. S. Nat. Mus., no. 50, pt. 11, 807 pp. (North and Middle America).  
 Dementiev *et al.*, 1951, Ptitsy Sovetskogo Soiuzu, **1**, pp. 70-341 (English trans., 1966, Birds Soviet Union, **1**, pp. 71-379).  
 Condon and Amadon, 1954, Rec. South Austral. Mus., **11**, pp. 189-246 (taxonomy of Australian species).  
 Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 144-238.  
 White, 1965, Revised Check List Afr. Non-Passerine Birds, pp. 40-66.  
 Brown and Amadon, 1968, Eagles Hawks Falcons, 2 vols.  
 Glutz von Blotzheim, Bauer, and Bezzel, 1971, Handb. Vögel Mitteleuropas, **4**, 943 pp.  
 Medway and Wells, 1976, Birds Malay Peninsula, **5**, pp. 101-119.  
 Blake, 1977, Man. Neotropical Birds, **1**, pp. 262-386.

### SUBORDER CATHARTAE

#### FAMILY CATHARTIDAE<sup>1</sup>

- cf. Amadon, 1978, Condor, **79** (1977), pp. 413-416 (taxonomy).

<sup>1</sup>Brodkorb, 1964, Bull. Florida State Mus., **8**, p. 250, uses the name Vulturidae. One hopes that this proposal, confusing at this late date, will be rejected.—D. A.

GENUS **CORAGYPS** GEOFFROY SAINT-HILAIRE

*Coragyps* I. Geoffroy Saint-Hilaire, 1853, in Le Maout, Hist. Nat. Oiseaux, p. 66. Type, by monotypy, *Vultur atratus* Bechstein.

**CORAGYPS ATRATUS****Coragyps atratus** (Bechstein)

*Vultur atratus* Bechstein, 1793, in Latham, Allgemeine Uebersicht Vögel, 1, Anhang, p. 655; based on "Black Vulture or Carrion Crow" of Bartram, 1791, Travels North South Carolina, pp. 152, 289—St. John's River, Florida.

*Cathartes foetens* Lichtenstein, 1817, Verzeichniss Ausgestorbenen Säugethiere Vögel, Zool. Mus. Berlin, p. 30; based on "Iribú," no. 2, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 1, p. 19—Paraguay.

*Cathartes brasiliensis* Bonaparte, 1850, Consp. Gen. Avium, 1, p. 9—South America and Antilles; southern Brazil designated as type locality by Berlepsch, 1908, Novit. Zool., 15, p. 289.

North America from southern Arizona east to Maryland, south through Middle America and South America to central Chile, Uruguay, and central Argentina.

GENUS **CATHARTES** ILLIGER

*Cathartes* Illiger, 1811, Prodrum Syst. Mammalium Avium, p. 236. Type, by subsequent designation (Vigors, 1825, Zool. Journ., 2, p. 384), *Vultur aura* Linnaeus.

cf. Wetmore, 1964, Smithsonian Misc. Coll., 146, no. 6, 18 pp. (review of genus).

**CATHARTES AURA****Cathartes aura septentrionalis** Wied

*Cathartes aura septentrionalis* Wied, 1839, Reise Nordamerika, 1, p. 162—Fox River, near New Harmony, Indiana.

North America from the Mississippi Valley east and from southern Canada and New England south to the Gulf and Florida coasts. Somewhat migratory in the north.

**Cathartes aura meridionalis** Swann

*Cathartes aura meridionalis* Swann, 1921, Synop. Accipitres,

ed. 2, p. 3—Santa Marta, Colombia. Migrant.

*Cathartes aura teter* Friedmann, 1933, Proc. Biol. Soc. Washington, **46**, p. 188—Riverside, California.

Western North America from southern British Columbia, central Alberta, and southern Manitoba south to Baja California, south-central Arizona, and south-central Texas. In part highly migratory, wintering from California and Nebraska south to Paraguay and southern Brazil.

**Cathartes aura aura** (Linnaeus)

*Vultur Aura* Linnaeus, 1758, Syst. Nat., ed. 10, p. 86; based chiefly on "Tzopilote S. Aura" of Hernandez, 1651, Nova Plant. Animal. Mineral. Mex. Hist., Hist. Animal. Mineral., p. 331—State of Veracruz, Mexico, designated by Nelson, 1905, Proc. Biol. Soc. Washington, **18**, p. 124.

*Cathartes aura insularis* Swann, 1921, Synop. Accipitres, ed. 2, p. 3—Isla Cozumel, eastern Mexico.

Southern border of United States from the lower Colorado Valley to Texas; Mexico; Central America south to central Costa Rica; Bahamas, Cuba, Isle of Pines, Jamaica, and Puerto Rico (where introduced).

**Cathartes aura ruficollis** Spix

*Cathartes ruficollis* Spix, 1824, Avium Species Novae Itinere Brasiliam, **1**, p. 2—interior of Bahia and Piauí, Brazil.

Southern Costa Rica, south throughout the tropical lowlands of South America; Trinidad.

**Cathartes aura jota** (Molina)

*Vulcur* [sic] *Jota* Molina, 1782, Saggio Storia Nat. Chili, pp. 265, 343—Chile.

South America from Colombia south in the Andes to Tierra del Fuego. Not on the coast.

**Cathartes aura falklandicus** (Sharpe)

*Catharista falklandica* Sharpe, 1873, Ann. Mag. Nat. Hist., ser. 4, **11**, p. 133—Falkland Islands.

Coast of western South America from Ecuador to southern Chile; Falkland Islands.

CATHARTES BURROVIANUS<sup>1</sup>

**Cathartes burrovianus burrovianus** Cassin

*Cathartes burrovianus* Cassin, 1845, Proc. Acad. Nat. Sci.

<sup>1</sup>*C. burrovianus* and *melambrotus* may form a superspecies.—D. A.

Philadelphia, 2, p. 212—near Veracruz City, Mexico. Tropical lowlands of eastern and southern Mexico from Tamaulipas south; thence locally through Central America and northwestern South America to central Colombia and northwestern Venezuela.

**Cathartes burrovianus urubitinga** Pelzeln

*Cathartes urubitinga* [sic] Natterer = Pelzeln, 1861, Sitzungsber. K. Akad. Wissen. Wien, Math.-Naturwissen. Cl., 44, pt. 1, p. 7—Brazil. Type from Forte do Rio Branco, Amazonas.

*Cathartes burrovianus dugandi* Lehmann, 1957, Novedades Colombianas, 1, p. 120—Caicara, Venezuela.

South America from southeastern Colombia, central and eastern Venezuela, and the Guianas south through Brazil to Paraguay, northern Argentina, and Uruguay.

CATHARTES MELAMBROTUS

**Cathartes melambrotus** Wetmore

*Cathartes melambrotus* Wetmore, 1964, Smithsonian Misc. Coll., 146, no. 6, p. 15—Kartabo, Guyana.

Amazonia, including southern Venezuela and the Guianas.

GENUS GYMNOGYPS LESSON

*Gymnogyps* Lesson, 1842, Écho Monde Savant, 9, col. 1037.

Type, by original designation, *Vultur californianus* Shaw.

GYMNOGYPS CALIFORNIANUS

**Gymnogyps californianus** (Shaw)

*Vultur californianus* Shaw, 1798, in Shaw and Nodder, Nat. Misc., 9, pl. 301 and text—coast of California.

Coastal ranges of southern California; formerly more widespread. Nearly extinct.

GENUS VULTUR LINNAEUS

*Vultur* Linnaeus, 1758, Syst. Nat., ed. 10, p. 86. Type, by subsequent designation (J. A. Allen, 1907, Bull. Amer. Mus. Nat. Hist., 24, p. 11), *Vultur gryphus* Linnaeus.

VULTUR GRYPHUS

**Vultur gryphus** Linnaeus

*Vultur gryphus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 86;

based on "Cuntur" of Ray, 1713, *Synop. Method. Avium Piscium*, p. 11, and "Vultur gryps Gryphus" of Klein, 1750, *Hist. Avium Prodromus*, p. 45—Chile.

Andes from Venezuela and Colombia to the Strait of Magellan and Tierra del Fuego. Foraging in adjacent lower areas, for example in Mato Grosso, Brazil, and in Peru; and breeding also at lower elevations southward.

GENUS **SARCORAMPHUS** DUMÉRIL

*Sarcoramphus* Duméril, 1806, *Zool. Analytique*, p. 32. Type, by subsequent designation (Vigors, 1825, *Zool. Journ.*, 2, pp. 381, 384), *Vultur Papa* Linnaeus.

**SARCORAMPHUS PAPA**

***Sarcoramphus papa*** (Linnaeus)

*Vultur Papa* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 86; based on "The Warwovwen, or Indian Vulture" of Albin, 1734, *Nat. Hist. Birds*, 2, p. 4, pl. 4, and "The King of the Vultures" of Edwards, 1743, *Nat. Hist. Birds*, p. 2, pl. 2—"in India occidentali"; error, Surinam designated by Berlepsch, 1908, *Novit. Zool.*, 15, p. 289.

Central Mexico south through Central America and South America to Bolivia, Paraguay, southern Brazil, and northern Argentina, in lowlands.

SUBORDER **ACCIPITRES**

FAMILY **ACCIPITRIDAE**

SUBFAMILY **PANDIONINAE**

GENUS **PANDION** SAVIGNY

*Pandion* Savigny, 1809, *Descr. Égypte, Hist. Nat.*, 1, pp. 69, 95. Type, by monotypy, *Pandion fluviatilis* Savigny = *Falco haliaetus* Linnaeus.

cf. Moll, 1962, *Fischadler (Neue Brehm-Bücherei 308)*, 95 pp.

## PANDION HALIAETUS

**Pandion haliaetus haliaetus** (Linnaeus)

*Falco Haliaetus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 91—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 22.

*Pandion haliaetus friedmanni* Wolfe, 1946, Auk, **63**, p. 586—Sungari River valley, near Harbin, Manchuria.

*Pandion haliaetus mutuus* Kipp, 1951, Bonner Zool. Beitr., **2**, p. 112—Foochow, southern China.

Northern Eurasia from Scotland to Kamchatka, the Kurils, and Japan, north to about tree line; south to Mediterranean islands, Africa casual south of the Sahara, Canaries, Cape Verdes, Red Sea area, Socotra, Persian Gulf, southern edge of the Himalayas, China, and Taiwan. Migratory, reaching southern Africa, India, the East Indies.

**Pandion haliaetus melvillensis** Mathews

*Pandion haliaetus melvillensis* Mathews, 1912, Austral Avian Rec., **1**, p. 34—Melville Island, northern Australia.

*Pandion haliaëtus microhaliaëtus* Brasil, 1916, Rev. Française Ornith., **4**, p. 201—New Caledonia.

East Indies, Philippines, New Guinea, Solomon Islands, Palau Islands, New Caledonia, and northern Australia.

**Pandion haliaetus cristatus** (Vieillot)

*Buteo cristatus* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., **4**, p. 481—Australia = Tasmania, *vide* Mathews, 1913, List Birds Australia, p. 113.

Southern Australia; Tasmania. Chiefly coastal.

**Pandion haliaetus carolinensis** (Gmelin)

*Falco carolinensis* Gmelin, 1788, Syst. Nat., **1**, p. 263; based on "Fishing Hawk" of Catesby, 1729, Nat. Hist. Carolina, pt. 1, p. 2, pl. 2—South Carolina *ex* Catesby.

North America, north locally to the northern limits of forest; south on the Pacific coast locally to Guatemala and the Gulf of California, and to central New Mexico, the Gulf coast, and Florida. Winters from southern United States south to Peru and southern Brazil; casually farther.

**Pandion haliaetus ridgwayi** Maynard

*Pandion Ridgweir* [sic] Anonymous = C. J. Maynard, 1887,

Amer. Exch., Mart, Household Journ., 3, no. 3, p. 33—Andros Island.

Bahama Islands, the keys off Belize (British Honduras), and probably those off Cuba.

### SUBFAMILY ACCIPITRINAE

#### GENUS AVICEDA SWAINSON

*Aviceda* Swainson, 1836, Nat. Hist. Class. Birds, 1, p. 300.

Type, by subsequent designation (Swainson, 1837, Nat. Hist. Class. Birds, 2, p. 214), *Aviceda cuculoides* Swainson.

*Baza* Hodgson, 1837, Journ. Asiatic Soc. Bengal, 5 (1836), p. 777. Type, by original designation, *Baza syama* Hodgson = *Falco leuphotes* Dumont.

cf. Parkes, 1961, Postilla, no. 51, 10 pp. (*jerdoni magnirostris*).

#### AVICEDA CUCULOIDES<sup>1</sup>

##### ***Aviceda cuculoides cuculoides* Swainson**

*Aviceda cuculoides* Swainson, 1837, Birds Western Africa, 1, p. 104, pl. 1—no locality. Type from Senegal.

Senegal to western Ethiopia, south to Nigeria and northern Zaire.

##### ***Aviceda cuculoides batesi* (Swann)**

*Baza cuculoides batesi* Swann, 1920, Synop. List Accipitres, p. 107—River Ja, Cameroon.

Forests of western Africa from Sierra Leone to Angola, east to the eastern edge of the Congo forest.

##### ***Aviceda cuculoides verreauxii* Lafresnaye**

*Aviceda Verreauxii* Lafresnaye, 1846, Rev. Zool., Paris, 9, p. 130—Durban, Natal.

*Baza emini* Reichenow, 1894, Journ. Ornith., 42, p. 163, note—southwest of Lake Albert Nyanza.

Forest and woodland in Africa south of the range of *batesi*, south to Cape Province.

#### AVICEDA MADAGASCARIENSIS

##### ***Aviceda madagascariensis* (Smith)**

*Pernis Madagascariensis* A. Smith, 1834, South Afr. Quart.

<sup>1</sup>*A. cuculoides, madagascariensis, jerdoni, and subcristata* may form a superspecies.—D. A.



Journ., ser. 2, p. 285—Madagascar.  
Madagascar.

#### AVICEDA JERDONI

##### **Aviceda jerdoni jerdoni** (Blyth)

*Pernis Jerdoni* Blyth, 1842, Journ. Asiatic Soc. Bengal, 11, p. 464—no locality. Type from Bengal. Sikkim, northern and eastern India, Bangladesh, Burma, Thailand, Indochina, Hainan, Sumatra. Winter visitor Malay Peninsula.

##### **Aviceda jerdoni ceylonensis** (Legge)

*Baza ceylonensis* Legge, 1876, Stray Feathers, 4, p. 247—Kandy, Ceylon. Southwestern India and Sri Lanka (Ceylon).

##### **Aviceda jerdoni borneensis** (Brüggemann)

*Baza borneensis* Brüggemann, 1876, Abh. Naturwissen. Verein Bremen, 5, p. 47—Pontianak, Borneo. Borneo.

##### **Aviceda jerdoni magnirostris** (Kaup)

*Hyptiopus magnirostris* G. R. Gray = Kaup, 1847, Isis von Oken, col. 343—Philippines. *Baza leucopias* Sharpe, 1888, Ibis, p. 195—Palawan. Philippines: Palawan, Samar, Mindanao.

##### **Aviceda jerdoni celebensis** (Schlegel)

*Baza celebensis* Schlegel, 1873, Mus. Hist. Nat. Pays-Bas, livr. 10, Rev. Coll. Oiseaux Proie, p. 135—Celebes and Sula Islands. Celebes; Banggai Islands; Sula Islands.

#### AVICEDA SUBCRISTATA

##### **Aviceda subcristata timorlaoensis** (Meyer)

*Baza timorlaoensis* A. B. Meyer, 1894, Abh. Ber. K. Zool. Mus. Dresden, 4 (1892/93), no. 3, p. 5—Timorlaut = Tanimbar. Lesser Sunda Islands from Lombok east to Timor and smaller islands to the north and east (Tanahdjampea, Tukangbesi, Damar, Babar, Tanimbar).

##### **Aviceda subcristata pallida** (Stresemann)

*Baza subcristata pallida* Stresemann, 1913, Novit. Zool.,

- 20**, p. 306—Tual, Kai Islands.  
Kai Islands, south of western New Guinea.
- Aviceda subcristata reinwardtii*** (Schlegel and Müller)  
*Falco (Lophotes) Reinwardtii* Schlegel and S. Müller, 1841,  
in Temminck (ed.), Verh. Nat. Geschiedenis Nederlandsche  
Overzeesche Bezittingen, Zool., Aves, pl. 5, text p. 37  
(1845)—Manado, Celebes; error, Ceram substituted by  
Berlepsch, 1911, Abh. Senckenberg. Naturforsch. Gesell.,  
**34**, p. 81.  
Moluccas: Ambon, Haruku, Ceram.
- Aviceda subcristata stresemanni*** (Siebers)  
*Baza stresemanni* Siebers, 1930, Treubia, **7**, Suppl., p. 243—  
Nal Besi, Buru.  
Moluccas: Buru.
- Aviceda subcristata rufa*** (Schlegel)  
*Baza rufa* Schlegel, 1866, Vogels Nederlandsche Indië,  
Valkvogels, pp. 41, 78, pl. 27, fig. 4, pl. 28, figs. 1-3—  
"Halmahera, Morotai, Batjan, Ternate en Tidore."  
Moluccas: Obi and the northern islands.
- Aviceda subcristata waigeuensis*** Mayr  
*Aviceda subcristata waigeuensis* Mayr, 1940, Amer. Mus.  
Novit., no. 1056, p. 8—Waigeo.  
Waigeo Island, off western New Guinea.
- Aviceda subcristata obscura*** Junge  
*Aviceda subcristata obscura* Junge, 1956, Zool. Mededeling-  
en Rijksmus. Nat. Hist. Leiden, **34**, p. 231—Biak.  
Biak Island, off New Guinea.
- Aviceda subcristata stenozone*** (Gray)  
*Baza stenozone* G. R. Gray, 1858, Proc. Zool. Soc. London,  
p. 169—Aru Islands.  
Salawati; Misool; Aru Islands; western New Guinea, east in  
the north to Geelvink Bay, in the south to the Fly River.
- Aviceda subcristata megala*** (Stresemann)  
*Baza subcristata megala* Stresemann, 1913, Novit. Zool.,  
**20**, pp. 305 (in key), 307—Fergusson Island.  
Eastern New Guinea; Japen Island; Fergusson Island; Good-  
enough Island.
- Aviceda subcristata coultasi*** Mayr  
*Aviceda subcristata coultasi* Mayr, 1945, Amer. Mus. Novit.,

no. 1294, p. 11—Manus Island.

Admiralty Islands: Manus.

***Aviceda subcristata bismarckii*** (Sharpe)

*Baza bismarckii* Sharpe, 1888, in Gould, Birds New Guinea, pt. 25, text to plate labeled *Baza gurneyi*—New Britain and New Ireland.

Bismarck Archipelago: New Britain, New Ireland, New Hanover.

***Aviceda subcristata proxima*** Mayr

*Aviceda subcristata proxima* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 10—Bougainville.

Solomon Islands: Bougainville and Shortland.

***Aviceda subcristata robusta*** Mayr

*Aviceda subcristata robusta* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 9—Choiseul.

Solomon Islands: Choiseul and Santa Isabel.

***Aviceda subcristata gurneyi*** (Ramsay)

*Baza Gurneyi* Ramsay, 1882, Journ. Linn. Soc. London, 16, p. 130—Ugi.

Solomon Islands: San Cristóbal, Ugi, Santa Ana, Malaita, Guadalcanal.

***Aviceda subcristata njikena*** Condon and Amadon

*Aviceda subcristata njikena* Condon and Amadon, 1954, Rec. South Austral. Mus., 11, p. 198—Fitzroy River.

Northwestern Australia.

***Aviceda subcristata subcristata*** (Gould)

*Lepidogenys subcristatus* Gould, 1838, Synop. Birds Australia, pt. 3, pl. 46 and text—New South Wales.

*Baza subcristata queenslandica* Mathews, 1912, Novit. Zool., 18, p. 251—Mackay, Queensland.

Coastal northern Australia, east of *njikena*, east to Queensland and thence south to northern New South Wales.

AVICEDA LEUPHOTES

***Aviceda leuphotes wolfei*** Deignan

*Aviceda leuphotes wolfei* Deignan, 1948, Auk, 65, p. 284—Mt. Omei, Szechwan.

Szechwan, China. Winter quarters unknown.

**Aviceda leuphotes syama** (Hodgson)

*Baza Syama* Hodgson, 1837, Journ. Asiatic Soc. Bengal, 5 (1836), p. 777—lower region of Nepal.

Southern slopes of Himalayas from Nepal to Assam, southern China (Kweichow, Kwangsi, Kwangtung), northern Burma. Winters in Indochinese countries south to Singapore and perhaps Sri Lanka (Ceylon).

**Aviceda leuphotes leuphotes** (Dumont)

*Falco leuphotes* Dumont, 1820, Dict. Sci. Nat., 16, p. 217—Pondicherry, India.

*Baza lophotes burmana* W. L. Sclater, 1920, Bull. Brit. Ornith. Club, 41, p. 31—Malewoon, Patchan Estuary, Tenasserim.

Southern India, southern Burma, Thailand, Indochina, Hainan. Somewhat migratory.

**Aviceda leuphotes andamanica** Abdulali

*Aviceda leuphotes andamanica* Abdulali, 1970, Journ. Bombay Nat. Hist. Soc., 67, p. 138—Wrightmyo, South Andaman Island.

Andaman Islands.

GENUS **LEPTODON** SUNDEVALL

*Leptodon* Sundevall, 1836, K. Vetenskaps-Acad. Handlingar (1835), p. 114. Type, by monotypy, *Falco cayennensis* Gmelin = *Falco cayanensis* Latham.

*Odontriorchis* Kaup, 1844, Class. Säugethiere Vögel, p. 124. Type, by monotypy, *cayennensis* = *Falco cayanensis* Latham.

cf. Brodkorb, 1943, Misc. Publ. Mus. Zool., Univ. Michigan, no. 55, pp. 26-27.

Pinto, 1953, Papéis Avulsos, Dept. Zool., São Paulo, 11, pp. 131-132.

**LEPTODON CAYANENSIS****Leptodon cayanensis cayanensis** (Latham)

*Falco cayanensis* Latham, 1790, Index Ornith., p. 28—Cayenne.

*Falco palliatus* Prinz Max = Temminck, 1822, Planches Color., livr. 23, pl. 204—Brazil and Guiana = Rio Peruípe, Bahia, Brazil, ex Wied, 1830, Beitr. Naturgeschichte

Brasilien, 3, p. 152 (cf. Hellmayr, 1929, Publ. Field Mus. Nat. Hist., Zool. Ser., 12, p. 456).

?*Odontriorchis forbesi* Swann, 1922, Synop. Accipitres, ed. 2, p. 159—Pernambuco, Brazil.

Tropical parts of Mexico south through Central America and South America to western Ecuador and Amazonia; Trinidad.

**Leptodon cayanensis monachus** (Vieillot)

*Sparvius monachus* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 10, p. 341—Brazil; type locality herewith restricted to Rio de Janeiro.

Central and southern Brazil, Paraguay, eastern Bolivia, northern Argentina.

GENUS **CHONDROHIERAX** LESSON

*Chondrohierax* Lesson, 1843, Écho Monde Savant, 10, col. 61. Type, by monotypy, *Daedalion erythrofrons* Lesson = *Falco uncinatus* Temminck.

*Regerhinus* Kaup, 1845, Mus. Senckenbergianum, Abh. Gebiete Beschreib. Naturgeschichte, 3, pp. 255, 262. Type, by monotypy, *Falco uncinatus* "Illiger."

cf. Amadon, 1960, Novedades Colombianas, 1, pp. 237-238.

**CHONDROHIERAX UNCINATUS**

**Chondrohierax uncinatus aquilonis** Friedmann

*Chondrohierax uncinatus aquilonis* Friedmann, 1934, Journ.

Washington Acad. Sci., 24, p. 314—Tamaulipas, Mexico.

Southern Texas (recently) and eastern Mexico.

**Chondrohierax uncinatus uncinatus** (Temminck)

*Falco uncinatus* Illiger = Temminck, 1822, Planches Color., livr. 18, pls. 103-104—vicinity of Rio, etc.; restricted to Bahia, Brazil, by Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 4, p. 27, note.

*Regerhinus (Cymindis) Megarhynchus* Des Murs (ex Kaup MS), 1856, in Castelnau, Expéd. Amér. Sud, pt. 7, Zool., 1, Oiseaux (1855), livr. 17, p. 9, pl. 1—Sarayacu, Peru.

*Chondrohierax uncinatus immanis* Friedmann, 1934, Journ. Washington Acad. Sci., 24, p. 315—Ambato, Ecuador.

Western Mexico south through Central America and South America to western Peru, Paraguay, southern Brazil, and northern Argentina; Trinidad.

**Chondrohierax uncinatus mirus** Friedmann

*Chondrohierax uncinatus mirus* Friedmann, 1934, Journ. Washington Acad. Sci., **24**, p. 313—Grenada.

West Indies: Grenada.

**Chondrohierax (uncinatus) wilsonii** (Cassin)

*Cymindis Wilsonii* Cassin, 1847, Journ. Acad. Nat. Sci. Philadelphia, n. s., **1**, p. 21, pl. 7—near Gibara, Cuba.

Cuba.

GENUS **HENICOPERNIS** GRAY

*Henicopernis* G. R. Gray, 1859, Proc. Zool. Soc. London, p. 153. Type, by monotypy, *Falco longicauda* Garnot.

cf. Gyldenstolpe, 1955. Arkiv Zool., ser. 2, **8**, pp. 214-215 (*longicauda*).

Junge, 1956, Zool. Mededelingen Rijksmus. Nat. Hist. Leiden, **34**, pp. 232-236 (*longicauda*).

**HENICOPERNIS LONGICAUDA**<sup>1</sup>**Henicopernis longicauda longicauda** (Garnot)

*Falco longicauda* Garnot, 1828, in Duperrey, Voyage Coquille, Zool., Atlas, **1**, livr. 7, pl. 10 (21 June); 1829, **1**, livr. 13, p. 588—New Guinea.

New Guinea.

**Henicopernis longicauda minimus** Junge

*Henicopernis longicauda minimus* Junge, 1937, Nova Guinea, n. s., **1**, p. 150—Wokam, Aru Islands.

Islands off western New Guinea (Waigeo, Misool, Aru, Biak).

**Henicopernis longicauda fraterculus** Stresemann and Paludan

*Henicopernis longicauda fraterculus* Stresemann and Paludan, 1932, Novit. Zool., **38**, p. 239—Serui, Japen.

Japen Island, off New Guinea.

**HENICOPERNIS INFUSCATA****Henicopernis infuscata** Gurney

*Henicopernis infuscata* Gurney, 1882, Ibis, p. 128—Blanche Bay, New Britain.

New Britain.

<sup>1</sup>*H. longicauda* and *infuscata* form a superspecies.—D. A.

GENUS **PERNIS** CUVIER

*Pernis* Cuvier, 1817, Règne Animal, 1 (1816), p. 322. Type, by monotypy, *Falco apivorus* Linnaeus.

cf. Stresemann, 1940, Archiv Naturgeschichte, n. s., 9, pp. 137-193.

Vaurie and Amadon, 1962, Amer. Mus. Novit., no. 2111, 11 pp.

**PERNIS APIVORUS**<sup>1</sup>**Pernis apivorus** (Linnaeus)

*Falco apivorus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 91—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 23.

Europe and western Asia, north to England, northern Sweden, Finland, and the Archangel district, south to northern Spain, Balkans, Crimea, Asia Minor, Caucasus, Novosibirsk district. Winters in tropical and southern Africa.

**PERNIS PTILORHYNCHUS****Pernis ptilorhynchus orientalis** Taczanowski

*Pernis apivorus orientalis* Taczanowski, 1891, Mém. Acad. Imp. Sci. St.-Petersbourg, sér. 7, 39, pt. 1, p. 50—Kultuk west of Lake Baykal, mouth of Ussuri River at lat. 48° N., and Askold Island. Type from mouth of Ussuri River.

*Pernis apivorus japonicus* Nagamichi Kuroda, 1925, Dôbutsu. Zasshi, 37, pp. 223 (Japanese text), 225 (English text)—Nagano, Honshu, Japan.

*Pernis apivorus neglectus* Nagamichi Kuroda, 1936, Birds Island Java, p. 533—Taihoku, Taiwan.

Southern Siberia, east of the range of *apivorus*, from the Yenisey and the Baykal area east to Amurland and Ussuriland, south to Manchuria and perhaps northern Korea; also Sakhalin and Japan (Hokkaido, Honshu). Winters in southeastern Asia, the East Indies, and the Philippines.

**Pernis ptilorhynchus ruficollis** Lesson

*Pernis ruficollis* Lesson, 1830, Traité Ornith., livr. 1, p. 77—"patrie inconnue" = Bengal.

*Pernis ptilorhynchus gurneyi* Stresemann, 1940, Archiv Na-

<sup>1</sup>*P. apivorus* and *ptilorhynchus* form a superspecies.—D. A.

turgeschichte, n. s., 9, p. 168—Lamaing, near Mandalay, Burma.

India from the foothills of the Himalayas south to Sri Lanka (Ceylon) and east to Assam, Burma, southern China (Yunnan).

***Pernis ptilorhynchus philippensis* Mayr**

*Pernis ptilorhynchus philippensis* Mayr, 1939, Ornith. Monatsber., 47, p. 74—Mindanao.

Philippines: Luzon, Cebu, Leyte, Negros, Mindanao.

***Pernis ptilorhynchus palawanensis* Stresemann**

*Pernis ptilorhynchus palawanensis* Stresemann, 1940, Archiv Naturgeschichte, n. s., 9, p. 171—Puerto Princesa, Palawan.

Philippines: Palawan.

***Pernis ptilorhynchus torquatus* Lesson**

*Pernis torquata* Lesson, 1830, Traité Ornith., livr. 1, p. 76—Sumatra.

Malay Peninsula, Sumatra, Borneo.

***Pernis ptilorhynchus ptilorhynchus* (Temminck)**

*Falco ptilorhynchus* [sic] Temminck, 1821, Planches Color., livr. 8, pl. 44—Java.

Java.

**PERNIS CELEBENSIS**

***Pernis celebensis celebensis* Wallace**

*Pernis cristatus* var. *celebensis* Wallace, 1868, Ibis, p. 17—Celebes.

*Pernis celebensis* Walden, 1872, Trans. Zool. Soc. London, 8, p. 111—Celebes.

Celebes and off-lying islands (Muna, Peleng).

***Pernis celebensis steerei* Sclater**

*Pernis celebensis steerei* W. L. Sclater, 1919, Bull. Brit. Ornith. Club, 40, p. 41—San Antonio, Negros Island.

Philippines (but not the Palawan group).

**GENUS ELANOIDES VIEILLLOT**

*Elanoides* Vieillot, 1818, Nouv. Dict. Hist. Nat., nouv. éd., 24, p. 101. Type, by monotypy, *Falco forficatus* Linnaeus.



## ELANOIDES FORFICATUS

**Elanoides forficatus forficatus** (Linnaeus)

*Falco forficatus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 89; based on "Swallow tail'd Hawk" of Catesby, 1729, Nat. Hist. Carolina, pt. 1, p. 4, pl. 4—America = Carolina ex Catesby.

Gulf and southern Atlantic United States from eastern Texas to Florida and north to the Carolinas; formerly north to Minnesota; perhaps northeastern Mexico. Now common only in Florida. Winters in South America, south to Brazil and Argentina.

**Elanoides forficatus yetapa** (Vieillot)

*Milvus yetapa* Vieillot, 1818, Nouv. Dict. Hist. Nat., nouv. éd., 20, p. 564; based on "Alcon cola-tixera," no. 38, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 1, p. 169—Paraguay.

Locally from southern Mexico south through Central America and South America, including Trinidad, to Paraguay and northern Argentina. Migratory in southern part of range; also in Trinidad and perhaps elsewhere.

GENUS **MACHAERHAMPHUS** WESTERMAN

*Machaerhamphus* Westerman, 1851, K. Zool. Genootschap Natura Artis Magistra Amsterdam, Bijdragen Dierkunde, pt. 2, p. 29, pl. 12. Type, by monotypy, *Machaerhamphus alcinus* Westerman.

**MACHAERHAMPHUS ALCINUS****Machaerhamphus alcinus alcinus** Westerman

*Machaerhamphus alcinus* Westerman, 1851, K. Zool. Genootschap Natura Artis Magistra Amsterdam, Bijdragen Dierkunde, pt. 2, p. 29, pl. 12—Malacca.

Tenasserim, Malay Peninsula, Sumatra, Borneo.

<sup>1</sup>*Macheiramphus* Bonaparte, 1850, Rev. Mag. Zool., Paris, sér. 2, 2, p. 482, resurrected by Deignan, 1960, Bull. Brit. Ornith. Club, 80, p. 121, while a senior synonym, must be regarded as a *nomen oblitum*, unused for 110 years.—D. A.

**Machaerhamphus alcinus papuanus** Mayr

*Machaerhamphus alcinus papuanus* Mayr, 1940, Amer. Mus. Novit., no. 1091, p. 1—Kumusi River.

New Guinea.

**Machaerhamphus alcinus anderssoni** (Gurney)

*Stringonyx anderssoni* Gurney, 1866, Proc. Zool. Soc. London (1865), p. 618—Otjimbingue, Damaraland.

Africa from Ghana east to Ethiopia and ? Somalia, south to South West Africa (Namibia), Rhodesia (Zimbabwe), and Natal; Madagascar.

GENUS **GAMPSONYX** VIGORS

*Gampsonyx* Vigors, 1825, Zool. Journ., 2, p. 69. Type, by monotypy, *Gampsonyx swainsonii* Vigors.

cf. V. Stresemann, 1959, Auk, 76, pp. 360-361 (affinities of the genus).

## GAMPSONYX SWAINSONII

**Gampsonyx swainsonii leonae** Chubb

*Gampsonyx swainsonii leonae* Chubb, 1918, Bull. Brit. Ornith. Club, 39, p. 22—León, Nicaragua.

Western Nicaragua; Santa Marta region of Colombia, east through Venezuela to Guyana, south to the north bank of the lower Amazon; Trinidad. Not in forest.

**Gampsonyx swainsonii swainsonii** Vigors

*Gampsonyx Swainsonii* Vigors, 1825, Zool. Journ., 2, p. 69—tableland of Bahia, Brazil.

Eastern Peru, eastern Bolivia, Brazil from the south bank of the Amazon to Mato Grosso and Rio de Janeiro, western Paraguay, and northern Argentina. Not in forest.

**Gampsonyx swainsonii magnus** Chubb

*Gampsonyx swainsonii magnus* Chubb, 1918, Bull. Brit. Ornith. Club, 39, p. 21—Amotape, Peru.

Arid western Ecuador and northwestern Peru.

GENUS **ELANUS** SAVIGNY

*Elanus* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, pp. 69, 97. Type, by monotypy, *Elanus caesius* Savigny = *Falco caeruleus* Desfontaines.

- cf. Salomonsen, 1953, Vidensk. Meddelelser Dansk Naturhist. Forening København, **115**, pp. 209-210 (*caeruleus*).  
 Parkes, 1958, Condor, **60**, pp. 139-140 (specific relationships in the genus).

ELANUS LEUCURUS<sup>1</sup>**Elanus leucurus majusculus** Bangs and Penard

*Elanus leucurus majusculus* Bangs and Penard, 1920, Proc. New England Zool. Club, **7**, p. 46—San Rafael, California. Locally in southern United States (California, Texas, the Gulf states and north to South Carolina; very rare east of the Mississippi River); also in northern Baja California and perhaps elsewhere in northern Mexico. The species is spreading, especially in the area from southern Mexico to Panama, but it is not known whether the incursion is from California or from South America.

**Elanus leucurus leucurus** (Vieillot)

*Milvus leucurus* Vieillot, 1818, Nouv. Dict. Hist. Nat., nouv. éd., **20**, p. "556" = 563; based on "Alcon blanco," no. 36, of Azara, 1802, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, **1**, p. 165—Paraguay. Locally in South America, including Trinidad (? breeding), south to central Chile and central Argentina. Not in forest.

## ELANUS CAERULEUS

**Elanus caeruleus caeruleus** (Desfontaines)

*Falco caeruleus* Desfontaines, 1789, Hist. Acad. Roy. Sci., Paris (1787), p. 503, pl. 15—Algiers. Southern Europe (Iberian Peninsula), locally throughout Africa, southern Arabia.

**Elanus caeruleus vociferus** (Latham)

*Falco vociferus* Latham, 1790, Index Ornith., p. 46; based on "La petite Buze criarde" of Sonnerat, 1782, Voyage Indes Orientales Chine, **2**, p. 184—India; restricted to Coromandel coast by Hartert, 1914, Vögel Pal. Fauna, p. 1184. Pakistan, India, Sri Lanka (Ceylon), Nepal, Bangladesh,

<sup>1</sup>*E. leucurus*, *caeruleus*, and *notatus* form a superspecies, or may form a single species.—D. A.

southern China (Yunnan), Indochinese countries, and Malay Peninsula.

**Elanus caeruleus sumatranus** Salomonsen

*Elanus caeruleus sumatranus* Salomonsen, 1953, Vidensk. Meddelelser Dansk Naturhist. Forening København, **115**, p. 210—Mt. Korinchi.

Sumatra.

**Elanus caeruleus hypoleucus** Gould

*Elanus hypoleucus* Gould, 1859, Proc. Zool. Soc. London, p. 127—Macassar, Celebes.

Java, Borneo, Philippines, Celebes, Kalao (Flores Sea), Lesser Sunda Islands (Lombok, Sumba).

**Elanus caeruleus wahgiensis** Mayr and Gilliard

*Elanus caeruleus wahgiensis* Mayr and Gilliard, 1954, Bull. Amer. Mus. Nat. Hist., **103**, p. 332—Wahgi Valley at Nondugl.

Scattered valleys in New Guinea from Wau west at least to the Mt. Hagen area and the Baiyer River valley; also near Merauke at sea level in the south (? subspecies), and on the Sepik River.

ELANUS NOTATUS

**Elanus notatus** Gould

*Elanus notatus* Gould, 1838, Synop. Birds Australia, pt. 4, app., p. 1—New South Wales.

Australia; increasing and becoming more general.

ELANUS SCRIPTUS

**Elanus scriptus** Gould

*Elanus scriptus* Gould, 1842, Birds Australia, pt. 9 (1 December), pl. and text—South Australia = Cooper's Creek, *vide* Mathews, 1927, Syst. Avium Australasia-narum, p. 259.

Locally in interior of Australia; irruptions reaching coastal areas.

GENUS CHELICTINIA LESSON

*Chelictinia* Lesson, 1843, Écho Monde Savant, **10**, col. 63.  
Type, by monotypy, *Elanoides riocourii* Vieillot.

## CHELICTINIA RIOCOURII

**Chelictinia riocourii** (Vieillot)

*Elanoides riocourii* Vieillot, 1822, Galerie Oiseaux, 1, pt. 1, p. 43, pl. 16—Senegal.

Dry country from Senegal and Nigeria to Ethiopia and Somalia, south to the Kedong Valley, Kenya.

GENUS **ROSTRHAMUS** LESSON

*Rostrhamus* Lesson, 1830, *Traité Ornith.*, livr. 1, p. 55. Type, by monotypy, *Rostrhamus niger* Lesson = *Herpetotheres sociabilis* Vieillot.

*Helicolestes* Bangs and Penard, 1918, *Bull. Mus. Comp. Zool.*, 62, p. 38. Type, by original designation, *Falco hamatus* Illiger = Temminck.

cf. Amadon, 1964, *Amer. Mus. Novit.*, no. 2166, p. 3 (generic characters).

Amadon, 1975, *Auk*, 92, pp. 380–382 (review of *sociabilis*).

**ROSTRHAMUS SOCIABILIS****Rostrhamus sociabilis plumbeus** Ridgway

*Rostrhamus sociabilis* var. *plumbeus* Ridgway, 1874, in Baird, Brewer, and Ridgway, *Hist. North Amer. Birds*, 3, pp. 208 (in key), 209—Everglades of Florida.

*Rostrhamus sociabilis levis* Friedmann, 1933, *Proc. Biol. Soc. Washington*, 46, p. 199—Cuba.

Southern Florida, Cuba, and the Isle of Pines.

**Rostrhamus sociabilis major** Nelson and Goldman

*Rostrhamus sociabilis major* Nelson and Goldman, 1933, *Proc. Biol. Soc. Washington*, 46, p. 193—Catemaco, Veracruz, Mexico.

Southeastern Mexico from Veracruz south; Petén region of Guatemala; Belize (British Honduras).

**Rostrhamus sociabilis sociabilis** (Vieillot)

*Herpetotheres sociabilis* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 18, p. 318; based on "Gavilan de estero sociable," no. 16, of Azara, 1802, *Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata*, 1, p. 84—Corrientes, near Río de la Plata, Argentina.

Central America from Honduras and Nicaragua south, and

swampy lowlands in South America south to central Argentina. West of the Andes south only to Ecuador. Rare in Central America and Panama; casual Trinidad.

#### ROSTRHAMUS HAMATUS

##### **Rostrhamus hamatus** (Temminck)

*Falco hamatus* Illiger = Temminck, 1821, Planches Color., livr. 11, pl. 61 and text—Brazil.

Northern South America, from Colombia to Surinam, south to eastern Bolivia and the lower Amazon. Locally near lowland watercourses.

#### GENUS HARPAGUS VIGORS

*Harpagus* Vigors, 1824, Zool. Journ., 1, p. 338. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 4), *Falco bidentatus* Latham.

cf. Amadon, 1961, Condor, 63, pp. 178-179 (relationships of genus).

#### HARPAGUS BIDENTATUS

##### **Harpagus bidentatus fasciatus** Lawrence

*Harpagus fasciatus* Lawrence, 1869, Proc. Acad. Nat. Sci. Philadelphia (1868), p. 429—Guatemala.

Southeastern Mexico south through Central America to Colombia (west of the Eastern Andes) and western Ecuador.

##### **Harpagus bidentatus bidentatus** (Latham)

*Falco bidentatus* Latham, 1790, Index Ornith., p. 38; based on "Notched Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 34—Cayenne.

South America east of the Andes, south to eastern Bolivia and central Brazil; Trinidad.

#### HARPAGUS DIODON

##### **Harpagus diodon** (Temminck)

*Falco diodon* Temminck, 1823, Planches Color., livr. 34, pl. 198—Brazil; restricted to Villa Viçozza, Rio Peruípe, Bahia, by Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 4, p. 32, note 3.

Locally in the Guianas and eastern Brazil, south to Bolivia (Santa Cruz), Paraguay, and northern Argentina.

GENUS **ICTINIA** VIEILLOT

*Ictinia* Vieillot, 1816, *Analyse*, p. 24. Type, by monotypy,  
*Milvus cenchris* Vieillot = *Falco plumbeus* Gmelin.

**ICTINIA PLUMBEA**<sup>1</sup>***Ictinia plumbea*** (Gmelin)

*Falco plumbeus* Gmelin, 1788, *Syst. Nat.*, 1, p. 283; based  
on "Spotted-tailed Hobby" of Latham, 1781, *General*  
*Synop. Birds*, 1, p. 106—Cayenne.

Tropical Mexico south through Central America and South  
America (east of the Andes) to Paraguay and northern Argenti-  
na; Trinidad. Migratory in northern and southern portions  
of range.

**ICTINIA MISSISSIPPIENSIS*****Ictinia mississippiensis*** (Wilson)

*Falco misissippiensis* [sic] Wilson,<sup>2</sup> 1811, *Amer. Ornith.*, 3,  
p. 80, pl. 25, fig. 1—below Natchez, Mississippi.

Middle south of United States from Kansas, and even recently  
Arizona and New Mexico, east locally to South Carolina, south  
to Texas, the Gulf states, and northern Florida. Rare in east.  
Winters in South America, perhaps chiefly well south, in Brazil,  
Paraguay, and northern Argentina.

GENUS **LOPHOICTINIA** KAUP

*Lophoictinia* Kaup, 1847, *Isis von Oken*, col. 113. Type, by  
monotypy, *Milvus isurus* Gould.

**LOPHOICTINIA ISURA*****Lophoictinia isura*** (Gould)

*Milvus isurus* Gould, 1838, *Synop. Birds Australia*, pt. 3,  
pl. 47, fig. 2, and text—Australia = New South Wales,  
*fide* Mathews, 1912, *Novit. Zool.*, 18, p. 250.

Australia.

<sup>1</sup>*I. plumbea* and *mississippiensis* form a superspecies.—D. A.

<sup>2</sup>Name spelled correctly in index of same work; see also Thirty-third  
Suppl. *Amer. Ornith. Union Check-list North Amer. Birds*, 1976,  
*Auk*, 93, p. 876.—D. A.

GENUS **HAMIROSTRA** BROWN

*Hamirostra* T. Brown, 1846, *Illus. Gen. Birds*, pt. 8, p. 12.  
Type, by monotypy, *Hamirostra montana* Brown = *Buteo melanosternon* Gould.

*Gypoictinia* Kaup, 1850, *Monogr. Falconidae*, p. 61, in Jardine, *Contrib. Ornith.* Type, by monotypy, *Buteo melanosternon* Gould.

**HAMIROSTRA MELANOSTERNON*****Hamirostra melanosternon*** (Gould)

*Buteo melanosternon* Gould, 1841, *Proc. Zool. Soc. London* (1840), p. 162—interior of New South Wales.  
Northern and interior regions of Australia.

GENUS **MILVUS** LACÉPÈDE

*Milvus* Lacépède, 1799, *Tableaux Mammifères Oiseaux*, p. 4. Type, by tautonymy, *Falco milvus* Linnaeus.

cf. Makatsch, 1972, *Schwarze Milan (Neue Brehm-Bücheri 100)*, ed. 2, 80 pp. (*migrans*).

Naurois, 1972, *Proc. XV Int. Ornith. Congr.*, The Hague (1970), pp. 671-673.

**MILVUS MILVUS*****Milvus milvus milvus*** (Linnaeus)

*Falco Milvus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 89—Europe, Asia, Africa; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 20.

*Milvus milvus caucasicus* Buturlin, 1929, *Zametki o Ptitsakh Sev. Kavkaza*, p. 13—Sochi, Caucasus.

Locally from Great Britain, southern Sweden, Baltic states, and the Ukraine south to southern Europe, the Mediterranean islands, and the Middle East east to the Caucasus and northern Iran; also Canary Islands, Morocco, northern Algeria, and northern Tunisia. Migratory in north.

***Milvus (milvus) fasciicauda*** Hartert

*Milvus milvus fasciicauda* Hartert, 1914, *Bull. Brit. Ornith. Club*, 33, p. 89—Santo Antão, Cape Verde Islands.

Cape Verde Islands.



## MILVUS MIGRANS

**Milvus migrans migrans** (Boddaert)

*Falco migrans* Boddaert, 1783, Table Planches Enlum., p. 28; based on "Le Milan noir" of Daubenton, 1765-81, Planches Enlum., pl. 472—France.

*Milvus korschun tianshanicus* Buturlin, 1928, Opredelitel Vidov Ptits SSSR, pt. 1, p. 73—Naryn, Tien Shan.

Europe from France, Finland, and Russia south to Morocco, Tunisia, Sicily, Balkans; Near and Middle East south to Syria, east to Turkistan (Tien Shan, Pamir foothills, where interbreeding with *lineatus*), Afghanistan, and western Pakistan. Migratory in north, reaching southern Africa.

**Milvus (migrans) lineatus** (Gray)

*Haliaetus lineatus* J. E. Gray, 1831, Illus. Ind. Zool., 1, pt. 8, pl. 18—China.

*Milvus melanotis* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 14, pl. 5, fig. 5B—Japan.

Eurasia from the Urals and River Ob east to the Pacific, the Kurils, and Japan, south to Tibet, the Himalayas, southern China, northern Indochina, Malay Peninsula. Somewhat migratory.

**Milvus migrans formosanus** Kuroda

*Milvus lineatus formosanus* Nagamichi Kuroda, 1920, Dôbutsu. Zasshi, 32, pp. 243 (Japanese text), 245 (English text)—Gyochi, Nanto district, Taiwan.

Taiwan and Hainan.

**Milvus migrans govinda** Sykes

*Milvus Govinda* Sykes, 1832, Proc. Com. Sci. Corresp. Zool. Soc. London, pt. 2, p. 81—Dukhun = Deccan, India.

Eastern Pakistan, India, Sri Lanka (Ceylon), Bangladesh, Burma, southern Indochina, Malay Peninsula.

**Milvus migrans affinis** Gould

*Milvus affinis* Gould, 1838, Synop. Birds Australia, pt. 3, pl. 47, fig. 1, and text—Australia = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 249.

Celebes; Lesser Sundas (Lombok, Sumba, Timor); eastern New Guinea; islands off New Guinea (New Britain, Fergusson); northern Australia, south in smaller numbers to northern Victoria.

**Milvus migrans aegyptius** (Gmelin)

*Falco aegyptius* Gmelin, 1788, Syst. Nat., 1, p. 261—Egypt.

*Milvus migrans arabicus* Swann, 1922, Synop. Accipitres, ed. 2, p. 153—Lahy = Lahej, Aden.

Egypt, coasts of Red Sea, southern Arabia, coasts of Somalia and Kenya.

**Milvus migrans parasitus** (Daudin)

*Falco parasitus* Daudin, 1800, Traité Ornith., 2, p. 150; based on "Le Parasite" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 58, pl. 22—South Africa.

*Milvus migrans tenebrosus* Grant and Mackworth-Praed, 1933, Bull. Brit. Ornith. Club, 54, p. 23—Beoumi, Ghana.

Africa south of the Sahara, Cape Verde Islands, Comoro Islands, Madagascar.

GENUS **HALIASTUR** SELBY

*Haliastur* Selby, 1840, Cat. Gen. Sub-gen. Types Class Aves, pp. 2 (note), 3. Type, by original designation, *Haliastur pondicerianus* Gmelin = *Falco indus* Boddaert.

cf. Amadon, 1941, Emu, 40, pp. 365-366 (*sphenurus*).

**HALIASTUR SPHENURUS****Haliastur sphenurus** (Vieillot)

*Milvus sphenurus* Vieillot, 1818, Nouv. Dict. Hist. Nat., nouv. éd., 20, p. 564—Australasia = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 249.

*Haliastur sphenurus johannae* Brasil, 1916, Rev. Française Ornith., 4, p. 201—New Caledonia.

Eastern New Guinea; Australia, less common southward; New Caledonia.

**HALIASTUR INDUS****Haliastur indus indus** (Boddaert)

*Falco Indus* Boddaert, 1783, Table Planches Enlum., p. 25; based on "Aigle des grandes Indes" of Daubenton, 1765-81, Planches Enlum., pl. 416—Pondicherry, India, *ex* Daubenton.

Pakistan, India, and Sri Lanka (Ceylon), east to southern China, Burma, Thailand, and Indochina. Chiefly coastal or near water.

**Haliastur indus intermedius** Blyth

*Haliastur intermedius* Blyth, 1865, Ibis, p. 28—Java.

*Haliaetus indus* var. *ambiguus* Brüggemann, 1876, Abh. Naturwissen. Verein Bremen, 5, p. 45—Celebes (populations inclining to *girrenera*).

*Haliastur indus permistus* Neumann, 1939, Bull. Brit. Ornith. Club, 59, p. 105—Peleng Island.

Malay Peninsula, Philippines, Greater and Lesser Sunda Islands, Celebes and nearby islands (Peleng, Tukangbesi).

**Haliastur indus girrenera** (Vieillot)

*Haliaetus girrenera* Vieillot, 1822, Galerie Oiseaux, 1, pt. 1, p. 31, pl. 10—New South Wales.

*Haliaetus leucosternus* Gould, 1838, Proc. Zool. Soc. London (1837), p. 138—Australia.

Moluccas; New Guinea and surrounding islands; Bismarck Archipelago; northern and eastern Australia, along coasts and rivers, south to northern New South Wales.

**Haliastur indus flavirostris** Condon and Amadon

*Haliastur indus flavirostris* Condon and Amadon, 1954, Rec. South Austral. Mus., 11, p. 206—Bougainville Island.

Solomon Islands, including Nissan and Feni to the north of Bougainville.

GENUS **HALIAEETUS** SAVIGNY

*Haliaeetus* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, pp. 68, 85. Type, by monotypy, *Haliaeetus nisus* Savigny = *Falco albicilla* Linnaeus.

cf. Fischer, 1970, Seeadler (Neue Brehm-Bücherei 221), ed. 2, 146 pp.

**HALIAEETUS LEUCOGASTER**<sup>1</sup>**Haliaeetus leucogaster** (Gmelin)

*Falco leucogaster* Gmelin, 1788, Syst. Nat., 1, p. 257; based on "White-bellied Eagle" of Latham, 1781, General Synop. Birds, 1, first p. 33—no locality; Java designated by Hartert, 1902, Novit. Zool., 9, p. 427.

India, Sri Lanka (Ceylon), southeastern Asia, north to southeastern China and Taiwan, thence south and east through

<sup>1</sup>*H. leucogaster* and *sanfordi* form a superspecies.—D. A.

the East Indies, Philippines, New Guinea region; Australia and coastal islands, including Tasmania. Chiefly coastal and insular.

#### HALIAEETUS SANFORDI

##### **Haliaeetus sanfordi** Mayr

*Haliaeetus sanfordi* Mayr, 1935, Amer. Mus. Novit., no. 820, p. 1—Choiseul Island.

Solomon Islands.

#### HALIAEETUS VOCIFER<sup>1</sup>

##### **Haliaeetus vocifer** (Daudin)

*Falco vocifer* Daudin, 1800, Traité Ornith., 2, p. 65; based on "Le Vocifer" of Levaillant, 1796, Hist. Nat. Oiseaux Afrique, 1, p. 11, pl. 4—Keurboom River, Cape Province.

*Haliaëtos clamans* C. L. Brehm, 1853, Journ. Ornith., 1, p. 199, note—no locality; Shoa designated by Friedmann, 1930, Bull. U. S. Nat. Mus., no. 153, pt. 1, p. 66.

Africa from Senegal, Sudan, and Ethiopia south.

#### HALIAEETUS VOCIFEROIDES

##### **Haliaeetus vociferoides** Des Murs

*Haliaeetus vociferoides* Des Murs, 1845, Rev. Zool., Paris, 8, p. 175 bis.—Madagascar.

Madagascar.

#### HALIAEETUS LEUCORYPHUS

##### **Haliaeetus leucoryphus** (Pallas)

*Aquila leucorypha* Pallas, 1771, Reise Verschiedene Provinzen Russischen Reichs, 1, p. 454—lower Ural River.

Eastern Russia (Ural River), thence east to Mongolia, Manchuria, and the Baykal area, south to the Caspian area, Pakistan, northern India, Bangladesh, Burma, Tibet, and western China (Szechwan, Kansu). Migrates somewhat farther south.

<sup>1</sup>*H. vocifer* and *vociferoides* form a superspecies.—D. A.

HALIAEETUS ALBICILLA<sup>1</sup>**Haliaeetus albicilla** (Linnaeus)

*Falco Albicilla* Linnaeus, 1758, Syst. Nat., ed. 10, p. 89—Europe, America; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 19.

*Haliaetos Groenlandicus* C. L. Brehm, 1831, Handb. Naturgeschichte Vögel Deutschlands, p. 16—Greenland.

Western Greenland; Iceland; northern and central Eurasia locally from the British Isles (extirpated) east across Siberia to the Pacific, the Kuril Islands, Japan (Hokkaido); south to Germany, the Balkans, the Middle East, Mongolia, and Manchuria. Somewhat migratory.

## HALIAEETUS LEUCOCEPHALUS

**Haliaeetus leucocephalus washingtoniensis** (Audubon)

*Falco Washingtoniensis* Audubon, 1827, Birds Amer., pl. 11 (first state: legend on rock)—near Henderson, Kentucky, *vide* Audubon, 1831, Ornith. Biogr., 1, p. 60. Migrant.

*Haliaetus leucocephalus alascanus* Townsend, 1897, Proc. Biol. Soc. Washington, 11, p. 145—Unalaska, Aleutian Islands.

North America from Bering Island (USSR), the Aleutian Islands, Alaska, and Canada, north to about treeline and south to the United States border. Migratory in the colder interior districts.

**Haliaeetus leucocephalus leucocephalus** (Linnaeus)

*Falco leucocephalus* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 124; based on "The Bald Eagle" of Catesby, 1729, Nat. Hist. Carolina, pt. 1, p. 1, pl. 1—America, Europe = South Carolina *ex* Catesby.

North America, south of *washingtoniensis*, south to Florida, the Gulf coast, and the Mexican boundary, but extending into Baja California.

## HALIAEETUS PELAGICUS

**Haliaeetus pelagicus pelagicus** (Pallas)

*Aquila pelagica* Pallas, 1811, Zoographia Rosso-Asiat., 1,

<sup>1</sup>*H. albicilla* and *leucocephalus* may form a superspecies.—D. A.

p. 343 and pl.—islands between Kamchatka and America = *Tauisk*, on Sea of Okhotsk, *fide* Stresemann, 1948, *Zool. Jahrb.*, **78**, Abt. Syst., p. 127.

Northeastern Asia, chiefly coastal, from Koryakland east to long. 173° E., thence south through Kamchatka to Sakhalin and adjacent coasts. In winter to Manchuria, Japan, Korea, and, casually, the Aleutian Islands.

***Haliaeetus pelagicus niger* Heude**

*Haliaeetus niger* Heude, 1887, *Naturaliste*, p. 95—seas near Korea.

Korea and probably Ussuriland and Dauria in the USSR. Perhaps only a color phase.

GENUS **ICHTHYOPHAGA** LESSON

*Ichthyophaga* [sic] Lesson, 1843, *Écho Monde Savant*, **10**, col. 14. Type, by monotypy, *Ichthyophaga javana* Lesson = *Falco ichthyaetus* Horsfield.

*Polioaëtus* Kaup, 1850, *Monogr. Falconidae*, p. 72, in Jardine, *Contrib. Ornith.* Type, by monotypy, *Falco ichthyaetus* Horsfield.

cf. Mees, 1967, *Zool. Mededelingen Rijksmus. Nat. Hist. Leiden*, **42**, p. 144 (*humilis* vs. *nana*).

**ICHTHYOPHAGA HUMILIS**

***Ichthyophaga humilis plumbea* (Jerdon)**

*Polioaëtus plumbea* Hodgson = Jerdon, 1871, *Ibis*, p. 336—northwestern Himalayas.

Lower Himalayas, south slope, from Kashmir to Assam, thence east to northern Indochina and Hainan.

***Ichthyophaga humilis humilis* (Müller and Schlegel)**

*Falco (Pandion) humilis* S. Müller and Schlegel, 1841, in Temminck (ed.), *Verh. Nat. Geschiedenis Nederlandsche Overzeesche Bezittingen, Zool., Aves*, pl. 6, p. 47 (1845)—Sumatra.

*Ichthyaëtus nanus* Blyth, 1842, *Journ. Asiatic Soc. Bengal*, **11**, p. 202—Malay Peninsula.

Tenasserim, Burma; Thailand; Malaya; Sumatra; Borneo; Great Natuna Island; Celebes.

## ICHTHYOPHAGA ICHTHYAETUS

**Ichthyophaga ichthyaetus** (Horsfield)

*Falco Ichthyaetus* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 136—Java.

*Ichthyophaga ichthyaetus plumbeiceps* Stuart Baker, 1927, Bull. Brit. Ornith. Club, 47, p. 150—Ceylon.

India, Sri Lanka (Ceylon), Burma, Thailand, Indochina, Malaya, Sumatra, Java, Borneo, Philippines.

## GENUS GYPOHIERAX RÜPPELL

*Gypohierax* Rüppell, 1836, Neue Wirbelthiere Fauna Abyssinien, Vögel, p. 46. Type, by monotypy, *Falco angolensis* Gmelin.

## GYPOHIERAX ANGOLENSIS

**Gypohierax angolensis** (Gmelin)

*Falco angolensis* Gmelin, 1788, Syst. Nat., 1, p. 252; based on "Angola Vulture" of Latham, 1781, General Synop. Birds, 1, p. 18—Angola.

Locally over sub-saharan Africa, usually near oil palms, rivers, or coasts.

## GENUS GYPAETUS STORR

*Gypaetus* Storr, 1784, Alpenreise, p. 69. Type, by monotypy, *Gypaetus grandis* Storr = *Vultur aureus* Hablitzl.

## GYPAETUS BARBATUS

**Gypaetus barbatus aureus** (Hablitzl)

*Vultur aureus* Hablitzl, 1783, Neue Nordische Beytr., 4, p. 64—Samamisian Alps, Gilan, Iran.

*Gypaetus hemachalanus* Hutton, 1838, Journ. Asiatic Soc. Bengal, 7, p. 22—Tootoo, near Simla, India.

*Gypaetus altaicus* Sharpe, 1874, Cat. Birds Brit. Mus., 1, p. 229—Altai.

Mountains of southern Europe (including larger Mediterranean islands) from Spain, the Alps (formerly), and the Balkans east through the Near and Middle East to Iraq, Iran,

Russian Turkistan, Afghanistan, Himalayas, Tibet, Mongolia, western and central China.

**Gypaetus barbatus barbatus** (Linnaeus)

*Vultur barbatus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 87; based on "The Bearded Vulture" of Edwards, 1750, Nat. Hist. Birds, p. 106, pl. 106—Africa; restricted, *ex* Edwards, to Santa Cruz, near Oran, Algeria, by Hartert, 1914, Vögel Pal. Fauna, p. 1294.

Atlas Range in Morocco, Algeria, and Tunisia.

**Gypaetus barbatus meridionalis** Keyserling and Blasius

*Gypaetus meidionalis* [sic] Keyserling and J. H. Blasius, 1840, Wirbelthiere Europa's, p. xxviii—South Africa. Sinai, Arabia, and Ethiopia, thence south very locally in eastern and southern Africa.

GENUS **NEOPHRON** SAVIGNY

*Neophron* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, pp. 68, 75. Type, by monotypy, *Vultur percnopterus* Linnaeus.

NEOPHRON PERCNOPTERUS

**Neophron percnopterus percnopterus** (Linnaeus)

*Vultur Perenopterus* [sic] Linnaeus, 1758, Syst. Nat., ed. 10, p. 87; based on "Vultur. (Percnopterus)" of Hasselquist, 1757, Iter Palaestinum, p. 209—Egypt.

Southern Europe from the Iberian Peninsula, southern France and Switzerland, Rumania and southern Russia east through Socotra, Arabia, Iraq, the Crimea and Caucasus, Iran, Pakistan, and northwestern India. Also the Balearic, Canary, and Cape Verde Islands, and south locally throughout Africa, except in forest. Somewhat migratory.

**Neophron percnopterus ginginianus** (Latham)

*Vultur ginginianus* Latham, 1790, Index Ornith., p. 7—Coromandel, India.

India, east and south of *percnopterus*.

GENUS **NECROSYRTE** GLOGER

*Necrosyrtes* Gloger, 1841, Hand- und Hilfsbuch Naturgeschichte, p. 236. Type, by monotypy, *Cathartes monachus* Temminck.



## NECROSYRTES MONACHUS

**Necrosyrtes monachus monachus** (Temminck)

*Cathartes monachus* Temminck, 1823, Planches Color., livr. 38, pl. 22—Senegal.

Western Africa from central Spanish Sahara south to the northern border of the Guinea forest.

**Necrosyrtes monachus pileatus** (Burchell)

*Vultur pileatus* Burchell, 1824, Travels Interior Southern Africa, 2, p. 195, note—Hopetown district, Cape Province. Ethiopia south to northern Cape Province, west through Rhodesia (Zimbabwe) to southern Angola and South West Africa (Namibia).

## GENUS GYPS SAVIGNY

*Gyps* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, pp. 68, 71. Type, by monotypy, *Gyps vulgaris* Savigny = *Vultur fulvus* Hablitzl.

*Pseudogyps* Sharpe, 1873, Ann. Mag. Nat. Hist., ser. 4, 11, p. 133. Type, by subsequent designation (Sharpe, 1874, Cat. Birds Brit. Mus., 1, p. 11), *Vultur bengalensis* Gmelin.

GYPS BENGALENSIS<sup>1</sup>**Gyps bengalensis** (Gmelin)

*Vultur bengalensis* Gmelin, 1788, Syst. Nat., 1, p. 245; based on "Bengal Vulture" of Latham, 1781, General Synop. Birds, 1, p. 19, pl. 1—Bengal.

Southern Iran, Afghanistan, Pakistan, India, Bangladesh, Burma, southern China (Yunnan), southern Thailand, Indochina (north to Laos), Malaya (? nonbreeding).

## GYPS AFRICANUS

**Gyps africanus** Salvadori

*Gyps africanus* Salvadori, 1865, Notizia Storica Lavori Classe Sci. Fis. Mat. R. Accad. Sci. Torino, p. 133—Sennar, Sudan.

Senegal east to Sudan and Ethiopia, thence south through

<sup>1</sup>*G. bengalensis* and *africanus* form a superspecies.—D. A.

eastern Africa to Zululand and the Vaal River and west through Rhodesia (Zimbabwe) to southern Angola.

#### GYPS INDICUS

##### **Gyps (indicus) tenuirostris** Gray

*Gyps tenuirostris* Hodgson = G. R. Gray, 1844, Gen. Birds, 1, p. 6, pl. 3—Nepal.

*Gyps indicus nudiceps* Stuart Baker, 1927, Bull. Brit. Ornith. Club, 47, p. 151. New name for *Gyps tenuirostris* G. R. Gray, 1844, but not required.

Lower Himalayas from Kashmir to eastern Assam.

##### **Gyps indicus indicus** (Scopoli)

*Vultur indicus* Scopoli, 1786, Deliciae Florae Faunae Insubricae, 2, p. 85; based on "Le grand Vautour des Indes" of Sonnerat, 1782, Voyage Indes Orientales Chine, 2, p. 183, pl. 105—India.

Indian Peninsula, Burma, Thailand, Indochina. Straggler to Malaya.

#### GYPS RUEPELLII

##### **Gyps rueppellii rueppellii** (Brehm)

*Vultur Rueppellii* A. E. Brehm, 1852, Naumannia, 2, Heft 3, p. 44—Khartoum, Sudan.

Senegal, Nigeria, northern Cameroon, east to Sudan, south to Uganda and Kenya.

##### **Gyps rueppellii erlangeri** Salvadori

*Gyps erlangeri* Salvadori, 1908, Boll. Mus. Zool. Anat. Comp. Univ. Torino, 23 (no. 576), p. 3—Shoa, Ethiopia.

Highlands of Ethiopia and northwestern Somalia. Straggler to Arabia.

#### GYPS HIMALAYENSIS

##### **Gyps himalayensis** Hume

*Gyps himalayensis* Hume, 1869, Rough Notes, pp. 12, 15—Himalayas.

Himalayas and other ranges from northwestern India and the Pamirs east to Tibet and western China. Usually at higher elevations than other members of the genus.

GYPS FULVUS<sup>1</sup>**Gyps fulvus fulvus** (Hablizl)

*Vultur fulvus* Brisson = Hablizl, 1783, Neue Nordische Beytr., 4, p. 58, Samamisian Alps, Gilan, Iran.

Locally from Spain, France, Italy, the Balkans, the larger Mediterranean islands, and northern Africa south occasionally to southern borders of the Sahara and eastern Ethiopia (Eritrea), east through the Near and Middle East to Iran, Turkistan, the Pamirs, and the Mongolian Altai. Somewhat migratory.

**Gyps fulvus fulvescens** Hume

*Gyps fulvescens* Hume, 1869, Rough Notes, pp. 15, 19—Punjab. Type from Lahore.

Afghanistan, Pakistan, and northern India east to Assam, south to northern Gujarat and Khandesh; perhaps northern Bangladesh.

**?Gyps fulvus jonesi** Whistler<sup>2</sup>

*Gyps indicus jonesi* Whistler, 1927, Bull. Brit. Ornith. Club, 47, p. 74—Margal Range, Rawalpindi district, Pakistan.

Low ranges between the Salt Range and the Indus River, Pakistan.

**Gyps (fulvus) coprotheres** (Forster)

*Vultur Coprotheres* J. R. Forster, 1798, in Levaillant, Naturgeschichte Afr. Vogel, p. 35, pl. 10—South Africa.

*Vultur Kolbii* Daudin, 1800, Traité Ornith, 2, p. 15; based on "Le Chasse-fiente" of Levaillant, ? 1797, Hist. Nat. Oiseaux Afrique, 1, p. 28, pl. 10—South Africa.

Southern Africa from South West Africa (Namibia), southern Rhodesia (Zimbabwe), and southern Mozambique south.

## GENUS AEGYPIUS SAVIGNY

*Aegyptius* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, pp. 68, 73. Type, by monotypy, *Vultur niger* Daudin = *Vultur monachus* Linnaeus.

<sup>1</sup>*G. fulvus*, *coprotheres*, and perhaps *himalayensis* form a superspecies.—D. A.

<sup>2</sup>Perhaps a synonym of *fulvescens*. Stresemann, who examined the type, placed (in MS) *jonesi* as a race of *fulvus*, not of *indicus*.—D. A.

- Torgos* Kaup, 1828, *Isis von Oken*, col. 1144. Type, by monotypy, *Vultur auricularis* Daudin = *Vultur tracheliotus* J. R. Forster.
- Otogyps* G. R. Gray, 1841, *List Gen. Birds*, ed. 2, p. 2. Type, by monotypy, *Vultur auricularis* Daudin = *Vultur tracheliotus* J. R. Forster.
- Sarcogyps* Lesson, 1842, *Écho Monde Savant*, 9, col. 1038. Type, by monotypy, *Vultur ponticerianus* Latham = *Vultur calvus* Scopoli.
- Trigonoceps* Lesson, 1842, *Écho Monde Savant*, 9, col. 1038. Type, by monotypy, *Vultur occipitalis* Burchell.
- Lophogyps* Bonaparte, 1854, *Rev. Mag. Zool.*, Paris, sér. 2, 6, p. 530. Type, by monotypy, *Vultur occipitalis* Burchell.
- cf. Amadon, 1978, *Condor*, 79 (1977), pp. 415–416 (limits of genus).

## AEGYPIUS MONACHUS

***Aegypius monachus*** (Linnaeus)

*Vultur Monachus* Linnaeus, 1766, *Syst. Nat.*, ed. 12, 1, p. 122; based on "The Crested or Coped Black Vulture" of Edwards, 1760, *Gleanings Nat. Hist.*, p. 171, pl. 290—Arabia.

*Vultur Chincou* Daudin, 1800, *Traité Ornith.*, 2, p. 12—locality restricted to northeastern China by Hachisuka, 1938, *Bull. Brit. Ornith. Club*, 59, p. 17.

*Aegypius monachus danieli* Meinertzhagen, 1938, *Bull. Brit. Ornith. Club*, 58, p. 94—Khangai, Mongolia.

Southern Europe, including some of the Mediterranean islands, east through the Balkans; northern Morocco; Asia Minor south to the Syrian Desert, the Caucasus, Iran, Afghanistan, northern India and Tibet to western China, Mongolia and adjacent desert ranges of USSR (Altai, Tarbagatay). Somewhat migratory, especially in Asia, reaching Yemen, central India, and southern China.

## AEGYPIUS TRACHELIOTUS

***Aegypius tracheliotus*** (Forster)

*Vultur tracheliotus* J. R. Forster, 1791, in *Levaillant, Reise Innere Afrika*, 3, p. 363, pl. 12—Great Namaqualand.

*Vultur auricularis* Daudin, 1800, *Traité Ornith.*, 2, p. 10; based on "L'Oricou" of Levaillant, ? 1797, *Hist. Nat. Oiseaux Afrique*, 1, p. 23, pl. 9—Great Namaqualand.

*Vultur Nubicus* H. Smith, 1829, in Griffith, Animal Kingdom, **6**, p. 164—Nubia.

Locally in drier parts of Africa, from Morocco to Egypt, south to South Africa; also Israel and Yemen.

#### AEGYPIUS OCCIPITALIS

**Aegyptius occipitalis** (Burchell)

*Vultur occipitalis* Burchell, 1824, Travels Interior Southern Africa, **2**, p. 329, note—Makkwari = Matlowing River, Botswana.

Drier parts of Africa south of the Sahara, south to the Orange River, South Africa.

#### AEGYPIUS CALVUS

**Aegyptius calvus** (Scopoli)

*Vultur calvus* Scopoli, 1786, Deliciae Florae Faunae Insubriae, **2**, p. 85; based on "Le Vautour royal de Pondichéry" of Sonnerat, 1782, Voyage Indes Orientales Chine, **2**, p. 182, pl. 104—Pondicherry, India.

Pakistan, India, Bangladesh, Burma, Thailand, Indochina, Malaya.

#### GENUS CIRCAETUS VIEILLOT

*Circaetus* Vieillot, 1816, Analyse, p. 23. Type, by monotypy, "Jean-le-Blanc" Buffon = *Falco gallicus* Gmelin.

cf. Brown, 1974, Bull. Brit. Ornith. Club, **94**, pp. 126–128.

#### CIRCAETUS GALLICUS<sup>1</sup>

**Circaetus gallicus gallicus** (Gmelin)

*Falco gallicus* Gmelin, 1788, Syst. Nat., **1**, p. 259; based on "Jean le blanc" of Latham, 1781, General Synop. Birds, **1**, p. 39—France.

*Circaetus gallicus heptneri* Dementiev, 1932, Ornith. Monatsber., **40**, p. 173—Pishpek = Frunze, Kirghiz Republic. Southern and central Europe from Spain, France, Switzerland, the Balkans, and Russia north to lat. 56° N. on the Volga;

<sup>1</sup>*Accipter ferox* S. G. Gmelin, 1771, Novi Commentarii Acad. Sci. Imp. Petropolitanae, **15** (1770), p. 442, pl. 10—Astrakhan, is unidentifiable (cf. Mayr, 1944, Emu, **43**, p. 303).—D. A.

south, including Mediterranean islands, to northern Africa well into the Sahara; thence east, locally, through the Near and Middle East to Iran, India, the Aral Sea, Russian Turkistan, Mongolia, and western China. Migratory, wintering in the subarid zone south of the Sahara, in India, and in south-eastern Asia (to Lesser Sunda Islands).

***Circaetus gallicus beaudouini* Verreaux and Des Murs**

*Circaëtus beaudouini* Verreaux and Des Murs, 1862, *Ibis*, p. 212, pl. 7—Bissau, Portuguese Guinea.

Senegal to northern Nigeria, east and south to western Sudan, the Uganda border, and western Kenya.

***Circaetus gallicus pectoralis* Smith**

*Circaetus* [sic] *Pectoralis* A. Smith, 1829, *South Afr. Commercial Advertiser*, 4 (13 May)—no locality = South Africa.

Eastern Sudan and Ethiopia, south in open country to South Africa.

**CIRCAETUS CINEREUS**

***Circaetus cinereus* Vieillot**

*Circaetus cinereus* Vieillot, 1818, *Nouv. Dict. Hist. Nat.*, nouv. éd., 23, p. 445—Senegal.

Senegal east to northern Ethiopia, thence south to Cape Province, except in heavy forest.

**CIRCAETUS FASCIOLATUS**

***Circaetus fasciolatus* Gurney**

*Circaëtus fasciolatus* Gurney, 1861, *Ibis*, p. 130—Natal.

Eastern Africa from Kenya to Natal, chiefly in coastal districts, but occurring inland to eastern Rhodesia (Zimbabwe).

**CIRCAETUS CINERASCENS**

***Circaetus cinerascens* Müller**

*Circaëtus* [sic] *cinerascens* J. W. von Müller, 1851, *Naumania*, [1], Heft 4, p. 27—Sennar, Sudan.

Sierra Leone and Nigeria across southern Sudan to western Ethiopia, thence south to the Zambezi River, and across Rhodesia (Zimbabwe) to Angola. Absent from forest.

GENUS **TERATHOPIUS** LESSON

*Terathopius* Lesson, 1830, *Traité Ornith.*, livr. 1 (February), p. 46. Type, by monotypy, *Falco ecaudatus* "Shaw" = Daudin.

*Helotarsus* A. Smith, 1830, *South Afr. Quart. Journ.*, ser. 1, pp. 110-111. Type, by monotypy, *Helotarsus typicus* Smith = *Falco ecaudatus* Daudin.

**TERATHOPIUS ECAUDATUS****Terathopius ecaudatus** (Daudin)

*Falco ecaudatus* Daudin, 1800, *Traité Ornith.*, 2, p. 54; based on "Le Bateleur" of Levaillant, ? 1797, *Hist. Nat. Oiseaux Afrique*, 1, p. 20, pls. 7-8—"pays d'Auteniquoi" = Knysna district, Cape Province, *vide* W. L. Sclater, 1924, *Syst. Avium Ethiopicarum*, p. 64.

Senegal to Sudan and Ethiopia, south to South Africa, except in forest.

GENUS **SPILORNIS** GRAY

*Spilornis* G. R. Gray, *List Gen. Birds*, 1840, p. 3. Type, by original designation, *Falco bacha* Shaw; based on "Le Bacha" of Levaillant, ? 1797, *Hist. Nat. Oiseaux Afrique*, 1, p. 44, pl. 15 = *Falco bassus* J. R. Forster = *Spilornis cheela* subsp.

cf. Meise, 1939, *Journ. Ornith.*, 87, pp. 65-74.

Ripley, 1944, *Bull. Mus. Comp. Zool.*, 94, pp. 324-326 (West Sumatran Islands).

Rand, 1951, *Fieldiana, Zool.*, 31, pp. 576-579 (Philippines).

Stresemann, 1959, *Vierteljahrsschr. Naturforsch. Gesell. Zürich (Festschr. Steiner)*, 104, pp. 208-213.

Amadon, 1974, *Bull. Brit. Ornith. Club*, 94, pp. 159-163.

**SPILORNIS CHEELA****Spilornis cheela cheela** (Latham)

*Falco Cheela* Latham, 1790, *Index Ornith.*, p. 14—India; restricted to Lucknow by W. L. Sclater, 1919, *Bull. Brit. Ornith. Club*, 40, p. 38.

Northern India and lower Himalayas from Pakistan and Kashmir to Assam.

**Spilornis cheela melanotis** (Jerdon)

*Falco albidus* Temminck, 1820, Planches Color., livr. 4, pl. 19—Pondicherry.

*Buteo melanotis* Jerdon, 1844, Madras Journ. Lit. Sci., 13, p. 166—foot of the Nilgiris. New name for *Falco albidus* Temminck, 1820, preoccupied by *Falco albidus* Gmelin, 1788, Syst. Nat., 1, p. 267.

Peninsular India from Gujarat and the Gangetic Plain southward.

**Spilornis cheela spilogaster** (Blyth)

*Haematornis spilogaster* Blyth, 1852, Journ. Asiatic Soc. Bengal, 21, p. 351—Ceylon.

Sri Lanka (Ceylon).

**Spilornis cheela burmanicus** Swann

*Spilornis cheela burmanicus* Swann, 1920, Synop. List Accipitres, p. 81—Jobin, Thayetmyo, Burma.

*Spilornis cheela floweri* Swann, 1920, Synop. List Accipitres, p. 81—"Tahkaman and Chantaboon," Thailand.

Burma, southwestern China, Thailand, and Indochina (except Tonkin).

**Spilornis cheela davisoni** Hume

*Spilornis Davisoni* Hume, 1873, Stray Feathers, 1, p. 307—Port Blair, South Andaman Island.

Andaman Islands.

**Spilornis cheela ricketti** Sclater

*Spilornis cheela ricketti* W. L. Sclater, 1919, Bull. Brit. Ornith. Club, 40, p. 37—Yamakan, Fukien.

Southeastern China and northern Indochina (Tonkin).

**Spilornis cheela perplexus** Swann

*Spilornis cheela perplexus* Swann, 1922, Synop. Accipitres, ed. 2, p. 135—Iriomote Island.

Ryukyu Islands: Iriomote, Ishigaki.

**Spilornis cheela hoya** Swinhoe

*Spilornis hoya* Swinhoe, 1866, Ibis, p. 304—Formosa.

Taiwan.

**Spilornis cheela rutherfordi** Swinhoe

*Spilornis rutherfordi* Swinhoe, 1870, Ibis, p. 85—Hainan.

Hainan.

**Spilornis cheela palawanensis** Sclater

*Spilornis cheela palawanensis* W. L. Sclater, 1919, Bull.



Brit. Ornith. Club, **40**, p. 38—Palawan.

Palawan group, Philippine Islands: Palawan, Balabac, Calamianes, Busuanga.

**Spilornis cheela richmondi** Swann

*Spilornis cheela richmondi* Swann, 1922, Synop. Accipitres, ed. 2, p. 135—Kendawangan River, southwestern Borneo. Southern Borneo.

**Spilornis cheela pallidus** Walden

*Spilornis pallidus* Walden, 1872, Ibis, p. 363—Jambusan, Sarawak.

?*Spilornis raja* Sharpe, 1893, Bull. Brit. Ornith. Club, **1**, p. 55—Kuching, Sarawak.

Lowlands of northern Borneo.

**Spilornis (cheela) kinabaluensis** Sclater

*Spilornis cheela kinabaluensis* W. L. Sclater, 1919, Bull. Brit. Ornith. Club, **40**, p. 17—Mt. Kinabalu.

Mountains of northern Borneo.

**Spilornis (cheela) natunensis** Chasen

*Spilornis cheela natunensis* Chasen, 1934, Bull. Raffles Mus., no. 9, p. 93—Bunguran Island.

Natuna Islands (Bunguran); also Belitung (Billiton) Island, off western Borneo.

**Spilornis cheela malayensis** Swann

*Spilornis cheela malayensis* Swann, 1920, Synop. List Accipitres, p. 83—Pahang, Malaya.

Southern Tenasserim, Burma; Malay Peninsula, Anambas Islands, and northern Sumatra.

**Spilornis cheela batu** Meyer de Schauensee and Ripley

*Spilornis cheela batu* Meyer de Schauensee and Ripley, 1939, Proc. Acad. Nat. Sci. Philadelphia, **91**, p. 402—Batu Islands.

Southern Sumatra and the Batu Islands, off western Sumatra.

**Spilornis (cheela) minimus** Hume

*Spilornis minimus* Hume, 1873, Stray Feathers, **1**, p. 464—Camorta Island.

Central Nicobar Islands.

**Spilornis (cheela) klossi** Richmond

*Spilornis klossi* Richmond, 1902, Proc. U. S. Nat. Mus., **25**, p. 304—Great Nicobar Island.

Great Nicobar Island.

**Spilornis (cheela) abbotti** Richmond

*Spilornis abbotti* Richmond, 1903, Proc. U. S. Nat. Mus.,  
26, p. 492—Simalur = Simeulue.

Simeulue Island, off western Sumatra.

**Spilornis (cheela) asturinus** Meyer

*Spilornis asturinus* A. B. Meyer, 1884, Abh. Naturwissen.  
Gesell. Isis Dresden, p. 13—no locality; Nias designated  
by Meise, 1939, Journ. Ornith., 87, p. 69.

*Spilornis salvadorii* Berlepsch, 1895, Novit. Zool., 2, p.  
73—Nias.

Nias Island, off western Sumatra.

**Spilornis (cheela) sipora** Chasen and Kloss

*Spilornis elgini sipora* Chasen and Kloss, 1926, Ibis, p. 278,  
pl. 3—Sipora (= Sipura) Island.

Mentawai Islands (Sipura and the Pagai group), possibly  
Siberut, off western Sumatra.

**Spilornis cheela bido** (Horsfield)<sup>1</sup>

*Falco Bido* Horsfield, 1821, Trans. Linn. Soc. London, 13,  
p. 137—Java.

Java and Bali.

**Spilornis cheela baweanus** Oberholser

*Spilornis cheela baweanus* Oberholser, 1917, Proc. U. S.  
Nat. Mus., 52, p. 185—Bawean.

Bawean Island, Java Sea.

**Spilornis (cheela) rufipectus** Gould

*Spilornis rufipectus* Gould, 1858, Proc. Zool. Soc. London  
(1857), p. 222—vicinity of Macassar, Celebes.

Celebes and nearby islands (Salajar, Muna, Butung).

**Spilornis cheela sulaensis** (Schlegel)

*Circaëtus sulaënsis* Schlegel, 1866, Vogels Nederlandsche  
Indië, Valkvogels, p. 38—Sula Islands.

Banggai and Sula Islands, off eastern Celebes.

**Spilornis (cheela) holospilus** (Vigors)

*Buteo holospilus* Vigors, 1831, Proc. Com. Sci. Corresp. Zool.

<sup>1</sup>*Falco Bassus* J. R. Forster, 1798, in Levaillant, Naturgeschichte  
Afr. Vogel, p. 55, pl. 15—mountains of Great Namaqualand (corrected  
to Java by Sundevall, 1857, K. Svenska Vetenskaps-Acad. Handling-  
ar, n. s., 2, no. 3, p. 25), is unidentifiable (cf. Gurney, 1878, Ibis,  
p. 100, and Stresemann, 1959, Journ. Ornith., 100, p. 355).—D. A.

Soc. London, pt. 1, p. 96—near Manila.

Philippines from Luzon and Mindoro to the Sulu Archipelago, except the ranges of *panayensis* and *palawanensis*.

**Spilornis cheela panayensis** Steere

*Spilornis panayensis* Steere, 1890, List Birds Mammals Steere Exped. Philippines, p. 7—Guimaras, Panay, and Negros.

West-central Philippine Islands: Tablas, Romblon, Sibuyan, Masbate, Panay, Guimaras, Negros, Cebu, Bohol, Siquijor.

**SPILORNIS ELGINI**

**Spilornis elgini** (Blyth)

*Haematornis elgini* Tytler = Blyth, 1863, Ibis, p. 118—South Andaman Island.

Andaman Islands.

GENUS **DRYOTRIORCHIS** SHELLEY

*Dryotriorchis* Shelley, 1874, Ibis, p. 90. Type, by monotypy, *Astur spectabilis* Schlegel.

**DRYOTRIORCHIS SPECTABILIS**

**Dryotriorchis spectabilis spectabilis** (Schlegel)

*Astur spectabilis* Schlegel, 1863, Nederlandsch Tijdschrift Dierkunde (K. Zool. Genootschap Natura Artis Magistra Amsterdam), 1, p. 131, pl. 6—St. George Elmina, Ghana.

Liberia to southern Nigeria and northern Cameroon.

**Dryotriorchis spectabilis batesi** Sharpe

*Dryotriorchis batesi* Sharpe, 1904, Ibis, p. 601—Efulen, Cameroon.

Southern Cameroon south to Gabon and southeastern Zaire, east to the Semliki Valley, Uganda.

GENUS **EUTRIORCHIS** SHARPE

*Eutriorchis* Sharpe, 1875, Proc. Zool. Soc. London, p. 73. Type, by original designation, *Eutriorchis astur* Sharpe.

**EUTRIORCHIS ASTUR**

**Eutriorchis astur** Sharpe

*Eutriorchis astur* Sharpe, 1875, Proc. Zool. Soc. London, p.

73, pl. 13—southern Madagascar.  
Forests of eastern Madagascar. Perhaps extinct.

GENUS **POLYBOROIDES** SMITH

*Polyboroides* A. Smith, 1829, South Afr. Commercial Advertiser, 4 (13 May). Type, by monotypy, *Polyboroides typus* Smith.

*Gymnogenys* Lesson, 1830, Traité Ornith., livr. 1, p. 64. Type, by monotypy, *Vultur radiatus* Scopoli.

**POLYBOROIDES TYPUS**<sup>1</sup>

**Polyboroides typus pectoralis** Sharpe

*Polyboroides pectoralis* Sharpe, 1903, Bull. Brit. Ornith. Club, 13, p. 50—Efulen, Cameroon.

Southern Sahara (Air) and western Sudan south to Cameroon and the Congo basin.

**Polyboroides typus typus** Smith

*Polyboroides Typus* A. Smith, 1829, South Afr. Commercial Advertiser, 4 (13 May)—no locality = South Africa.

Eastern Sudan east to eastern Ethiopia (Eritrea), thence south to Angola and Cape Province.

**POLYBOROIDES RADIATUS**

**Polyboroides radiatus** (Scopoli)

*Vultur radiatus* Scopoli, 1786, Deliciae Florae Faunae Insubricae, 2, p. 85; based on "L'Autour gris à ventre rayé de Madagascar" of Sonnerat, 1782, Voyage Indes Orientales Chine, 2, p. 181, pl. 103—Madagascar.

Madagascar.

GENUS **CIRCUS** LACÉPÈDE

*Circus* Lacépède, 1799, Tableaux Mammifères Oiseaux, p. 4. Type, by subsequent designation (Lesson, 1828, Man. Ornith., 1, p. 105), *Falco aeruginosus* Linnaeus.

cf. Nieboer, 1973, doctoral thesis, Univ. Amsterdam (monogr. of genus).

Amadon, 1978, Emu, 78, pp. 115–117 (species limits).

<sup>1</sup>*P. typus* and *radiatus* form a superspecies.—D. A.

## CIRCUS ASSIMILIS

**Circus assimilis** Jardine and Selby

*Circus assimilis* Jardine and Selby, 1828, *Illus. Ornith.*, pt. 4, pl. 51 and text—near Sydney, Australia.

*Circus assimilis rogersi* Mathews, 1912, *Novit. Zool.*, 18, p. 244—Fitzroy River, northwestern Australia.

*Circus assimilis quirindus* Mathews, 1915, *Birds Australia*, 5, p. 23—Celebes and the northern islands.

Australia, chiefly grasslands of the interior. Recorded also from Sumba, Timor, Taliabu, and Celebes, apparently breeding on some of these islands.

## CIRCUS MAURUS

**Circus maurus** (Temminck)

*Falco maurus* Temminck, 1828, *Planches Color.*, livr. 78, p. 461—Cape of Good Hope.

Locally in South Africa, especially in Cape Province, but sometimes in Natal, Lesotho, Orange Free State, Botswana, and South West Africa (Namibia).

CIRCUS CYANEUS<sup>1</sup>**Circus cyaneus cyaneus** (Linnaeus)

*Falco cyaneus* Linnaeus, 1766, *Syst. Nat.*, ed. 12, 1, p. 126; based on "The Blue Hawk" of Edwards, 1756, *Gleanings Nat. Hist.*, p. 33, pl. 225—Europe, Africa = region of London ex Edwards.

*Circus taissiae* Buturlin, 1908, *Journ. Ornith.*, 56, p. 283 and note—Shredne Kolymsk, northeastern Siberia.

Eurasia: north to the southern tundra from the British Isles to the Pacific (Amurland, ? Kamchatka); south to the Pyrenees, northern Italy, Balkans, Caucasus, northern Turkistan, Tibet, and northern China. Somewhat migratory, reaching the Mediterranean, Iran, northern India, northern Indochina, Malay Peninsula, Japan.

**Circus (cyaneus) hudsonius** (Linnaeus)

*Falco hudsonius* Linnaeus, 1766, *Syst. Nat.*, ed. 12, 1, p. 128; based on "The Ring-tail'd Hawk" of Edwards, 1750, *Nat. Hist. Birds*, p. 107, pl. 107—Hudson Bay.

<sup>1</sup>*C. cyaneus* and *cinereus* form a superspecies.—D. A.

North America, north to the southern tundra, south to northern Baja California, Texas, Ohio, and Virginia. Winters south to Central America and the West Indies, casually to northern South America.

#### CIRCUS CINEREUS

##### **Circus cinereus** Vieillot

*Circus cinereus* Vieillot, 1816, *Nouv. Dict. Hist. Nat.*, nouv. éd., 4, p. 454; based on "Gavilan del campo ceniciento," no. 32, of Azara, 1802, *Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata*, 1, p. 145—Paraguay and near Río de la Plata.

*Circus histrionicus* Quoy and Gaimard, 1824, in Freycinet, *Voyage Uranie Physicienne*, Zool., livr. 3, pp. 93-94, pls. 15-16—Falkland Islands.

Southern South America north to Uruguay, Paraguay, extreme southern Brazil, and, in the Andes, to Colombia; Falkland Islands.

#### CIRCUS MACROURUS

##### **Circus macrourus** (Gmelin)

*Falco macrourus* S. G. Gmelin, 1770, *Reise Russland*, 1, p. 48—Voronezh, Russia.

*Accipiter macrourus* S. G. Gmelin, 1771, *Novi Commentarii Acad. Sci. Imp. Petropolitanae*, 15 (1770), p. 439, pls. 8-9—Voronezh, Russia.

Eastern Europe (Poland, Rumania), thence east through USSR in open country to near Lake Baykal and perhaps western Mongolia. North in USSR to about lat. 56° N., south to the Crimea, Caucasus, northern Iran, steppes near Aral Sea, and foothills of Russian Altai. Winters in Africa, south of the Sahara; less commonly in India, Sri Lanka (Ceylon), Burma.

#### CIRCUS MELANOLEUCOS

##### **Circus melanoleucos** (Pennant)

*Falco melanoleucos* Pennant, 1769, *Ind. Zool.*, p. 2, pl. 2—Ceylon.

Eastern Asia from Lake Baykal east to Amurland and Ussuri-land, south to Mongolia, Manchuria, northern Korea; one breeding record northern Burma. Winters to India, Sri Lanka (Ceylon), Malay Peninsula, Taiwan, Borneo, Philippines.

## CIRCUS PYGARGUS

**Circus pygargus** (Linnaeus)

*Falco Pygargus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 89; based on "The Ring-Tail" of Albin, 1734, Nat. Hist. Birds, 2, p. 5, pl. 5 (female), and 1738, 3, p. 3, pl. 3 (male)—Europe = England *ex* Albin.

Europe from England, the Baltic states, and central Russia south to Spain, France, northern Italy, and the Balkans; also northern Morocco. East locally in Eurasia through western Siberia to the Yenisey River and the Russian Altai, north to about lat. 56° N., south to the Caspian area, including northern Iran, and the Tien Shan. Winters in central and southern Africa, southern Iran, and India.

CIRCUS RANIVORUS<sup>1</sup>**Circus ranivorus** (Daudin)

*Falco ranivorus* Daudin, 1800, Traité Ornith., 2, p. 170; based on "Le Grenouillard" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 63, pl. 23—South Africa.

*Circus ranivorus aequatorialis* Stresemann, 1924, Ornith. Monatsber., 32, p. 48—Kiraragua, Kilimanjaro.

Uganda, Kenya, southern Zaire, and southern Angola south to Cape Province.

## CIRCUS AERUGINOSUS

**Circus aeruginosus harterti** Zedlitz

*Circus aeruginosus harterti* Zedlitz, 1914, Journ. Ornith., 62, p. 133—Mhoiwla, Morocco.

Northern Africa in Morocco, Algeria, and Tunisia; chiefly coastal.

**Circus aeruginosus aeruginosus** (Linnaeus)

*Falco aeruginosus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 91; based on "The Moor Buzzard" of Albin, 1731, Nat. Hist. Birds, 1, p. 3, pl. 3—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 23.

England, southern Sweden, northern Russia, southwestern Siberia east across central Asia to the upper Yenisey River

<sup>1</sup>*C. ranivorus*, *aeruginosus*, *pilonotus*, *approximans*, and *maillardi* form a superspecies.—D. A.

and Mongolia, south to the Mediterranean, Israel, Caucasus, and Iran. Winters in Africa south to Angola and the Transvaal; also in Iran, India, Sri Lanka (Ceylon), and Burma.

#### CIRCUS SPILONOTUS

##### **Circus spilonotus spilonotus** Kaup

*Circus spilonotus* Kaup, 1847, Isis von Oken, col. 953—Asia. Asia, east of *aeruginosus*, from the Baykal region and Mongolia east to the Pacific (Amurland, Ussuriland), south to northern China (Manchuria, Sinkiang) and perhaps northern Korea; also Hokkaido, Japan, and perhaps Sakhalin. Winters from China and Japan south to the Malay Peninsula, Borneo, and the Philippines.

##### **Circus spilonotus spilothorax** Salvadori and D'Albertis

*Circus spilothorax* Salvadori and D'Albertis, 1875, Ann. Mus. Civ. Genova, 7, p. 807—Yule Island, New Guinea. New Guinea, locally.

#### CIRCUS APPROXIMANS

##### **Circus approximans approximans** Peale

*Circus approximans* Peale, 1848, U. S. Explor. Exped., 8, p. 64—Vanua Levu, Fiji.

*Circus wolfi* Gurney, 1866, Proc. Zool. Soc. London (1865), p. 823, pl. 44—New Caledonia.

? Lord Howe, Norfolk, Kermadec, Chatham Islands, New Caledonia, New Hebrides, Loyalty, Fiji, Tonga, and Society Islands.

##### **Circus approximans gouldi** Bonaparte

*Circus gouldi* Bonaparte, 1850, Consp. Gen. Avium, 1, p. 34—Australia = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 245.

Southern New Guinea, moister parts of Australia, Tasmania, New Zealand. Tasmanian birds winter in Australia. Perhaps only a nonbreeding migrant to New Guinea.

#### CIRCUS MAILLARDI

##### **Circus maillardi maillardi** Verreaux

*Circus Maillardi* J. Verreaux, 1862, in Maillard, Île Réunion, p. 160—Réunion. Réunion, Indian Ocean.



**Circus maillardi macrosceles** Newton

*Circus macrosceles* Newton, 1863, Proc. Zool. Soc. London, p. 180—Madagascar.  
Madagascar and the Comoro Islands.

CIRCUS BUFFONI<sup>1</sup>**Circus buffoni** (Gmelin)

*Falco Buffoni* Gmelin, 1788, Syst. Nat., 1, p. 277; based on "Cayenne Ringtail" of Latham, 1781, General Synop. Birds, 1, p. 91—northeastern Brazil.

Locally in northern South America, east of the Andes, including Trinidad and Tobago; also southern South America from central Chile, eastern Bolivia, and Brazil south of the Amazon south, at least as a straggler, to Tierra del Fuego.

GENUS MELIERAX GRAY<sup>2</sup>

*Meliërax* G. R. Gray, 1840, List Gen. Birds, p. 5. Type, by original designation, *Falco musicus* Daudin = *Falco canorus* Rislachi.

*Micronisus* G. R. Gray, 1840, List Gen. Birds, p. 5. Type, by original designation, *Falco gabar* Daudin.

## MELIERAX GABAR

**Melierax gabar** (Daudin)

*Falco gabar* Daudin, 1800, Traité Ornith., p. 87; based on "Le Gabar" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 89, pl. 33—interior of South Africa.

*Melierax gabar defensorum* Meinertzhagen, 1949, Bull. Brit. Ornith. Club, 69, p. 82—Lodar, Aden.

Senegal through Sudan to northwestern Ethiopia and southeastern Arabia, south to Cape Province, except in forest.

<sup>1</sup>*Falco brasiliensis* Gmelin, 1788, based on the "Caracara" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 211, has been used for this species by some recent authors without, it would seem, sufficient reason (Amadon, 1954, Auk, 71, p. 203). None of the early literature uses this name.—D. A.

<sup>2</sup>*Melierax* selected by first reviser action (Hartlaub, 1852, Abh. Gebiete Naturwissen. Verein Hamburg, 2, pt. 2, p. 15) over simultaneously published *Micronisus*.—D. A.

MELIERAX METABATES<sup>1</sup>**Melierax metabates theresae** Meinertzhagen

*Melierax metabates theresae* Meinertzhagen, 1939, Bull. Brit. Ornith. Club, **59**, p. 63—Auliouz, Sous Valley, Morocco. Southwestern Morocco (Sous Valley).

**Melierax metabates neumanni** Hartert

*Meliërax canorus neumanni* Hartert, 1914, Vögel Pal. Fauna, p. 1165—Arbub, near Merowe, Sudan. Mali, Niger, northern Nigeria, Chad, northern Sudan.

**Melierax metabates ignoscens** Friedmann

*Melierax metabates ignoscens* Friedmann, 1928, Proc. Biol. Soc. Washington, **41**, p. 94—Sheikh Othman, Aden. Southwestern Arabian Peninsula.

**Melierax metabates metabates** Heuglin

*Melierax metabates* Heuglin, 1861, Ibis, p. 72—White Nile between lat. 6° N. and 7° N. Senegal east to southern Sudan and Ethiopia, thence south locally to northeastern Zaire, Kenya, and northern Tanzania.

**Melierax metabates mechowi** Cabanis

*Meliërax Mechowi* Cabanis, 1882, Journ. Ornith., **30**, p. 229—Angola. Type from Melandje. Angola east to southern Tanzania, Malawi, Mozambique, and the Transvaal.

## MELIERAX CANORUS

**Melierax (canorus) poliopterus** Cabanis

*Melierax poliopterus* Cabanis, 1869, in Decken, Reisen Ost-Afrika, **3**, Abth. 1, p. 40—Umba River, Kenya. Southern Ethiopia and adjacent Somalia south locally through Uganda, Kenya, and Tanzania.

**Melierax canorus argentior** Clancey

*Melierax musicus argentior* Clancey, 1960, Durban Mus. Novit., **6**, p. 15—Sukses, Okahandja-Otjiwarongo Road, Damaraland, South West Africa. ? Southern Angola, South West Africa (Namibia), western Malawi, Botswana, western Transvaal, Orange Free State.

<sup>1</sup>*M. metabates* and *canorus* evidently form a superspecies.—D. A.

**Melierax canorus canorus** (Rislachi)

*Falco canorus* Rislachi, 1799, Diss. Falcone Canoro, p. 1; based on "Le Faucon Chanteur" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 77, pl. 27—South Africa.<sup>1</sup>

*Falco musicus* Daudin, 1800, Traité Ornith., 2, p. 116; based on "Le Faucon Chanteur" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 77, pl. 27—Cape Province.

*Melierax poliopterus coombsi* Roberts, 1931, Ann. Transvaal Mus., 14, p. 239—Zoutpansberg, Transvaal.

Cape Province, perhaps eastern Orange Free State, Natal (formerly). Somewhat migratory.

GENUS **ACCIPITER** BRISSON

*Accipiter* Brisson, 1760, Ornith., 1, pp. 28, 310. Type, by tautonomy, *Accipiter* = *Falco nisus* Linnaeus.

*Erythrotriorchis* Sharpe, 1875, Proc. Zool. Soc. London, p. 337. Type, by monotypy, *Falco radiatus* Latham.

*Megatriorchis* Salvadori and D'Albertis, 1875, Ann. Mus. Civ. Genova, 7, p. 805. Type, by monotypy, *Megatriorchis doriae* Salvadori and D'Albertis.

cf. Kramer, 1973, Habicht Sperber (Neue Brehm-Bücherei 158), ed. 2, 102 pp. (*gentilis*, *nisus*).

Wattell, 1973, Publ. Nuttall Ornith. Club, no. 13, 237 pp. (monogr., bibliogr.).

Amadon, 1978, Emu, 78, pp. 117-118 (*Erythrotriorchis*, *Megatriorchis*).

## ACCIPITER POLIOGASTER

**Accipiter poliogaster** (Temminck)

*Falco poliogaster* Natterer = Temminck, 1824, Planches Color., livr. 45, pl. 264—Brazil. Type from Ypanema, São Paulo.

*Falco pectoralis* Drapiez, 1838, Dict. Class. Sci. Nat., 4, p. 340—South America.

Locally in forests of South America, east of the Andes, south to Paraguay and northern Argentina.

<sup>1</sup>Rislachi's dissertation, published separately in 1799, was reprinted in 1801 in Diss. Acad. Upsaliae Habita Praesidio C. P. Thunberg, 3, pp. 264-272.—D. A.

ACCIPITER TRIVIRGATUS<sup>1</sup>**Accipiter trivirgatus layardi** (Whistler)

*Astur trivirgatus layardi* Whistler, 1936, Journ. Bombay Nat. Hist. Soc., 38, p. 434—Ceylon.

Sri Lanka (Ceylon).

**Accipiter trivirgatus peninsulæ** Koelz

*Accipiter trivirgatus peninsulæ* Koelz, 1949, Auk, 66, p. 83—Londa, Bombay district.

Southern India.

**Accipiter trivirgatus indicus** (Hodgson)

*Astur indicus* Hodgson, 1836, Bengal Sporting Mag., n. s., 8, p. 177—Nepal.

*Spizaëtus rufitinctus* Horsfield, 1840, Proc. Zool. Soc. London (1839), p. 153—Assam, India.

Northern India south about to the Godavari River and east to Assam, southern China (Yunnan, Kwangsi), Burma, Thailand, Malaya, Indochina, Hainan.

**Accipiter trivirgatus formosæ** Mayr

*Accipiter trivirgatus formosæ* Mayr, 1949, Amer. Mus. Novit., no. 1415, p. 11—Tapposha, Taiwan.

Taiwan.

**Accipiter trivirgatus trivirgatus** (Temminck)

*Falco trivirgatus* Temminck, 1824, Planches Color., livr. 51, pl. 303—Sumatra.

Sumatra.

**Accipiter trivirgatus niasensis** Mayr

*Accipiter trivirgatus niasensis* Mayr, 1949, Amer. Mus. Novit., no. 1415, p. 4—Nias.

Nias Island, off western Sumatra.

**Accipiter trivirgatus javanicus** Mayr

*Accipiter trivirgatus javanicus* Mayr, 1949, Amer. Mus. Novit., no. 1415, p. 4—Tjibodas, western Java.

Java.

**Accipiter trivirgatus microstictus** Mayr

*Accipiter trivirgatus microstictus* Mayr, 1949, Amer. Mus. Novit., no. 1415, p. 5—Riam, southwestern Borneo.

Borneo.

<sup>1</sup>A. *trivirgatus* and *griseiceps* form a superspecies.—D. A.

**Accipiter trivirgatus palawanus** Mayr

*Accipiter trivirgatus palawanus* Mayr, 1949, Amer. Mus. Novit., no. 1415, p. 5—Taguso, Palawan.

Palawan and the Calamianes in the southern Philippines; also Natuna Islands, off Borneo (subspecies doubtful).

**Accipiter trivirgatus extimus** Mayr

*Accipiter trivirgatus extimus* Mayr, 1945, Zoologica, 30, p. 106—Davao, Mindanao.

Philippines: Negros, Samar, Leyte, Mindanao.

**Accipiter trivirgatus castroi** Manuel and Gilliard

*Accipiter trivirgatus castroi* Manuel and Gilliard, 1952, Amer. Mus. Novit., no. 1545, p. 3—Anibawan, Polillo.

Philippines: Polillo.

## ACCIPITER GRISEICEPS

**Accipiter griseiceps** (Schlegel)

*Astur griseiceps* Schlegel, 1862, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 1, Astures, p. 23—Atep and Gorontalo, northern Celebes.

Celebes and nearby islands (Togian, Muna, Butung).

## ACCIPITER TACHIRO

**Accipiter tachiro unduliventer** (Rüppell)

*Falco (Astur) unduliventer* Rüppell, 1836, Neue Wirbelthiere Fauna Abyssinien, Vögel, p. 40, pl. 18, fig. 1—Simen, Ethiopia.

Mountain forests of Ethiopia, except in southwest.

**Accipiter tachiro croizati** Desfayes

*Accipiter tachiro croizati* Desfayes, 1974, Bull. Brit. Ornith. Club, 94, p. 70—Afallo, Ghera region, Kaffa Province, Ethiopia; altitude about 2,050 meters.

Rain forest of southwestern Ethiopia.

**Accipiter tachiro macrocelides** (Hartlaub)

*Astur macrocelides* [sic] Temminck = Hartlaub, 1855, Journ. Ornith., 3, p. 354—Rio Bontry, Ghana.

Sierra Leone south to western Cameroon, in forest.

**Accipiter tachiro toussenelii** (Verreaux)

*Nisus Toussenelii* J. and E. Verreaux, 1855, Journ. Ornith., 3, p. 101—Gabon.

Southern Cameroon to Gabon and the lower Congo basin.

**Accipiter tachiro canescens** (Chapin)*Astur toussenellii* [sic] *canescens* Chapin, 1921, Amer. Mus.

Novit., no. 7, p. 1—Medje, northern Ituri district, Zaire.

Upper Congo basin.

**Accipiter tachiro lopezi** (Alexander)*Astur lopezi* Alexander, 1903, Bull. Brit. Ornith. Club, 13,

p. 49—Moka, Fernando Po.

Fernando Po, Gulf of Guinea.

**Accipiter tachiro sparsimfasciatus** (Reichenow)*Astur sparsimfasciatus* Reichenow, 1895, Ornith. Mo-

natsber., 3, p. 97—Zanzibar.

Southern Somalia, Kenya, Tanzania, eastern and southern Zaire (except rain forest), Angola, Zambia, Malawi, Zanzibar.

**Accipiter tachiro pemaensis** Benson and Elliott*Accipiter tachiro pemaensis* Benson and Elliott, 1975, Bull.

Brit. Ornith. Club, 95, p. 60—Pemba Island.

Pemba Island, off Tanzania.

**Accipiter tachiro tachiro** (Daudin)*Falco tachiro* Daudin, 1800, Traité Ornith., 2, p. 90; based

on "Le Tachiro" of Levaillant, 1798, Hist. Nat. Oiseaux

Afrique, 1, p. 66, pl. 24—"pays d'Auteniquoi" = Knysna district, Cape Province.

Southern Angola, Malawi, Rhodesia (Zimbabwe), and Mozambique, south to Cape Province.

## ACCIPTER CASTANILIUS

**Accipiter castanilius castanilius** Bonaparte*Accipiter castanilius* Bonaparte, 1853, Rev. Mag. Zool., Paris,sér. 2, 5, p. 578—South America; error, Gabon, *fide*

Gurney, 1875, Ibis, p. 363.

Forests of Nigeria, Cameroon, and lower Congo basin.

**Accipiter castanilius beniensis** Lönnberg*Accipiter beniensis* Lönnberg, 1917, Arkiv Zool., 10, no. 24,

p. 13—Beni, Zaire.

Forests of upper Congo basin.

ACCIPTER BADIUS<sup>1</sup>**Accipiter badius cenchroides** (Severtsov)*Astur cenchroides* Severtsov, 1873, Izvestiia Imp. Obschest-<sup>1</sup>*A. badius, brevipes, butleri*, and perhaps *soloensis* and *francesii* form a superspecies.—D. A.

va Liubitelei Estest. Antrop. Etnogr., Moscow, 8, pt. 2 (1872), p. 113—Auliye-ata (= Dzhabul) and Chimkent, Turkistan.

*Astur badius chorassanicus* Heptner and Stachanov, 1930, Journ. Ornith., 78, p. 514—near Askhabad, Transcaspia.

Southern Caspian area in USSR and Iran, east through Afghanistan and Pakistan to extreme northwestern India, Russian Turkistan, and Inner Mongolia. Somewhat migratory, reaching the Punjab, India.

**Accipiter badius dussumieri** (Temminck)

*Falco dussumieri* Temminck, 1824, Planches Color., livr. 52, text to pls. 308 (adult) and 336 (immature)—India. Type from Bengal.

India, Kashmir, Sikkim, Bangladesh.

**Accipiter badius badius** (Gmelin)

*Falco badius* Gmelin, 1788, Syst. Nat., 1, p. 280; based on "The Brown Hawk" of P. Brown, 1776, New Illus. Zool., p. 6, pl. 3, and Latham, 1781, General Synop. Birds, 1, p. 96—Ceylon.

Southwestern India (Kerala) and Sri Lanka (Ceylon).

**Accipiter badius poliopsis** (Hume)

*Micronisus poliopsis* Hume, 1874, Stray Feathers, 2, p. 325—northern Pegu, Burma.

*Astur badius klossi* Swann, 1925, Monogr. Birds Prey, pt. 4, p. 217—Daban, Annam.

Assam, Burma, southern China, Thailand, Indochina, and Hainan. Straggles to Malaya and Sumatra.

**Accipiter badius sphenurus** (Rüppell)

*Falco (Nisus) sphenurus* Rüppell, 1836, Neue Wirbelthiere Fauna Abyssinien, Vögel, p. 42—Dahlak Island, Red Sea.

Gambia, Ghana, and southern Nigeria east to Ethiopia and southwestern Arabia, south to Cameroon, northern Zaire, and northern Tanzania.

**Accipiter badius polyzonoides** Smith

*Accipiter polyzonoides* A. Smith, 1838, Illus. Zool. South Africa, Aves, pl. 11—Mafeking, Transvaal.

Southern Zaire and Tanzania to the Orange River, South Africa.

ACCIPITER BREVIPES

**Accipiter brevipes** (Severtsov)

*Astur brevipes* Severtsov, 1850, Bull. Soc. Imp. Naturalistes

Moscou, **23**, no. 3, first p. 234, pls. 1-3—Voronezh Province, Russia.

Southeastern Europe from Yugoslavia to Greece, thence east through central Russia to the Volga, and south and east to the Crimea, Turkey, Caucasus, and Iran. Migratory; principal winter range not known.

#### ACCIPITER BUTLERI

##### **Accipiter butleri butleri** (Gurney)

*Astur butleri* Gurney, 1898, Bull. Brit. Ornith. Club, **7**, p. 27—Car Nicobar.

Nicobar Islands: Car Nicobar.

##### **Accipiter butleri obsoletus** (Richmond)

*Astur obsoletus* Richmond, 1902, Proc. U. S. Nat. Mus., **25**, p. 306—Katchall Island.

Nicobar Islands: Katchall.

#### ACCIPITER SOLOENSIS

##### **Accipiter soloensis** (Horsfield)

*Falco Soloënsis* Horsfield, 1821, Trans. Linn. Soc. London, **13**, p. 137—Solo, Java.

Korea, southern Manchuria, and thence west in China to Szechwan, south to Kwangsi and Kwangtung; Taiwan. Winters to Andaman Islands, Malay Peninsula, Greater and Lesser Sunda Islands, Moluccas, and Waigeo, off New Guinea, but chiefly in Celebes and the Philippines.

#### ACCIPITER FRANCESII

##### **Accipiter francesii francesii** Smith

*Accipiter Francesii* A. Smith, 1834, South Afr. Quart. Journ., ser. 2, no. 3, pt. 2, p. 280—Madagascar.

Madagascar.

##### **Accipiter francesii griveaudi** Benson

*Accipiter francesii griveaudi* Benson, 1960, Ibis, **103b**, p. 36—Nioumbadjou, Grand Comoro.

Grand Comoro, Comoro Islands, off Madagascar.

##### **Accipiter francesii pusillus** (Gurney)

*Scelopspizias pusillus* Gurney, 1875, Ibis, p. 358—Joanna Island = Anjouan.

Anjouan Island, Comoro Islands.



**Accipiter francesii brutus** (Schlegel)

*Nisus brutus* Schlegel, 1866, *Nederlandsch Tijdschrift Dierkunde* (K. Zool. Genootschap Natura Artis Magistra Amsterdam), **3**, p. 80—Mayotte.

Mayotte Island, Comoro Islands.

## ACCIPITER TRINOTATUS

**Accipiter trinotatus** Bonaparte

*Accipiter trinotatus* Bonaparte, 1850, *Consp. Gen. Avium*, **1**, p. 33—Celebes.

Celebes and nearby islands (Muna, Butung).

## ACCIPITER FASCIATUS

**Accipiter fasciatus natalis** (Lister)

*Urospizias natalis* Lister, 1889, *Proc. Zool. Soc. London* (1888), p. 523—Christmas Island.

Christmas Island, Indian Ocean.

**Accipiter fasciatus tjendanae** Stresemann

*Accipiter fasciatus tjendanae* Stresemann, 1925, *Journ. Ornith.*, **73**, p. 323, note 1—Waingapo, Sumba.

Lesser Sunda Islands: Sumba.

**Accipiter fasciatus wallacii** (Sharpe)

*Astur wallacii* Sharpe, 1874, *Cat. Birds Brit. Mus.*, **1**, pp. 95 (in key), 128, pl. 5 (col. fig. of adult)—Lombok.

Lesser Sunda Islands: Lombok, Sumbawa, Flores, Wetar, Leti, Moa, Damar, Sermata.

**Accipiter fasciatus stresemanni** Rensch

*Accipiter fasciatus stresemanni* Rensch, 1931, *Mitt. Zool. Mus. Berlin*, **17**, p. 509—Kalao Tuah Island = Kalaotoa.

Small islands between Celebes and Flores (Tanahdjampea, Kalao, Bonerate, Kalaotoa, Madu, Tukangbesi).

**Accipiter fasciatus hellmayri** Stresemann

*Accipiter fasciatus hellmayri* Stresemann, 1922, *Journ. Ornith.*, **70**, p. 129, note 2—Timor.

Lesser Sunda Islands: Alor, Samao, Timor.

**Accipiter fasciatus savu** Mayr

*Accipiter fasciatus savu* Mayr, 1941, *Ornith. Monatsber.*, **49**, p. 44—Savu = Sawu.

Lesser Sunda Islands: Sawu.

**Accipiter fasciatus buruensis** Stresemann

*Accipiter torquatus buruensis* Stresemann, 1914, Novit. Zool.,  
21, p. 381—Fakal, Buru Island.

Moluccas: Buru.

**Accipiter fasciatus polycryptus** Rothschild and Hartert

*Accipiter fasciatus polycryptus* Rothschild and Hartert, 1915,  
Novit. Zool., 22, p. 53—Sogeri district, Owen Stanley  
Mountains.

Eastern New Guinea, west to the Sepik River.

**Accipiter fasciatus dogwa** Rand

*Accipiter fasciatus dogwa* Rand, 1941, Amer. Mus. Novit.,  
no. 1102, p. 1—Dogwa, Oriomo River.

Southern New Guinea, from Merauke district to the Oriomo  
River.

**Accipiter fasciatus didimus** (Mathews)

*Astur fasciatus didimus* Mathews, 1912, Austral Avian Rec.,  
1, 33—Melville Island.

Coastal regions of northern Australia, including Melville  
Island.

**Accipiter fasciatus fasciatus** (Vigors and Horsfield)

*Astur Fasciatus* Vigors and Horsfield, 1827, Trans. Linn.  
Soc. London, 15, p. 181—New South Wales (immature).

*Astur Approximans* Vigors and Horsfield, 1827, Trans. Linn.  
Soc. London, 15, p. 181—New South Wales (adult).

*Astur cruentus* Gould, 1843, Proc. Zool. Soc. London (1842),  
p. 113—York district, Western Australia.

*Urospiza fasciata rennelliana* Kinghorn, 1937, Proc. Zool.  
Soc. London, 107, ser. B, p. 180—Rennell Island.

Australia, south of the range of *didimus*; Tasmania; Rennell  
and Bellona Islands in the Solomons.

**Accipiter fasciatus vigilax** (Wetmore)

*Astur fasciatus vigilax* Wetmore, 1926, Condor, 28, p. 46—  
New Caledonia.

New Caledonia, Loyalty Islands, New Hebrides (Aneityum  
only).

## ACCIPITER NOVAEHOLLANDIAE

**Accipiter novaehollandiae sylvestris** Wallace

*Accipiter sylvestris* Wallace, 1864, Proc. Zool. Soc. London  
(1863), p. 487—Flores.

Lesser Sunda Islands: Sumbawa, Flores, Pantar, Alor.

**Accipiter novaehollandiae polionotus** (Salvadori)

*Urospizias polionotus* Salvadori, 1890, Mem. Accad. Sci. Torino, ser. 2, **40**, p. 147—Timorlaut = Tanimbar.

Small islands east of Timor: Banda, Damar, Babar, Tanimbar.

**Accipiter novaehollandiae albiventris** (Salvadori)

*Urospizias albiventris* Salvadori, 1875, Ann. Mus. Civ. Genova, **7**, p. 982—Great Kai Island and Kai Bandan.

Kai Islands, southwest of New Guinea.

**Accipiter novaehollandiae obiensis** (Hartert)

*Astur griseogularis obiensis* Hartert, 1903, Novit. Zool., **10**, p. 3—Obi Major.

Moluccas: Obi.

**Accipiter (novaehollandiae) griseogularis** (Gray)

*Astur griseogularis* G. R. Gray, 1860, Proc. Zool. Soc. London, p. 343—Batjan, Gilolo (= Halmahera), Ternate.

Moluccas: Batjan, Tidore, Ternate, Halmahera, Gebe.

**Accipiter novaehollandiae mortyi** Hartert

*Accipiter fasciatus mortyi* Hartert, 1925, Novit. Zool., **32**, p. 269—Morotai.

Moluccas: Morotai.

**Accipiter novaehollandiae hiogaster** (Müller)

*Falco hiogaster* S. Müller, 1841, in Temminck (ed.), Verh. Nat. Geschiedenis Nederlandsche Overzeesche Bezittingen, Land- Volkenkunde, p. 110, note 3—Ambon.

*Urospizias sumbaënsis* A. B. Meyer, 1894, Abh. Ber. K. Zool. Mus. Dresden, **4** (1892/93), no. 3, p. 7—Sumba = Ambon, *vide* Stresemann, 1924, Journ. Ornith., **72**, p. 445, note 3.

Moluccas: Ceram and off-lying islands (Kelang, Ambon, Saparua).

**Accipiter novaehollandiae pallidiceps** (Salvadori)

*Urospizias pallidiceps* Salvadori, 1879, Ibis, p. 474—Buru.

Moluccas: Buru.

**Accipiter novaehollandiae leucosomus** (Sharpe)

*Astur novaehollandiae leucosomus* Sharpe, 1874, Cat. Birds Brit. Mus., **1**, pp. 94 (in key), 119—New Guinea and adjacent islands (white phase).

*Urospizias etorques* Salvadori, 1875, Ann. Mus. Civ. Genova, **7**, p. 901—New Guinea and Salawati (dark phase).

New Guinea and nearby smaller islands (Waigeo, Salawati, Numfoor, Japen, Aru, Trobriand, Woodlark, Bonvouloir).

**Accipiter novaehollandiae pallidimas** Mayr

*Accipiter novaehollandiae pallidimas* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 10—Fergusson Island.

Goodenough and Fergusson Islands in the D'Entrecasteaux Archipelago, off eastern New Guinea.

**Accipiter novaehollandiae manusi** Mayr

*Accipiter novaehollandiae manusi* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 8—Manus.

Admiralty Islands: Manus, San Miguel, Rambutyo, Nauna.

**Accipiter novaehollandiae bougainvillei** (Rothschild and Hartert)

*Astur etorques bougainvillei* Rothschild and Hartert, 1905, Novit. Zool., 12, p. 250—Bougainville.

Solomon Islands: Bougainville and Fauro (Shortland group).

**Accipiter novaehollandiae rufoschistaceus** (Rothschild and Hartert)

*Astur rufoschistaceus* Rothschild and Hartert, 1902, Novit. Zool., 9, p. 590—Santa Isabel.

Solomon Islands: Choiseul, Santa Isabel, Nggela group.

**Accipiter novaehollandiae pulchellus** (Ramsay)

*Astur pulchellus* Ramsay, 1881, Journ. Linn. Soc. London, 16, p. 131—Cape Pitt, Guadalcanal.

Solomon Islands: Guadalcanal.

**Accipiter novaehollandiae malaitae** Mayr

*Accipiter novaehollandiae malaitae* Mayr, 1931, Amer. Mus. Novit., no. 504, p. 4—Malaita.

Solomon Islands: Malaita.

**Accipiter novaehollandiae rubianae** (Rothschild and Hartert)

*Astur etorques rubianae* Rothschild and Hartert, 1905, Novit. Zool., 12, p. 250—Gizo.

Solomon Islands: Vella Lavella, Gizo, New Georgia, Rendova.

**Accipiter novaehollandiae misulae** Mayr

*Accipiter novaehollandiae misulae* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 11—Misima.

Louisiade Archipelago, off eastern New Guinea: Misima (= St. Aignan) and Tagula (= Sudest) Islands.

**Accipiter novaehollandiae misoriensis** (Salvadori)

*Urospizias misoriensis* Salvadori, 1875, Ann. Mus. Civ. Genova, 7, p. 904—Korido, Misori (= Biak) Island.

Biak Island, off New Guinea.

**Accipiter novaehollandiae dampieri** (Gurney)

*Urospizias dampieri* Gurney, 1882, Ibis, p. 453—New Britain.

*Accipiter hiogaster rooki* Rothschild and Hartert, 1914, Novit. Zool., 21, p. 288—Rook (= Umboi) Island.

Bismarck Archipelago: New Britain and Umboi Island.

**Accipiter novaehollandiae lavongai** Mayr

*Accipiter novaehollandiae lavongai* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 7—New Hanover (Lavongai).

Bismarck Archipelago: New Hanover and New Ireland; Tabar Islands (? subspecies).

**Accipiter novaehollandiae lihirensis** Stresemann

*Accipiter novaehollandiae lihirensis* Stresemann, 1933, Ornith. Monatsber., 41, p. 114—Lihir.

Bismarck Archipelago: Lihir group, Tanga (Boang) group.

**Accipiter novaehollandiae matthiae** Mayr

*Accipiter novaehollandiae matthiae* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 8—St. Matthias Island.

Bismarck Archipelago: St. Matthias Island.

**Accipiter novaehollandiae novaehollandiae** (Gmelin)<sup>1</sup>

*Falco novae Hollandiae* Gmelin, 1788, Syst. Nat., 1, p. 264; based on "New-Holland White Eagle" of Latham, 1781, General Synop. Birds, 1, p. 40—"Nova Hollandia" = New South Wales, *vide* Mathews, 1912, Novit. Zool. 18, p. 245.

*Astur clarus cooktowni* Mathews, 1912, Novit. Zool., 18, p. 245—Cooktown, northern Queensland.

Northern and eastern Australia: chiefly coastal and montane; Tasmania.

ACCIPITER MELANOCHLAMYS<sup>2</sup>**Accipiter melanochlamys melanochlamys** (Salvadori)

*Urospizias melanochlamys* Salvadori, 1875, Ann. Mus. Civ. Genova, 7, p. 905—Arfak Mountains.

Arfak Mountains, western New Guinea.

**Accipiter melanochlamys schistacinus** (Rothschild and Hartert)

<sup>1</sup>All the preceding 22 forms dubiously conspecific with *novaehollandiae*.—D. A.

<sup>2</sup>*A. melanochlamys, albobularis, rufitorques*, and *haplochrous* form a superspecies.—D. A.

*Astur melanochlamys schistacinus* Rothschild and Hartert,  
1903, Novit. Zool., **10**, p. 482—Mt. Goliath.  
Mountains of central and eastern New Guinea.

#### ACCIPITER ALBOGULARIS

##### **Accipiter albogularis eichhorni** Hartert

*Accipiter eichhorni* Hartert, 1926, Novit. Zool., **33**, p. 36—  
Feni.

Feni Island, southeast of New Ireland.

##### **Accipiter albogularis woodfordi** (Sharpe)

*Astur woodfordi* Sharpe, 1888, Proc. Zool. Soc. London, p.  
183—Guadalcanal.

Solomon Islands: Bougainville, Treasury, Choiseul, Florida,  
Guadalcanal.

##### **Accipiter albogularis albogularis** Gray

*Accipiter albogularis* G. R. Gray, 1870, Ann. Mag. Nat. Hist.,  
ser. 4, **5**, p. 327—San Cristóbal.

Solomon Islands: San Cristóbal, Ugi, Santa Ana.

##### **Accipiter albogularis gilvus** Mayr

*Accipiter albogularis gilvus* Mayr, 1945, Amer. Mus. Novit.,  
no. 1294, p. 8—Kolombangara.

Solomon Islands: Vella Lavella, Kolombangara, New Georgia,  
Rendova.

##### **Accipiter albogularis sharpei** (Oustalet)

*Astur Sharpei* Oustalet, 1875, Bull. Soc. Philomath. Paris,  
sér. 6, **12**, p. 25—"îles Mariannes" = Santa Cruz Islands.

Santa Cruz Islands (southeast of the Solomons): Utupua,  
Vanikoro.

#### ACCIPITER RUFITORQUES

##### **Accipiter rufitorques** (Peale)

*Astur rufitorques* Peale, 1848, U. S. Explor. Exped., **8**, p.  
68—Fiji.

Fiji Islands.

#### ACCIPITER HAPLOCHROUS

##### **Accipiter haplochrous** Sclater

*Accipiter haplochrous* P. L. Sclater, 1859, Ibis, p. 275, pl.  
8—Nu Island, off New Caledonia.

New Caledonia.

## ACCIPITER HENICOGRAMMUS

**Accipiter henicogrammus** (Gray)

*Astur henicogrammus* G. R. Gray, 1860, Proc. Zool. Soc.  
London, p. 343—Gilolo = Halmahera.

Moluccas: Morotai, Halmahera, Batjan.

## ACCIPITER LUTEOSCHISTACEUS

**Accipiter luteoschistaceus** Rothschild and Hartert

*Accipiter luteoschistaceus* Rothschild and Hartert, 1926, Bull.  
Brit. Ornith. Club, **46**, p. 53—Talasea, New Britain.

New Britain.

## ACCIPITER IMITATOR

**Accipiter imitator** Hartert

*Accipiter eichhorni imitator* Hartert, 1926, Novit. Zool., **33**,  
p. 37—Choiseul.

Solomon Islands: Bougainville, Choiseul, and Santa Isabel.

ACCIPITER POLIOCEPHALUS<sup>1</sup>**Accipiter poliocephalus** Gray

*Accipiter poliocephalus* G. R. Gray, 1858, Proc. Zool. Soc.  
London, p. 170—Aru Islands.

New Guinea and many of the surrounding islands (Waigeo,  
Batanta, Salawati, Misool, Japen, Aru, Fergusson, Misima).

## ACCIPITER PRINCEPS

**Accipiter princeps** Mayr

*Accipiter princeps* Mayr, 1934, Amer. Mus. Novit., no. 709,  
p. 3—Balayang, New Britain.

Highlands of New Britain.

ACCIPITER SUPERCILIOSUS<sup>2</sup>**Accipiter superciliosus fontanieri** Bonaparte

*Accipiter fontanieri* [sic] Bonaparte, 1853, Compt. Rend.  
Acad. Sci., Paris, **37**, p. 810—no locality. Type from Santa

Cruz, Magdalena, Colombia.

<sup>1</sup>*A. poliocephalus* and *princeps* form a superspecies.—D. A.

<sup>2</sup>*A. superciliosus* and *collaris* form a superspecies.—D. A.

*Accipiter superciliosus exitiosus* Bangs and Penard, 1920, 1920, Proc. New England Zool. Club, 7, p. 45—Carillo, Costa Rica.

Nicaragua, Costa Rica, and Panama south to Colombia (west of Eastern Andes) and western Ecuador.

**Accipiter superciliosus superciliosus** (Linnaeus)

*Falco superciliosus* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 128—Surinam.

*Falco tinus* Latham, 1790, Index Ornith., p. 50; based on "Tiny Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 39—Cayenne.

South America, east of the Andes, south to northern Paraguay and northern Argentina.

ACCIPITER COLLARIS

**Accipiter collaris** Sclater

*Accipiter collaris* P. L. Sclater (ex Kaup MS), 1860, Ibis, p. 148, pl. 6—interior of New Grenada. Type from Bogotá, Colombia.

Subtropics of northern Andes in Colombia, Venezuela, and Ecuador.

ACCIPITER ERYTHROPUS<sup>1</sup>

**Accipiter erythropus erythropus** (Hartlaub)

*Nisus erythropus* Temminck = Hartlaub, 1855, Journ. Ornith., 3, p. 354—Rio Bontry, Ghana.

Western Africa from Gambia to Nigeria, in forest.

**Accipiter erythropus zenkeri** Reichenow

*Accipiter zenkeri* Reichenow, 1894, Ornith. Monatsber., 2, p. 125—Jaunde, Cameroon.

*Accipiter minullus sassii* Stresemann, 1924, Ornith. Monatsber., 32, p. 109—Beni, eastern Zaire.

Forests from Cameroon to northern Angola, east to western Uganda.

ACCIPITER MINULLUS

**Accipiter minullus** (Daudin)

*Falco minullus* Daudin, 1800, Traité Ornith., 2, p. 88; based

<sup>1</sup>A. *erythropus* and *minullus* form a superspecies.—D. A.



on "Le Minulle" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 92, pl. 34—Gamtoos River, Cape Province. *Accipiter minullus tropicalis* Reichenow, 1898, Journ. Ornith., 46, p. 139—East Africa.

*Accipiter minullus intermedius* Erlanger, 1904, Journ. Ornith., 52, p. 173—Abela, Ethiopia.

Eastern Africa from Sudan and Ethiopia south to Cape Province, and west, south of the Congo forest, to Angola and South West Africa (Namibia).

#### ACCIPITER GULARIS<sup>1</sup>

##### *Accipiter gularis sibiricus* Stepanian

*Accipiter gularis sibiricus* Stepanian, 1959, Ornitologija, 2, p. 78—Khrasnoyarsk district, Siberia.

Siberia from the Novosibirsk district east to the Pacific, north to about the middle Lena River, south to Mongolia and northeastern China. Highly migratory, presumably wintering from southern China to the Malay Peninsula and the Andaman, Nicobar, and Greater Sunda Islands.

##### *Accipiter gularis gularis* (Temminck and Schlegel)

*Astur (Nisus) gularis* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 5, pl. 2—Japan.

*Accipiter stevensoni* Gurney, 1863, Ibis, p. 447, pl. 11—Peking; Macao (migrant).

Sakhalin, southern Kuril Islands, and Japan (Hokkaido, Honshu). Winters from southern Japan, Korea, and eastern China south through the Malay Peninsula, the Greater Sunda Islands, and the Philippines.

##### *Accipiter gularis iwasakii* Mishima

*Accipiter gularis iwasakii* Mishima, 1962, Tori, 17, pp. 219 (Japanese text), 221 (English text)—Iriomote and Ishigaki, Ryukyu Islands.

Ryukyu Islands: Iriomote, Ishigaki.

#### ACCIPITER VIRGATUS

##### *Accipiter virgatus affinis* Hodgson

[*Accipiter*] *affinis* Parbattia = Hodgson, 1836, Bengal

<sup>1</sup>*A. gularis*, *virgatus*, and possibly *nanus* form a superspecies. The first two are often considered to be conspecific.—D. A.

Sporting Mag., n. s., 8, p. 179—terai of Nepal.

*Accipiter virgatus kashmiriensis* Whistler, 1936, Journ. Bombay Nat. Hist. Soc., 38, p. 435—Murree, northwestern Punjab.

Kashmir east to northern Burma and central and southern China; Hainan. Winters (some may breed) in southern Burma, Thailand, Indochina.

***Accipiter virgatus fuscipectus* Mees**

*Accipiter virgatus fuscipectus* Mees, 1970, Zool. Mededelingen Rijksmus. Nat. Hist. Leiden, 44, pp. 286-287—Wanta, Taiwan.

Mountains of Taiwan.

***Accipiter virgatus besra* Jerdon**

*Accipiter besra* Jerdon, 1839, Madras Journ. Lit. Sci., 10, p. 84—Soonda Jungles, southern India.

Hill forest of Western and Eastern Ghats in India; Sri Lanka (Ceylon).

***Accipiter virgatus nisoides* Blyth**

*Accipiter nisoides* Blyth, 1847, Journ. Asiatic Soc. Bengal, 16, p. 727—Malacca.

Tenasserim, Burma; Malaya; ? Andaman Islands. Status debated; perhaps only migrants (of *A. gularis*) are found in these areas.

***Accipiter virgatus confusus* Hartert**

*Accipiter virgatus confusus* Hartert, 1910, Novit. Zool., 17, p. 209—Laguna de Bai, Luzon.

Luzon, Philippine Islands.

***Accipiter virgatus quagga* Parkes**

*Accipiter virgatus quagga* Parkes, 1973, Nemouria, no. 11, p. 17—Mt. Katanglad, Bukidon Province, Mindanao; altitude 5,000-5,500 feet.

Mindanao, Philippine Islands. Populations of the other islands in the Philippines are intermediate between this and *confusus*.

***Accipiter virgatus rufotibialis* Sharpe**

*Accipiter rufotibialis* Sharpe, 1887, Ibis, p. 437—Mt. Kinabalu.

Mountains of northern Borneo.

***Accipiter virgatus vanbemmeli* Voous**

*Accipiter virgatus vanbemmeli* Voous, 1950, Amsterdam

Naturalist, 1, p. 99—Berastagi, Van Heutsz Mountains, northeastern Sumatra.

Mountains of Sumatra.

**Accipiter virgatus virgatus** (Temminck)

*Falco virgatus* Reinwardt = Temminck, 1822, Planches Color., livr. 19, pl. 109—Java.

Mountains of Java, Bali, and (? subspecies) Flores.

ACCIPITER NANUS

**Accipiter nanus** (Blasius)

*Erythrospizias trinotatus nanus* W. Blasius, 1897, Festschr. Techn. Hochschule Braunschweig, p. 292—Rurukan, Celebes.

*Accipiter archboldi* Stresemann, 1932, Ornith. Monatsber., 40, p. 113—Tanke Salokko, Celebes.

Mountains of Celebes.

ACCIPITER CIRRHOCEPHALUS<sup>1</sup>

**Accipiter cirrhocephalus papuanus** (Rothschild and Hartert)

*Astur cirrhocephalus papuanus* Rothschild and Hartert, 1913, Novit. Zool., 20, p. 482—Utakwa River, New Guinea.

New Guinea and some nearby islands (Waigeo, Salawati, Japen, Aru).

**Accipiter cirrhocephalus rosselianus** Mayr

*Accipiter cirrhocephalus rosselianus* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 12—Mt. Rossel.

Rossel Island, Louisiade Archipelago, off eastern New Guinea.

**Accipiter cirrhocephalus quaesitandus** Mathews

*Accipiter cirrhocephalus quaesitandus* Mathews, 1915, Birds Australia, 5, p. 81—Cape York.

Northern Australia, including Cape York Peninsula.

**Accipiter cirrhocephalus cirrhocephalus** (Vieillot)

*Sparvius cirrhocephalus* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 10, p. 329—New Holland = New South

<sup>1</sup>A. *cirrhocephalus*, *brachyurus*, *erythrauchen*, and perhaps *rhodogaster* form a superspecies.—D. A.

Wales, *vide* Mathews, 1912, *Novit. Zool.*, **18**, p. 246.

*Accipiter cirrocephalus broomei* Mathews, 1912, *Novit. Zool.*, **18**, p. 247—Broome Hill, Australia.

Australia (except the northernmost part); Tasmania.

#### ACCIPITER BRACHYURUS

**Accipiter brachyurus** (Ramsay)

*Astur brachyurus* Ramsay, 1879, *Proc. Linn. Soc. New South Wales*, **4**, p. 465—New Britain.

New Britain.

#### ACCIPITER ERYTHRAUCHEN

**Accipiter erythrauchen erythrauchen** Gray

*Accipiter erythrauchen* G. R. Gray, 1861, *Proc. Zool. Soc. London* (1860), p. 344—Gilolo = Halmahera.

Moluccas: Morotai, Halmahera, Batjan, Obi.

**Accipiter erythrauchen ceramensis** (Schlegel)

*Nisus cirrhocephalus ceramensis* Schlegel, 1862, *Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll.*, livr. 1, Astures, p. 39—Ceram.

Moluccas: Buru, Ceram.

#### ACCIPITER RHODOGASTER

**Accipiter rhodogaster rhodogaster** (Schlegel)

*Nisus virgatus rhodogaster* Schlegel, 1862, *Mus. Nat. Hist. Pays-Bas, Rev. Méthod. Crit. Coll.*, livr. 1, Astures, p. 32—Gorontalo, Celebes.

*Accipiter rhodogaster butonensis* Voous, 1951, *Treubia*, **21**, p. 82—Buton = Butung Island.

Celebes and nearby islands (Muna, Butung).

**Accipiter rhodogaster sulaensis** (Schlegel)

*Nisus sulaensis* Schlegel, 1866, *Vogels Nederlandsche Indië, Valkvogels*, pp. 26, 64, pl. 16, figs. 3-4—Sula Besi = Sanana.

Small islands east of Celebes (Peleng, Banggai, Sula).

#### ACCIPITER OVAMPENSIS

**Accipiter ovampensis** Gurney

*Accipiter ovampensis* Gurney, 1875, *Ibis*, p. 367, pl. 6—Okavango River, South West Africa.

Ghana and Togo east to Ethiopia, south to eastern Transvaal and South West Africa (Namibia). Not in forest.

## ACCIPITER MADAGASCARIENSIS

**Accipiter madagascariensis** Smith

*Accipiter Madagascariensis* A. Smith, 1834, South Afr. Quart. Journ., ser. 2, no. 3, pt. 2, pp. 282-283—Madagascar.

Madagascar.

ACCIPITER NISUS<sup>1</sup>**Accipiter nisus nisus** (Linnaeus)

*Falco Nisus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 92—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 24.

*Accipiter nisus peregrinoides* Kleinschmidt, 1921, in Grote, Ornith. Literatur Russlands, no. 3, p. 56—Rossiten, East Prussia. Migrant.

*Accipiter nisus hibernicus* Swann, 1924, Bull. Brit. Ornith. Club, 44, p. 79—Hillsborough, Ireland.

*Accipiter nisus Salamancae* Jordans and Steinbacher, 1941, Ann. Naturhist. Mus. Wien, 52, p. 238—Linares de Riofrio, Salamanca, Spain.

Western Eurasia, north to limit of forest, east to western Siberia (Yenisey River), south to Spain, Sicily, Asia Minor, Caucasus area, northern Iran. Migratory in north.

**Accipiter nisus nisosimilis** (Tickell)

*Falco Nisosimilis* Tickell, 1833, Journ. Asiatic Soc. Bengal, 2, p. 571—Marcha, Borabhúm, India.

*Accipiter pallens* Stejneger, 1893, Proc. U. S. Nat. Mus., 16, p. 625—Hitachi, Japan.

Asia, east of the range of *nisus*, east to the Pacific, Sakhalin, Kuril Islands, Japan, south to Turkistan, Afghanistan, northern China, Korea. Migrates farther south in winter.

**Accipiter nisus dementjevi** Stepanian

*Accipiter nisus dementjevi* Stepanian, 1958, Uchenye Zapiski Gosudarst. Moskovskii Univ., 197, pp. 125-129—Issyk-Kul and Fergana, Asia.

<sup>1</sup>A. *nisus* forms a superspecies with *rufiventris*, to which some would add *striatus*, *madagascariensis*, and even *cirrhocephalus* and allied species.—D. A.

Tien Shan and adjacent mountain ranges in central Asia.

**Accipiter nisus melaschistos** Hume

*Accipiter Melaschistos* Hume, 1869, Rough Notes, p. 128—Himalayas.

Mountains of eastern Afghanistan, Pakistan, northern India, Tibet, western China, and northern Burma. Somewhat migratory.

**Accipiter nisus wolterstorffi** Kleinschmidt

*Accipiter wolterstorffi* Kleinschmidt, 1901, Ornith. Monatsber. **9**, p. 168—Lanusei, Sardinia.

Sardinia and perhaps Corsica.

**Accipiter nisus granti** Sharpe

*Accipiter Granti* Sharpe, 1890, Ann. Mag. Nat. Hist., ser. **6**, **5**, p. 485—Madeira.

*Accipiter nisus teneriffae* Laubmann, 1912, Verh. Ornith. Gesell. Bayern, **11**, p. 164—Vilaflor, Tenerife.

Madeira and the Canary Islands.

**Accipiter nisus punicus** Erlanger

*Accipiter nisus punicus* Erlanger, 1897, Ornith. Monatsber., **5**, p. 187—Ain-bou-Dries, Tunisia.

Northwestern Africa in Morocco, Algeria, and Tunisia, south to the Atlas Mountains and central Tunisia.

ACCIPITER RUFIVENTRIS<sup>1</sup>

**Accipiter rufiventris perspicillaris** (Rüppell)

*Falco (Astur) perspicillaris* Rüppell, 1836, Neue Wirbelthiere

<sup>1</sup>Mees, 1967, Zool. Mededelingen Rijksmus. Nat. Hist. Leiden, **42**, p. 144, believes that *rufiventris* does not apply to this form and that *exilis* Temminck, 1830, Planches Color., livr. 84, pl. 496, should be used. Since this would change an established name, the International Commission on Zoological Nomenclature voted, Opin. 1028, 1974, Bull. Zool. Nomencl., **31**, p. 186, to place the specific name *rufiventris*, as published in the binomen *Accipiter rufiventris* Smith 1830, on the Official List of Specific Names in Zoology with the Name No. 2537, and to place the specific name *exilis*, as published in the binomen *Falco exilis* Temminck 1830, on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 998.—D. A.

Fauna Abyssinien, Vögel, p. 41, pl. 18, fig. 2—Gondar, Ethiopia.

Ethiopia.

**Accipiter rufiventris rufiventris** Smith

*Accipiter rufiventris* A. Smith, 1830, South Afr. Quart.

Journ., ser. 1, p. 231—no locality = South Africa.

Locally in highland forest from Kenya and the Katanga (= Shaba) district of southern Zaire south to Angola, South West Africa (Namibia), and South Africa.

ACCIPITER STRIATUS

**Accipiter striatus perobscurus** Snyder

*Accipiter striatus perobscurus* Snyder, 1938, Occas. Papers

Roy. Ontario Mus., Zool., no. 4, p. 4—Graham Island,

Queen Charlotte Islands.

Queen Charlotte Islands and perhaps the adjacent mainland coast of British Columbia. Somewhat migratory, reaching Oregon.

**Accipiter striatus velox** (Wilson)

*Falco velox* Wilson, 1812, Amer. Ornith., 5, p. 116, pl. 45,

fig. 1—banks of the Schuylkill River, near Philadelphia, Pennsylvania.

Alaska and Canada, north almost to treeline, except range of *perobscurus*, south locally to central California, Texas, and the northern parts of the Gulf states. Winters from the United States south to western Panama.

**Accipiter striatus suttoni** van Rossem

*Accipiter striatus suttoni* van Rossem, 1939, Auk, 56, p. 127,

pl. 6—Mesa del Chipinque, near Monterrey, Nuevo León, Mexico.

Pine-oak zone from the San Luis Mountains on the border of New Mexico and Mexico, south locally in Mexico, except Baja California, to Michoacán and Veracruz.

**Accipiter striatus madrensis** Storer

*Accipiter striatus madrensis* Storer, 1952, Condor, 54, p.

288—Cuapongo, Guerrero, Mexico.

Sierra Madre del Sur, Guerrero, Mexico, and perhaps western Oaxaca.

**Accipiter striatus chionogaster** Kaup

*Nisus (Accipiter) chionogaster* Kaup, 1852, Proc. Zool. Soc.

London (1851), p. 41—Cobán, Guatemala.  
Highlands of Chiapas, Mexico; Guatemala; Honduras; El Salvador; Nicaragua.

**Accipiter striatus ventralis** Sclater

*Accipiter ventralis* P. L. Sclater, 1866, Proc. Zool. Soc. London, p. 303—Bogotá, Colombia.

*Nisus salvini* Ridgway, 1876, Bull. U. S. Geol. Geogr. Surv. Territories, 2, p. 121—Mérida, Venezuela.

Andes from Colombia (including Sierra de Santa Marta) and western Venezuela to Ecuador, Peru, and western Bolivia.

**Accipiter striatus erythronemius** Kaup

*Nisus vel Accipiter erythronemius* Kaup (ex G. R. Gray MS), 1850, Monogr. Falconidae, p. 64, in Jardine, Contrib. Ornith.—Bolivia.

Southern half of Brazil, eastern Bolivia, Paraguayan Chaco, Uruguay, and northern Argentina.

**Accipiter striatus striatus** Vieillot

*Accipiter striatus* Vieillot, 1807, Hist. Nat. Oiseaux Amérique Septentrionale, 1, p. 42, pl. 14—Santo Domingo, Hispaniola.

**Accipiter striatus fringilloides** Vigors

*Accipiter fringilloides* Vigors, 1827, Zool. Journ., 3, p. 434—near Havana, Cuba.

Cuba.

**Accipiter striatus venator** Wetmore

*Accipiter striatus venator* Wetmore, 1914, Proc. Biol. Soc. Washington, 27, p. 119—Maricao, Puerto Rico.  
Puerto Rico.

ACCIPITER BICOLOR<sup>1</sup>

**Accipiter bicolor fidens** Bangs and Noble

*Accipiter bicolor fidens* Bangs and Noble, 1918, Auk, 35, p. 444—Buena Vista, Veracruz.

Eastern Mexico in states of Veracruz and Oaxaca.

**Accipiter bicolor bicolor** (Vieillot)

*Sparvius bicolor* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 10, p. 325—Cayenne.

<sup>1</sup>A. *bicolor*, *cooperii*, and *gundlachi* form a superspecies.—D. A.



*Accipiter bicolor schistochlamys* Hellmayr, 1906, Bull. Brit.

Ornith. Club., **16**, p. 82—Nanegal, Ecuador.

Southeastern Mexico (Yucatán) south through Central and South America to Peru, eastern Bolivia, and Brazil (south to Maranhão).

**Accipiter bicolor pileatus** (Temminck)

*Falco pileatus* Temminck (ex Wied MS), 1823, Planches Color., livr. 35, pl. 205—Brazil. Type from Rio Belmonte, Bahia.

Tableland of Brazil from southern Maranhão and Piauí to central Mato Grosso and Rio Grande do Sul; Paraguay, Misiones, Argentina.

**Accipiter (bicolor) guttifer** Hellmayr

*Accipiter guttifer* Hellmayr, 1917, Verh. Ornith. Gesell. Bayern, **13**, p. 200—Bolivia.

Southern Bolivia, western Mato Grosso, northwestern Argentina, and the Paraguayan Chaco.

**Accipiter (bicolor) chilensis** Philippi and Landbeck

*Accipiter chilensis* Philippi and Landbeck, 1864, Archiv Naturgeschichte, **30**, pt. 1, p. 43—Chile.

Forested Andean slopes of central Chile and Argentina, south through Tierra del Fuego and Staten Island.

#### ACCIPITER COOPERII

**Accipiter cooperii** (Bonaparte)

*Falco cooperii* Bonaparte, 1828, Amer. Ornith., **2**, p. 1, pl. 10, fig. 1—Bordentown, New Jersey.

Canada from southern British Columbia and Alberta east to central Quebec and Nova Scotia, south over the United States to Florida and to northern and western Mexico. Winters from the northern United States to Mexico and Guatemala, casually to Colombia.

#### ACCIPITER GUNDLACHI

**Accipiter gundlachi** Lawrence

*Accipiter Gundlachi* Lawrence, 1860, Ann. Lyceum Nat. Hist. New York, **7**, p. 252—Hanabana, Cuba.

Cuba.

## ACCIPITER MELANOLEUCUS

**Accipiter melanoleucus temminckii** (Hartlaub)

*Astur Temminckii* Hartlaub, 1855, Journ. Ornith., 3, p. 353—Rio Bontry, Ghana.

Western Africa from Ghana and the Central African Empire to Gabon.

**Accipiter melanoleucus melanoleucus** Smith

*Accipiter melanoleucus* [sic] A. Smith, 1830, South Afr. Quart. Journ., ser. 1, pp. 229-230—no locality = South Africa.

Eastern Africa from central Sudan and Ethiopia south to Cape Province; Pemba; Zanzibar.

## ACCIPITER HENSTII

**Accipiter henstii** (Schlegel)

*Astur henstii* Schlegel, 1873, Mus. Hist. Nat. Pays-Bas, livr. 10, Rev. Coll. Oiseaux Proie, p. 62—Morondava, Madagascar.

Madagascar.

ACCIPITER GENTILIS<sup>1</sup>**Accipiter gentilis gentilis** (Linnaeus)

*Falco gentilis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 89—(Swedish) Alps.

*Astur gallinarum* C. L. Brehm, 1831, Handb. Naturgeschichte Vögel Deutschlands, p. 83—Germany.

*Astur gentilis moscoviae* Sushkin, 1928, Proc. Boston Soc. Nat. Hist., 39, p. 8—Ryazan Province, Russia.

*Accipiter tischleri* Kleinschmidt, 1938, Falco, 34, p. 5—East Prussia.

*Accipiter Koeneni* Kleinschmidt, 1938, Falco, 34, p. 5—"Rheinhessen."

Scandinavia and Russia, west to the Volga, except extreme north, south to the British Isles (casual) and central Europe.

**Accipiter gentilis marginatus** (Piller and Mitterpacher)

*Falco marginatus* Piller and Mitterpacher, 1783, Iter Poseganam Sclavoniae Provinciam, p. 28—no locality = Vuko-

<sup>1</sup>*A. gentilis* and *meyerianus* may form a superspecies, to which some would add *melanoleucus* and *henstii*.—D. A.

var, Yugoslavia, *vide* Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, p. 160.

*Accipiter Palumbarius caucasicus* Kleinschmidt, 1923, Berajah, p. 5, pl. 9, fig. 5, pl. 12, fig. 5—Vladikavkaz, Caucasus.

*Accipiter gentilis trischittae* Ragoneri, 1946, Riv. Ital. Ornitologia, ser. 2, 16, p. 121—Alto Casentino, Tuscany, Italy. Southeastern Europe, west to Italy and Sicily, east to the Crimea, Asia Minor, Caucasus, and northern Iran.

***Accipiter gentilis arrigonii* (Kleinschmidt)**

*Astur gentilis arrigonii* Kleinschmidt, 1903, Ornith. Monatsber., 9, p. 152—Sardinia.

*Accipiter gentilis kleinschmidti* Jordans, 1950, in Jordans and Peus (eds.), Syllegomena Biologica (Festschrift O. Kleinschmidt), p. 178—Linares de Riofrio, Salamanca, Spain.

Spain, Sardinia, probably Corsica, northern Morocco.

***Accipiter gentilis buteoides* (Menzbir)**

*Astur palumbarius buteoides* Menzbir, 1882, Ornitologicheskaja Geografiiia Evropeiskoi Rossii, 1, p. 440—Vladimir Province, central Russia.

Northernmost Scandinavia and USSR, east in the taiga to eastern Siberia (Lena and Yana Valleys). In winter reaches Germany, Hungary, southern Russia, the Caucasus, and central Asia.

***Accipiter gentilis albidus* (Menzbir)**

*Astur palumbarius albidus* Menzbir, 1882, Ornitologicheskaja Geografiiia Evropeiskoi Rossii, 1, p. 438; based on *Astur palumbarius* var. *alba* of Pallas, 1811, Zoographia Rosso-Asiat., 1, p. 368, and *Astur palumbarius* Lacépède of Schrenk, 1860, Reisen Forschungen Amur-lande, 1, p. 243—eastern Siberia, Amurland, and Kamchatka.

Northeastern Siberia and Kamchatka. Somewhat migratory.

***Accipiter gentilis schvedowi* (Menzbir)**

A [*stur*] *palumbarius schvedowi* Menzbir, 1882, Ornitologicheskaja Geografiiia Evropeiskoi Rossii, 1, p. 439—Irkutsk.

*Astur palumbarius khamensis* Bianchi, 1906, Bull. Brit. Ornith. Club, 16, p. 70—Kham, southeastern Tibet. Type from near Chambdo (now Changtutsung).

*Accipiter gentilis suschkini* Dementiev, 1940, Biulleten Moskovskogo Obshchestva Ispytalelei Prirody, Otd. Biol.,

n. s., 49, p. 21—Burziansk district, southeastern Russia. Southern Siberia from the Urals east through the Altai, Tien Shan, and Manchuria to Amurland, Sakhalin, and the Kuril Islands; south to mountains of Kansu, Szechwan, and Yunnan. In winter to Korea, Japan, Himalayas, and northern Indochinese countries.

**Accipiter gentilis fujiyamae** (Swann and Hartert)

*Astur gentilis fujiyamae* Swann and Hartert, 1923, Bull. Brit. Ornith. Club, 43, p. 170—Shimosake, Sagami Bay, Honshu.

Hokkaido, Honshu, and perhaps other islands of Japan.

**Accipiter gentilis atricapillus** (Wilson)

*Falco atricapillus* Wilson, 1812, Amer. Ornith., 6, p. 80, pl. 52, fig. 3—Philadelphia, Pennsylvania.

*Astur atricapillus* var. *striatulus* Ridgway, 1874, in Baird, Brewer, and Ridgway, Hist. North Amer. Birds, 3, p. 238—Fort Steilacoom, Washington.

North America, north to limit of forest, south to California, northern Arizona, New Mexico, and Tennessee. Migratory in north.

**Accipiter gentilis apache** van Rossem

*Accipiter gentilis apache* van Rossem, 1938, Proc. Biol. Soc. Washington, 51, p. 99—Cochise County, Arizona.

Mountains of southern Arizona and western Mexico from Sonora and Chihuahua south to the Sierra de Nayarit, Jalisco.

**Accipiter gentilis laingi** (Taverner)

*Astur atricapillus laingi* Taverner, 1940, Condor, 42, p. 160—Masset, Queen Charlotte Islands.

Queen Charlotte Islands and Vancouver Island, British Columbia.

ACCIPITER MEYERIANUS

**Accipiter meyerianus** (Sharpe)

*Astur Meyerianus* Sharpe, 1878, Journ. Linn. Soc. London, 13, p. 458—Ansus, Japen Island.

Moluccas (Halmahera, Boano, Ceram, Ceramlaut); New Guinea (locally in mountains and on Japen Island); New Britain and coastal islet of Uatom; Solomon Islands (Kolombangara, Guadalcanal).

## ACCIPITER BUERGERSI

**Accipiter buergersi** (Reichenow)

*Astur bürgersi* Reichenow, 1914, Ornith. Monatsber., 22, p. 29—Maeanderberg, near Sepik River, New Guinea. Mountains of eastern New Guinea.

## ACCIPITER RADIATUS

**Accipiter radiatus** (Latham)

*Falco radiatus* Latham, 1801, Index Ornith., Suppl., p. 12—New South Wales.

Forest in northern and eastern Australia, south to northern New South Wales.

## ACCIPITER DORIAE

**Accipiter doriae** (Salvadori and D'Albertis)

*Megatriorchis doriae* Salvadori and D'Albertis, 1875, Ann. Mus. Civ. Genova, 7, p. 805—Yule Island, New Guinea. New Guinea.

## GENUS UROTRIORCHIS SHARPE

*Urotriorchis* Sharpe, 1874, Cat. Birds Brit. Mus., 1, pp. 46 (in key), 83. Type, by monotypy, *Astur macrourus* Hartlaub.

cf. Amadon, 1978, Emu, 78, p. 117 (status of genus).

## UROTRIORCHIS MACROURUS

**Urotriorchis macrourus** (Hartlaub)

*Astur macrourus* Temminck = Hartlaub, 1855, Journ. Ornith., 3, p. 353—Dabocrom, Ghana.

*Urotriorchis macrourus batesi* Swann, 1921, Synop. Accipitres, ed. 2, p. 29—Bitye, River Ja, Cameroon.

Forest from Liberia, Ghana, and Cameroon east through Zaire to western Uganda.

GENUS BUTASTUR HODGSON<sup>1</sup>

*Butastur* Hodgson, 1843, Journ. Asiatic Soc. Bengal, 12, p. 311. Type, by original designation, *Circus teesa* Franklin.

<sup>1</sup>All 4 species of *Butastur* may form a superspecies.—D. A.

## BUTASTUR RUFIPENNIS

**Butastur rufipennis** (Sundevall)

*Poliornis rufipennis* Sundevall, 1851, Öfversigt K. Vetenskaps-Akad. Förhandlingar, Stockholm, 7 (1850), p. 131—Khartoum, Sudan.

Semiarid belt across Africa from Senegal and Nigeria to Sudan and Somalia. In off season migrates south to Cameroon, northeastern Zaire, Kenya, and Tanzania.

## BUTASTUR LIVENTER

**Butastur liventer** (Temminck)

*Falco liventer* Temminck, 1827, Planches Color., livr. 74, pl. 438 and text—Celebes, Sumatra, Java, and India. Type from Java.

Lower Burma, southern China, Thailand, Indochina, Java, ? southeastern Borneo, southern Celebes, ? Timor.

## BUTASTUR TEESA

**Butastur teesa** (Franklin)

*Circus Teesa* Franklin, 1831, Proc. Com. Sci. Corresp. Zool. Soc. London, pt. 1, p. 115—Further India; restricted to Ganges-Nerbudda (= Narmada) by Stuart Baker, 1928, Fauna Brit. India, Birds, ed. 2, 5, p. 104.

Southeastern Iran, Pakistan, India, Himalayan foothills, Bangladesh, Burma.

## BUTASTUR INDICUS

**Butastur indicus** (Gmelin)

*Falco indicus* Gmelin, 1788, Syst. Nat., 1, p. 264; based on "Javan Hawk" of Latham, 1781, General Synop. Birds, 1, first p. 34—Java.

Korea, northeastern China and the Khabarovsk region of Siberia to the north, Japan. Highly migratory, wintering in southern China, Indochina, Malay peninsula, Borneo, Philippines, Celebes, and east to small islands off western New Guinea.

## GENUS KAUIFALCO BONAPARTE

*Kaupifalco* Bonaparte, 1854, Rev. Mag. Zool., Paris, sér. 2, 6, p. 533. Type, by monotypy, *Falco monogrammicus* Temminck.

## KAUPIFALCO MONOGRAMMICUS

**Kaupifalco monogrammicus monogrammicus** (Temminck)

*Falco monogrammicus* Temminck, 1824, Planches Color.,  
livr. 53, pl. 314—Senegal.

Senegal to Cameroon, thence east to Sudan, Ethiopia, Uganda,  
and Kenya, except in forest.

**Kaupifalco monogrammicus meridionalis** (Hartlaub)

*Micronisus monogrammicus* var. *Merid.* Hartlaub, 1860,  
Proc. Zool. Soc. London, p. 109—Ambriz, Angola.

Southern Kenya to Transvaal and Natal, thence west into  
Angola.

GENUS GERANOSPIZA KAUP<sup>1</sup>

*Ischnosceles* Strickland, 1844, Ann. Mag. Nat. Hist., 13, p.  
409. Type, by original designation, *Falco gracilis* Tem-  
minck. Not *Ischnoscelis* Burmeister, 1842 (Coleoptera).<sup>2</sup>

*Geranospiza* Kaup, 1847, Isis von Oken, col. 143, new name  
for *Ischnosceles* Strickland, preoccupied.

## GERANOSPIZA CAERULESCENS

**Geranospiza caerulescens livens** Bangs and Penard

*Geranospiza caerulescens livens* Bangs and Penard, 1921,  
Proc. Biol. Soc. Washington, 34, p. 89—Alamos, Sonora.

Northwestern Mexico.

**Geranospiza caerulescens nigra** (Du Bus de Gisignies)

*Ischnosceles niger* Du Bus de Gisignies, 1847, Bull. Acad.  
Roy. Sci. Lettres Beaux-Arts Belgique, 14, pt. 2, p. 102—  
Mexico.

Mexico from Sinaloa and Tamaulipas south through Central  
America to Panama.

**Geranospiza caerulescens balzarensis** Sclater

*Geranospiza niger balzarensis* W. L. Sclater, 1918, Bull.

<sup>1</sup>Position of genus uncertain. Probably it is related to the neotropical  
"subbuteonines" rather than to *Polyboroides*, and it is here placed  
with the former group.—D. A.

<sup>2</sup>Wetmore, 1965, Birds Panama, 1, p. 253, used *Ischnosceles* for  
the Crane Hawk on the basis that it is not invalidated by *Ischnoscelis*.  
Be that as it may, *Geranospiza* has been in universal use for the  
genus for a century or more and may be retained on the principle  
of conservation of names.—D. A.

Brit. Ornith. Club, 38, p. 45—Balzar Mountains, Ecuador. Eastern Panama; Pacific slope of Colombia, Ecuador, and northern Peru.

**Geranospiza caerulescens caerulescens** (Vieillot)

*Sparvius caerulescens* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 10, p. 318—South America; restricted to Cayenne by Berlepsch and Hartert, 1902, *Novit. Zool.*, 9, p. 114.

South America east of the Andes from Colombia, Venezuela, and the Guianas south through Amazonia to northeastern Bolivia.

**Geranospiza caerulescens gracilis** (Temminck)

*Falco gracilis* Temminck, 1821, *Planches Color.*, livr. 16, pl. 91 and text—eastern Brazil.

Northeastern Brazil from Maranhão, Piauí, and Ceará south to central Goiás and Bahia.

**Geranospiza caerulescens flexipes** Peters

*Geranospiza caerulescens flexipes* Peters, 1935, *Proc. Biol. Soc. Washington*, 48, p. 72—Resistencia, Chaco, Argentina.

Southern Brazil from Minas Gerais, southern Goiás, and Mato Grosso south to Rio Grande do Sul Paraguay, Uruguay, and northern Argentina.

GENUS **LEUCOPTERNIS** KAUP

*Leucopternis* Kaup, 1847, *Isis von Oken*, col. 210. Type, by subsequent designation (G. R. Gray, 1855, *Cat. Gen. Subgen. Birds Brit. Mus.*, p. 3), *Falco melanops* Latham.

cf. Amadon, 1969, *Amer. Mus. Novit.*, no. 2166, pp. 8-9.

**LEUCOPTERNIS SCHISTACEA**<sup>1</sup>

**Leucopternis schistacea** (Sundevall)

*Asturina schistacea* Sundevall, 1851, *Öfversigt K. Vetenskaps-Akad. Förhandlingar*, Stockholm, 7 (1850), p. 132, note 3—Brazil.

Eastern Colombia, Ecuador, Peru, Bolivia east through southern Venezuela and Amazonia to Pará and the island of Maracá, Amapá, Brazil.

<sup>1</sup>*L. schistacea* and *plumbea* form a superspecies.—D. A.



## LEUCOPTERNIS PLUMBEA

**Leucopternis plumbea** Salvin

*Leucopternis plumbea* Salvin, 1872, Ibis, p. 240, pl. 8—Ecuador.

Panama, western Colombia, western Ecuador, northwestern Peru. In forest.

## LEUCOPTERNIS PRINCEPS

**Leucopternis princeps princeps** Sclater

*Leucopternis princeps* P. L. Sclater, 1865, Proc. Zool. Soc. London, p. 429, pl. 24—Costa Rica.

Costa Rica and Panama. In mountain forest.

**Leucopternis princeps zimmeri** Friedmann

*Leucopternis princeps zimmeri* Friedmann, 1935, Auk, 52, p. 30—San José de Sumaco, Ecuador.

Locally in the Andes of Colombia and northern Ecuador.

LEUCOPTERNIS MELANOPS<sup>1</sup>**Leucopternis melanops** (Latham)

*Falco melanops* Latham, 1790, Index Ornith., p. 37; based on "Streaked Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 34—Cayenne.

Amazonian Colombia, Ecuador, northern Peru, southern Venezuela, and the Guianas, south to the Amazon.

## LEUCOPTERNIS KUHLI

**Leucopternis kuhli** Bonaparte

*Leucopternis Kuhli* Bonaparte, 1850, Consp. Gen. Avium, 1, p. 19—no locality; Pará designated by Brabourne and Chubb, 1913, Birds South Amer., p. 69.

Eastern Peru; Brazil south of the Amazon from the Pará region to the Rio Madeira, south to the Rio Machados.

## LEUCOPTERNIS LACERNULATA

**Leucopternis lacernulata** (Temminck)

*Falco lacernulatus* Temminck, 1827, Planches Color., livr.

<sup>1</sup>*L. melanops* and *kuhli* form a superspecies.—D. A.

74, pl. 437 and text—Brazil. Type from vicinity of Rio de Janeiro.

Eastern Brazil, from Bahia to São Paulo and Santa Catarina. Rare.

#### LEUCOPTERNIS SEMIPLUMBEA

##### **Leucopternis semiplumbea** Lawrence

*Leucopternis semiplumbeus* Lawrence, 1861, Ann. Lyceum Nat. Hist. New York, 7, p. 288—Caribbean slope of the Isthmus of Panama along the line of the Panama Railroad. Honduras and Nicaragua south to the Pacific slope of Colombia and northern Ecuador.

#### LEUCOPTERNIS ALBICOLLIS<sup>1</sup>

##### **Leucopternis albicollis ghiesbreghti** (Du Bus de Gisignies)

*Buteo ghiesbreghti* Du Bus de Gisignies, 1845, Esquisses Ornith., livr. 1, pl. 1 and text—Hacienda de Mirador, Veracruz, Mexico.

Southern Mexico, Guatemala, and Belize (British Honduras).

##### **Leucopternis albicollis costaricensis** Sclater

*Leucopternis ghiesbreghti costaricensis* W. L. Sclater, 1919, Bull. Brit. Ornith. Club, 39, p. 76—Carillo, Costa Rica.

Honduras to Panama and adjacent Colombia (Jurado).

##### **Leucopternis albicollis williaminae** Meyer de Schauensee

*Leucopternis albicollis williaminae* Meyer de Schauensee, 1950, Notulae Naturae, no. 221, p. 3—Quimarí, southwestern Bolívar, Colombia.

Northwestern Colombia and western Venezuela (Perijá).

##### **Leucopternis albicollis albicollis** (Latham)

*Falco albicollis* Latham, 1790, Index Ornith., p. 36; based on "White-necked Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 30—Cayenne.

Amazonia and adjacent areas, including Venezuela and the Guianas, south to eastern Bolivia and to Mato Grosso and Maranhão in Brazil; Trinidad.

##### **Leucopternis (albicollis) occidentalis** Salvin

*Leucopternis occidentalis* Salvin, 1876, Ibis, p. 496—western Ecuador.

Western Ecuador, chiefly in mountains.

<sup>1</sup>*L. albicollis* and *polionota* form a superspecies.—D. A.

## LEUCOPTERNIS POLIONOTA

**Leucopternis polionota** (Kaup)

*Buteo polionotus* Kaup, 1847, Isis von Oken, col. 212—"South America." Type from São Paulo, Brazil.

Eastern Brazil from Alagoas and Bahia to São Paulo and Santa Catarina, eastern Paraguay (Alto Paraná). Rare.

GENUS **ASTURINA** VIEILLOT

*Asturina* Vieillot, 1816, Analyse, pp. 24, 68. Type, by original designation, *Asturina cinerea* Vieillot = *Falco nitidus* Latham.

cf. Amadon, MS (status of genus).

## ASTURINA NITIDA

**Asturina nitida plagiata** Schlegel

*Asturina plagiata* Schlegel, 1862, Mus. Hist. Nat. Pays-Bas, Rev. Method. Crit. Coll., livr. 1, Asturinae, p. 1, note—Veracruz, Mexico.

*Asturina plagiata micrus* Miller and Griscom, 1921, Amer. Mus. Novit., no. 25, p. 4—Chinandega, Nicaragua.

Southern Arizona, New Mexico, and Texas, south through Mexico and Central America to northwestern Costa Rica. Migratory in north.

**Asturina nitida costaricensis** Swann

*Asturina nitida costaricensis* Swann, 1922, Synop. Accipitres, ed. 2, p. 90—Boruca, Costa Rica.

*Buteo nitidus blakei* Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 4, p. 160. New name for *Asturina nitida costaricensis* Swann, 1922, considered preoccupied by *Buteo borealis* var. *costaricensis* Ridgway, 1874, in Baird, Brewer, and Ridgway, Hist. North Amer. Birds, 3, p. 285, note.

Southwestern Costa Rica, Panama, locally in Colombia, perhaps western Ecuador.

**Asturina nitida nitida** (Latham)

*Falco nitidus* Latham, 1790, Index Ornith., p. 41; based on "Plumbeous Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 37—Cayenne.

Eastern Colombia, eastern Ecuador, Venezuela, Trinidad, the Guianas, Amazonian Brazil east to northern Maranhão.

**Asturina nitida pallida** Todd

*Asturina nitida pallida* Todd, 1915, Proc. Biol. Soc. Washington, **28**, p. 170—Río Surutú, Bolivia.

Tableland of Brazil from Piauí south to Rio de Janeiro, Goiás, and Mato Grosso; eastern Bolivia; Paraguay; northern Argentina.

GENUS **BUTEOGALLUS** LESSON

*Buteogallus* Lesson, 1830, *Traité Ornith.*, livr. 2, p. 83. Type, by monotypy, *Buteogallus cathartoides* Lesson = *Falco aequinoctialis* Gmelin.

*Urubitinga* Lafresnaye, 1842, *Dict. Univ. Hist. Nat.*, **2**, p. 786. Type, by monotypy, *Falco urubitinga* Gmelin.

*Hypomorphnus* Cabanis, 1844, *Archiv Naturgeschichte*, **10**, pt. 1, p. 263. Type, by original designation, *Falco urubitinga* Gmelin.

*Heterospizias* Sharpe, 1874, *Cat. Birds Brit. Mus.*, **1**, pp. 158 (in key), 160. Type, by monotypy, *Falco meridionalis* Latham.

cf. Monroe, 1968, *Birds Honduras*, pp. 81–82 (*subtilis*).  
Amadon, MS (status of *Heterospizias*).

**BUTEOGALLUS AEQUINOCTIALIS**<sup>1</sup>**Buteogallus aequinoctialis** (Gmelin)

*Falco aequinoctialis* Gmelin, 1788, *Syst. Nat.*, **1**, p. 265; based on "Aequinoctial Eagle" of Latham, 1781, *General Synop. Birds*, **1**, p. 43—Cayenne.

Atlantic coast of South America from the Orinoco delta, Venezuela, to Paraná, Brazil, or beyond. Chiefly or entirely in coastal mangrove zone.

**BUTEOGALLUS SUBTILIS****Buteogallus subtilis rhizophorae** Monroe

*Buteogallus subtilis rhizophorae* Monroe, 1963, *Occas. Papers Mus. Zool., Louisiana State Univ.*, no. 26, p. 1—San Lorenzo, Valle, Honduras.

<sup>1</sup>*B. aequinoctialis* and *subtilis* may form a superspecies.—D. A.

Mangrove zone of Pacific coast of El Salvador, Honduras, and probably Chiapas, Mexico.

**Buteogallus subtilis bangsi** (Swann)

*Urubitinga anthracina bangsi* Swann, 1922, Synop. Accipitres, ed. 2, p. 98—San Miguel Island = Isla del Rey, Pearl Islands.

Mangrove zone of Pacific coast of Costa Rica and Panama, including the Pearl Islands.

**Buteogallus subtilis subtilis** (Thayer and Bangs)

*Urubitinga subtilis* Thayer and Bangs, 1905, Bull. Mus. Comp. Zool., 46, p. 94—Gorgona Island, Colombia.

Mangrove zone of Pacific coast and islands of Colombia, Ecuador, and extreme northern Peru (Tumbes).

BUTEOGALLUS ANTHRACINUS

**Buteogallus (anthracinus) gundlachii** (Cabanis)

*Hypomorphnus Gundlachii* Cabanis, 1855, Journ. Ornith., 2 (1854), Erinnerungsschrift, p. 80—Cuba.

Cuba and Isle of Pines.

**Buteogallus anthracinus utilensis** Twomey

*Buteogallus anthracinus utilensis* Twomey, 1956, Ann. Carnegie Mus., 33, p. 387—Utila Island, Honduras.

Islands of Gulf of Honduras: Utila, Guanaja, and perhaps others.

**Buteogallus anthracinus anthracinus** (Deppe)

*Falco anthracinus* Deppe, 1830, Preis-Verzeichniss Säugethiere Vögel Deppe Schiede Mexico Gesammelt, p.3—Veracruz.

*Urubitinga anthracina cancrivora* Clark, 1905, Proc. Biol. Soc. Washington, 18, p. 63—St. Vincent Island, Lesser Antilles.

*Buteogallus anthracinus micronyx* van Rossem and Hachisuka, 1937, Trans. San Diego Soc. Nat. Hist., 8, p. 361—Arivaipa Creek, Arizona.

Southwestern United States (southern Utah to Arizona and east to southern Texas) south through Middle America to northern South America; east, chiefly in coastal districts, to Guyana; also Trinidad and the island of St. Vincent, Lesser Antilles. Migratory in the north.

## BUTEOGALLUS URUBITINGA

**Buteogallus urubitinga ridgwayi** Gurney

*Urubitinga ridgwayi* Gurney, 1884, List Diurnal Birds Prey, p. 148—Guatemala.

Mexico from southern Sonora and Tamaulipas south through Central America to western Panama.

**Buteogallus urubitinga urubitinga** (Gmelin)

*Falco Urubitinga* Gmelin, 1788, Syst. Nat., 1, p. 265; based on "L'Aigle du Brésil" of Brisson, 1760, Ornith., 1, p. 445 (ex "Urubitinga" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 214)—northeastern Brazil.

*Urubitinga urubitinga azarae* Swann, 1930, Monogr. Birds Prey, pt. 8, p. 453—Tucumán, Argentina.

Eastern Panama, Colombia, Venezuela, Trinidad, Tobago, south to western Ecuador and, east of the Andes, to Paraguay, Uruguay, and central Argentina.

## BUTEOGALLUS MERIDIONALIS

**Buteogallus meridionalis** (Latham)

*Falco meridionalis* Latham, 1790, Index Ornith., p. 36; based on "Rufous-headed Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 33—Cayenne.

*Heterospizias meridionalis australis* Swann, 1921, Auk, 38, p. 359—Malvinas, Tucumán, Argentina.

Panama, western Colombia and Ecuador, South America east of the Andes south to central Argentina; Trinidad.

## GENUS PARABUTEO RIDGWAY

*Parabuteo* Ridgway, 1874, in Baird, Brewer, and Ridgway, Hist. North Amer. Birds, 3, p. 250. Type, by monotypy, *Buteo harrisi* Audubon.

## PARABUTEO UNICINCTUS

**Parabuteo unicinctus harrisi** (Audubon)

*Buteo Harrisi* Audubon, 1837, Birds Amer., pl. 392—between Bayou Sara and Natchez, *fide* Audubon, 1839, Ornith. Biogr., 5, p. 34. Casual.

?*Parabuteo unicinctus superior* van Rossem, 1942, Trans. San Diego Soc. Nat. Hist., 9, p. 377—Imperial County, California.

Locally in southern California, Arizona, New Mexico, and Texas, occasionally farther north, south in open country through Middle America and western South America to Peru.

**Parabuteo unicinctus unicinctus** (Temminck)

*Falco unicinctus* Temminck, 1824, Planches Color., livr. 53, pl. 313—Boa Vista, western Minas Gerais, Brazil.

South America, south and east of *harrisi*, to central Chile and northern Patagonia. Not in forest.

GENUS **BUSARELLUS** LESSON

*Busarellus* Lafresnaye = Lesson, 1843, Écho Monde Savant, 10, col. 468. Type, by original designation, *Circus busarellus* Vieillot = *Falco nigricollis* Latham.<sup>1</sup>

**BUSARELLUS NIGRICOLLIS**

**Busarellus nigricollis nigricollis** (Latham)

*Falco nigricollis* Latham, 1790, Index Ornith., p. 35; based on "Black-necked Falcon" of Latham, 1787, General Synop. Birds, Suppl., p. 30—Cayenne.

Tropical Mexico south through Central and South America, east of the Andes, to southern Brazil.

**Busarellus nigricollis leucocephalus** (Vieillot)

*Circus leucocephalus* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 4, p. 465; based on "Gavilan de estero cabeza blanca," no. 13, of Azara, 1802, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 1, p. 78—Paraguay.

*Busarellus nigricollis australis* Swann, 1922, Synop. Accipitres, ed. 2, p. 95—Mocoví, Argentina.

Paraguay, northern Argentina, Uruguay.

GENUS **GERANOÆTUS** KAUP

*Geranoætus* Kaup, 1844, Class. Säugethiere Vögel, p. 122.

Type, by monotypy, *Falco aguja* Temminck = *Spizaetus melanoleucus* Vieillot.

cf. Amadon, 1963, Condor, 65, pp. 407-409.

<sup>1</sup>*Busarellus* Lafresnaye, 1839, Rev. Zool., Paris, 2, p. 196, and *Busarellus* Lafresnaye, 1842, in Orbigny, Dict. Univ. Hist. Nat., 2, p. 785, are *nomina nuda*.—D. A.

## GERANOAEETUS MELANOLEUCUS

**Geranoaetus melanoleucus australis** Swann

*Geranoaetus melanoleucus australis* Swann, 1922, Synop. Accipitres, ed. 2, p. 67—Chubut, Argentina.

*Geranoaetus melanoleucus meridensis* Swann, 1922, Synop. Accipitres, ed. 2, p. 68—Nevada, Mérida, Venezuela.

Western and southern South America from the Andes of Venezuela and Colombia south to Chile and Tierra del Fuego, and, in lowlands as well, from coastal Peru and Buenos Aires Province, Argentina, south.

**Geranoaetus melanoleucus melanoleucus** (Vieillot)

*Spizaetus melanoleucus* Vieillot, 1819, Nouv. Dict. Hist. Nat., nouv. éd., 32, p. 57; based on "Águila obscura y blanca," no. 8, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 1, p. 61—Paraguay.

Southeastern Brazil from São Paulo to Rio Grande do Sul; Paraguay; Uruguay; eastern Argentina south to Santa Fe, Entre Ríos, and Buenos Aires.

## GENUS HARPYHALIAETUS LAFRESNAYE

*Harpyhaliaetus* Lafresnaye, 1842, Rev. Zool., Paris, 5, p. 173. Type, by monotypy, *Harpyia coronata* Vieillot.

*Urubitornis* J. Verreaux, 1856, Proc. Zool. Soc. London, p. 145. Type, by monotypy, *Circaetus solitarius* Tschudi.

## HARPYHALIAETUS SOLITARIUS

**Harpyhaliaetus solitarius sheffleri** (van Rossem)

*Urubitornis solitarius sheffleri* van Rossem, 1948, Proc. Biol. Soc. Washington, 61, p. 67—extreme southeastern Sonora, Mexico.

Locally in highlands of Middle America from Sonora, Mexico, to Panama.

**Harpyhaliaetus solitarius solitarius** (Tschudi)

*Circaetus solitarius* Tschudi, 1844, Archiv Naturgeschichte, 10, pt. 1, p. 264—Río Chanchamayo, Junín, Peru.

Locally in humid Andes from Santa Marta Mountains, Colombia, south to northwestern Argentina.



## HARPYHALIAETUS CORONATUS

**Harpyhaliaetus coronatus** (Vieillot)

*Harpyia coronata* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 14, p. 237; based on "Águila coronada," no. 7, of Azara, 1802, *Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata*, 1, p. 56—Paraguay.

Semiopen country in southern Brazil (Mato Grosso, Goiás, to Rio Grande do Sul), eastern Bolivia, western Paraguay, Argentina south to Mendoza and the lower Río Negro.

## GENUS BUTEO LACÉPÈDE

*Buteo* Lacépède, 1799, *Tableaux Mammifères Oiseaux*, p. 4. Type, by tautonomy, *Falco buteo* Linnaeus.

*Rupornis* Kaup, 1844, *Class. Säugethiere Vögel*, p. 120. Type, by monotypy, *Falco magnirostris* Gmelin.

cf. Rudebeck, 1957, in Hanström, Brinck, and Rudebeck (eds.), *South Afr. Animal Life* (Res. Lund Univ. Exped. 1950-51), 4, pp. 415-437 (South African subspecies of *buteo*).

Vaurie, 1961, *Amer. Mus. Novit.*, no. 2042, 14 pp. (Old World species).

Voous and Bijleveld, 1964, *Beaufortia*, 11, pp. 37-43 (*buteo*, *rufinus*).

Amadon, 1965, *Oiseau*, 35, no. spéc., pp. 9-11 (species sequence).

Melde, 1976, *Mäusebussard* (Neue Brehm-Bücherei 185), ed. 3, 92 pp. (*buteo*).

## BUTEO MAGNIROSTRIS

**Buteo magnirostris griseocauda** Ridgway

[*Buteo (Rupornis) magnirostris*] var. *griseocauda* Ridgway, 1873, *Proc. Boston Soc. Nat. Hist.*, 16, pp. 87 (in key), 88—Mexico. Cotypes from Oaxaca.

*Rupornis magnirostris argutus* Peters and Griscom, 1929, *Proc. New England Zool. Club*, 11, p. 46—Almirante, northwestern Panama.

*Rupornis magnirostris direptor* Peters and Griscom, 1929, *Proc. New England Zool. Club*, 11, p. 46—near Mazatenango, Guatemala.

*Buteo magnirostris xantusi* van Rossem, 1939, Ann. Mag. Nat. Hist., ser. 11, 4, p. 440—Colima, Mexico.

*Buteo magnirostris petersi* Brodkorb, 1940, Occas. Papers Mus. Zool., Univ. Michigan. no. 425, p. 2—Chiapas, Mexico.

Mexico from Colima, Nuevo León, and Tamaulipas (except Yucatán) south to the Chiriquí Lagoon region of Panama.

***Buteo magnirostris conspectus* (Peters)**

*Rupornis magnirostris conspecta* Peters, 1913, Auk, 30, p. 370—San Ignacio, Yucatán.

Northern part of Yucatán Peninsula.

***Buteo magnirostris gracilis* (Ridgway)**

*Rupornis gracilis* Ridgway, 1885, Proc. U. S. Nat. Mus., 8, p. 94—Cozumel Island.

Cozumel, Meco, and Holbox Islands, off Yucatán, Mexico.

***Buteo magnirostris sinushonduri* Bond**

*Buteo magnirostris sinus-honduri* Bond, 1936, Proc. Acad. Nat. Sci. Philadelphia, 88, p. 355—Bonacca Island.

Islands in Gulf of Honduras (except Utila).

***Buteo magnirostris petulans* van Rossem**

*Asturina ruficauda* P. L. Sclater and Salvin, 1869, Proc. Zool. Soc. London, p. 133—type from Lion Hill, Panama.

*Buteo magnirostris petulans* van Rossem, 1935, Condor, 37, p. 215. New name for *Asturina ruficauda* P. L. Sclater and Salvin, 1869, preoccupied by *Buteo ruficaudus* Vieillot, 1807, Hist. Nat. Oiseaux Amérique Septentrionale, 1, p. 43, pl. 14 bis.

Southwestern Costa Rica from the Terraba Valley south; Pacific slope of Panama south to the Río Tuira.

***Buteo magnirostris alius* (Peters and Griscom)**

*Rupornis magnirostris alia* Peters and Griscom, 1929, Proc. New England Zool. Club, 11, p. 48—San Miguel, El Rey, Pearl Islands.

Isla Pedro González, Isla San José, Isla Cañas, and Isla del Rey, Pearl Islands, Gulf of Panama.

***Buteo magnirostris magnirostris* (Gmelin)**

*Falco magnirostris* Gmelin, 1788, Syst. Nat., 1, p. 282; based on "Epervier à gros bec, de Cayenne" of Daubenton, 1765-81, Planches Enlum., pl. 464—Cayenne.

*Rupornis magnirostris insidiatrix* Bangs and Penard, 1918,

Bull. Mus. Comp. Zool., **62**, p. 36—Santa Marta Mountains, Colombia.

*Rupornis magnirostris ecuadoriensis* Swann, 1922, Synop.

Accipitres, ed. 2, p. 91—Province of Esmeraldas, Ecuador. Northern South America, from Colombia, Venezuela, and the Guianas south to western Ecuador, and, farther east, to the Amazon from the Rio Madeira to the Atlantic.

**Buteo magnirostris saturatus** (Sclater and Salvin)

? *Sparvius superciliaris* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., **10**, p. 328; based on "Esparvero pardo ceja blanca," no. 25, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, **1**, p. 116—Paraguay.

*Asturina saturata* P. L. Sclater and Salvin, 1876, Proc. Zool. Soc. London, p. 357—Apolo and Tilotilo, Bolivia.

Bolivia, Paraguay, and western Argentina.

**Buteo magnirostris occiduus** (Bangs)

*Rupornis magnirostris occiduus* Bangs, 1911, Proc. Biol. Soc. Washington, **24**, p. 187—Río Tambopata, Peru.

*Buteo magnirostris inca* Meyer de Schauensee, 1945, Notulae Naturae, no. 156, p. 2—Inambari, Puno, Peru.

Eastern Peru, extreme northern Bolivia, western Brazil south of the Amazon east to the left bank of the Rio Madeira.

**Buteo magnirostris nattereri** (Sclater and Salvin)

*Asturina nattereri* P. L. Sclater and Salvin, 1869, Proc. Zool. Soc. London, p. 132—Bahia, Brazil.

Northeastern Brazil from Maranhão, Piauí, and Ceará south to Bahia.

**Buteo magnirostris magniplumis** (Bertoni)

*Potamolegus superciliaris magniplumis* Bertoni, 1901, Anales Cient. Paraguay, **1**, p. 159—Mondaiñh, Paraguay.

Southern Brazil from Espírito Santo, Minas Gerais, Goiás, and Mato Grosso south to Rio Grande do Sul; Alto Paraná, Paraguay; Misiones, Argentina.

**Buteo magnirostris pucherani** (Verreaux)

*Asturina Pucherani* J. and E. Verreaux, 1855, Rev. Mag. Zool., Paris, sér. 2, **7**, p. 350—"l'Amérique Méridionale." Type from Buenos Aires, Argentina.

*Asturina gularis* Schlegel, 1862, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 1, Asturinae, p. 4—Buenos Aires.

Northeastern Argentina (Corrientes, Entre Ríos, Buenos Aires), Uruguay.

#### BUTEO LEUCORRHOUS

**Buteo leucorrhous** (Quoy and Gaimard)

*Falco leucorrhous* Quoy and Gaimard, 1824, in Freycinet, Voyage Uranie Physicienne, Zool., livr. 3, p. 91, pl. 13—"Brésil." Type from Rio de Janeiro.

Hill country or subtropics from Colombia and western Venezuela south to northern Argentina and thence east across Paraguay and Brazil south from Rio de Janeiro.

#### BUTEO RIDGWAYI

**Buteo ridgwayi** (Cory)

*Rupornis ridgwayi* Cory, 1883, Quart. Journ. Boston Zool. Soc., 2, p. 46—Santo Domingo.

Hispaniola.

#### BUTEO LINEATUS

**Buteo lineatus elegans** Cassin

*Buteo elegans* Cassin, 1856, Proc. Acad. Nat. Sci. Philadelphia, 7 (1855), p. 281—California.

Locally in California and, formerly, southern Oregon; northern Baja California, Mexico. Straggles southward in winter to Sinaloa, Mexico.

**Buteo lineatus lineatus** (Gmelin)

*Falco lineatus* Gmelin, 1788, Syst. Nat., 1, p. 268; based on "Barred-breasted Buzzard" of Latham, 1781, General Synop. Birds, 1, p. 56, and "Red-shouldered Falcon" of Pennant, 1785, Arctic Zool., 2, p. 206—Long Island, New York.

Southern Canada from Manitoba east to Quebec and Prince Edward Island, thence south in the United States to Kansas, Tennessee, and North Carolina. Migratory in northern part of range, occasionally reaching the Gulf states and eastern Mexico.

**Buteo lineatus texanus** Bishop

*Buteo lineatus texanus* Bishop, 1912, Auk, 29, p. 232—Corpus Christi, Texas.

Southern Texas, thence south in Mexico to Zacatecas, the Valley of Mexico, and Veracruz.

**Buteo lineatus alleni** Ridgway

*Buteo lineatus alleni* Ridgway, 1885, Proc. U. S. Nat. Mus., 7, p. 514—Tampa, Florida.

Southeastern United States from South Carolina and Florida (except the extreme south) west to eastern Oklahoma and Texas.

**Buteo lineatus extimus** Bangs

*Buteo lineatus extimus* Bangs, 1920, Proc. New England Zool. Club, 7, p. 35—Cape Florida.

Extreme southern Florida and the Florida Keys.

BUTEO PLATYPTERUS

**Buteo platypterus platypterus** (Vieillot)

*Sparvius platypterus* Vieillot, 1823, in Bonnaterre and Vieillot, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 93, p. 1273; based on "Broad-winged Hawk, *Falco pennsylvanicus*," of Wilson, 1812, Amer. Ornith., 6, p. 92, pl. 54, fig. 1—near the Schuylkill River, Pennsylvania.

Central and southern Canada from Alberta east to Nova Scotia, thence south in the United States from the Great Plains east, locally to the Gulf coast and Florida. Winters from extreme southern Florida and Guatemala south to southern Peru and Brazil.

**Buteo platypterus cubanensis** Burns

*Buteo platypterus cubanensis* Burns, 1911, Wilson Bull., 23, p. 148—Cuba.

Cuba.

**Buteo platypterus brunnescens** Danforth and Smyth

*Buteo platypterus brunnescens* Danforth and Smyth, 1935, Journ. Agric. Univ. Puerto Rico, 19, p. 485—Puerto Rico.

Puerto Rico.

**Buteo platypterus insulicola** Riley

*Buteo platypterus insulicola* Riley, 1908, Auk, 25, p. 273—Antigua.

Antigua, Lesser Antilles.

**Buteo platypterus rivierei** Verrill

*Buteo (latissimus) rivierei* A. H. Verrill, 1905, Descr. Three

New Species Birds Dominica (unpaged pamphlet)—  
Dominica.

Dominica, Martinique, and St. Lucia, Lesser Antilles.

**Buteo platypterus antillarum** Clark

*Buteo antillarum* Clark, 1905, Proc. Biol. Soc. Washington,  
18, p. 62—St. Vincent.

St. Vincent, the larger Grenadines, and Grenada, Lesser  
Antilles; Tobago and Little Tobago, off Trinidad.

BUTEO BRACHYURUS

**Buteo brachyurus brachyurus** Vieillot

*Buteo brachyurus* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv.  
éd., 4, p. 477—no locality. Type from Cayenne.

Locally in South America south to western Ecuador, and, east  
of the Andes, to eastern Peru, Bolivia, Paraguay, and northern  
Argentina; Trinidad.

**Buteo brachyurus fuliginosus** Sclater

*Buteo fuliginosus* P. L. Sclater, 1858, Proc. Zool. Soc. London,  
p. 356—Tamaulipas, Mexico.

Central and southern Florida; and from central and northeast-  
ern Mexico south through Middle America, including Panama.

**Buteo (brachyurus) albigula** Philippi

*Buteo albigula* Philippi, 1899, Anales Univ. Chile, 103, p.  
664, pl. 6—Valdivia, Chile.

Forested slopes of the Andes from Colombia and Venezuela  
south to Chile and adjacent Argentina. Usually above 2,300  
meters.

BUTEO SWAINSONI

**Buteo swainsoni** Bonaparte

*Buteo vulgaris* Audubon, 1837, Birds Amer., pl. 372—near  
the Columbia River [= Fort Vancouver, Washington],  
*vide* Audubon, 1838, Ornith. Biogr., 4, p. 508.

*Buteo Swainsoni* Bonaparte, 1838, Geogr. Comp. List Birds  
Europe North Amer., p. 3. New name for *Buteo vulgaris*  
Audubon, 1837, preoccupied by *Buteo vulgaris* Swainson,  
1832, in Swainson and Richardson, Fauna Boreali-Ameri-  
cana, 2 (1831), p. 47, pl. 27.

Open country of western North America, north to interior  
Alaska and Mackenzie, Canada, south to northwestern Mexico

(Baja California, Durango), east to Minnesota and Illinois. Highly migratory, wintering chiefly in Argentina, sparingly farther north, including Texas and southern Florida.

#### BUTEO GALAPAGOENSIS

##### **Buteo galapagoensis** (Gould)

*Polyborus galapagoensis* Gould, 1837, Proc. Zool. Soc. London, p. 9—Galapagos Archipelago.

Galapagos Archipelago.

#### BUTEO ALBICAUDATUS

##### **Buteo albicaudatus hypospodius** Gurney

*Buteo hypospodius* Gurney, 1876, Ibis, p. 73, pl. 3—Medellín, Colombia, and Mérida, Venezuela.

Southern Texas, thence south through Middle America to Panama, northern Colombia, and northwestern Venezuela.

##### **Buteo albicaudatus colonus** Berlepsch

*Buteo albicaudatus colonus* Berlepsch, 1892, Journ. Ornith., 40, p. 91—Curaçao.

Eastern Colombia and across Venezuela (except northwest) to Surinam, south to the delta of the Amazon; islands of Aruba, Curaçao, Bonaire, and Trinidad.

##### **Buteo albicaudatus albicaudatus** Vieillot

*Buteo albicaudatus* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 4, p. 477—South America; restricted to Rio de Janeiro by Berlepsch, 1908, Novit. Zool., 15, p. 291.

Eastern Bolivia, Brazil from Mato Grosso, Goiás, and Bahia south, Paraguay, Uruguay, Argentina south to the borders of Patagonia.

#### BUTEO POLYOSOMA<sup>1</sup>

##### **Buteo polyosoma polyosoma** (Quoy and Gaimard)

*Falco polyosoma* Quoy and Gaimard, 1824, in Freycinet, Voyage Uranie Physicienne, Zool., livr. 3, p. 92, pl. 14—Falkland Islands.

<sup>1</sup>*B. polyosoma, poecilochrous*, and perhaps also *galapagoensis* and *albicaudatus* form a superspecies.—D. A.

*Haliaeetus erythronotus* King, 1827, Zool. Journ., 3, p. 424—  
Strait of Magellan.

*Buteo aethiops* Philippi, 1899, Anales Univ. Chile, 103, pp.  
665, 668—central provinces of Chile.

*Buteo erythronotus peruviensis* Swann, 1922, Synop.  
Accipitres, ed. 2, p. 85—Eten, Lambayeque, Peru.

Temperate zone of the Andes of Colombia and Ecuador, south  
through Peru, Bolivia, Chile, and Argentina; also Falkland  
Islands. At lower elevations in Peru and to the south.

**Buteo (polyosoma) exsul** Salvin

*Buteo exsul* Salvin, 1875, Ibis, p. 371—Más Afuera Island.  
Más Afuera, Juan Fernández Islands, off Chile.

BUTEO POECILOCHROUS

**Buteo poecilochrous** Gurney

*Buteo poecilochrous* Gurney, 1879, Ibis, p. 176—Yauayacu  
= Yanayacu, Ecuador.

High Andes from southern Colombia to Chile and northern  
Argentina. Perhaps an altitudinal race of *B. polyosoma*.

BUTEO ALBONOTATUS

**Buteo albonotatus** Kaup

*Buteo albonotatus* G. R. Gray, 1844, List Specimens Birds  
Brit. Mus., pt. 1, p. 17. *Nomen nudum*.

*Buteo albonotatus* Kaup (ex G. R. Gray, 1844), 1847, Isis  
von Oken, col. 329—no locality. Type from Mexico.

*Buteo abbreviatus* Cabanis, 1849, in Schomburgk, Reisen  
Brit. Guiana, 3 (1848), p. 739—upper Pomeroon River,  
Guyana.

Southwestern United States from Arizona to western Texas  
and from Mexico, including northern Baja California, south  
through Central America and South America to Brazil, Bolivia,  
and Paraguay; Trinidad. Locally migratory.

BUTEO SOLITARIUS

**Buteo solitarius** Peale

*Buteo solitarius* Peale, 1848, U. S. Explor. Exped., 8, p.  
62—Island of Hawaii.

Island of Hawaii, Hawaiian Islands.



## BUTEO VENTRALIS

**Buteo ventralis** Gould

*Buteo ventralis* Gould, 1837, Proc. Zool. Soc. London, p. 10—no locality. Type from Santa Cruz, Patagonia.

*Buteo pictus* Philippi, 1899, Anales Univ. Chile, 103, pp. 665, 668—Chile.

Andes from central Chile and adjacent Argentina south to the Strait of Magellan.

## BUTEO JAMAICENSIS

**Buteo jamaicensis alascensis** Grinnell

*Buteo borealis alascensis* Grinnell, 1909, Univ. California Publ. Zool., 5, p. 211—Glacier Bay, Alaska.

Southeastern Alaska from Yakutat Bay south into British Columbia (Vancouver and Queen Charlotte Islands, ? coastal districts).

**Buteo jamaicensis harlani** (Audubon)

*Falco Harlani* Audubon, 1830, Birds Amer., pl. 86—near St. Francisville, Louisiana, *vide* Audubon, 1831, Ornith. Biogr., 1, p. 441.

Upper Yukon Valley, southwestern Yukon, and northern British Columbia. Winters chiefly from Kansas and Missouri to Texas and Louisiana.

**Buteo jamaicensis calurus** Cassin

*Buteo calurus* Cassin, 1856, Proc. Acad. Nat. Sci. Philadelphia, 7 (1855), p. 281—vicinity of Fort Webster, New Mexico.

?*Buteo jamaicensis abieticola* Todd, 1950, Ann. Carnegie Mus., 31, p. 291—St. Margaret Falls, Quebec.

Western North America from central British Columbia south to Baja California and southern Texas, east to the Great Plains, and possibly sparingly in the coniferous belt of Canada to the Atlantic coast. Migrates, occasionally as far as Panama.

**Buteo jamaicensis borealis** (Gmelin)

*Falco borealis* Gmelin, 1788, Syst. Nat., 1, p. 266; based on "American Buzzard" of Latham, 1781, General Synop. Birds, 1, p. 50, and "Red-tailed Falcon" of Pennant, 1785, Arctic Zool., 2, p. 205—Carolina.

North America, east of the Great Plains, south of the taiga,

south to the Gulf states and northern Florida. Migratory in north.

**Buteo jamaicensis kriderii** Hoopes

*Buteo borealis* var. *kriderii* Hoopes, 1873, Proc. Acad. Nat.

Sci. Philadelphia, p. 283, pl. 5—Winnebago County, Iowa. Great Plains from southern Canada south to Wyoming and western Nebraska. In winter reaches the Gulf coast.

**Buteo jamaicensis fuertesi** Sutton and Van Tyne

*Buteo jamaicensis fuertesi* Sutton and Van Tyne, 1935, Occas.

Papers Mus. Zool., Univ. Michigan, no. 321, p. 1—near Alpine, Brewster County, Texas.

Southwestern Texas and northern Mexico.

**Buteo jamaicensis hadropus** Storer

*Buteo jamaicensis hadropus* Storer, 1962, Condor, **64**, p.

78—Chilpancingo, Guerrero, Mexico.

Mexican highlands from Jalisco to Oaxaca.

**Buteo jamaicensis kemsiesi** Oberholser

*Buteo jamaicensis kemsiesi* Oberholser, 1959, Proc. Biol. Soc.

Washington, **72**, p. 159—Tegucigalpa, Honduras.

Highlands of Middle America from Chiapas, Mexico, to northern Nicaragua.

**Buteo jamaicensis costaricensis** Ridgway

*Buteo borealis* var. *costaricensis* Ridgway, 1874, in Baird,

Brewer, and Ridgway, Hist. North Amer. Birds, **3**, p. 285, note—Costa Rica.

Highlands of Costa Rica and western Panama.

**Buteo jamaicensis fumosus** Nelson

*Buteo borealis fumosus* Nelson, 1898, Proc. Biol. Soc. Wash-

ington, **12**, p. 7—María Madre Island.

Tres Mariás Islands, off western Mexico.

**Buteo jamaicensis socorroensis** Nelson

*Buteo borealis socorroensis* Nelson, 1898, Proc. Biol. Soc.

Washington, **12**, p. 7—Socorro Island.

Socorro Island, Revillagigedo Islands, off western Mexico.

**Buteo jamaicensis umbrinus** Bangs

*Buteo borealis umbrinus* Bangs, 1901, Proc. New England

Zool. Club, **2**, p. 68—Manatee County, Florida.

Florida Peninsula.

**Buteo jamaicensis solitudinis** Barbour

*Buteo borealis solitudinis* Barbour, 1935, Occas. Papers

Boston Soc. Nat. Hist., 8, p. 207—Solidad de Cienfuegos, Cuba.

Bahama Islands and Cuba.

***Buteo jamaicensis jamaicensis* (Gmelin)**

*Falco jamaicensis* Gmelin, 1788, Syst. Nat., 1, p. 266; based on "Cream-coloured Buzzard" of Latham, 1781, General Synop. Birds, 1, p. 49—Jamaica.

Jamaica, Hispaniola, Puerto Rico, Virgin Islands, and northern Leeward Islands (Saba, St. Eustatius, St. Kitts, Nevis).

**BUTEO BUTEO<sup>1</sup>**

***Buteo buteo buteo* (Linnaeus)**

*Falco Buteo* Linnaeus, 1758, Syst. Nat., ed. 10, p. 90; based on "The Puttock or common Buzzard" of Albin, 1831, Nat. Hist. Birds, 1, p. 1, pl. 1—Europe; restricted to Sweden by Hellmayr and Laubmann, 1916, Nomencl. Vögel Bayerns, p. 19.

British Isles; continental Europe from limit of forest east to Finland, Estonia, Poland, Rumania, south to northern Italy and Greece; Asia Minor. Somewhat migratory in north, some passing Gibraltar and reaching Liberia.

***Buteo buteo pojana* (Savi)**

*Falco pojana* Savi, 1822, Nuovo Giornale Pisa, 22, p. 68—Tuscany, Italy.

*Buteo buteo Arrigonii* Picchi, 1903, Avicula, 7, p. 40—Sardinia.

*Buteo buteo meridionalis* Trischitta, 1939, Alcune Nuove Forme Uccelli Ital., p. 3 (pamphlet)—southern Italy and Sicily.

Italy, Corsica, Sardinia, and Sicily.

***Buteo buteo harterti* Swann**

*Buteo buteo harterti* Swann, 1919, Synop. List Accipitres, p. 43—Madeira. Type from Santo Amaro.

?*Buteo vulgaris hispaniae* Jordans, 1939, Falco, 35, p. 13—Linares de Riofrio, Salamanca, and Mosqueruela, Teruel, Spain.

Madeira Islands and perhaps Spain.

<sup>1</sup>*B. buteo*, *oreophilus*, and *brachypterus* form a superspecies, to which, perhaps, *jamaicensis* and *ventralis* should be added.—D. A.

**Buteo buteo insularum** Floericke

*Buteo insularum* Floericke, 1903, Mitt. Reichsb. Vogelkunde Vogelschutz, **3**, p. 64—Gran Canaria.

*Buteo buteo rothschildi* Swann, 1919, Synop. List Accipitres, p. 43—Terceira, Azores.

Azores and Canary Islands.

**Buteo buteo bannermani** Swann

*Buteo buteo bannermani* Swann, 1919, Synop. List Accipitres, p. 44—St. Vincent, Cape Verde Islands.

Cape Verde Islands.

**Buteo buteo vulpinus** (Gloger)

*Falco vulpinus* Gloger, 1833, Abändern Vögel Einfluss Klima's, p. 141—Africa. Type from Cape Province.

*Buteo vulpinus intermedius* Menzibir, 1889, Ornith. Turkestan, livr. 2, p. 197—Russia.

Northern and eastern Europe, north and east of the range of *buteo*, east through Siberia to the Yenisey River, south to central Asia (Altai, Kentei, and the Tien Shan). Winters in Africa, south commonly to Cape Province, and also in smaller numbers south and southeastward in Asia, even straggling to the Malay Peninsula.

**Buteo buteo menetriesi** Bogdanov

*Buteo Menetriesi* Bogdanov, 1879, Trudy Obschestva Estest. Imp. Kazanskom Univ., **8**, no. 4, p. 45—Caucasus.

Forests of the Crimea, the Caucasus, and south into eastern Turkey and northern Iran, including the Elburz Mountains. Apparently resident.

**Buteo buteo japonicus** Temminck and Schlegel

*Buteo japonicus* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 16, pls. 6 and 6b—Japan.

*Buteo burmanicus* Hume, 1875, Stray Feathers, **3**, p. 30—Thayetmyo, Pegu, Burma. Migrant.

Asia, east of the range of *vulpinus*, from the Baykal area, Mongolia, and Tibet east to the Pacific from Amurland to Manchuria; also Sakhalin, the southern Kurils, and Japan. In winter south to India, Indochina, Malay Peninsula, and Taiwan.

**Buteo buteo refectus** Portenko

*Buteo japonicus saturatus* Portenko, 1929, Bull. Acad. Sci. URSS, Cl. Sci. Phys.-Math., p. 644—Ju-tschou, Kham = Yushu, Tsinghai, China.

*Buteo japonicus reffectus* Portenko, 1935, Ornith. Monatsber., 43, p. 152. New name for *Buteo japonicus saturatus* Portenko, 1929, preoccupied by *Asturina saturata* P. L. Slater and Salvin, 1876, Proc. Zool. Soc. London, p. 357.

Forests of Himalayas and western China to 4,000 meters or above; lower in winter.

**Buteo buteo toyoshimai** Momiyama

*Buteo japonicus toyoshimai* Momiyama, 1927, Annot. Ornith. Orientalis, 1, pp. 73 (Japanese text), 98 (English text)—Oki-mura, Coffin Island (= Haha Shima), Bonin Islands.

Bonin Islands and Izu islands (south of Honshu, Japan).

**Buteo buteo oshiroi** Kuroda

*Buteo buteo oshiroi* Nagahisa Kuroda, 1971, Tori, 20, pp. 125 (Japanese text), 127 (English text)—Minami Minamidaito, Daito islands.

Daito group, Ryukyu Islands.

BUTEO OREOPHILUS

**Buteo oreophilus oreophilus** Hartert and Neumann

*Buteo oreophilus* Hartert and Neumann, 1914, Ornith. Monatsber., 22, p. 31—Koritscha, Ethiopia.

Highland forests of eastern Africa from southern Ethiopia south at least to Tanzania.

**Buteo oreophilus trizonatus** Rudebeck

? *Buteo tachardus* A. Smith, 1830, South Afr. Quart. Journ., ser. 1, p. 381—no locality = South Africa.

*Buteo buteo trizonatus* Rudebeck, 1957, in Hanström, Brinck, and Rudebeck (eds.), South Afr. Animal Life (Res. Lund Univ. Exped. 1950-51), 4, p. 416—Knysna, Cape Province.

Forests in South Africa, north to Natal; straggles to southern Rhodesia (Zimbabwe).

BUTEO BRACHYPTERUS

**Buteo brachypterus** Hartlaub

*Buteo brachypterus* Pelzeln = Hartlaub, 1860, Journ. Ornith., 8, p. 11—Madagascar.

Madagascar.

BUTEO RUFINUS

**Buteo rufinus rufinus** (Cretzschmar)

*Falco rufinus* Cretzschmar, 1827, in Rüppell, Atlas Reise

Nördl. Afrika, Vögel (1826), p. 40, pl. 27—upper Nubia, Shendi, Sennar, and Ethiopia.

*Buteo ferox auctorum* (misapplied to this species).

Greece, Asia Minor, Iraq, Iran, Pakistan, Afghanistan, and the steppes east to Turkistan, northwestern Mongolia, and the southern Altai; south to Kashmir and northern Uttar Pradesh (Garhwal) in India. Winters chiefly in northeastern Africa from Darfur east to the White and Blue Nile, straggling to Kenya; also from central Asia to northern India.

**Buteo rufinus cirtensis** (Levaillant)

*Falco cirtensis* Jean Levaillant, 1850, Explor. Sci. Algérie, Hist. Nat. Oiseaux, Atlas, pl. 3—no locality. Type from province of Constantine, northeastern Algeria, *vide* Loche, 1867, Explor. Sci. Algérie, Hist. Nat. Oiseaux, 1, p. 44.

Northern Africa from Morocco, Spanish Sahara, and Mauritania east to Egypt; Sinai; Yemen.

BUTEO HEMILASIUS

**Buteo hemilasius** Temminck and Schlegel

*Buteo hemilasius* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 18, pl. 7—Japan.

Highland steppes of central Asia from Mongolia and surrounding mountains (Altai, Baykal area) and Manchuria south to Sinkiang and Tibet. In winter to central China, Korea, and Japan (once, type specimen).

BUTEO REGALIS

**Buteo regalis** (Gray)

*Archibuteo regalis* G. R. Gray, 1844, Gen. Birds, 1, p. [12], col. pl. 6—no locality. Type from Real del Monte, Hidalgo, Mexico.

Eastern Washington and southern Canada from Alberta to Manitoba south to eastern Oregon, Nevada, New Mexico, western Texas, and Oklahoma. Somewhat migratory, reaching Mexico in winter.

BUTEO LAGOPUS

**Buteo lagopus lagopus** (Pontoppidan)

*Falco Lagopus* Pontoppidan, 1763, Danske Atlas, 1, p. 616—no locality = Denmark.

Northern Scandinavia east to the Ob River in western Siberia. Winters south to the British Isles, central Europe, and occasionally to Cyprus, the Near and Middle East to Afghanistan.

***Buteo lagopus kamschatkensis*** Dementiev

*Archibuteo pallidus* Menzbir, 1889, Ornith. Turkestan, livr. 2, p. 163—Russian Turkistan.

*Buteo lagopus kamschatkensis* Dementiev, 1931, Ornith. Monatsber., 39, p. 54—Kikhchik River, Kamchatka.

*Buteo lagopus menzbieri* Dementiev, 1951, Ptitsy Sovetskogo Soiuz, 1, p. 312. New name for *Archibuteo pallidus* Menzbir, 1889, preoccupied by *Buteo pallidus* Lesson, 1830, Traité Ornith., livr. 2, p. 82.

Northern Siberia from the lower Ob River east to the Pacific (Kamchatka); Kuril Islands. Winters south to Russia, southern Siberia, Turkistan, northern China, Korea, Japan.

***Buteo lagopus sanctijohannis*** (Gmelin)

*Falco S. Johannis* Gmelin, 1788, Syst. Nat., 1, p. 273; based on "S. John's Falcon" of Latham, 1781, General Synop. Birds, 1, p. 77, and Pennant, 1785, Arctic Zool., p. 200, pl. 9—Hudson Strait and Newfoundland.

Aleutian Islands and Alaska; Canada east to Baffin Island, south to northern edges of forest in British Columbia, Ungava, and Newfoundland. In winter south commonly to the northern United States, sometimes farther.

BUTEO AUGURALIS

***Buteo auguralis*** Salvadori

*Buteo auguralis* Salvadori, 1865, Atti Soc. Ital. Sci. Nat., Milan, 8, p. 377—Ethiopia.

Sierra Leone east to Sudan and Ethiopia, south to Angola, Zaire, and Uganda, except in forest. Breeds in southern portion of range and migrates northward in the rainy season.

BUTEO RUFOFUSCUS

***Buteo (rufofuscus) archeri*** Sclater

*Buteo jakal archeri* W. L. Sclater, 1918, Bull. Brit. Ornith. Club, 39, p. 17—Waghar, Somalia.

Highlands of Somalia.

***Buteo (rufofuscus) augur*** Rüppell

*Falco (Buteo) Augur* Rüppell, 1836, Neue Wirbelthiere Fauna

Abyssinien, Vögel, p. 38, pl. 16—Abyssinia.

Open highlands of Africa from Ethiopia south to the Limpopo River and west through Rhodesia (Zimbabwe) to Angola.

**Buteo rufofuscus rufofuscus** (Forster)

*Falco rufofuscus* J. R. Forster, 1798, in Levaillant, *Naturgeschichte Afr. Vögel*, p. 59, pl. 16; based on "Le Rounoir" of Levaillant, ? 1797, *Hist. Nat. Oiseaux Afrique*, 1, p. 47, pl. 16—South Africa.

*Falco jakal* Daudin, 1800, *Traité Ornith.*, 2, p. 161; based on "Le Rounoir" of Levaillant, ? 1797, *Hist. Nat. Oiseaux Afrique*, 1, p. 47, pl. 16—South Africa.

South Africa, south of the Limpopo River, and Damaraland, South West Africa (Namibia).

GENUS **MORPHNUS** DUMONT

*Morphnus* Cuvier = Dumont, 1816, *Dict. Sci. Nat.*, 1, Suppl., p. 88. Type, by subsequent designation (Chubb, 1916, *Birds Brit. Guiana*, 1, p. 252), *Falco guianensis* Daudin.

cf. Lehmann, 1943, *Caldasia*, 2, pp. 165–179.

**MORPHNUS GUIANENSIS**

**Morphnus guianensis** (Daudin)

*Falco guianensis* Daudin, 1800, *Traité Ornith.*, 2, p. 78; based on "Petit Aigle de la Guiane" of Mauduyt de la Varenne, 1782, *Encycl. Méthod.*, *Hist. Nat. Amimaux*, 1, p. 475—Cayenne.

*Morphnus taeniatus* Gurney, 1879, *Ibis*, p. 176, pl. 3—Sarayacu, Ecuador.

Locally in lowland forest from Honduras to Panama, and in South America, east of the Andes, south to Paraguay and northern Argentina (Misiones).

GENUS **HARPIA** VIEILLOT

*Harpia* Vieillot, 1816, *Analyse*, p. 24. Type, by monotypy, *Vultur harpyja* Linnaeus.

**HARPIA HARPYJA**

**Harpia harpyja** (Linnaeus)

*Vultur Harpyja* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 86;



based on "Yzquauhtli" of Hernandez, 1651, Nova Plant. Animal. Mineral. Mex. Hist., Hist. Animal. Mineral., p. 34—Mexico.

Lowland forest in Mexico, central America, and, in South America, south to Paraguay and (formerly) northern Argentina.

GENUS **HARPYOPSIS** SALVADORI

*Harpyopsis* Salvadori, 1875, Ann. Mus. Civ. Genova, **7**, p. 682. Type, by monotypy, *Harpyopsis novaeguineae* Salvadori.

**HARPYOPSIS NOVAEGUINEAE**

**Harpyopsis novaeguineae** Salvadori

*Harpyopsis novaeguineae* Salvadori, 1875, Ann. Mus. Civ. Genova, **7**, p. 682—Andai, Arfak Peninsula, New Guinea.

GENUS **PITHECOPHAGA** OGILVIE-GRANT

*Pithecophaga* Ogilvie-Grant, 1896, Bull. Brit. Ornith. Club, **6**, p. 16. Type, by monotypy, *Pithecophaga jefferyi* Ogilvie-Grant.

cf. Gonzales, 1968, Silliman Journ., **15**, pp. 461-491.  
Kennedy, 1977, Wilson Bull., **89**, pp. 1-20.

**PITHECOPHAGA JEFFERYI**

**Pithecophaga jefferyi** Ogilvie-Grant

*Pithecophaga jefferyi* Ogilvie-Grant, 1896, Bull. Brit. Ornith. Club, **6**, p. 17—Samar, Philippine Islands.  
Larger islands of the Philippines: Luzon, Samar, Leyte, Mindanao. Probably extirpated on Samar and Leyte.

GENUS **ICTINAETUS** BLYTH

*Ictinaetus* Blyth, 1843, Journ. Asiatic Soc. Bengal, **2**, p. 128.  
Type, by monotypy, *Ictinaetus oivorus* Blyth = *Aquila pernigra* Hodgson.

## ICTINAETUS MALAYENSIS

**Ictinaetus malayensis perniger** (Hodgson)

*Aquila Pernigra* Hodgson, 1836, Journ. Asiatic Soc. Bengal, 5, p. 227—Nepal.

Hill forest in Nepal, India, and Sri Lanka (Ceylon).

**Ictinaetus malayensis malayensis** (Temminck)

*Falco malayensis* Reinwardt = Temminck, 1822, Planches Color., livr. 20, pl. 177—Indian Archipelago; restricted to Java by Swann, 1922, Synop. Accipitres, ed. 2, p. 115.

Hill forest in southeastern Asia from Burma south to the larger islands of the East Indies, including the Moluccas.

GENUS **AQUILA** BRISSON

*Aquila* Brisson, 1760, Ornith., 1, pp. 28, 419. Type, by tautonymy, *Aquila* Brisson = *Falco chrysaetos* Linnaeus. *Uroaëtus* Kaup, 1844, Class. Säugethiere Vögel, p. 121. Type, by original designation, [*Aquila*] *fucosa* = *Vultur audax* Latham.

cf. Brooke *et al.*, 1972, Occas. Papers Nat. Mus. Rhodesia, ser. B, 5, pp. 61-114 (*nipalensis*, *rapax*).

Fischer, 1976, Steinadler, Kaffern- Keilschwanzadler (Neue Brehm-Bücherei 500), 220 pp. (*chrysaetos*, *verreauxi*, *audax*).

**AQUILA POMARINA*****Aquila pomarina pomarina*** Brehm

*Aquila Pomarina* C. L. Brehm, 1831, Handb. Naturgeschichte Vögel Deutschlands, p. 27—Pomerania.

*Psammoaetus nipalensis bradfieldi* Roberts, 1928, Ann. Transvaal Mus., 12, p. 301—Damaraland.

Europe from eastern Germany, Poland, Austria (formerly), and the Balkan countries, including European Turkey (Thrace) east through the USSR to the Moscow and Ukraine regions, north to about Leningrad and south to the Caucasus and Caspian lowlands. Winters sparingly in the Middle East and northeastern Africa, but chiefly in the African savannas south of the Equator, to Rhodesia (Zimbabwe) and occasionally South West Africa (Namibia).

**Aquila pomarina hastata** (Lesson)

*Morphnus hastatus* Lesson, 1834, in Bélanger, Voyage Indes-Orientales, Zool., p. 217—Bengal.  
India south to Tamil Nadu; Bangladesh.

## AQUILA CLANGA

**Aquila clanga** Pallas

*Aquila Clanga* Pallas, 1811, Zoographia Rosso-Asiat., 1, p. 351—Russia and Siberia.  
Finland, East Germany, Rumania, and Russia, east across central Eurasia to the Amur River, possibly Sakhalin, northern China, Pakistan, and northern India; one breeding record Sweden. In winter reaches southern Europe, northeastern Africa (casually to Kenya), Yemen, India, Burma, southern China, Taiwan, Indochina, and Malay Peninsula.

## AQUILA RAPAX

**Aquila rapax orientalis** Cabanis

*Aquila orientalis* Cabanis, 1854, Journ. Ornith., 2, p. 369, note—Sarepta, southeastern Russia.  
Steppes of Rumania and Russia, east to the steppes north of the Caspian and Aral Seas. Winters from the Near East, Iraq, and Arabia to eastern Africa, south to Rhodesia (Zimbabwe).

**Aquila (rapax) nipalensis** Hodgson

*Aquila nipalensis* Hodgson, 1833, Asiatic Researches, 18, pt. 2, p. 13, pl. [1]—great valley of Nepal.<sup>1</sup>  
Steppes of central Asia, east of *orientalis*, from the Aral Sea area across Mongolia to northern China. Reaches India, Burma, and southern China in winter; casually farther south.

**Aquila rapax vindhiana** Franklin

*Aquila Vindhiana* Franklin, 1831, Proc. Com. Sci. Corresp. Zool Soc. London, pt. 1, p. 114—Vindhya Hills, India.  
Pakistan, India, Bangladesh, and central Burma.

<sup>1</sup>Peters, 1931, Check-list Birds World, 1, p. 255, inadvertently gave "*Circaetus nipalensis*" instead of the correct *Aquila nipalensis*.—D. A.

**Aquila rapax belisarius** (Levaillant)

*Falco Belisarius* Jean Levaillant, 1850, Explor. Sci. Algérie, Hist. Nat. Oiseaux, Atlas, pl. 2—no locality. Type from Ghelma (= Guelma), province of Constantine, north-eastern Algeria, *vide* Loche, 1867, Explor. Sci. Algérie, Hist. Nat. Oiseaux, 1, p. 24.

*Aquila raptor* A. E. Brehm, 1855, Naumannia, [5], p. 13—Blue and White Nile.

Morocco, Tunisia, Sudan, and southern Arabia south to northern Nigeria, northern Zaire, and northern Kenya.

**Aquila rapax rapax** (Temminck)

*Falco rapax* Temminck, 1828, Planches Color., livr. 76, pl. 455—South Africa.

Angola, southern Zaire, and Kenya south to Cape Province.

## AQUILA HELIACA

**Aquila heliaca adalberti** Brehm

*Aquila Adalberti* C. L. Brehm, 1861, Ber. XIII. Versammlung Deutschen Ornith.-Gesell. (1860), p. 60—Spain. Spain, Portugal, and the northern peninsula of Morocco.

**Aquila heliaca heliaca** Savigny

*Aquila heliaca* Savigny, 1809, Descr. Égypte, Hist. Nat., 1, p. 82, pl. 12—Upper Egypt.

*Aquila heliaca ricketti* Swann, 1931, Monogr. Birds Prey, pt. 10, p. 42—Foochow, Fukien, China.

Southeastern Europe from Hungary and northern Greece east through Russia, Turkey, Cyprus, Caucasus, Iran, and Chinese Turkistan to the Baykal area. Winters south to northeastern Africa (casually Kenya), Iraq, northern India, southeastern China, and northern Indochina.

## AQUILA WAHLBERGI

**Aquila wahlbergi** Sundevall

*Aquila Wahlbergi* Sundevall, 1851, Öfversigt K. Vetenskaps-Akad. Förhandlingar, Stockholm, 7 (1850), p. 109—"in Caffraria superiori, prope 25° lat." Type from Mohapvani, Botswana.

Open country in Africa, south of the Sahara, south to northern Cape Province. Migratory in some areas.

## AQUILA GURNEYI

**Aquila gurneyi** Gray

*Aquila* (? *Heteropus*) *gurneyi* G. R. Gray, 1860, Proc. Zool. Soc. London, p. 342, pl. 169—Batjan, Moluccas.

Moluccas; New Guinea and off-lying islands (Waigeo, Batanta, Salawati, Misool, Aru, Goodenough).

AQUILA CHRYSÆTOS<sup>1</sup>**Aquila chrysaetos homeyeri** Severtsov

*Aquila fulva Homeyeri* Severtsov, 1888, Nouv. Mém. Soc. Imp. Naturalistes Moscou, 15, p. 184—Balearic Islands and Algeria.

Spain, Balearic Islands, ? Sardinia, northwestern Africa south to Mauritania, Egypt, Sinai, Turkey, Syria, Arabia, Caucasus, Iran.

**Aquila chrysaetos chrysaetos** (Linnaeus)

*Falco Chrysaëtos* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 19.

*Falco fulvus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88—Europe = England (*ex* Willughby, 1676, Ornith., p. 28, and Ray, 1713, Synop. Method. Avium Piscium, p. 6, note 2).

British Isles, Lapland, and northern Russia south to the Pyrenees, Alps, and Balkan Peninsula, east to western Siberia and northern Kirghiz Steppes. Intergrading with *canadensis* in the Altai Mountains and central Siberia.

**Aquila chrysaetos canadensis** (Linnaeus)

*Falco canadensis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88; based on "The White-tailed Eagle" of Edwards, 1743, Nat. Hist. Birds, 1, p. 1, pl. 1—Hudson Bay.

*Aquila chrysaetos kamtschatica* Severtsov, 1888, Nouv. Mém. Soc. Imp. Naturalistes Moscou, 15, p. 180—Kamchatka.

*Aquila chrysaëtos obscurior* Sushkin, 1925, Spisok Raspredelenie Ptits Russkogo Altaia, p. 59—central Altai and Sailughem ranges.

<sup>1</sup>*A. chrysaetos*, *audax*, and possibly *gurneyi* form a superspecies.—D. A.

Eastern Asia, east of the range of *chrysaetos*, south to northern Mongolia and Manchuria; North America south in the west to Durango, Mexico, and in the east sparingly to New York and (formerly) North Carolina. Migratory in north.

***Aquila chrysaetos daphanea*** Severtsov

?*Aquila fulva* var. *intermedia* Severtsov, 1873, *Izvestiia Imp. Obshchestva Liubitelei Estest. Antrop. Etnogr.*, Moscow, 8, pt. 2 (1872), p. 112—Turkistan.

*Aquila daphanea* Severtsov, 1888, *Nouv. Mém. Soc. Imp. Naturalistes Moscou*, 15, p. 190—Russian Turkistan, Transbaicalia, etc.

*Aquila chrysaetus* [sic] *hodgsoni* Ticehurst, 1931, *Bull. Brit. Ornith. Club*, 52, p. 25—Hazara, Pakistan.

Mountains of Asia, south of *chrysaetos* and *canadensis*, from Russian Turkistan east to northern China, south to Afghanistan, Pakistan, the Himalayas, and southwestern China.

***Aquila chrysaetos japonica*** Severtsov

*Aquila fulva japonica* Severtsov, 1888, *Nouv. Mém. Soc. Imp. Naturalistes Mouscou*, 15, p. 182—Japan.

Mountains of Korea and Japan (Hokkaido, Honshu), straggling south in winter.

#### AQUILA AUDAX

***Aquila audax audax*** (Latham)

*Vultur audax* Latham, 1801, *Index Ornith.*, Suppl., p. 2—New South Wales.

Australia; also savannas of southern New Guinea.

***Aquila audax fleayi*** Condon and Amadon

*Aquila audax fleayi* Condon and Amadon, 1954, *Rec. South Austral. Mus.*, 11, p. 229—Great Lake, Tasmania.

Tasmania.

#### AQUILA VERREAUXII

***Aquila verreauxii*** Lesson

*Aquila Verreauxii* Lesson, 1830, *Centurie Zool.*, p. 105, pl. 38—interior of Cape of Good Hope.

Africa throughout in open country, north to the borders of the Sahara (except northwest), and locally to Sinai, Israel, and the Arabian Peninsula.

GENUS **HIERAAETUS** KAUP

*Hieraaëtus* Kaup, 1844, Class. Säugethiere Vögel, p. 120.

Type, by original designation, *Falco pennatus* Gmelin.

cf. Mayr, 1941, Ornith. Monatsber., 49, p. 43 (*fasciatus*).

**HIERAAETUS FASCIATUS**<sup>1</sup>**Hieraaetus fasciatus fasciatus** (Vieillot)

*Aquila fasciata* Vieillot, 1822, Mém. Soc. Linnéenne Paris, 2, pt. 2, p. 152—Fontainebleau, France, and Sardinia.

*Hieraaetus fasciatus grandis* Wilder, 1928, Bull. Peking Soc. Nat. Hist., 3, no. 1, p. 39—Chihli, China.

Southern Europe from Spain and southern France to Greece; larger Mediterranean islands; northern Africa from Morocco to Cyrenaica, south to the Atlas; locally through Asia Minor south to Yemen and east to northern Iraq, Iran, Russian Turkistan, Afghanistan, Pakistan, India, northern and central Burma, southern China, perhaps northern Thailand and Indochina.

**Hieraaetus fasciatus renschi** Stresemann

*Hieraaetus fasciatus renschi* Stresemann, 1932, Ornith. Monatsber., 40, p. 78—Sumbawa.

Lesser Sunda Islands: Sumbawa, Timor, Wetar, Luang.

**HIERAAETUS SPILOGASTER****Hieraaetus spilogaster** (Bonaparte)

*Spizaëtus spilogaster* Du Bus de Gisignies = Bonaparte, 1850, Rev. Mag. Zool., Paris, sér. 2, 2, p. 487—Ethiopia.

Africa south of the Sahara, except in heavy forest.

**HIERAAETUS PENNATUS****Hieraaetus pennatus pennatus** (Gmelin)

*Falco pennatus* Gmelin, 1788, Syst. Nat., 1, p. 272; based on "Booted Falcon" of Latham, 1781, General Synop. Birds, 1, p. 75—no locality; France suggested by Swann, 1922, Synop. Accipitres, ed. 2, p. 113.

Locally in southern Europe from Spain and France to the

<sup>1</sup>*H. fasciatus* and *spilogaster* form a superspecies.—D. A.

Balkans; northern Africa from Morocco to Tunisia, south to the Atlas; Near East (Turkey, Syria); USSR north to Moscow area and east to Caucasus and Caspian. Breeding locally in South Africa, perhaps only recently. In part highly migratory, wintering in eastern Africa, sparingly south to South Africa.

**Hieraaetus pennatus milvoides** (Jerdon)

*S(pizaetus) milvoides* Jerdon, 1839, Madras Journ. Lit. Sci., 10, p. 75—Trichinopoly, Madras, India. Migrant.

*Hieraaetus pennatus harterti* Stegmann, 1935, Ornith. Monatsber., 43, p. 151—Troitskosavsk = Kyakhta, Transbaicalia.

Asia, east of the range of *pennatus*, locally to the Baykal area, Mongolia, and northwestern China, north to lat. 55° N., south to Turkistan, Afghanistan, and northwestern India. Winters south to Sri Lanka (Ceylon) and occasionally Malaysia.

HIERAAETUS MORPHNOIDES

**Hieraaetus morphnoides morphnoides** (Gould)

*Aquila morphnoïdes* Gould, 1841, Proc. Zool. Soc. London (1840), p. 161—upper Hunter River, New South Wales. Australia.

**Hieraaetus morphnoides weiskei** (Reichenow)

*Eutolmaetus weiskei* Reichenow, 1900, Ornith. Monatsber., 8, p. 185—Astrolabe Mountains, New Guinea; altitude 3,000 feet.

Mountains of central and eastern New Guinea.

HIERAAETUS DUBIUS

**Hieraaetus dubius** (Smith)

*Morphinus dubius* A. Smith, 1830, South Afr. Quart. Journ., ser. 1, p. 117—Heer Logement, near Olifants River, Cape Province.

*Spizaëtus ayresii* Gurney, 1862, Ibis, p. 149, pl. 4—Natal.

*Hieraaetus fasciatus minor* Erlanger, 1904, Journ. Ornith., 52, p. 185, pl. 10—northern Somalia.

Locally in sub-Saharan Africa, except in extensive forest.

HIERAAETUS KIENERII

**Hieraaetus kienerii kienerii** (Geoffroy Saint-Hilaire)

*Astur Kienerii* G. S. = Geoffroy Saint-Hilaire, 1835, Mag.



Zool., Paris, 5, cl. 2, text to pl. 35—Himalayas.

Lower Himalayas and foothills from Nepal to Assam, Western Ghats of peninsular India, Sri Lanka (Ceylon).

**Hieraaetus kienerii formosus** Stresemann

*Hieraaëtus kieneri formosus* Stresemann, 1924, Ornith. Monatsber., 32, p. 108—northern Celebes.

Burma, Thailand, southern Indochina, Hainan, Malaya, Sumatra, Java, Borneo, Philippines, Celebes, Lesser Sunda Islands (Sumbawa).

GENUS **SPIZASTUR** GRAY

*Spizastur* G. R. Gray, 1841, List Gen. Birds, ed. 2, p. 3.

Type, by original designation, *S. atricapillus* Cuvier = *Buteo melanoleucus* Vieillot.

**SPIZASTUR MELANOLEUCUS**

**Spizastur melanoleucus** (Vieillot)

*Buteo melanoleucus* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 4, p. 482—Guiana.

Southern Tamaulipas, Mexico (? casual), south locally through Middle America and South America to southern Brazil, Paraguay, and northern Argentina, shunning Amazonia.

GENUS **LOPHAETUS** KAUP

*Lophaëtus* Kaup, 1847, Isis von Oken, col. 165. Type, by monotypy, *Falco occipitalis* Daudin.

**LOPHAETUS OCCIPITALIS**

**Lophaetus occipitalis** (Daudin)

*Falco occipitalis* Daudin, 1800, Traité Ornith., 2, p. 40; based on "Le Huppard" of Levaillant, 1796, Hist. Nat. Oiseaux Afrique, 1, p. 8, pl. 2—"pays d'Auteniquoi" = Knysna district, Cape Province.

Africa from Senegal east to Sudan and Ethiopia, south to Cape Province.

GENUS **SPIZAETUS** VIEILLLOT

*Spizaëtus* Vieillot, 1816, Analyse, p. 24. Type, by subsequent designation (G. R. Gray, 1840, List. Gen. Birds, p. 2), *Falco ornatus* Daudin.

*Cassinaëtus* W. L. Sclater, 1922, Bull. Brit. Ornith. Club, 42, p. 76. Type, by original designation, *Limnaetus africanus* Cassin.

#### SPIZAETUS AFRICANUS

##### **Spizaetus africanus** (Cassin)

*Limnaetus africanus* Cassin, 1865, Proc. Acad. Nat. Sci. Philadelphia, p. 4—Ogabi River, Gabon.

Forests in Africa from Liberia east through Zaire to western Uganda and Lake Tanganyika.

#### SPIZAETUS CIRRHATUS

##### **Spizaetus cirrhatus cirrhatus** (Gmelin)

*Falco cirrhatus* Gmelin, 1788, Syst. Nat., 1, p. 274; based on "Crested Indian Falcon" of Latham, 1781, General Synop. Birds, 1, p. 80—India.

Indian Peninsula, south from Bengal, central Rajasthan, and the Gangetic Plain.

##### **Spizaetus cirrhatus ceylanensis** (Gmelin)

*Falco ceylanensis* Gmelin, 1788, Syst. Nat., 1, p. 275; based on "Ceylonese crested Falcon" of Latham, 1781, General Synop. Birds, 1, p. 82—Ceylon.

Sri Lanka (Ceylon).

##### **Spizaetus cirrhatus andamanensis** Tytler

*Spizaetus Andamanensis* Tytler, 1865, Proc. Asiatic Soc. Bengal, p. 112—Port Blair, South Andaman Island.

Andaman Islands.

##### **Spizaetus (cirrhatus) limnaeetus** (Horsfield)

*Falco Limnaeetus* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 138—Java.

Himalayan foothills from Garhwal to Assam, thence south to Thailand, southern Indochina, Malaya, Sumatra, Java, Borneo, and the Philippines (Calamianes, Palawan, Lubang, Mindoro, Mindanao).

##### **Spizaetus cirrhatus vanheurni** Junge

*Spizaetus cirrhatus vanheurni* Junge, 1936, Temminckia, 1, p. 24—Simalur = Simeulue.

Simeulue Island, off western Sumatra.

**Spizaetus cirrhatus floris** (Hartert)

*Limnaëtus limnaëtus floris* Hartert, 1898, Novit. Zool., 5, p. 46—Flores.

Lesser Sunda Islands: Sumbawa, Flores.

SPIZAETUS NIPALENSIS<sup>1</sup>**Spizaetus nipalensis orientalis** Temminck and Schlegel

*Spizaëtus orientalis* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 7—Japan.

Mountains of Hokkaido, Honshu, and Shikoku, Japan, straggling to Korea.

**Spizeatus nipalensis nipalensis** (Hodgson)

*Nisaëtus Nipalensis* Hodgson, 1836, Journ. Asiatic Soc. Bengal, 5, p. 229, pl. 7—Nepal.

*Spizaetus nipalensis fokiensis* W. L. Sclater, 1919, Bull. Brit. Ornith. Club, 40, p. 37—Fukien.

*Spizaetus nipalensis whiteheadi* Swann, 1933, Monogr. Birds Prey, pt. 11, p. 112—Hainan.

Himalayas from Kashmir to Assam, highlands of southern China, Taiwan, Hainan, Burma, Thailand. Winter visitor Malaya.

**Spizaetus nipalensis kelaarti** Legge

*Spizaëtus kelaarti* Legge, 1878, Ibis, p. 202—Ceylon.

Mountains of southwestern India and Sri Lanka (Ceylon).

## SPIZAETUS BARTELSI

**Spizaetus bartelsi** Stresemann

*Spizaëtus nipalensis bartelsi* Stresemann, 1924, Journ. Ornith., 72, p. 431—western Java.

Java.

## SPIZAETUS LANCEOLATUS

**Spizaetus lanceolatus** Temminck and Schlegel

*Spizaëtus lanceolatus* Temminck and Schlegel, 1844, in Siebold, Fauna Japonica, Aves, p. 7—Celebes.

Celebes and off-lying islands (Peleng, Sula Besi = Sanana, Muna, Butung).

<sup>1</sup>*S. nipalensis*, *bartelsi*, and perhaps *lanceolatus*, *philippensis*, and *alboniger* form a superspecies.—D. A.

## SPIZAETUS PHILIPPENSIS

**Spizaetus philippensis** Gould

*Spizaetus Philippensis* Gould, 1863, Birds Asia, pt. 15, in text to pl. labeled *Spizaetus alboniger*—Philippines. Philippine Islands.

## SPIZAETUS ALBONIGER

**Spizaetus alboniger** (Blyth)

*Nisaetus alboniger* Blyth, 1845, Journ. Asiatic Soc. Bengal, 14, p. 173—Malacca, Malay Peninsula. Tenasserim, Burma; Malay Peninsula; Sumatra; North Pagai Island (off western Sumatra); Borneo.

## SPIZAETUS NANUS

**Spizaetus nanus nanus** Wallace

*Spizaetus nanus* Wallace, 1868, Ibis, p. 14—Sarawak. Southern Tenasserim, Burma; Malay Peninsula; Sumatra; Borneo.

**Spizaetus nanus stresemanni** Amadon

*Spizaetus nanus stresemanni* Amadon, 1953, Ibis, 95, p. 498—Mojeia River, Nias. Nias Island, off western Sumatra.

## SPIZAETUS TYRANNUS

**Spizaetus tyrannus serus** Friedmann

*Spizaetus tyrannus serus* Friedmann, 1950, Smithsonian Misc. Coll., 111, no. 16, p. 1—Río Indio, Canal Zone, Panama.

Tropical Mexico south through Central America and South America to Colombia, Ecuador, Venezuela, Trinidad, the Guianas, northern and western Brazil, Bolivia.

**Spizaetus tyrannus tyrannus** (Wied)

*Falco tyrannus* Wied, 1820, Reise Brasilien, 1, p. 360—Rio Belmonte, Bahia, Brazil. Eastern Brazil from Bahia south, northeastern Argentina (Misiones).

## SPIZAETUS ORNATUS

**Spizaetus ornatus vicarius** Friedmann

*Spizaetus ornatus vicarius* Friedmann, 1935, Journ. Wash-

ington Acad. Sci., **25**, p. 451—Manatol (= Manatee) Lagoon, British Honduras.

Tropical Mexico south through Central and South America to Colombia (west of the Eastern Andes) and western Ecuador.

**Spizaetus ornatus ornatus** (Daudin)

*Falco ornatus* Daudin, 1800, *Traité Ornith.*, **2**, p. 77; based on "L'Aigle Moyen de la Guiane" of Mauduyt de la Varenne, 1782, *Encycl. Méthod.*, *Hist. Nat. Animaux*, **1**, p. 475, and "L'Autour Huppé" of Levaillant, 1798, *Hist. Nat. Oiseaux Afrique*, **1**, p. 76, pl. 2—Cayenne.

South America from eastern base of Colombian Andes east to the Guianas and thence south through Brazil, eastern Ecuador, and eastern Peru to eastern Bolivia, northern Argentina, Paraguay, and Rio Grande do Sul; Trinidad and Tobago.

GENUS **STEPHANOÆTUS** SCLATER

*Stephanoætus* W. L. Sclater, 1922, *Bull. Brit. Ornith. Club*, **42**, p. 72. Type, by original designation, *Falco coronatus* Linnaeus.

**STEPHANOÆTUS CORONATUS**

**Stephanoætus coronatus** (Linnaeus)

*Falco coronatus* Linnaeus, 1766, *Syst. Nat.*, ed. 12, **1**, p. 124; based on "The Crowned Eagle" of Edwards, 1758, *Gleanings Nat. Hist.*, p. 31, pl. 224—coast of Guinea.

Africa from Guinea to southwestern Ethiopia, south to Angola, Rhodesia (Zimbabwe), and eastern Cape Province.

GENUS **OROÆTUS** RIDGWAY

*Oroætus* Ridgway, 1920, *Smithsonian Misc. Coll.*, **72**, no. 4, p. 1. Type, by original designation, *Falco isidori* Des Murs.

**OROÆTUS ISIDORI**

**Oroætus isidori** (Des Murs)

*Falco Isidori* Des Murs, 1845, *Rev. Zool.*, Paris, **8**, p. 175 bis—Santa Fé de Bogotá, Colombia.

*Spizaëtus devillei* Dubois, 1874, *Bull. Acad. Roy. Sci. Lettres Beaux-Arts Belgique*, sér. 2, **38**, p. 129, pls. 1-2—Baeza, Ecuador.

Andes from western Venezuela and Colombia south through Ecuador and Peru to northwestern Argentina. In forest.

GENUS **POLEMAETUS** HEINE

*Polemaëtus* Heine, 1890, in Heine and Reichenow, Nomencl. Mus. Heineani Ornith., p. 270. Type, by monotypy, *Falco bellicosus* Daudin.

**POLEMAETUS BELLICOSUS**

***Polemaetus bellicosus*** (Daudin)

*Falco bellicosus* Daudin, 1800, *Traité Ornith.*, 2, p. 38; based on "Le Griffard" of Levaillant, 1796, *Hist. Nat. Oiseaux Afrique*, 1, p. 1, pl. 1—Great Namaqualand, Cape Province. Africa south of the Sahara from Gambia and Ethiopia south to South Africa. In open country.

SUBORDER **SAGITTARII**

FAMILY **SAGITTARIIDAE**

GENUS **SAGITTARIUS** HERMANN

*Sagittarius* Hermann, 1783, *Tabula Affinitatum Animalium*, pp. 136, 235. Type, by monotypy, *Sagittarius* of Vosmaer = *Falco serpentarius* J. F. Miller.

**SAGITTARIUS SERPENTARIUS**

***Sagittarius serpentarius*** (Miller)

*Falco serpentarius* J. F. Miller, 1779, *Icones Animalium*, pt. 5, pl. 28—Cape of Good Hope. Africa south of the Sahara. In open country.

SUBORDER **FALCONES**

FAMILY **FALCONIDAE**

SUBFAMILY **POLYBORINAE**

cf. Vuilleumier, 1970, *Breviora*, no. 355, 29 pp.

Olson, 1976, *Proc. Biol. Soc. Washington*, 88, pp. 355-365.

GENUS **DAPTRIOUS** VIEILLOT

*Daptrius* Vieillot, 1816, Analyse, p. 22. Type, by monotypy,  
*Daptrius ater* Vieillot.

*Ibycter* Vieillot, 1816, Analyse, p. 22. Type, by monotypy,  
*Falco americanus* Boddaert.

**DAPTRIOUS ATER****Daptrius ater** Vieillot

*Daptrius ater* Vieillot, 1816, Analyse, p. 68—Brazil.

Eastern Colombia, southern Venezuela, the Guianas, and south through Amazonia to northeastern Bolivia, northern Mato Grosso, and northern Maranhão.

**DAPTRIOUS AMERICANUS****Daptrius americanus** (Boddaert)

*Falco americanus* Boddaert, 1783, Table Planches Enlum., p. 25; based on "Aigle d'Amérique" of Daubenton, 1765-81, Planches Enlum., pl. 417—Cayenne.

*Ibycter americanus guatemalensis* Swann, 1921, Synop. Accipitres, ed. 2, p. 14—Guatemala.

*Daptrius americanus pelzelni* Pinto, 1948, Papéis Avulsos, Dept. Zool., São Paulo, 8, p. 294—Ypanema, São Paulo.

Chiapas, Mexico; Central America and South America east of the Andes to central Peru, Mato Grosso, and São Paulo. In forest.

GENUS **PHALCOBOENUS** ORBIGNY

*Phalcoboenus* Orbigny, 1834, Voyage Amérique Méridionale, livr. 2, pl. 2. Type, by monotypy, *Phalcoboenus montanus* Orbigny = *Aquila megalopterus* Meyen.

**PHALCOBOENUS MEGALOPTERUS****Phalcoboenus (megalopterus) carunculatus** Des Murs

*Phalcoboenus carunculatus* Des Murs, 1853, Rev. Mag. Zool., Paris, sér. 2, 5, p. 154—Colombia.

High Andes of southwestern Colombia and Ecuador.

**Phalcoboenus (megalopterus) megalopterus** (Meyen)

*Aquila megaloptera* Meyen, 1834, Nova Acta Acad. Caes.

Leopold.-Carol. Nat. Curiosorum, Halle, 16, Suppl., p. 64, pl. 7—Cordillera of Chile.

Andes from central Peru south through Bolivia, Argentina, and Chile to about lat. 35° S. (Talca, Chile).

**Phalcoboenus (megalopterus) albogularis** Gould

*Polyborus (Phalcoboenus) albogularis* Gould, 1837, Proc. Zool. Soc. London, p. 9—Santa Cruz, Patagonia.

Andean slopes of Chile and Argentina from latitude of Neuquén Province, Argentina, south, including Isla Grande, Tierra del Fuego. At lower elevations southward.

PHALCOBOENUS AUSTRALIS

**Phalcoboenus australis** (Gmelin)

*Falco australis* Gmelin, 1788, Syst. Nat., 1, p. 259; based on "Statenland Eagle" of Latham, 1781, General Synop. Birds, 1, p. 40 (ex J. R. Forster MS)—Staten Island.

Islands off extreme southern South America (Staten Island, Navarino Island, Cape Horn islands, etc.), and possibly southern and northeastern coasts of Isla Grande, Tierra del Fuego; Falkland Islands.

GENUS **POLYBORUS** VIEILLLOT

*Polyborus* Vieillot, 1816, Analyse, p. 22. Type, by monotypy, Caracara of Buffon = *Falco plancus* J. F. Miller.

*Caracara* Merrem, 1826, in Ersch and Gruber, Allgemeine Encycl. Wissen. Künste, 15, p. 159. Type, by subsequent designation (Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 4, p. 281), *Falco plancus* J. F. Miller.

POLYBORUS PLANCUS

**Polyborus (plancus) lutosus** Ridgway

*Polyborus Lutosus* Ridgway, 1876, Bull. U. S. Geol. Geogr. Surv. Territories, 1, ser. 2, p. 459—Guadalupe Island.

Guadalupe Island, off Baja California, Mexico. Extinct.

**Polyborus plancus pallidus** Nelson

*Polyborus cheriway pallidus* Nelson, 1898, Proc. Biol. Soc. Washington, 12, p. 8—María Madre Island.

María Madre, Tres Marias Islands, off western Mexico.



**Polyborus plancus cheriway** (Jacquin)

*Falco cheriway* Jacquin, 1784, Beytr. Geschichte Vögel, p. 17, pl. 4—Aruba.

*Polyborus Audubonii* Cassin, 1865, Proc. Acad. Nat. Sci. Philadelphia, p. 2—Florida.

*Polyborus plancus ammophilus* van Rossem, 1939, Ann. Mag. Nat. Hist., ser. 11, 4, p. 441—Tesia, Sonora, Mexico.

Southern United States in Florida and locally from Texas to Arizona; thence south through Middle America and South America to northern Peru and the Amazon. Also Cuba, Isle of Pines, and Dutch West Indies.

**Polyborus plancus plancus** (Miller)

*Falco plancus* J. F. Miller, 1777, Icones Animalium, pt. 3, pl. 17—Tierra del Fuego.

*Falco Tharus* Molina, 1782, Saggio Storia Nat. Chili, pp. 264, 343—Chile.

*Falco brasiliensis* Gmelin, 1788, Syst. Nat., 1, p. 262; based on "Brazilian Kite" of Latham, 1781, General Synop. Birds, 1, p. 63—Brazil.

Central Peru, central Bolivia, Brazil from the Amazon delta south to Tierra del Fuego; Falkland Islands.

GENUS **MILVAGO** SPIX

*Milvago* Spix, 1824, Avium Species Novae Itinere Brasiliam, 1, p. 12. Type, by monotypy, *Milvago ochrocephalus* Spix = *Polyborus chimachima* Vieillot.

**MILVAGO CHIMACHIMA****Milvago chimachima cordatus** Bangs and Penard

*Milvago chimachima cordatus* Bangs and Penard, 1918, Bull. Mus. Comp. Zool., 62, p. 35—San Miguel, Pearl Islands.

*Milvago chimachima paludivaga* Penard, 1923, Proc. New England Zool. Club, 8, p. 36—Paramaribo, Surinam.

Southern Costa Rica; Panama; Pearl Islands, Gulf of Panama; northern South America, east of the Andes, south to the Amazon; probably Trinidad. Not in heavy forest.

**Milvago chimachima chimachima** (Vieillot)

*Polyborus chimachima* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 259; based on "Chimachima," no. 6, of Azara, 1802, Apuntamientos Hist. Nat. Páxaros Paraguay

Rio Plata, 1, p. 50—Paraguay.  
 South America, south of the Amazon, to northern Argentina, Paraguay, and Uruguay.

#### MILVAGO CHIMANGO

##### **Milvago chimango chimango** (Vieillot)

*Polyborus chimango* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 260; based on "Chimángo," no. 5, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 1, p. 47—Paraguay and Río de la Plata.

*Milvago chimango azarae* Brodkorb, 1939, Proc. Biol. Soc. Washington, 52, p. 83—east of Rosario, Paraguay.

Northern and central Chile south to about Concepción, extreme southern Brazil, Paraguay, Uruguay, Argentina south to Río Chubut.

##### **Milvago chimango temucoensis** Sclater

*Milvago chimango temucoensis* W. L. Sclater, 1918, Bull. Brit. Ornith. Club, 38, p. 43—Pelal, near Temuco, Cautín, Chile.

Southern South America, south of *chimango*, south through Tierra del Fuego to the Cape Horn islands.

#### GENUS HERPETOTHERES VIEILLOT

*Herpetotheres* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 18, p. 317. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 3), *Falco cachinnans* Linnaeus.

#### HERPETOTHERES CACHINNANS

##### **Herpetotheres cachinnans chapmani** Bangs and Penard

*Herpetotheres cachinnans chapmani* Bangs and Penard, 1918, Bull. Mus. Comp. Zool., 62, p. 37—Quintana Roo, Mexico.

*Herpetotheres cachinnans excubitor* van Rossem, 1938, Trans. San Diego Soc. Nat. Hist., 9, p. 10—Volcán de Colima, Jalisco, Mexico.

Mexico from southern Sonora and San Luis Potosí south; Central America south to Honduras.

##### **Herpetotheres cachinnans cachinnans** (Linnaeus)

*Falco cachinnans* Linnaeus (ex Rolander MS), 1758, Syst.

Nat., ed. 10, p. 90—South America; restricted to Surinam by Berlepsch, 1908, *Novit. Zool.*, **15**, p. 290.

*Herpetotheres cachinnans maestus* Bangs and Noble, 1918, *Auk*, **35**, p. 444—Bellavista, Río Marañón, Peru.

Nicaragua south through Central America and South America to Peru and central Brazil.

**Herpetotheres cachinnans queribundus** Bangs and Penard  
*Herpetotheres cachinnans queribundus* Bangs and Penard, 1919, *Bull. Mus. Comp. Zool.*, **63**, p. 23—Pernambuco, Brazil.

Eastern Bolivia and eastern Brazil south to Paraguay and northern Argentina.

#### GENUS MICRASTUR GRAY

*Micrastur* G. R. Gray, 1841, *List Gen. Birds*, p. 6. Type, by original designation, *Falco brachypterus* Temminck = *Sparvius semitorquatus* Vieillot.

cf. Traylor, 1948, *Fieldiana, Zool.*, **31**, pp. 199–200 (*buckleyi*).  
Schwartz, 1972, *Condor*, **74**, p. 399–415 (*ruficollis, gilvicollis*).

#### MICRASTUR RUFICOLLIS

**Micrastur ruficollis guerilla** Cassin

*Micrastur guerilla* Cassin, 1848, *Proc. Acad. Nat. Sci. Philadelphia*, **4**, p. 87—near Jalapa, Veracruz.

?*Micrastur ruficollis oaxacae* Phillips, 1966, *Bull. Brit. Ornith. Club*, **86**, p. 91—southwestern Oaxaca.

Southern Mexico south through Central America to Nicaragua.

**Micrastur ruficollis interstes** Bangs

*Micrastur interstes* Bangs, 1907, *Auk*, **24**, p. 289—La Estrella de Cartago, Costa Rica.

Costa Rica, Panama, western Colombia, western Ecuador.

**Micrastur ruficollis zonothorax** (Cabanis)

*Climacocercus zonothorax* Cabanis, 1865, *Journ. Ornith.*, **13**, p. 406—Puerto Cabelo, Carabobo, Venezuela.

?*Micrastur ruficollis kalinowskii* Dunajewski, 1938, *Acta Ornith. Mus. Zool. Polonici*, **2**, p. 319—Amable María, Junín, Peru.

Eastern Andean foothills from Colombia and Venezuela south possibly to Bolivia.

**Micrastur ruficollis concentricus** (Lesson)

*Nisus concentricus* Illiger = Lesson, 1830, *Traité Ornith.*, livr. 1, p. 60—Cayenne.

Southern Venezuela, the Guianas, and all of Amazonia.

**Micrastur ruficollis ruficollis** (Vieillot)

*Sparvius ruficollis* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 10, p. 322—South America; restricted to Rio de Janeiro by Naumburg, 1930, *Bull. Amer. Mus. Nat. Hist.*, 60, p. 105.

Brazil south of Amazonia, Paraguay, north-central and north-eastern Argentina.

**Micrastur ruficollis olrogi** Amadon

*Micrastur ruficollis olrogi* Amadon, 1964, *Amer. Mus. Novit.*, no. 2166, p. 19—San Pablo, Tucumán, Argentina.

Subtropical forest in northwestern Argentina.

## MICRASTUR GILVICOLLIS

**Micrastur gilvicollis gilvicollis** (Vieillot)

*Sparvius gilvicollis* Vieillot, 1817, *Nouv. Dict. Hist. Nat.*, nouv. éd., 10, p. 323—no locality. Type from Cayenne.

*Micrastur pelzelni* Ridgway, 1876, *Ibis*, p. 4—Sarayacu, Río Ucayali, Peru.

Southern Venezuela, the Guianas, and all of Amazonia.

**Micrastur (gilvicollis) plumbeus** Sclater

*Micrastur plumbeus* W. L. Sclater, 1918, *Bull. Brit. Ornith. Club*, 38, p. 44—Río Bogotá, Esmeraldas, Ecuador.

Southwestern Colombia (Cauca Valley) and northwestern Ecuador. Rare.

## MICRASTUR MIRANDOLLEI

**Micrastur mirandollei** (Schlegel)

*Astur mirandollei* Schlegel, 1862, *Mus. Hist. Nat. Pays-Bas*, Rev. Méthod. Crit. Coll., livr. 1, Astures, p. 27—Surinam.

*Micrastur mirandollei extimus* Griscom and Greenway, 1937, *Bull. Mus. Comp. Zool.*, 81, p. 418—Permé, Panamá.

Costa Rica, Panama, western slope of Colombia, and northern South America, east of the Andes, south through Amazonia and eastern Brazil to Espírito Santo.

## MICRASTUR SEMITORQUATUS

**Micrastur semitorquatus naso** (Lesson)

*Carnifex naso* Lesson, 1842, Écho Monde Savant, 9, col. 1085—Realejo, Nicaragua.

Mexico from Sinaloa and Tamaulipas south through Central America to Panama, northern and western Colombia, and Ecuador.

**Micrastur semitorquatus semitorquatus** (Vieillot)

*Sparvius semi-torquatus* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 10, p. 322; based on "Esparvero faxado," no. 29, of Azara, 1802, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 1, p. 126—Paraguay.

South America east of the Andes (except northern Colombia), south to Paraguay and northern Argentina.

## MICRASTUR BUCKLEYI

**Micrastur buckleyi** Swann

*Micrastur melanoleucus buckleyi* Swann, 1919, Synop. List Accipitres, substitute p. 15—Sarayacu, Ecuador.

Amazonian Ecuador and Peru.

## SUBFAMILY FALCONINAE

GENUS SPIZIAPTERYX KAUP<sup>1</sup>

*Spizapteryx* Kaup, 1852, Proc. Zool. Soc. London (1851), p. 43. Type, by monotypy, *Harpagus circumcinctus* Kaup.

## SPIZIAPTERYX CIRCUMCINCTUS

**Spizapteryx circumcinctus** (Kaup)

*Harpagus circumcinctus* Kaup, 1852, Proc. Zool. Soc. London (1851), p. 43—Chili; error, type from Mendoza, Argentina (cf. Hellmayr and Conover, 1949, Publ. Field Mus. Nat. Hist., Zool. Ser., 13, pt. 1, no. 4, p. 288, note 2).

Chaco and bordering areas of northern and central Argentina; recorded once from Paraguay.

<sup>1</sup>Position of genus doubtful, may belong in Polyborinae; cf. Olson, 1976, Auk, 93, pp. 633-636.—D. A.

GENUS **POLIHIERAX** KAUP

- Polihiërax* Kaup, 1847, Isis von Oken, col. 47. Type, by monotypy, *Falco semitorquatus* A. Smith.  
*Neohierax* Swann, 1922, Synop. Accipitres, ed. 2, p. 184.  
 Type, by original designation, *Polihierax insignis* Walden.

**POLIHIERAX SEMITORQUATUS****Polihierax semitorquatus** (Smith)

*Falco simitorquata* [sic] A. Smith, 1836, Rep. Exped. Explor. Central Africa, p. 44—near Old Latakoo = Kuruman, Botswana, *fide* W. L. Sclater, 1924, Syst. Avium Aethiopicarum, p. 56.

*Hypotriorchis castanonotus* Heuglin, 1860, Ibis, p. 407—Méré Belenia, White Nile, southern Sudan.

*Polihierax semitorquatus major* Bowen, 1931, Proc. Acad. Nat. Sci. Philadelphia, 83, p. 259—Mbuyuni, Teita district, Kenya.

Southern Ethiopia and Somalia south through Kenya to northern Tanzania; Transvaal west to Angola and South West Africa (Namibia).

**POLIHIERAX INSIGNIS****Polihierax insignis insignis** Walden

*Polihierax insignis* Walden, 1872, Proc. Zool. Soc. London (1871), p. 627—Tongoo, Upper Burma.

Irrawaddy Valley of Burma.

**Polihierax insignis cinereiceps** Stuart Baker

*Polihierax insignis cinereiceps* Stuart Baker, 1927, Bull. Brit. Ornith. Club, 47, p. 101—Myawadi, Kawthoolei, Burma.

Tenasserim, Burma; Thailand.

**Polihierax insignis harmandi** Oustalet

*Falco (Polihierax)* [sic] *Harmandi* Oustalet, 1876, Bull. Soc. Philomath. Paris, sér. 6, 13, p. 57—Laos.

*Neohierax insignis beaulieui* Delacour and Jabouille, 1930, Oiseau, 11, p. 407—Ban-Ni, Cochinchina.

Southern Indochina.

GENUS **MICROHIERAX** SHARPE

- Microhierax* Sharpe, 1874, Cat. Birds Brit. Mus., 1, p. 366.  
 Type, by original designation, *Falco fringillarius* Drapiez.

MICROHIERAX CAERULESCENS<sup>1</sup>**Microhierax caerulescens caerulescens** (Linnaeus)

*Falco caerulescens* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88; based on "The little Black and Orange-colour'd Indian Hawk" of Edwards, 1750, Nat. Hist. Birds, p. 108, pl. 108—Asia = Bengal *ex* Edwards.

Himalayan foothills from northern Uttar Pradesh to the hills of Assam.

**Microhierax caerulescens burmanicus** Swann

*Microhierax caerulescens burmanicus* Swann, 1920, Synop.

List Accipitres, p. 116—Thayetmyo, Burma.

Burma south to northern Tenasserim, Thailand, central and southern Indochina.

## MICROHIERAX FRINGILLARIUS

**Microhierax fringillarius** (Drapiez)

*Falco fringillarius* Drapiez, 1824, in Bory de Saint-Vincent (ed.), Dict. Class. Hist. Nat., 6, p. 412, pl. 59—"Indes"; Sumatra suggested by Hartert, 1902, Novit. Zool., 9, p. 541.<sup>2</sup>

*Hierax horsfieldi* Lesson, 1843, Écho Monde Savant, 10, col. 728—Java, Sumatra.

Southern Tenasserim, southern Thailand, Malaya, Sumatra, Java, Bali, Borneo.

## MICROHIERAX LATIFRONS

**Microhierax latifrons** Sharpe

*Microhierax latifrons* Sharpe, 1879, Ibis, p. 237, pl. 7—Lawas River and Lumbidan, Borneo.

Northwestern Borneo (Sarawak).

<sup>1</sup>*M. caerulescens* and *fringillarius* form a superspecies.—D. A.

<sup>2</sup>Deignan, 1946, Ibis, 88, p. 403, stated that *Falco fringillarius* Drapiez, 1824, is preoccupied by *Falco fringillarius* Sprüngli, 1784 (= *Falco nisus* Linnaeus), as published by Storr in Alpenreise, 1, p. 71. Dr. E. Sutter of Basel has kindly sent me a photostat of the page in question from Storr's publication, and, as Sutter remarks, the name is a *nomen nudum*.—D. A.

## MICROHIERAX ERYTHROGENYS

**Microhierax erythrogenys erythrogenys** (Vigors)

*Hierax erythrogenys* Vigors, 1831, Proc. Com. Sci. Corresp. Zool. Soc. London, pt. 1, p. 96—near Manila.

Philippine Islands: Luzon and Mindoro.

**Microhierax erythrogenys meridionalis** Ogilvie-Grant

*Microhierax meridionalis* Ogilvie-Grant, 1897, Ibis, p. 220—Samar and Mindanao.

Philippine Islands: Samar to Mindanao.

## MICROHIERAX MELANOLEUCUS

**Microhierax melanoleucus** (Blyth)

*Ierax melanoleucus* Blyth, 1843, Journ. Asiatic Soc. Bengal, 12, p. 179—Assam.

Eastern Bangladesh, Assam, southeastern China, northern Indochina.

GENUS **FALCO** LINNAEUS

*Falco* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 3), "*F. peregrinus* L." = *Falco peregrinus* Tunstall.

*Ieracidea* Gould, 1838, Synop. Birds Australia, pt. 3, pl. 43. Type, by monotypy, *Falco berigora* Vigors and Horsfield.

*Cuvieria* (nec *Cuvieria* Lesueur and Pictet, 1807, Coelenterata) Roberts, 1922, Ann. Transvaal Mus., 8, p. 210. Type, by original designation, *Falco cuvieri* A. Smith.

*Planofalco* Oberholser, 1925, Amer. Midland Nat., 9, p. 601. Type, by original designation, *Falco mexicanus* Schlegel.

cf. Sushkin, 1905, Nouv. Mém. Soc. Imp. Naturalistes Moscou, 16, livr. 4, pp. 106-117 (generic status of *novaeseelandiae*).

Stresemann and Amadon, 1963, Ibis, 105, pp. 400-402 (status of *kreyenborgi*).

Piechocki, 1975, Turmfalke (Neue Brehm-Bücherei 116), ed. 4, 106 pp. (*tinnunculus*).

Fischer, 1977, Wanderfalke (Neue Brehm-Bücherei 380), ed. 4, 152 pp. (*peregrinus*).



## FALCO BERIGORA

**Falco berigora novaeguineae** (Meyer)

*Hieracidea novaeguineae* A. B. Meyer, 1894, Journ. Ornith.,  
42, p. 89—Huon Peninsula, New Guinea.

Eastern two thirds of New Guinea and some off-lying islands  
(Manam, Karkar, Long).

**Falco berigora melvillensis** (Mathews)

*Ieracidea berigora melvillensis* Mathews, 1912, Austral  
Avian Rec., 1, p. 34—Melville Island.

*Ieracidea berigora kempfi* Mathews, 1916, Birds Australia,  
5, p. 277—Cape York.

Coastal districts of northern Australia and the nearby islands.

**Falco berigora berigora** Vigors and Horsfield

*Falco Berigora* Vigors and Horsfield, 1827, Trans. Linn.  
Soc. London, 15, p. 184—New South Wales.

Coastal districts and highlands of southern Queensland and  
New South Wales.

**Falco berigora occidentalis** (Gould)

*Ieracidea occidentalis* Gould, 1844, Birds Australia, pt. 16  
(1 September), pl. and text—Western Australia = Perth,  
*vide* Mathews, 1913, List Birds Australia, p. 112.

Moister parts of southwestern Australia.

**Falco berigora centralia** (Mathews)

*Ieracidea berigora centralia* Mathews, 1916, Birds Australia,  
5, p. 277—Finke River, Northern Territory.

Arid regions of Australia.

**Falco berigora tasmanica** (Mathews)

*Ieracidea berigora tasmanica* Mathews, 1916, Birds Australia,  
5, p. 276—Tasmania.

Tasmania, Flinders, King, and other nearby islands; probably  
wanders to adjacent southern Australia.

## FALCO NAUMANNI

**Falco naumanni** Fleischer

*Falco Naumanni* Fleischer, 1818, in Laurop and Fischer's  
Sylvan for 1817/1818, p. 174—southern Germany and  
Switzerland; error for Sicily, *vide* Stresemann (MS).

*Falco cenchrus* var. *pekinensis* Swinhoe, 1870, Proc. Zool.

Soc. London, p. 442—near Peking.

Locally in southern Europe from southern Portugal to southern Russia, south to the larger Mediterranean islands and north-western Africa (Morocco to Tunisia, south to the Atlas); east locally through Asia Minor, Caucasus, Iran, southern Asiatic steppes, north to about lat. 55° N.; east to Mongolia and northern China. Highly migratory, wintering from Africa to India, Burma, and southern China.

#### FALCO SPARVERIUS<sup>1</sup>

##### **Falco sparverius sparverius** Linnaeus

*Falco sparverius* Linnaeus, 1758, Syst. Nat., ed. 10, p. 90; based on "The Little Hawk" of Catesby, 1729, Nat. Hist. Carolina, pt. 1, p. 5, pl. 5—America = South Carolina ex Catesby.

*Tinnunculus phalaena* Lesson, 1845, Écho Monde Savant, 12, col. 1087, San Blas, Nayarit, and Acapulco, Guerrero, Mexico.

*Falco sparverius guadalupensis* Bond, 1943, Condor, 45, p. 179—Guadalupe Island, off Baja California.

East-central Alaska, Canada south of the tundra, south through United States (except southeast) and western Mexico (except coastal areas) to Guerrero. In winter south to Panama.

##### **Falco sparverius paulus** (Howe and King)

*Cerchneis sparverius paulus* Howe and King, 1902, Contrib. North Amer. Ornith., 1, p. 28—Miami, Florida.

South Carolina to southern Alabama and south through Florida.

##### **Falco sparverius peninsularis** Mearns

*Falco sparverius peninsularis* Mearns, 1892, Auk, 9, p. 267—San José, Baja California.

Southern Baja California and lowlands of Sonora and Sinaloa, Mexico.

##### **Falco sparverius tropicalis** (Griscom)

*Cerchneis sparveria tropicalis* Griscom, 1930, Amer. Mus. Novit., no. 414, p. 1—Antigua, Guatemala.

<sup>1</sup>*F. sparverius, tinnunculus, newtoni, punctatus, araea, moluccensis,* and *cenchroides*, all or part, form a superspecies.—D. A.

Southern Mexico (Chiapas), Guatemala, and northern Honduras.

**Falco sparverius nicaraguensis** Howell

*Falco sparverius nicaraguensis* Howell, 1965, Auk, **82**, p. 442—Puerto Cabezas, Nicaragua.

Lowland pine savanna of Honduras and Nicaragua.

**Falco sparverius sparverioides** Vigors

*Falco Sparverioides* Vigors, 1827, Zool. Journ., **3**, p. 436—near Havana, Cuba.

Cuba and Isle of Pines.

**Falco sparverius dominicensis** Gmelin

*Falco dominicensis* Gmelin, 1788, Syst. Nat., **1**, p. 285; based on "L'Emerillon de S. Dominigue" of Brisson, 1760, Ornith., **1**, p. 389, pl. 32, fig. 2—Santo Domingo.

Hispaniola, West Indies.

**Falco sparverius caribaeorum** Gmelin

*Falco caribaeorum* Gmelin, 1788, Syst. Nat., **1**, p. 284; based on "L'Emerillon des Antilles" of Brisson, 1760, Ornith., **1**, p. 385 (ex "l'Emerillon Gri-Gry" of Dutertre, 1667, Hist. Antilles, **2**, p. 253)—Antilles; restricted to Guadeloupe by Berlepsch, 1892, Journ. Ornith., **40**, p. 92.

*Cerchneis sparveria loquacula* Riley, 1904, Smithsonian Misc. Coll., **47**, p. 284—Isabel II, Vieques Island, Puerto Rico.

Puerto Rico; Lesser Antilles from the Virgin Islands to Grenada.

**Falco sparverius brevipennis** (Berlepsch)

*Tinnunculus sparverius brevipennis* Berlepsch, 1892, Journ. Ornith., **40**, p. 91—Curaçao.

Aruba, Curaçao, and Bonaire, Netherlands West Indies.

**Falco sparverius isabellinus** Swainson

*Falco isabellinus* Swainson, 1837, Animals Menageries, p. 281—Demerara, Guyana.

*Cerchneis sparverius margaritensis* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., **1**, p. 297—Margarita Island, Venezuela.

*Cerchneis sparverius distincta* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., **1**, p. 297—Boa Vista, Rio Branco, Brazil.

*Cerchneis sparveria perplexa* Cory, 1915, Publ. Field Mus.

Nat. Hist., Ornith. Ser., 1, p. 327—lower Essequibo River, Guyana.

Venezuela (except northwest), Guianas, coastal Trinidad (formerly), northern Brazil.

**Falco sparverius ochraceus** (Cory)

*Cerchneis sparverius ochracea* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., 1, p. 298—Colón, Táchira, Venezuela.

*Cerchneis sparveria intermedia* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., 1, p. 325—Villavicencio, Colombia; altitude 1,600 feet.

Mountains of eastern Colombia and northwestern Venezuela.

**Falco sparverius caucae** (Chapman)

*Cerchneis sparverius caucae* Chapman, 1915, Bull. Amer. Mus. Nat. Hist., 34, p. 375—La Manuelita, Cauca Valley, Colombia.

Western Colombia in the mountains bordering the Cauca Valley.

**Falco sparverius aequatorialis** Mearns

*Falco sparverius aequatorialis* Mearns, 1892, Auk, 9, p. 269—Guayaquil; error, type from interior of Ecuador, *vide* Chapman, 1915, Bull. Amer. Mus. Nat. Hist., 34, p. 377.

Subtropical and temperate zones of Ecuador north of the Chanchan Valley.

**Falco sparverius peruvianus** (Cory)

*Cerchneis sparverius peruviana* Cory, 1915, Publ. Field Mus. Nat. Hist., Ornith. Ser., 1, p. 296—Chachapoyas, Peru.

Subtropical and temperate zones of southwestern Ecuador, Peru, and extreme northern Chile (Tacna).

**Falco sparverius fernandensis** (Chapman)

*Cerchneis sparverius fernandensis* Chapman, 1915, Bull. Amer. Mus. Nat. Hist., 34, p. 379—Más a Tierra.

Juan Fernández Islands (Más a Tierra), off Chile.

**Falco sparverius cinnamominus** Swainson

*Falco cinnamominus* Swainson, 1837, Animals Menageries, p. 281—Chile.

Southeastern Peru, Chile, Bolivia, Paraguay, Uruguay, southeastern Brazil, south to the Strait of Magellan and Tierra del Fuego.

**Falco sparverius cearae** (Cory)

*Cerchneis sparveria cearae* Cory, 1915, Publ. Field Mus.

Nat. Hist., Ornith. Ser., 1, p. 318—Quixada, Ceará, Brazil.

*Falco sparverius eidos* Peters, 1931, Check-list Birds World, 1, p. 305—Bahia, Brazil.

Tableland of Brazil, from southern Maranhão and Ceará south to Mato Grosso and Rio Grande do Sul and west to the Bolivian border.

## FALCO TINNUNCULUS

**Falco tinnunculus tinnunculus** Linnaeus

*Falco Tinnunculus* Linnaeus, 1758, Syst. Nat., ed. 10, p.

90—Europe; restricted to Sweden by Linnaeus, 1761,

Fauna Svecica, ed. 2, p. 21.

*Cerchneis tinnunculus dörriesi* Swann, 1920, Synop. List

Accipitres, p. 146—Sidemi River, southern Ussuriland.

*Falco tinnunculus stegmanni* Portenko, 1931, Mitt. Zool.

Mus. Berlin, 17, p. 415—Kelpin, Kashgaria, Chinese Turkistan.

Eurasia, including British Isles, north nearly to the limit of trees, east to the Pacific in Amurland and Ussuriland (but not extreme northeastern Asia), south to the Mediterranean and its islands; North Africa from Morocco to northern Libya, Israel, Iraq, Iran, Turkistan, Afghanistan, Pakistan, Kashmir, Tibet, northwestern China, Manchuria, and ? northern Korea. Somewhat migratory, reaching central Africa, India, and southeastern Asia.

**Falco tinnunculus interstinctus** McClelland

*Falco interstinctus* McClelland, 1840, Proc. Zool. Soc. London (1839), p. 154—Assam, India.

*Tinnunculus saturatus* Blyth, 1859, Journ. Asiatic Soc. Bengal, 28, p. 277—Ye, Tenasserim, Burma.

*Falco tinnunculus japonensis* Ticehurst, 1929, Bull. Brit.

Ornith. Club, 50, p. 10. New name for *Falco tinnunculus*

*japonicus* Temminck and Schlegel, 1844, in Siebold, Fauna

Japonica, Aves, p. 2, pls. 1 and 1b, preoccupied by *Falco*

*japonicus* Latham, 1790, Index Ornith., p. 13 = *Falco*

*japonensis* Gmelin, 1788, Syst. Nat., 1, p. 257.

*Cerchneis tinnunculus manchuricus* Stuart Baker, 1930,

Fauna Brit. India, Birds, ed. 2, 7, p. 403. New name for

*Falco tinnunculus japonicus* Temminck and Schlegel, 1844, preoccupied as above.

Eastern Himalayan foothills, central and southern China, central and southern Korea, Japan (? Hokkaido, Honshu), south to northern Burma and Indochina. On migration to India, Malay Peninsula, and the Philippines.

**Falco tinnunculus objurgatus** (Stuart Baker)

*Cerchneis tinnunculus objurgatus* Stuart Baker, 1927, Bull. Brit. Ornith. Club, 47, p. 106—Ootacamund, Nilgiri Hills, India.

Western and Eastern Ghats, in southern India.

**Falco tinnunculus canariensis** (Koenig)

*Cerchneis tinnunculus canariensis* Koenig, 1890, Journ. Ornith., 38, p. 285, pl. 1—Tenerife, Canary Islands. Madeira Islands and western Canary Islands.

**Falco tinnunculus dacotiae** Hartert

*Falco tinnunculus dacotiae* Hartert, 1913, Vögel Pal. Fauna, p. 1086—Lanzarote, Canary Islands.

Eastern Canary Islands.

**Falco tinnunculus neglectus** Schlegel

*Falco neglectus* Schlegel, 1873, Mus. Hist. Nat. Pays-Bas, livr. 10, Rev. Coll. Oiseaux Proie, p. 43—São Vicente, Cape Verde Islands.

Northern Cape Verde Islands.

**Falco tinnunculus alexandri** Bourne

*Falco tinnunculus alexandri* Bourne, 1955, Bull. Brit. Ornith. Club, 75, p. 36—São Tiago, Cape Verde Islands.

Southern Cape Verde Islands.

**Falco tinnunculus rupicolaeformis** (Brehm)

*Cerchneis rupicolaeformis* C. L. Brehm, 1855, Vollständige Vogelfang, p. 29—Egypt.

*Falco tinnunculus buryi* Grant and Mackworth-Præd, 1933, Bull. Brit. Ornith. Club, 54, p. 22—Dthala, Amiri district, South Arabia = Ad Dali, South Yemen, and Manakhah, Yemen.

Egypt, northern Sudan, Arabian Peninsula.

**Falco tinnunculus archeri** Hartert and Neumann

*Falco tinnunculus archeri* Hartert and Neumann, 1932, Journ. Ornith., 80, p. 531—Waghar Mountains, Somalia.

Somalia, coastal Kenya, Socotra.

**Falco tinnunculus rufescens** Swainson

*Falco rufescens* [sic] Swainson, 1837, Birds West Africa, 1, p. 109—no locality. Type presumably from Sierra Leone.

*Cerchneis tinnunculus carlo* Hartert and Neumann, 1907, Journ. Ornith., 55, p. 592—Bussidimo, near Harar, Ethiopia.

*Falco tinnunculus tanganyikae* Grant and Mackworth-Praed, 1933, Bull. Brit. Ornith. Club, 54, p. 21—Kigoma, Tanzania.

Guinea south to Cameroon and east through Sudan to Ethiopia; south to central Tanzania, east of the forest.

**Falco tinnunculus rupicolus** Daudin

*Falco rupicolus* Daudin, 1800, Traité Ornith., 2, p. 135; based on "Le Montagnard" of Levaillant, 1798, Hist. Nat. Oiseaux Afrique, 1, p. 95, pl. 35—Cape of Good Hope.

*Cerchneis tinnunculus ngamiensis* Roberts, 1932, Ann. Transvaal Mus., 15, p. 21—Ngamiland, Botswana.

Angola, southern Zaire, and southern Tanzania south to Cape Province.

## FALCO NEWTONI

**Falco newtoni** (Gurney)

*Tinnunculus newtoni* Gurney, 1863, Ibis, p. 34, pl. 2—Madagascar.

*Falco newtoni aldabranus* Grote, 1928, Ornith. Monatsber., 36, p. 78—Aldabra.

Madagascar and Aldabra Islands.

## FALCO PUNCTATUS

**Falco punctatus** Temminck

*Falco punctatus* Temminck, 1821, Planches Color., livr. 8, pl. 45—Mauritius.

Mauritius, Indian Ocean.

## FALCO ARAEA

**Falco araea** (Oberholser)

*Falco gracilis* Lesson, 1830, Traité Ornith., livr. 2, p. 93—no locality.

*Cerchneis araea* Oberholser, 1917, Proc. Biol. Soc. Washington, 30, p. 76—Seychelles. New name for *Falco gracilis*

Lesson, 1830, preoccupied by *Falco gracilis* Temminck, 1821, Planches Color., livr. 16, pl. 91 and text. Seychelles, Indian Ocean.

#### FALCO MOLUCCENSIS

##### **Falco moluccensis moluccensis** (Bonaparte)

*Tinnunculus moluccensis* Schlegel = Bonaparte, 1850, Consp. Gen. Avium, 1, p. 27—Ambon.

Southern islands of the Moluccas (Buru, Ambon, Ceram).

##### **Falco moluccensis bernsteini** Stresemann

*Falco moluccensis bernsteini* Stresemann, 1919, Anzeiger Ornith. Gesell. Bayern, 1, p. 8—northern Moluccas.

Northern islands of the Moluccas (Morotai, Halmahera, Ternate, Tidore, Batjan, Obi).

##### **Falco moluccensis javensis** Mayr

*Falco moluccensis javensis* Mayr, 1941, Ornith. Monatsber., 49, p. 45—Cheribon, Java.

Java, Bali, and nearby small islands (Penida, Kangean).

##### **Falco moluccensis microbalia** (Oberholser)

*Tinnunculus moluccensis occidentalis* A. B. Meyer and Wigglesworth, 1896, Abh. Ber. K. Zool. Mus. Dresden, 6, no. 2, p. 8—Pening, Celebes.

*Cerchneis moluccensis microbalia* Oberholser, 1919, Proc. U. S. Nat. Mus., 54, p. 178—Salembu Besar, Java Sea. New name for *Tinnunculus moluccensis occidentalis* A. B. Meyer and Wigglesworth, 1896, preoccupied by *Ieracidea occidentalis* Gould, 1844, Birds Australia, pt. 16, pl. and text.

Celebes and northern Lesser Sunda Islands from Lombok to Alor; also various associated or intervening islets (Salembu Besar, Tanahdjampea group, Butung, Tukangbesi group).

##### **Falco moluccensis timorensis** Mayr

*Falco moluccensis timorensis* Mayr, 1941, Ornith. Monatsber., 49, p. 46—Timor.

Timor, Lesser Sunda Islands, and some smaller islands to eastward as far as Tanimbar (Timorlaut).

##### **Falco moluccensis renschi** Siebers

*Falco moluccensis renschi* Siebers, 1930, Treubia, 7, Suppl., p. 239—Sumba.

Sumba, Lesser Sunda Islands.



## FALCO CENCHROIDES

**Falco cenchroides cenchroides** Vigors and Horsfield

*Falco Cenchroides* Vigors and Horsfield, 1827, Trans. Linn. Soc. London, **15**, p. 183—Australia = New South Wales, *vide* Mathews, 1912, Novit. Zool., **18**, p. 253.

Australia, Tasmania, Lord Howe Island; Christmas Island, Indian Ocean. Somewhat migratory, and has been recorded on various islands to the north of Australia from Java to the Arus and New Guinea lowlands; also New Zealand.

**Falco cenchroides baru** Rand

*Falco cenchroides baru* Rand, 1940, Amer. Mus. Novit., no. 1072, p. 1—Mt. Wilhelmina, New Guinea; altitude 3,400 meters.

Oranje Mountains, central New Guinea.

## FALCO RUPICOLOIDES

**Falco rupicoloides fieldi** (Elliot)

*Cerchneis fieldi* Elliot, 1897, Publ. Field Mus. Nat. Hist., Ornith. Ser., **1**, p. 58—Silo Plain, Somalia.

Northwestern Somalia and Ethiopia.

**Falco rupicoloides arthuri** (Gurney)

*Tinnunculus arthuri* Gurney, 1884, List Diurnal Birds Prey, pp. 156, 158—Mombasa, Kenya.

Kenya and northeastern Tanzania.

**Falco rupicoloides rupicoloides** Smith

*Falco Rupicoloides* A. Smith, 1829, South Afr. Commercial Advertiser, **4** (30 May)—no locality = South Africa.

Africa from South West Africa (Namibia) and the Zambezi River south.

## FALCO ALOPEX

**Falco alopex** (Heuglin)

*Tinnunculus alopex* Heuglin, 1861, Ibis, p. 69, pl. 3—Gallabat, Sudan.

*Cerchneis alopex eremica* Oberholser, 1917, Proc. Biol. Soc. Washington, **30**, p. 76—Mangu, Togoland.

Ghana south to northern Cameroon, east through Sudan to coast of Red Sea at lat. 16° N., south to northern Uganda and Kenya.

## FALCO ARDOSIACEUS

**Falco ardosiaceus** Vieillot

*Falco Ardosiaceus* Vieillot, 1823, in Bonnaterre and Vieillot, Tableau Encycl. Méthod. Trois Règnes Nature, Ornith., livr. 93, p. 1238—Senegal.

Senegal and Nigeria east through Sudan to Ethiopia, and south through inner eastern Africa to southern Tanzania, thence west to Angola and South West Africa (Namibia).

## FALCO DICKINSONI

**Falco dickinsoni** Sclater

*Falco dickinsoni* P. L. Sclater, 1864, Proc. Zool. Soc. London, p. 248—Chibasa, Shire River, Malawi.

Angola, southern Zaire, Tanzania, Zambia, Malawi, Rhodesia (Zimbabwe), Mozambique, Botswana, and eastern Transvaal; Pemba. Often associated with *Borassus* palms.

## FALCO ZONIVENTRIS

**Falco zoniventris** Peters

*Falco (Hypotriorchis) zoniventris* W. Peters, 1854, Ber. Verh. Akad. Wissen. Berlin (1853), p. 783—St. Augustin Bay, Madagascar.

Madagascar.

## FALCO CHICQUERA

**Falco chicquera chicquera** Daudin

*Falco chicquera* Daudin, 1800, Traité Ornith., 2, p. 121—Bengal.

Southeastern Iran, Pakistan, India including Himalayan foothills, Nepal, Bangladesh.

**Falco chicquera ruficollis** Swainson

*Falco ruficollis* Swainson, 1837, Birds West Africa, 1, p. 107, pl. 2—Senegal.

Gambia to Sudan and Ethiopia, thence south to Zambia, Malawi, and the Zambezi River. Often associated with *Borassus* palms.

**Falco chicquera horsbrughi** Gunning and Roberts

*Falco horsbrughi* Gunning and Roberts, 1911, Ann. Transvaal Mus., 3, p. 110—Pretoria, Transvaal.

*Chicquera ruficollis daviesi* Roberts, 1922, Ann. Transvaal Mus., 8, p. 211—Windhoek, South West Africa.

South Africa from the Zambezi River and South West Africa (Namibia) to Cape Province.

#### FALCO VESPERTINUS<sup>1</sup>

##### **Falco vespertinus** Linnaeus

*Falco vespertinus* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 129—Ingria = Province of St. Petersburg, *vide* Hartert, 1913, Vögel Pal. Fauna, p. 1078.

Eastern Europe from Hungary, Rumania, and longitude of Leningrad in Russia (casually in central Europe) east across Asia, locally to the upper Lena River, north to about lat. 62° N., south to the Ukraine, Crimea, Caucasus, southern Siberia, and foothills of central Asian mountains. Winters in Africa from the Equator south.

#### FALCO AMURENSIS

##### **Falco amurensis** Radde

*Falco vespertinus* var. *amurensis* Radde, 1863, Reisen Süden Ost-Sibirien, 2, p. 102, pl. 1, figs. 2a-c—Zeya River, Amurland.

Asian steppes south and east of the range of *vespertinus*, from the Baykal area east through the Amur Valley, south to Ussuriland, northern China (Manchuria to Shensi and Kiangsu), and northern Korea. Winters in eastern and southern Africa from Kenya and Zaire south.

#### FALCO ELEONORAE

##### **Falco eleonorae** Gén 

*Falco Eleonorae* Gén , 1839, Rev. Zool., Paris, 2, p. 105—Sardinia.

Canary Islands and islands in the Mediterranean (chiefly smaller ones) east to the Cyclades and Cyprus. Winters mainly in Madagascar, but to some extent from the Canary Islands to Somalia.

<sup>1</sup>*F. vespertinus* and *amurensis* form a superspecies.—D. A.

## FALCO CONCOLOR

**Falco concolor** Temminck

*Falco concolor* Temminck, 1825, Planches Color., livr. 56, pl. 330 and text—Senegal, etc.; restricted to Barqan Island, Gulf of Aqaba, by Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, p. 227.

Libya, Egypt, Sudan, islands in the Red Sea (Barqan Island, Dahlak Islands, and others), probably on adjacent coasts of Arabia, south on African coast to Somalia (formerly to Mombasa, Kenya), Near East (Dead Sea). Winters perhaps sparingly throughout breeding range, but chiefly in Madagascar; recorded on passage or wintering Lake Victoria, Lake Tanganyika, Mozambique, Natal, and Réunion; straggler to Mauritius.

## FALCO FEMORALIS

**Falco femoralis septentrionalis** Todd

*Falco fusco-caerulescens septentrionalis* Todd, 1916, Proc. Biol. Soc. Washington, 29, p. 98—Fort Huachuca, Arizona. Southern Arizona, New Mexico, and Texas (now very rare), south locally through Mexico; straggler to Guatemala and Nicaragua.

**Falco femoralis femoralis** Temminck

?*Falco fusco-caerulescens* Vieillot, 1817, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 90; based on "Alconcillo obscuro azulejo," no. 40, of Azara, 1802, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 1, p. 179—Paraguay.

*Falco femoralis* Temminck, 1822, Planches Color., livr. 21, pl. 121 and text; 1825, livr. 58, pl. 343 and text—Brazil. Eastern Panama, Colombia, Venezuela, Trinidad, and Guyana, south locally through Brazil, eastern Bolivia, Paraguay, and Argentina to Patagonia and Tierra del Fuego.

**Falco femoralis pichincae** Chapman

*Falco fusco-caerulescens pichincae* Chapman, 1925, Amer. Mus. Novit., no. 205, p. 1—Pichincha, Ecuador. Temperate zone of southwestern Colombia, Ecuador, Peru, and western Bolivia, south to northern Chile and northwestern Argentina (Tucumán).

## FALCO COLUMBARIUS

**Falco columbarius subaesalon** Brehm

*Falco columbarius subaesalon* C. L. Brehm, 1827, *Ornis*,  
3, p. 9—Iceland.

Iceland. Migrates to Faeroes, British Isles, France, Belgium.

**Falco columbarius aesalon** Tunstall

*Falco Aesalon* Tunstall, 1771, *Ornith. Brit.*, p. 1; based on  
"Le Faucon de Roche, ou Rochier" of Brisson, 1760, *Ornith.*,  
1, p. 349—France.

*Falco regulus* Pallas, 1773, *Reise Verschiedene Provinzen  
Russischen Reichs*, 2, p. 707—Siberia.

Northern Eurasia from the Faeroes and British Isles east to  
central Siberia (Yenisey River and southern Taymyr Peninsu-  
la), north to about the Arctic Circle, south to Estonia, Moscow,  
and about lat. 55° N. in Siberia. In winter reaches Near and  
Middle East, Afghanistan, Kashmir.

**Falco columbarius insignis** (Clark)

*Aesalon regulus insignis* Clark, 1907, *Proc. U. S. Nat. Mus.*,  
32, p. 470—Fusan = Pusan, Korea. Migrant.

Siberia, east of the range of *aesalon*, east to the valley of  
the Kolyma, south to the middle Lena and the Stanovoy Range.  
Recorded in winter at scattered points from Egypt and the  
Middle East to China, Japan, and northern Indochina.

**Falco columbarius pacificus** (Stegmann)

*Aesalon columbarius pacificus* Stegmann, 1929, *Bull. Acad.  
Sci. URSS, Cl. Sci. Phys.-Math.*, p. 591—Rasboinik Rock,  
Sea of Okhotsk.

Far eastern Siberia, east of the range of *insignis*, including  
Sakhalin but apparently absent from Kamchatka. Winters  
chiefly in Japan and China.

**Falco columbarius pallidus** (Sushkin)

*Lithofalco aesalon pallidus* Sushkin, 1900, *Bull. Brit. Ornith.  
Club*, 11, p. 5—western Kirghiz Steppes.

*Falco christiani-ludovici* Kleinschmidt, 1917, *Falco*, 13, p.  
10—Caucasus. Migrant.

Steppes of Asia from southern foothills of Ural Mountains  
and area north of the Aral Sea east to the western foothills  
of the Altai. Winters to the south from eastern Turkey to  
northwestern India and southwestern China.

**Falco columbarius lymani** Bangs

*Falco aesalon lymani* Bangs, 1913, Bull. Mus. Comp. Zool.,  
54, p. 465—Chegan-Burgazy Pass, Altai Mountains.

Mountains of central Asia in USSR, Chinese, Turkistan, and Mongolia, including Tien Shan and Altai ranges and Baykal area. In winter to western China (Sinkiang, Kansu).

**Falco columbarius suckleyi** Ridgway

*Falco columbarius* var. *suckleyi* Ridgway, 1873, Bull. Essex  
Inst., Salem, Mass., 5, p. 201—Shoalwater Bay and Fort  
Steilacoom, Washington.

Islands and coastal slopes from southeastern Alaska to British Columbia (including Queen Charlotte and Vancouver Islands) and northern Washington. Somewhat migratory.

**Falco columbarius columbarius** Linnaeus

*Falco columbarius* Linnaeus, 1758, Syst. Nat., ed. 10, p.  
90; based on "The Pigeon-Hawk" of Catesby, 1729, Nat.  
Hist. Carolina, pt. 1, p. 3, pl. 3—America = South Carolina  
ex Catesby.

*Falco columbarius bendirei* Swann, 1922, Bull. Brit. Ornith.  
Club, 42, p. 66—Fort Walla Walla, Washington.

North America, except Pacific coast and Great Plains, from treeline south to Newfoundland, the United States boundary, and, in the mountains, to Oregon and Wyoming. Winters chiefly from the southernmost United States south to the West Indies and northern South America, but locally north to Newfoundland.

**Falco columbarius richardsonii** Ridgway

*Falco (Hypotriorchis) richardsonii* Ridgway, 1871, Proc.  
Acad. Nat. Sci. Philadelphia (1870), p. 145—mouth of  
Vermillion River, South Dakota.

Great Plains from central Alberta and Saskatchewan south to Wyoming and western Nebraska. Winters from Wyoming and Colorado south to Zacatecas, Mexico.

## FALCO RUFIGULARIS

**Falco rufigularis petoensis** Chubb

*Falco rufigularis petoensis* Chubb, 1918, Bull. Brit. Ornith.  
Club, 39, p. 22—Peto, Yucatán.

*Falco albigularis petrophilus* van Rossem and Hachisuka,  
1937, Proc. Biol. Soc. Washington, 50, p. 107—Guirocoba,  
Sonora, Mexico.

Mexico south through Central and South America to Colombia (west of the Andes) and western Ecuador.

**Falco rufigularis rufigularis** Daudin

*Falco rufigularis* Daudin, 1800, *Traité Ornith.*, **2**, p. 131; based on "Orange-breasted Hobby" of Latham, 1787, *General Synop. Birds, Suppl.*, p. 28, second specimen—Cayenne.

*Falco albigularis* Daudin, 1800, *Traité Ornith.*, **2**, p. 131; based on "Orange-breasted Hobby" of Latham, 1787, *General Synop. Birds, Suppl.*, p. 28, first specimen—Cayenne.

*Falco rufigularis pax* Chubb, 1918, *Bull. Brit. Ornith. Club*, **39**, p. 22—Charuplaya, La Paz, Bolivia.

Venezuela, Trinidad, the Guianas, Amazonia west to the eastern base of the Andes in Colombia, Ecuador, and Peru, south to southern Brazil and northern Argentina.

**Falco rufigularis ophryophanes** (Salvadori)

*Hypotriorchis ophryophanes* Salvadori, 1895, *Boll. Mus. Zool. Anat. Comp. Univ. Torino*, **10** (no. 208), p. 20—Colonia Risso, Río Apa, Paraguay.

Tableland of Brazil from Piauí south to Mato Grosso, São Paulo, and Paraná, eastern Bolivia, Paraguay, northern Argentina.

FALCO SUBBUTEO<sup>1</sup>

**Falco subbuteo subbuteo** Linnaeus

*Falco Subbuteo* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 89; based on "The Hobby" of Albin, 1731, *Nat. Hist. Birds*, **1**, p. 6, pl. 6—Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 20.

*Falco subbuteo jugurtha* Hartert and Neumann, 1907, *Journ. Ornith.*, **55**, p. 591—Tangier, Morocco.

*Hypotriorchis subbuteo centralasiae* Buturlin, 1911, *Ornith. Mitt.*, **2**, p. 175—Baimgol, Tien Shan Range.

Southern England; continental Europe north to about the Arctic Circle, thence east across Siberia to the Sea of Okhotsk, Sakhalin, Kuril Islands, and Hokkaido, Japan; south locally in woodland to northwestern Africa (Morocco to Tunisia, south

<sup>1</sup>*F. subbuteo, cuvieri, longipennis*, and perhaps *rufigularis* and *severus* form a superspecies.—D. A.

to the Atlas Range), larger Mediterranean islands, Asia Minor, Caucasus, Iran, Afghanistan, Russian Turkistan, northern India; Mongolia, northern China. Highly migratory, reaching southern Africa, India, Burma, even Java.

**Falco subbuteo streichi** Hartert and Neumann

*Falco subbuteo streichi* Hartert and Neumann, 1907, Journ. Ornith., 55, p. 592—Swatow, Kwangtung.

China from the Chin Ling Mountains, southern Shensi, south; northern and eastern Burma; northern Indochina.

FALCO CUVIERI

**Falco cuvieri** Smith

*Falco Cuvieri* A. Smith, 1830, South Afr. Quart. Journ., ser. 1, p. 392—no locality = South Africa.

Africa from Gambia and Ghana east to Ethiopia, thence south to eastern Cape Province.

FALCO SEVERUS

**Falco severus severus** Horsfield

*Falco severus* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 135—Java.

*Falco Rufipedoides* Hodgson, 1844, Calcutta Journ. Nat. Hist., 4, p. 283—hills of India; restricted to Nepal by Stuart Baker, 1927, Bull. Brit. Ornith. Club, 47, p. 107.

Lower Himalayas from Pakistan to Assam and thence south in Burma, Thailand, Indochina, Malaya, Greater Sunda Islands, and the Philippines. Occurs southern India (status indeterminate); straggler to Sri Lanka (Ceylon).

**Falco severus papuanus** Meyer and Wigglesworth

*Falco severus papuanus* A. B. Meyer and Wigglesworth, 1894, Abh. Ber. K. Zool. Mus. Dresden, 4 (1892/93), no. 3, p. 6—Huon Gulf, New Guinea.

Celebes, Moluccas, New Guinea and some off-lying islands (Salawati, Japen), New Britain, Solomon Islands.

FALCO LONGIPENNIS

**Falco longipennis hanieli** Hellmayr

*Falco longipennis hanieli* Hellmayr, 1914, in Haniel, Zool. Timor, Lief. 1, p. 100—Bonleo, Timor.

Lesser Sunda Islands from Lombok to Timor.



**Falco longipennis longipennis** Swainson

*Falco longipennis* Swainson, 1837, *Animals Menageries*, p. 341—Tasmania.

The more humid, chiefly coastal, parts of Australia; also Tasmania. Somewhat migratory, reaching islands to north of Australia from the Lesser Sundas (Flores), the Moluccas, and the Kai Islands to southern New Guinea and even New Britain.

**Falco longipennis murchisonianus** Mathews

*Falco lunulatus murchisonianus* Mathews, 1912, *Novit. Zool.*, 18, p. 252—East Murchison, Western Australia.

The drier parts of Australia, north to the north coast of the continent.

## FALCO NOVAESEELANDIAE

**Falco novaeseelandiae** Gmelin

*Falco novae-Seelandiae* Gmelin, 1788, *Syst. Nat.*, 1, p. 268; based on "New-Zealand Falcon" of Latham, 1781, *General Synop. Birds*, 1, p. 57, pl. 4—Queen Charlotte Sound, New Zealand.

New Zealand; Auckland Islands.

## FALCO HYPOLEUCOS

**Falco hypoleucos** Gould

*Falco hypoleucos* Gould, 1841, *Proc. Zool. Soc. London* (1840), p. 162—Western Australia.

Australia, chiefly in the lightly timbered valleys of the interior.

## FALCO SUBNIGER

**Falco subniger** Gray

*Falco subniger* G. R. Gray, 1843, *Ann. Mag. Nat. Hist.*, 11, p. 371—Australia = Victoria, *vide* Mathews, 1912, *Novit. Zool.* 18, p. 252.

Australia, chiefly in the lightly timbered grasslands of the interior.

FALCO MEXICANUS<sup>1</sup>**Falco mexicanus** Schlegel

*Falco mexicanus* Lichtenstein = Schlegel, 1851, *Abh. Gebiete*

<sup>1</sup>*F. mexicanus*, *jugger*, *biarmicus*, *cherrug*, and *rusticolus* may form a superspecies.—D. A.

Zool. Vergleich. Anat., Heft 3, p. 15—Mexico. Type from Monterrey (cf. Schlegel, 1862, Mus. Hist. Nat. Pays-Bas, Rev. Méthod. Crit. Coll., livr. 1, Falcones, p. 18, note).

Drier areas of western North America from southern British Columbia, Alberta, and Saskatchewan south to Baja California, southern Arizona, and western Texas. Somewhat migratory, occurring occasionally as far south as Oaxaca, Mexico.

#### FALCO JUGGER

##### **Falco jugger** Gray

*Falco jugger* J. E. Gray, 1834, Illus. Ind. Zool., 2, pl. 26—India.

Southeastern Iran, Afghanistan, casually in adjacent southern USSR, Pakistan, India including Himalayan foothills, lowlands of Nepal, Bangladesh.

#### FALCO BIARMICUS

##### **Falco biarmicus feldeggii** Schlegel

*Falco Feldeggii* Schlegel, 1843, Abh. Gebiete Zool. Vergleich. Anat., Heft 3, p. 3, pls. 10-11—Dalmatia.

*Falco biarmicus orlandoi* Trischitta, 1939, Alcune Nuove Forme Uccelli Ital., p. 3 (pamphlet)—Castelvetrano, Sicily. Locally in southern Italy and Sicily, east across the Balkans (Yugoslavia, Albania, ? Bulgaria, Greece), western and northern Turkey, adjacent USSR (Armenia, Azerbaijan), northern Syria, Lebanon; also islands of Rhodes and ? Cyprus.

##### **Falco biarmicus erlangeri** Kleinschmidt

*Falco Hierofalco erlangeri* Kleinschmidt, 1901, Aquila, 8, p. 33—Tunis and Tangier.

Northwestern Africa from Morocco to Tunisia, south to Spanish Sahara, Mauritania, and the Tademait Plateau; straggler to Spain.

##### **Falco biarmicus tanypterus** Schlegel

*Falco tanypterus* Schlegel, 1843, Abh. Gebiete Zool. Vergleich. Anat., Heft 3, p. 8, pls. 12-13—Nubia and Ethiopia (p. 2).

Cyrenaica, Egypt, Sinai, Israel, and Iraq; south in Egypt and Sudan to about Khartoum.

##### **Falco biarmicus abyssinicus** Neumann

*Falco biarmicus abyssinicus* Neumann, 1904, Journ. Ornith.,

52, p. 369—Shoa, Ethiopia.

Africa, south of the Sahara, from Ghana and Nigeria east to Ethiopia and Somalia, south to Uganda and the Uele district of Zaire.

**Falco biarmicus biarmicus** Temminck

*Falco biarmicus* Temminck, 1825, Planches Color., livr. 55, pl. 324 and text—Caffraria and Cape of Good Hope.

Angola, southern Zaire (Katanga = Shaba), and Kenya south to Cape Province.

FALCO CHERRUG

**Falco cherrug cherrug** Gray

*Falco cherrug* J. E. Gray, 1834, Illus. Ind. Zool., 2, pts. 15-16, pl. 25—India. In winter.

*Falco cyanopus* Gesner = Thienemann, 1846, Rhea, 1, p. 62, pls. 1-2—Bohemia.

*Falco Hierofalco danubialis* Kleinschmidt, 1939, Falco, 35, p. 27—Rumania.

*Falco Hierofalco aralo-caspicus* Kleinschmidt, 1939, Falco, 35, p. 28—Lenkoran, Azerbaijan.

Central Europe from Czechoslovakia, Austria, Hungary, and Rumania east in the steppes through the Ukraine and western Siberia to the Yenisey River, north to about lat. 55° N., south to the Crimea, lower Don River, Caspian Sea, and foothills of the Russian Altai. Winters from northeastern Africa south to Ethiopia, east across the Middle East to Afghanistan and northwestern India.

**Falco cherrug milvipes** Jerdon

*Falco milvipes* Jerdon, 1871, Ibis, p. 240—Umballa, India. In winter.

*Falco hendersoni* Hume, 1871, Ibis, p. 407—Chinese Turkistan. Type from Kitchik Yilak, north of Sanju Pass, western Kun Lun Range, *vide* Henderson, 1873, in Henderson and Hume, Lahore to Yarkand, p. 171.

*Gennaia saceroides* Menzbir = Bianchi, 1907, in Geograficheskoe Obshchestvo SSSR, Mongolia Kam, 5 (Aves Exped. Koslowi Mongoliam Tibetiam Orientalem), p. 204—Fuma-fu, Holan Shan (Ala Shan), Inner Mongolia.

*Falco cherrug progressus* Stegmann, 1925, Compt. Rend. Acad. Sci. Russie, Leningrad, A, p. 64—between Urga and Kalgan, northern Mongolia.

*Falco cherrug coatsi* Dementiev, 1945, Uchenie Zapiski Gosudarst. Univ., Moscow, **83**, p. 93—Montibus Turanicis = Kuh i Tang, Uzbekistan.

Southern Baykal area, northern Mongolia and adjoining Manchuria, south to Chinese Turkistan, Tibet, the Nan Shan and Holan Shan (Ala Shan). In winter to Iran, Afghanistan, Pakistan, northwestern India, Nepal.

**Falco (cherrug) altaicus** (Menzbir)

*Hierofalco altaicus* Menzbir, 1891, Ornith. Turkestan, livr. 3, p. 272—Uimon, Russian Altai.

Mountains of central Asia: Tarbagatay, Tien Shan, Sayan, Altai. Has been taken in winter in western Siberia, Russian Turkistan, and Mongolia.

FALCO RUSTICOLUS

**Falco rusticolus candicans** Gmelin

*Falco candicans* Gmelin, 1788, Syst. Nat., **1**, p. 275; based on "White Jerfalcon" of Latham, 1781, General Synop. Birds, **1**, p. 83, and "Gerfalcon" of Pennant, 1785, Arctic Zool., p. 221—"Islandia et Scotia boreali" = Greenland, *vide* Hartert, 1913, Vögel Pal. Fauna, p. 1064.

Arctic coasts of northern Alaska and Canada and high Arctic of northern Greenland. Somewhat migratory, occasionally reaching northern United States and western Europe.

**Falco rusticolus rusticolus** Linnaeus

*Falco rusticolus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 88—Sweden.

Northern Scandinavia and northern Russia, east to the Kanin Peninsula (long. 45° E.). Slightly migratory.

**Falco rusticolus obsoletus** Gmelin

*Falco obsoletus* Gmelin, 1788, Syst. Nat., **1**, p. 268; based on "Plain Falcon" of Pennant, 1785, Arctic Zool., p. 208—Hudson Bay.

*Hierofalco uralensis* Severtsov and Menzbir, 1882, in Menzbir, Ornitologicheskaja Geografija Evropeiskoi Rossii, **1**, p. 288, pl. 3—Ural Mountains.

*Hierofalco Grebnitzkii* Severtsov, 1885, Nouv. Mém. Soc. Imp. Naturalistes Moscou, **15**, p. 69 and table.—Bering Island.

Subarctic Siberia from the Pechora River (about long. 53° E.) east to Kamchatka, northern Kuril Islands, islands in Bering

Sea, arctic North America, and southern Greenland, south of the range of *candicans*. In winter occasionally south to Russia, Manchuria, Japan, and northern United States.

**Falco rusticolus islandus** Brünnich

*Falco Islandus* Brünnich, 1764, Ornith. Borealis, p. 2—Iceland.  
Iceland.

FALCO KREYENBORGI

**Falco kreyenborgi** Kleinschmidt

*Falco kreyenborgi* Kleinschmidt, 1929, Falco, 3, p. 33. Type said to have come from Punta Arenas, Chile.  
Southernmost South America, north (? straggler) to Neuquén, Argentina. Status doubtful; very rare.

FALCO PEREGRINUS<sup>1</sup>

**Falco peregrinus tundrius** White

*Falco peregrinus tundrius* White, 1968, Auk, 85, p. 183—Adelaide Peninsula, Northwest Territories, Canada.  
Locally in tundra districts of northern Alaska, Canada, and Greenland, including some arctic islands. Highly migratory, wintering from the Gulf coast of the United States south to southern South America.

**Falco peregrinus anatum** Bonaparte

*Falco Anatum* Bonaparte, 1838, Geogr. Comp. List Europe North Amer., p. 4; based on "Great-footed Hawk, *Falco peregrinus*" of Wilson, 1814, Amer. Ornith., 9, p. 120, pl. 76—Great Egg Harbor, New Jersey.  
North America locally, south of the tundra and excluding northwestern coastal districts, south to northern Mexico (Baja California and islands in Gulf of California, Chihuahuan Desert, very locally farther east), southwestern Texas, Missouri, Tennessee, and South Carolina. Somewhat migratory. Now extirpated over much of range, including entire eastern United States and adjacent Canada, except as reintroduced (? subspecies).

**Falco peregrinus pealei** Ridgway

*Falco communis* var. *Pealei* Ridgway, 1873, Bull. Essex Inst.,

<sup>1</sup>*F. peregrinus* and *deiroleucus* may form a superspecies.—D. A.

Salem, Mass., 5, p. 201—northwest coast of North America from Sitka to Oregon.

Kuril Islands, Commander Islands, Aleutian Islands, islands of western coasts of Alaska and British Columbia south to the Queen Charlotte Islands. In winter straggler to Japan and south along the American coast to Oregon.

**Falco peregrinus cassini** Sharpe

*Falco Cassini* Sharpe, 1873, Ann. Mag. Nat. Hist., ser. 4, 11, p. 221—Strait of Magellan and Chile.

Extreme southern South America near Strait of Magellan and in Tierra del Fuego; Falkland Islands. Straggles somewhat farther north, perhaps to central Argentina.

**Falco peregrinus japonensis** Gmelin

*Falco japonensis* Gmelin, 1788, Syst. Nat., 1, p. 257; based on "Japones Hawk" of Latham, 1781, General Synop. Birds, 1, p. 33—Japan.

*Falco peregrinus harterti* Buturlin, 1907, Psovaia Ruzheinaia Okhota, 13, no. 7, p. 99—eastern tundras from the Lena to the Kolyma.

*Falco peregrinus pleskei* Dementiev, 1934, Falco, 29, p. 13—Great Shantar Island, Sea of Okhotsk.

*Falco peregrinus kleinschmidti* Dementiev, 1934, Oiseau, 4, p. 480—Olekminsk, southern Yakutia.

Northeastern Siberia from the Chukotski (Chukchi) Peninsula south to Kamchatka, Shantar Islands, Sakhalin, Kuril Islands, Japan. Winters from China and Japan south to Borneo and the Philippines.

**Falco peregrinus furuitii** Momiyama

*Falco peregrinus fruitii* [sic] Momiyama, 1927, Annot. Ornith. Orientalis, 1, pp. 71 (Japanese text), 97 (English text)—Isino-mura, San Alessandro Islands = Kita Iwo Jima.

Volcano Islands, south of Honshu, Japan; perhaps Bonin Islands.

**Falco peregrinus calidus** Latham

*Falco calidus* Latham, 1790, Index Ornith., p. 41—India. Migrant.

*Falco leuco-genys* C. L. Brehm, 1854, Naumannia, 4, pp. 51, 60—Germany. Migrant.

*Falco peregrinus caeruleiceps* Stegmann, 1934, Journ. Ornith., 82, p. 227—Gyda River, northwestern Siberia.

Northernmost Eurasia from Lapland east, including Novaya Zemlya and other arctic islands. Beginning to intergrade with *japonensis* at about the Lena River. Highly migratory, wintering from the Mediterranean region south over most of Africa and east through the Middle East, India, southeastern Asia, and the East Indies to New Guinea.

**Falco peregrinus peregrinus** Tunstall

*Falco Peregrinus* Tunstall, 1771, Ornith. Brit., p. 1—Great Britain.

*Falco peregrinus rhipaeus* Buturlin, 1907, Psovaia Ruzheinaia Okhota, 13, no. 7, p. 99—Urals.

Eurasia, south of the ranges of *calidus* and *japonensis*, from the British Isles east to the Pacific in Amurland and Ussuriland, south to the Pyrenees, northern Italy, the Balkans, the Ukraine, the southern Urals, western Siberia, the Altai Mountains, northwestern Mongolia, probably Manchuria. Partially migratory.

**Falco peregrinus peregrinator** Sundevall

*Falco peregrinator* Sundevall, 1837, Physiogr. Sällskapets Tidskrift, Lund, 1, pt. 2, p. 177, pl. 4—at sea between Ceylon and Sumatra.

Locally in Pakistan, India, Sri Lanka (Ceylon), Nepal, Burma, southeastern China, perhaps Taiwan.

**Falco peregrinus ernesti** Sharpe

*Falco ernesti* Sharpe, 1894, Ibis, p. 545—Mt. Dulit, Sarawak.

*Falco heinrichi* Kleinschmidt, 1937, Berajah, Falco Peregrinus, 2, Sonderblatt zu Tafel 5—Celebes.

Locally in the East Indies, east to the Philippines, New Guinea, and the Bismarck Archipelago.

**Falco peregrinus nesiotes** Mayr

*Falco peregrinus nesiotes* Mayr, 1941, Amer. Mus. Novit., no. 1133, p. 2—Tanna Island, New Hebrides.

New Hebrides, Loyalty Islands, New Caledonia (? subspecies), Fiji Islands.

**Falco peregrinus macropus** Swainson

*Falco macropus* Swainson, 1837, Animals Menageries, p. 341—Tasmania.

*Falco melanogenys* Gould, 1838, Proc. Zool. Soc. London (1837), p. 139—southern Australia and Tasmania.

Australia, except southwest, and Tasmania.

**Falco peregrinus submelanogenys** Mathews

*Falco peregrinus submelanogenys* Mathews, 1912, Austral Avian Rec., 1, p. 33—southwestern Australia = Bokerup, *vide* Mathews, 1913, List Birds Australia, p. 111.

Southwestern Australia.

**Falco peregrinus minor** Bonaparte

*Falco minor* Schlegel = Bonaparte, 1850, Consp. Gen. Avium, 1, p. 23—South Africa.

*Falco communis minor* Schlegel, 1851, Abh. Gebiete Zool. Vergleich. Anat., Heft 3, p. 20—Cape of Good Hope.

*Falco peregrinus perconfusus* Collin and Hartert, 1927, Novit. Zool., 34, p. 52. New name for *Falco minor* Schlegel, 1851, erroneously supposed to be preoccupied.

*Falco peregrinus wallichensis* Bradfield, 1944, New South Afr. Ornith. Records (pamphlet)—Swakopmund, South West Africa.

Africa south of the Sahara from Ghana, Sudan, and Ethiopia south, except in the equatorial forests.

**Falco peregrinus radama** Hartlaub

*Falco radama* Hartlaub, 1861, Ornith. Beitr. Fauna Madagascar's, p. 17—Madagascar.

Madagascar and the Comoro Islands.

**Falco peregrinus madens** Ripley and Watson

*Falco peregrinus madens* Ripley and Watson, 1963, Postilla, Peabody Mus. Nat. Hist., Yale Univ., no. 77, p. 2—Provocã o, Brava, Cape Verde Islands.

Cape Verde Islands.

**Falco peregrinus brookei** Sharpe

*Falco Brookei* Sharpe, 1873, Ann. Mag. Nat. Hist., ser. 4, 11, p. 21—Sardinia.

Southern France, Portugal, Spain, Morocco, southern Italy, Mediterranean islands, Greece, Crimea, Turkey, Armenia, Caucasus, northern Iran.

**Falco (peregrinus) pelegrinoides** Temminck

*Falco pelegrinoides* Temminck, 1829, Planches Color., livr. 81, pl. 479—Nubia.

*Falco barbarus arabicus* Erlanger, 1903, Journ. Ornith., 51, p. 293—Lahadsch = Lahej, near Aden.

Canary Islands, northern Africa from Morocco and Mauritania east to Egypt, northern Sudan, and Somalia, thence east locally



in the Near and Middle East from Sinai, Iraq, and Arabia, perhaps to western Iran.

**Falco peregrinus babylonicus** Sclater

*Falco babylonicus* P. L. Sclater, 1861, Ibis, p. 218, pl.

7—Newabgunge Bara Banki, Oudh, Uttar Pradesh, India.

*Falco peregrinus gobicus* Stegmann, 1934, Journ. Ornith.,

82, p. 235—Luktschun = Lukchun, Turfan, Sinkiang, China.

Asia from eastern Iran east locally to Pakistan, Afghanistan, northwestern India, Chinese Turkistan, and Mongolia. Some winter in northwestern India.

FALCO DEIROLEUCUS

**Falco deiroleucus** Temminck

*Falco deiroleucus* Temminck, 1825, Planches Color., livr.

59, pl. 348—São Francisco Island, Santa Catarina, Brazil.

Locally near cliffs and ruins, from southern Mexico south through Central America and South America, east of the Andes, to Paraguay and northern Argentina. Absent from Amazonia.

FALCO FASCIINUCHA

**Falco fasciinucha** Reichenow and Neumann

*Falco fasciinucha* Reichenow and Neumann, 1895, Ornith.

Monatsber., 3, p. 114—Teita, Kenya.

Southern Ethiopia, Kenya, Tanzania, Zambia, Rhodesia (Zimbabwe). Very local.

ORDER ANSERIFORMES<sup>1</sup>

PAUL A. JOHNSGARD

SUBORDER ANSERES

FAMILY ANATIDAE

cf. Delacour and Mayr, 1945-46, Wilson Bull., 57, pp. 3-55, 58, pp. 104-110 (classification).

Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist.,

<sup>1</sup>MS read by F. McKinney, P. Scott, D. W. Snow (African forms), and M. W. Weller.

- Zool. Ser., **13**, pt. 1, no. 2, pp. 283-415 (New World).  
 Dementiev *et al.*, 1952, Ptitsy Sovetskogo Soiuza, **4**, pp. 247-635 (English trans., 1967, Birds Soviet Union, **4**, pp. 276-683).  
 Delacour, 1954-64, Waterfowl World, 4 vols.  
 Woolfenden, 1961, Bull. Florida State Mus., **6**, pp. 1-129 (postcranial osteology).  
 Johnsgard, 1965, Handb. Waterfowl Behavior, 394 pp.  
 Vaurie, 1965, Birds Pal. Fauna, Non-Passeriformes, pp. 89-143.  
 White, 1965, Revised Check List Afr. Non-Passerine Birds, pp. 33-40.  
 Frith, 1967, Waterfowl Australia, 350 pp.  
 Bauer and Glutz von Blotzheim, 1968-69, Handb. Vögel Mitteleuropas, vols. 2-3.  
 Ploeger, 1968, Ardea, **56**, pp. 1-159 (geographical differentiation, arctic species).  
 Mayr and Short, 1970, Publ. Nuttall Ornith. Club, no. 9, 127 pp. (species taxa, North America).  
 Johnsgard, 1975, Waterfowl North Amer., 640 pp.  
 Brush, 1976, Zool. Journ., London, **179**, pp. 467-498 (feather proteins, taxonomy).  
 Palmer (ed.), 1976, Handb. North Amer. Birds, Vols. 2-3.  
 Blake, 1977, Man. Neotropical Birds, **1**, pp. 211-261.  
 Cramp and Simmons (eds.), 1977, Birds Western Palearctic, **1**, pp. 368-699.  
 Johnsgard, 1978, Ducks Geese Swans World, 424 pp.

### SUBFAMILY ANSERANATINAE

#### GENUS ANSERANAS LESSON

- Anseranas* Lesson, 1828, Man. Ornith., **2**, p. 418. Type, by monotypy, *Anas melanoleuca* Latham = *Anas semipalmata* Latham.  
 cf. Frith and Davies, 1961, CSIRO Wildlife Res., **6**, pp. 91-141 (ecology).  
 Johnsgard, 1961, Wildfowl Trust, Annual Rep., **12** (1959-60), pp. 92-103 (breeding biology).  
 Davies, 1963, Ibis, **105**, pp. 76-98 (behavior).  
 Davies and Frith, 1964, Emu, **63**, pp. 265-272 (taxonomic position).

## ANSERANAS SEMIPALMATA

**Anseranas semipalmata** (Latham)

*Anas semipalmata* Latham, 1798, Trans. Linn. Soc. London, 4, p. 103—Hawkesbury River, New South Wales.

Southern New Guinea from Frederik Hendrik Island to the Gulf of Papua; northern Australia from Fitzroy River east to Broad Sound, Queensland (formerly south in the east to southern Victoria).

## SUBFAMILY DENDROCYGNINAE

## GENUS DENDROCYGNA SWAINSON

*Dendrocygna* Swainson, 1837, Nat. Hist. Class. Birds, 2, p. 365. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 28), *Anas arcuata* Horsfield.

*Lamprocygna* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 25. Type, by original designation, *Anas autumnalis* Linnaeus.

*Nesocygna* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 24. Type, by original designation, *Anas arborea* Linnaeus.

*Prosopocygna* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 23. Type, by original designation, *Anas viduata* Linnaeus.

*Stagonocygna* Boetticher, 1949, Beitr. Gattungssystematik Vögel, p. 24. Type, by original designation, *Dendrocygna guttata* Schlegel.

cf. Rylander and Bolen, 1970, Auk, 87, pp. 72-90 (ecological and anatomical adaptations, North American species).  
Siegfried, 1973, Auk, 90, pp. 198-201 (*bicolor*, *viduata*, southern Africa).

Bolen and Rylander, 1974, Wildfowl, 25, pp. 81-83 (foot adaptations, *arcuata*, *eytoni*, *bicolor*, *autumnalis*).

Bolen and Rylander, 1976, Journ. Bombay Nat. Hist. Soc., 72, pp. 648-654 (morphology and ecology of *javanica*).

Banks, 1978, Auk, 95, pp. 348-352 (nomenclature of *autumnalis*).

## DENDROCYGNA GUTTATA

**Dendrocygna guttata** Schlegel

*Dendrocygna guttata* Schlegel, 1866, Mus. Hist. Nat. Pays-

Bas, Rev. Méthod. Crit. Coll., livr. 8, Anseres, p. 85—Celebes.

Philippines (Basilan, Mindanao), Celebes, Moluccas (Buru, Ambon, Ceram, Tanimbar), Kai and Aru Islands, New Guinea, Bismarck Archipelago.

#### DENDROCYGNA EYTONI

##### **Dendrocygna eytoni** (Eyton)

*Leptotarsis Eytoni* Eyton, 1838, Monogr. Anatidae, p. 111—northwestern Australia,

Australia from Fitzroy River east to Cape York Peninsula and south to New South Wales.

#### DENDROCYGNA BICOLOR<sup>1</sup>

##### **Dendrocygna bicolor** (Vieillot)

*Anas bicolor* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 136; based on "Pato roxo y negro," no. 436, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 443—Paraguay.

*Dendrocygna bicolor helva* Wetmore and Peters, 1922, Proc. Biol. Soc. Washington, 35, p. 42—Unlucky Lake, San Diego County, California.

Southern California, coastal Texas, southern Louisiana, and southern Florida, south along both coasts of Mexico to Oaxaca and Campeche; Honduras; Cuba. South America from Colombia south to Peru and east to the Guianas; Pará, Brazil, south to northern and central Argentina, Paraguay, and Uruguay; Trinidad. Eastern Africa from Sudan to Natal; Madagascar. India and Sri Lanka (Ceylon); Burma south to Pegu. Recent wintering movements in central and eastern United States.

#### DENDROCYGNA ARCUATA

##### **Dendrocygna arcuata arcuata** (Horsfield)

*Anas arcuata* Horsfield, 1824, Zool. Researches Java, pt. 8, pl. 64—Java.

Java, Borneo, Philippines, Celebes, Bali, Sumba, Roti, Timor.

<sup>1</sup>*D. bicolor* and *arcuata* form a superspecies.—P. A. J.

**Dendrocygna arcuata australis** Reichenbach

*Dendrocygna arcuata (australis)* Reichenbach, 1850, Avium Syst. Nat., no. 4, Novit., col. 7—Port Essington, Northern Territory, Australia.

Southern New Guinea; northern Australia from the Kimberley ranges to Rockhampton, Queensland, occasionally south to New South Wales and South Australia. Formerly recorded New Caledonia.

**Dendrocygna arcuata pygmaea** Mayr

*Dendrocygna arcuata pygmaea* Mayr, 1945, Amer. Mus. Novit., no. 1294, p. 3—Manlo, Wide Bay, New Britain.

New Britain; possibly Fiji Islands (where last recorded 1959).

## DENDROCYGNA JAVANICA

**Dendrocygna javanica** (Horsfield)

*Anas javanica* Horsfield, 1821, Trans. Linn. Soc. London, 13, p. 199—Java.

Pakistan, Nepal, India east to the coast of southern China, Taiwan, Ryukyu Islands, Sri Lanka (Ceylon), Andaman and Nicobar Islands, Hainan, Indochina, Malay Peninsula, Sumatra, Java, southwestern Borneo.

## DENDROCYGNA VIDUATA

**Dendrocygna viduata** (Linnaeus)

*Anas viduata* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 205—Cartagena, Colombia.

Costa Rica and Panama; Colombia east to Guyana, Brazil south to eastern Bolivia, Argentina to northern Buenos Aires, Paraguay, Uruguay; Trinidad. Africa south of the Sahara to South West Africa (Namibia) and Natal; Madagascar; Comoro Islands.

## DENDROCYGNA ARBOREA

**Dendrocygna arborea** (Linnaeus)

*Anas arborea* Linnaeus, 1758, Syst. Nat., ed. 10, p. 128; based chiefly on "The Black-bill'd Whistling Duck" of Edwards, 1751, Nat. Hist. Birds, p. 193, pl. 193—America = Jamaica, *ex* Sloane, 1725, Voyage Jamaica, 2, p. 324.

Bahamas, Greater Antilles, and northern Lesser Antilles.

## DENDROCYGNA AUTUMNALIS

**Dendrocygna autumnalis autumnalis** (Linnaeus)

*Anas autumnalis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 127; based on "Red-bill'd Whistling Duck" of Edwards, 1751, Nat. Hist. Birds, p. 194, pl. 194—America.

*Dendrocygna discolor* P. L. Sclater and Salvin, 1873, Nomencl. Avium Neotrop., p. 161—Venezuela, Guiana, and Brazil.

Eastern Panama, Colombia south to Peru and east to Surinam, Brazil from Amapá and Pará to Mato Grosso and Rio Grande do Sul, eastern Bolivia, northwestern Argentina, Paraguay; Trinidad. Casual Lesser Antilles and Puerto Rico.

**Dendrocygna autumnalis fulgens** Friedmann

*Dendrocygna autumnalis fulgens* Friedmann, 1947, Condor, 49, p. 190—Lomita Ranch, Texas.

*Dendrocygna autumnalis lucida* Friedmann, 1947, Condor, 49, p. 191—Tres Zapotes, Veracruz.

Arizona, southeastern Texas, coastal (chiefly) Mexico and Central America from Sonora and Tamaulipas south to central Panama, with gaps in Oaxaca and Belize (British Honduras).

## GENUS THALASSORNIS EYTON

*Thalassornis* Eyton, 1838, Monogr. Anatidae, p. 70. Type, by original designation, *Thalassornis leuconotus* Eyton.

cf. Johnsgard, 1967, Wildfowl Trust, Annual Rep., 18 (1965-66), pp. 98-107 (behavior and relationships).

Clark, 1969, Wildfowl, 20, pp. 71-74 (behavior).

Raikow, 1971, Wilson Bull., 83, pp. 270-277 (osteology and taxonomic position).

## THALASSORNIS LEUCONOTUS

**Thalassornis leuconotus leuconotus** Eyton

*Thalassornis leuconotus* Eyton, 1838, Monogr. Anatidae, p. 168—Cape of Good Hope.

Africa from Senegal east to southern Ethiopia, south to Cape Province. Absent from forested areas in western Africa and from the Congo basin.

**Thalassornis leuconotus insularis** Richmond

*Thalassornis insularis* Richmond, 1897, Proc. U. S. Nat.

Mus., 19, p. 679—Sakales River, eastern Madagascar. Madagascar, at elevations up to 800 meters.

### SUBFAMILY ANSERINAE

#### GENUS CYGNUS BECHSTEIN

- Cygnus* Bechstein, 1803, Ornith. Taschenbuch Deutschland, 2, p. 404, note. Type, by monotypy, *Anas olor* Gmelin.
- Chenopsis* Wagler, 1832, Isis von Oken, col. 1234. Type, by monotypy, *Chenopsis atrata* = *Anas atrata* Latham.
- cf. Banko, 1960, U.S. Dept. Int., Fish Wildlife Serv., North Amer. Fauna, no. 63, 224 pp. (*buccinator*).
- Berglund *et al.*, 1963, Acta Vertebratica, 2, pp. 161-288 (ecology of *olor*).
- Petzold, 1964, Beitr. Vogelkunde, 10, pp. 1-126 (comparative ethology).
- Vos, 1964, Ardea, 52, pp. 166-189 (behavior of *buccinator*).
- Guiler, 1966, Papers Proc. Roy. Soc. Tasmania, 100, pp. 31-52 (breeding of *atratus*).
- Minton, 1968, Wildfowl, 19, pp. 41-60 (breeding of *olor*).
- Braithwaite, 1970, Austral. Nat. Hist., 16, pp. 375-379 (*atratus*).
- Hilprecht, 1970, Höckerschwan, Singschwan, Zwergschwan (Neue Brehm-Bücherei 177), ed. 2, 184 pp. (*olor*, *cygnus*, *bewickii*).
- Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 108-110 (*melanocoryphus*).
- Hansen *et al.*, 1971, Wildlife Monogr., no. 26, 83 pp. (*buccinator*).
- Scott and Wildfowl Trust, 1972, Swans, 252 pp.
- Haapenen, 1973, Finnish Game Res., 33, pp. 31-36, 37-60 (breeding biology of *cygnus*).
- Sladen, 1973, Wildfowl, 24, pp. 8-14 (*columbianus*).
- Evans, 1975, Wildfowl, 26, pp. 117-130 (breeding behavior of *bewickii*).
- Scott, 1977, Wildfowl, 28, pp. 101-106 (*columbianus*).

#### CYGNUS OLOR

##### **Cygnus olor** (Gmelin)

*Anas Olor* Gmelin, 1789, Syst. Nat., 1, p. 502; based on "Mute Swan" of Latham, 1785, General Synop. Birds, 3,

p. 436, and Pennant, 1785, Arctic Zool., p. 543—"Russia, Siberia, Persico etiam littore maris Caspii."

Southern Sweden, Denmark, northern Germany, Poland, and locally in Russia and Siberia, also in Asia Minor and Iran east through Afghanistan perhaps to Inner Mongolia. In winter to northern Africa, Black Sea, northwestern India, and Korea. Locally feral or semiferal in Great Britain, France, Netherlands, and central Europe. Introduced and locally established in North America, mainly Rhode Island, Long Island, New York, and Lake Michigan. Also locally established in South Africa, Australia, and New Zealand.

#### CYGNUS ATRATUS

##### **Cygnus atratus** (Latham)

*Anas atrata* Latham, 1790, Index Ornith., p. 834—lakes of Australia.

Australia (except northern and central) and Tasmania. Introduced in the 1860s and now well established in New Zealand (both islands). Most abundant as breeding birds in southern and southwestern Australia, but highly mobile outside the breeding season and may occur almost anywhere on the continent.

#### CYGNUS MELANOCORYPHUS

##### **Cygnus melanocoryphus** (Molina)

*Anas Melancoripha* [sic] Molina, 1782, Saggio Storia Nat. Chili, pp. 234 (*Melancoripha*), 344 (*Melanocorypha*)—Chile.

Southern Chile from Coquimbo to Cape Horn, Brazil south from São Paulo, Paraguay, Uruguay, Argentina from Córdoba and Santa Fe to Tierra del Fuego; Falkland Islands. Winters north to the Tropic of Capricorn, in Paraguay and the three southern provinces of Brazil.

#### CYGNUS BUCCINATOR<sup>1</sup>

##### **Cygnus buccinator** Richardson

*Cygnus buccinator* Richardson, 1832, in Swainson and Ri-

<sup>1</sup> Considered to form a superspecies with *cygnus*, but species limits and affinities are still very uncertain (cf. Johnsgard, 1974, Wildfowl, 25, pp. 155-161).—P. A. J.



chardson, *Fauna Boreali-Americana*, 2 (1831), p. 464—Hudson Bay.

Now largely confined to central and southern Alaska, British Columbia, Alberta, Montana, and Wyoming, with local breeding elsewhere as a result of reintroductions. Limited southward movements occur during winter, especially in the Alaskan population.

#### CYGNUS CYGNUS

##### **Cygnus cygnus** (Linnaeus)

*Anas Cygnus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 122; based on "The Swan" of Albin, 1738, *Nat. Hist. Birds*, 3, p. 91, pl. 96, and "The Wild Swan" of Edwards, 1750, *Nat. Hist. Birds*, p. 150—Europe, North America; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 38.

*Cygnus Islandicus* C. L. Brehm, 1831, *Handb. Naturgeschichte Vögel Deutschlands*, p. 832—Iceland.

Iceland and northern Scandinavia east across USSR to Anadyrland, Kamchatka, and the Commander Islands, south to the Kirghiz Steppes, Caspian Sea coasts (occasionally), northern Mongolia, Transbaicalia, northwestern Manchuria, lower Amur Valley, northern Ussuriland, and Sakhalin. South in winter to the British Isles, central Asia, China, Japan, sometimes to the Mediterranean. Frequently reported from the Aleutian Islands, but not known to breed there.

#### CYGNUS BEWICKII<sup>1</sup>

##### **Cygnus bewickii** Yarrell

*Cygnus Bewickii* Yarrell, 1830, *Trans. Linn. Soc. London*, 16, p. 453, pl. 24—England.

*Cygnus bewicki* [sic] *jankowskyi* Alphéraky, 1904, *Priroda Okhota*, no. 9, p. 10—Vladivostok. Cf. Buturlin, 1907, *Ibis*, pp. 650-652.

Tundra from the Pechenga River, near the Fenno-Russian border, east along the northern Siberian coast to about long.

<sup>1</sup> *Cygnus (Coscoroba) davidi* Swinhoe, 1870, *Proc. Zool. Soc. London*, p. 430—Tientsin, is unidentifiable; cf. Vaurie, 1965, *Birds Pal. Fauna, Non-Passeriformes*, p. 107.—P. A. J.

160° E.; also Kolguyev and Vaygach Islands and southern Novaya Zemlya. Winters British Isles, southwestern Norway, Denmark, Germany, Caspian Sea, Russian Turkistan, Japan, Korea, coast of China south to Kwangtung.

CYGNUS COLUMBIANUS<sup>1</sup>

**Cygnus columbianus** (Ord)

*Anas Columbianus* Ord, 1815, in Guthrie, Geogr., ed. 2 (Amer.), 2, p. 319—The Dalles, Oregon, ex Allen, 1814, Hist. Lewis Clark Exped., 2, p. 192.

Tundra from Alaska east through the Northwest Territories to islands in Hudson Bay and southwestern Baffin Island. Winters to central California and Utah in the west, from Chesapeake Bay to Currituck Sound in the east.

GENUS COSCOROBA REICHENBACH

*Coscoroba* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 10. Type, by original designation and tautonymy, *Anser candidus* Vieillot = *Anas coscoroba* Molina.

cf. Rossi, 1960, Physis, 21, pp. 207-230.

Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 106-108.

COSCOROBA COSCOROBA

**Coscoroba coscoroba** (Molina)

*Anas Coscoroba* Molina, 1782, Saggio Storia Nat. Chili, pp. 234, 344—Chile.

Chile from Aisén south to Tierra del Fuego, Brazil in Rio Grande do Sul (resident), Paraguay, Uruguay, Argentina from Córdoba and Buenos Aires to Tierra del Fuego. Winters north to central Chile and northern Argentina.

GENUS ANSER BRISSON

*Anser* Brisson, 1760, Ornith., 1, p. 58; 6, p. 261. Type, by tautonymy, *Anser domesticus* = *Anas anser* Linnaeus.

*Chen* Boie, 1822, Isis von Oken, 10, col. 563. Type, by

<sup>1</sup> Often considered conspecific with *bewickii*, but species limits and affinities are still very uncertain (cf. Johnsgard, 1974, Wildfowl, 25, pp. 155-161).—P. A. J.

- monotypy, *Anser hyperboreus* Pallas.
- Cygnopsis* Brandt, 1836, Descr. Icones Animalium Rossicorum Novorum, Aves, fasc. 1, p. 5. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 73), *Anas cygnoides* Linnaeus.
- Eulabeia* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 9. Type, by original designation, *Anas indica* Latham.
- Philacte* Bannister, 1870, Proc. Acad. Nat. Sci. Philadelphia, p. 131. Type, by monotypy, *Anas canagica* Sevastianov.
- cf. Johansen, 1945, Dansk Ornith. Forenings Tidsskrift, **39**, pp. 106-127 (races of *fabalis*).
- Delacour, 1951, Ardea, **39**, pp. 135-142 (taxonomy of *fabalis*).
- Cooch, 1961, Auk, **78**, pp. 72-89 (*caerulescens*).
- Mathiasson, 1963, Acta Vertebratica, **2**, pp. 419-533 (biology of *fabalis*).
- Fischer, 1965, Zeitschr. Tierpsychol., **22**, pp. 247-304 (behavior of *anser*).
- Cooke and Cooch, 1968, Evolution, **22**, pp. 289-300 (polymorphism in *caerulescens*).
- Cooke and Ryder, Evolution, **25**, pp. 483-496 (polymorphism in *rossii*).
- Hudec and Rooth, 1970, Graugans (Neue Brehm-Bücherei 429), 148 pp. (*anser*).
- Philippona, 1972, Blessgans (Neue Brehm-Bücherei 457), 135 pp. (*albifrons*).
- Ryder, 1972, Ardea, **60**, pp. 185-215 (breeding biology of *rossii*).
- Cooke, MacInnes, and Prevett, 1975, Auk, **92**, pp. 493-570 (populations of *caerulescens*).
- Hanson and Jones, 1976, Biochemistry of Blue, Snow and Ross' Goose, 299 pp. (*caerulescens*, *rossii*).
- Eisenhauer and Kirkpatrick, 1977, Wildlife Monogr., **57**, 62 pp. (*canagicus*).

## ANSER CYGNOIDES

**Anser cygnoides** (Linnaeus)

*Anas Cygnoid* Linnaeus, 1758, Syst. Nat., ed. 10, p. 122 (*Anser cygnoides* cited in synonymy)—Asia.

Central and southern Russian Altai east through northern Mongolia and Transbaicalia to Amurland, central Mongolia,

Ussuriland, coast of the Sea of Okhotsk, and Sakhalin. Winters in northern China.

#### ANSER FABALIS

##### **Anser fabalis brachyrhynchus** Baillon

*Anser Brachyrhynchus* Baillon, 1834, Mém. Soc. Roy. Émulation Abbeville, sér. 2, no. 1 (1833), p. 74—Abbeville, lower Somme River, France.

Eastern Greenland, Iceland, Spitsbergen, and possibly Franz Josef Land and the Kola Peninsula. Winters in northwestern Europe.

##### **Anser fabalis fabalis** (Latham)

*Anas Fabalis* Latham, 1787, General Synop. Birds, Suppl., p. 297—Great Britain.

*Anser neglectus* Sushkin, 1895, Bull. Brit. Ornith. Club, 5, p. 6—no locality = Ufa district, eastern Russia, *vide* Sushkin, Ibis, 1897, p. 5.

Wooded areas of northern Scandinavia and northern Russia, between about lat. 62° N. and 70° N., east to the Ural Mountains. Winters in Europe, from Britain south to the Mediterranean and the Black Sea.

##### **Anser fabalis johanseni** Delacour

*Anser fabalis johanseni* Delacour, 1951, Ardea, 39, p. 139—Tai-pai Shan, Tsinling (= Chin Ling) Mountains, Shensi, China.

Wooded region of western Siberia, east to the Khatanga River, and south to lat. 61°–62° N. Winters in Iran, Turkistan, and western and central China.

##### **Anser fabalis middendorffii** Severtsov

*Anser grandis* Middendorff, 1853, Reise Norden Osten Sibiriens, 2, pt. 2, Lief. 1, p. 225, pl. 20, fig. 1—Udskoye Ostrog, southeastern Siberia.

*Anser Middendorffii* Severtsov, 1873, Izvestiia Imp. Obshchestva Liubitelei Estest. Antrop. Etnogr., Moscow, 8, pt. 2 (1872), pp. 70, 149—eastern Siberia. New name for *Anser grandis* Middendorff, 1853, preoccupied by *Anas grandis* Gmelin, 1789, Syst. Nat., 1, p. 504.

*Melanonyx arvensis sibiricus* Alphéraky, 1904, Gusi Rossii, pp. 9, 98. New name (in error) for *Anser middendorffii* Severtsov, 1873.

Wooded region of eastern Siberia from the Khatanga River to the Kolyma region and western Anadyrland, south to southern Russian Altai, northwestern Mongolia, Lake Baykal region, and northern Amurland. Winters in Japan and eastern China.

**Anser fabalis rossicus** Buturlin

*Anser (Melanonyx) serrirostris rossicus* Buturlin, 1933, *Opredelitel Promyslovykh Ptits*, p. 60—western Siberia = Beluchia Guba, Samal, Taymyr Peninsula, *vide* Dementiev, 1936, *Alauda*, **8**, p. 190.

Tundra of Novaya Zemlya and on the Yamal, Gyda, and Taymyr Peninsulas. Winters in Europe, western Siberia, Russian Turkistan, and central China.

**Anser fabalis serrirostris** Swinhoe

*Anser segetum* var. *serrirostris* Swinhoe, 1871, *Proc. Zool. Soc. London*, p. 417—near Amoy, China.

Tundra from the Khatanga River to the Chukchi Peninsula, Anadyrland, and Koryakland. Winters in Korea, China south to Fukien, and Japan south to Kyushu.

ANSER ALBIFRONS<sup>1</sup>

**Anser albifrons albifrons** (Scopoli)

*Branta albifrons* Scopoli, 1769, *Annus I Hist.-Nat.*, p. 69—no locality = ? northern Italy.

Arctic tundra of northern Russia and Siberia from the Kanin Peninsula, Kolguyev and Vaygach Islands, and Novaya Zemlya east to about the Kolyma River, south to about lat. 67° N. or 68° N. Winters from the British Isles south to southern Europe, Egypt, Asia Minor, Iraq, Iran, northern India, and Burma.

**Anser albifrons frontalis** Baird

*Anser frontalis* Baird, 1858, in Baird, Cassin, and Lawrence, *Rep. Explor. Surv. Railroad Mississippi Pacific*, **9**, p. 762—Fort Thorn, New Mexico,

Tundra of eastern Siberia, probably from the Kolyma Valley eastward, St. Lawrence Island, and western and northern Alaska. Winters in China, Japan, the western United States,

<sup>1</sup> *A. albifrons* and *erythropus* form a superspecies.—P. A. J.

and Mexico. Questionably distinct from *gambeli* (cf. Hellmayr and Conover, 1948, Publ. Field Mus. Nat. Hist., Zool. Ser., 13. pt. 1, no. 2, p. 292, note 1).

**Anser albifrons gambeli** Hartlaub

*Anser Gambelli* [sic] Hartlaub, 1852, Rev. Mag. Zool., Paris, sér. 2, 4, p. 7—Texas and southern United States.

Breeding grounds still uncertain; possibly includes Old Crow area of Yukon, Canada (cf. Elgas, 1970, Wilson Bull., 82, pp. 420-426). Winters in Texas and Mexico.

**Anser albifrons elgasi** Delacour and Ripley

*Anser albifrons elgasi* Delacour and Ripley, 1975, Amer. Mus. Novit., no. 2565, p. 2—Sacramento, California.

Breeding grounds uncertain, presumed to be in the taiga zone just south of the tundra in Alaska. Winters in the Sacramento region of central California.

**Anser albifrons flavirostris** Dalgety and Scott

*Anser albifrons flavirostris* Dalgety and Scott, 1948, Bull. Brit. Ornith. Club, 68, p. 115—North Slob, Wexford, Ireland.

West coast of Greenland. Winters in the British Isles, and occasionally on the Atlantic coast of North America.

ANSER ERYTHROPUS

**Anser erythropus** (Linnaeus)

*Anas erythropus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 123—"Europa septentrionalis"; restricted to northern Sweden by Lönnberg, 1913, Ibis, p. 401.

Scandinavia and Russian Lapland east through Siberia to Anadyrland, south to the northern edge of the taiga. Winters south to southern Europe, Egypt, Turkistan, northwestern India, China, and Japan.

ANSER ANSER

**Anser anser anser** (Linnaeus)

*Anas Anser* Linnaeus, 1758, Syst. Nat., ed. 10, p. 123; based on "The Laughing-Goose" of Edwards, 1750, Nat. Hist. Birds, p. 153, pl. 153—Europe and northern North America; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 40.

Iceland, Outer Hebrides and northern Scotland (feral elsewhere

in British Isles), and Scandinavia south to Austria, northern Greece, Bulgaria, Turkey, and Russia to the Caucasus and Transcaucasia. Winters in the British Isles, western and southern Europe, northern Africa, Rumania, Greece, Turkey, and Iran.

**Anser anser rubrirostris** Swinhoe

*Anser cinereus* var. *rubrirostris* Swinhoe, 1871, Proc. Zool. Soc. London, p. 416—Shanghai.

Breeds from west of the Urals and the lower Volga south to the Caspian, Iraq, Iran, and Afghanistan, east to northern Mongolia, Manchuria, and western China (Tsinghai, Kansu). In winter south to Asia Minor, India, Burma, and northern Indochina.

ANSER INDICUS

**Anser indicus** (Latham)

*Anas indica* Latham, 1790, Index Ornith., p. 839—India in winter, and Tibet.

High central Asia from Russian Altai east through northern Mongolia to northwestern Manchuria, south to the Tien Shan, northeastern Afghanistan, Ladakh, Tibet, and western China. Winters from Sind to Assam and northern Burma.

ANSER CAERULESCENS

**Anser caerulescens caerulescens** (Linnaeus)

*Anas caerulescens* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124; based on "The Blue-winged Goose" of Edwards, 1750, Nat. Hist. Birds, p. 152, pl. 152—Hudson Bay. Blue morph.

*Anser hyperboreus* Pallas, 1769, Spicilegia Zool., fasc. 6, p. 25—northeastern Siberia. White morph.

Northeastern Siberia east from the Indigirka River, Wrangel Island, northern coast of Alaska, the Mackenzie delta, and Banks Island east to the Melville Peninsula, southern Baffin Island, and Hudson Bay (both coasts). Winters south to Japan, California, Arizona, Mexico (Chihuahua, Coahuila, Durango, Tamaulipas), Texas, Louisiana, central Atlantic coast of United States. Occasional Europe.

**Anser caerulescens atlanticus** (Kennard)

*Chen atlantica* Kennard, 1927, Proc. New England Zool. Club, 9, p. 93—Princess Anne Club, Back Bay, Princess Anne County, Virginia.

Axel Heiberg, Ellesmere, Bathurst, Devon, Prince of Wales, Somerset, northern Baffin, and Bylot Islands, northwestern Greenland. Winters on the Atlantic coast from Chesapeake Bay to North Carolina.

#### ANSER ROSSII

##### **Anser rossii** Cassin

*Anser Rossii* Cassin, 1861, Proc. Acad. Nat. Sci. Philadelphia, p. 73—Great Slave Lake.

Canada south of Queen Maud Gulf, Northwest Territories, Southampton Island, McConnell River, southeastern Keewatin, La Pérouse Bay, Manitoba, and Cape Henrietta Maria, Ontario; range recently expanding eastward. Winters in interior valleys of California and, increasingly, in New Mexico, Texas, and Louisiana.

#### ANSER CANAGICUS

##### **Anser canagicus** (Sevastianov)

*Anas Canagica* Sevastianov, 1802, Nova Acta Acad. Sci. Imp. Petropolitanae, 13, p. 349, pl. 10—Kanaga Island, Aleutian Islands.

Northeastern Siberia from Kolyushin Bay around the Chukchi Peninsula and Gulf of Anadyr to Cape Navarin, St. Lawrence Island, western coast of Alaska from Kotzebue Sound to Kuskokwim Bay. Winters Commander Islands, outer coast of Kamchatka, Aleutian Islands, and Trinity-Kodiak-Afonak area of the Gulf of Alaska.

#### GENUS BRANTA SCOPOLI

*Branta* Scopoli, 1769, Annus I Hist.-Nat., p. 67. Type, by subsequent designation (J. A. Allen, 1907, Bull. Amer. Mus. Nat. Hist., 24, p. 32), *Anas bernicla* Linnaeus.

*Nesochen* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 81 (in key), 126. Type, by original designation and monotypy, *Anser sandvicensis* Vigors.

cf. Miller, A. H., 1937, Univ. California Publ. Zool., 42, pp. 1-79 (*sandvicensis*).

Aldrich, 1946, Wilson Bull., 58, pp. 94-103 (speciation in *canadensis*).

Handley, 1950, Wilson Bull., 62, pp. 128-132 (sympatry



- of *bernicla hrota* and *bernicla nigricans*).
- Hanson and Smith, 1950, Bull. Illinois Nat. Hist. Surv., **25**, pp. 67-210 (populations of *canadensis interior*).
- Delacour, 1951, Amer. Mus. Novit., no. 1537, 10 pp. (taxonomy of *canadensis*).
- Delacour and Zimmer, 1952, Auk, **69**, pp. 82-84 (*bernicla nigricans* and *bernicla orientalis*).
- Manning, Höhn, and Macpherson, 1956, Bull. Nat. Mus. Canada, no. 143, pp. 26-32 (*bernicla hrota* and *bernicla nigricans*).
- Humphrey, 1958, Condor, **60**, pp. 303-307 (trachea of *sandvicensis*).
- Hanson, 1965, Giant Canada Goose, 304 pp. (*canadensis maxima*).
- Kretschmar, 1965, Journ. Ornith., **106**, pp. 440-445 (*ruficollis*).
- Génsbøl, 1967, Grønland, pp. 169-178 (*leucopsis*).
- Sterbetz and Szijj, 1968, Vogelwarte, **24**, pp. 266-277 (migration of *ruficollis*).
- Cabot and West, 1973, Proc. Roy. Irish Acad., **73**, sec. B, pp. 415-443 (population dynamics of *leucopsis*).
- Owen and Campbell, 1974, Scottish Birds, **8**, pp. 181-193 (*leucopsis*).
- Radesäter, 1974, Ornis Scand., **5**, pp. 87-101 (behavior of *canadensis*).
- Mickelson, 1975, Wildlife Monogr., no. 45, 35 pp. (breeding biology of *canadensis minima*).
- Radesäter, 1976, Zeitschr. Tierpsychol. **39**, pp. 189-205 (behavior of *canadensis*).

## BRANTA SANDVICENSIS

**Branta sandvicensis** (Vigors)

*Anser sandvicensis* Vigors, 1833, List Animals Gardens Zool. Soc., London, ed. 3, p. 4—Hawaiian Islands.

Hawaii and Maui, Hawaiian Islands. Now rare in the wild state. Extinct on Maui before the introduction of captive-bred birds; present status there uncertain.

## BRANTA CANADENSIS

**Branta canadensis asiatica** Aldrich

*Branta hutchinsi asiatica* Aldrich, 1946, Wilson Bull., **58**,

p. 95—Bering Island, Siberia.

Formerly Bering Island, in the Commander Islands, and the northern Kuril Islands. Extinct (last reported from the Commanders in 1914).

**Branta canadensis leucopareia** (Brandt)

*Anser leucopareius* Brandt, 1836, Bull. Sci. Acad. Imp. Sci. St.-Pétersbourg, 1, p. 37, pl. 2, figs. 1-2—Unalaska, Aleutian Islands.

Formerly the Aleutian Islands, from Attu to Yunaska, and possibly on the Pribilof Islands. Now very rare and apparently limited to Buldir Island, in the Aleutians. Former winter range Japan and Pacific coast of North America from British Columbia to California; currently known to winter only in the Central Valley of California.

**Branta canadensis minima** Ridgway

*Branta minima* Ridgway, 1885, Proc. U. S. Nat. Mus., 8, p. 22—Pacific coast of North America. Type from St. Michael, Alaska.

West coast of Alaska from vicinity of Wainwright to Nushagak Bay. Winters in California (chiefly Sacramento and San Joaquin Valleys).

**Branta canadensis taverneri** Delacour

*Branta canadensis taverneri* Delacour, 1951, Amer. Mus. Novit., no. 1537, p. 7—Colusa, California.

Probably breeds in Alaska east of the range of *minima* from near the Beaufort Sea coast south to the base of the Alaska Peninsula and east to the Mackenzie delta, Northwest Territories. Winters from Washington to northern Mexico and Texas, but chiefly in central California.

**Branta canadensis occidentalis** (Baird)

*Bernicla occidentalis* Baird, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, p. 766—Port Townsend, Washington.

Alaska at Cook Inlet, Prince William Sound, and Copper River. Winters from Prince William Sound to western Oregon and northern California.

**Branta canadensis fulva** Delacour

*Branta canadensis fulva* Delacour, 1951, Amer. Mus. Novit., no. 1537, p. 7—Graham Island, Queen Charlotte Islands, British Columbia.

Coast and islands from Glacier Bay, Alaska, to British Columbia. Relatively sedentary, but regularly winters in western Oregon and sometimes south to northern California.

***Branta canadensis parvipes* (Cassin)**

*Anser parvipes* Cassin, 1852, Proc. Acad. Nat. Sci. Philadelphia, p. 187—Veracruz, Mexico.

Central Alaska (Fairbanks area) probably across much of the Northwest Territories east to Hudson Bay; not coastal. Winters from California to Louisiana, and in northern Mexico.

***Branta canadensis moffitti* Aldrich**

*Branta canadensis moffitti* Aldrich, 1946, Wilson Bull., 58, p. 97—Blue Lake, near Coulee City, Washington.

Central British Columbia east to central Manitoba, south to northern California, Nevada, Utah, and eastern Colorado. Winters in the southern parts of its breeding range and south to northern Mexico.

***Branta canadensis maxima* Delacour**

*Branta canadensis maxima* Delacour, 1951, Amer. Mus. Novit., no. 1537, p. 5—Round Lake, Grant County, Minnesota.

Formerly North Dakota, Minnesota, and Wisconsin south to Kansas, northern Arkansas, and northwestern Tennessee. Wintered over most of the breeding range. Now reintroduced and largely limited to flocks derived from captive birds. Birds breeding from Alberta to Manitoba have been attributed to *maxima*. Birds introduced into New Zealand were probably chiefly *maxima*.

***Branta canadensis hutchinsii* (Richardson)**

*Anser Hutchinsii* Richardson, 1832, in Swainson and Richardson, Fauna Boreali-Americana, 2 (1831), p. 470—Melville Peninsula.

Arctic tundra of Canada from Victoria Island east across Melville Peninsula to Baffin Island, and south on the west coast of Hudson Bay to southeastern Keewaytin. Winters in New Mexico, Texas, and northeastern Mexico. Birds from Ellesmere Island and western Greenland have also been attributed to *hutchinsii*.

***Branta canadensis interior* Todd**

*Branta canadensis interior* Todd, 1938, Auk, 55, p. 662—Port Harrison, east coast of Hudson Bay.

Manitoba east to southern Baffin Island and northern Quebec, including coasts and islands of Hudson and James Bays. Winters from southern Wisconsin east to New York and south to the Gulf and southern Atlantic coasts.

***Branta canadensis canadensis* (Linnaeus)**

*Anas canadensis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 123; based on "The Canada Goose" of Edwards, 1750, Nat. Hist. Birds, p. 151, pl. 151—Canada; City of Quebec suggested by Todd, 1938, Auk, 55, p. 661.

Southeastern Baffin Island, northeastern Quebec, Labrador, Newfoundland, Anticosti, and Magdalen Islands. Winters Newfoundland, Nova Scotia, and Atlantic coast south to North Carolina (occasionally to Florida). This and other subspecies (particularly *maxima*) widely introduced abroad.

BRANTA LEUCOPSIS

***Branta leucopsis* (Bechstein)**

*Anas leucopsis* Bechstein, 1803, Ornith. Taschenbuch Deutschland, 2, p. 424—Germany.

Northeastern Greenland, Spitsbergen, and southern island of Novaya Zemlya. Winters in the British Isles and the coasts of the North and Baltic Seas. Numerous records eastern United States.

BRANTA BERNICLA

***Branta bernicla hrota* (Müller)**

*Anas Hrota* O. F. Müller, 1776, Zool. Danicae Prodrömus, p. 14; based on "Hrota" of Olafsson, 1774, Reise Island, pt. 1, p. 292—Iceland.

Canada from Prince Patrick Island east to Ellesmere Island and south to Keewaytin, Southampton, Coates, and Baffin Islands, on both western and eastern coasts of Greenland south to about lat. 70° N., on Spitsbergen, Franz Josef Land, and perhaps the north island of Novaya Zemlya. Winters on the Atlantic coast of the United States south to North Carolina (occasionally on the Pacific coast), and on the coasts of north-western Europe.

***Branta bernicla bernicla* (Linnaeus)**

*Anas Bernicla* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124—

Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 41.

Arctic USSR from Kolguyev Island east through southern Novaya Zemlya to the Taymyr Peninsula and outlying islands, south to about lat. 70° N. Winters on the coasts of northwestern Europe.

**Branta bernicla orientalis** Tugarinov

*Branta bernicla orientalis* Tugarinov, 1941, Fauna SSSR, Ptitsy, 1, no. 4, p. 180—eastern Siberia.

Arctic Siberia from the delta of the Lena River east to the Chukchi Peninsula and Gulf of Anadyr, with adjacent islands. Winters along coasts of Japan and China (to Shantung).

**Branta bernicla nigricans** (Lawrence)

*Anser nigricans* Lawrence, 1846, Ann. Lyceum Nat. Hist. New York, 4, p. 171, pl. 12—Egg Harbor, New Jersey.

Coastal western and northern Alaska south to Kuskokwim Bay, and northwestern Canada east to about long. 100° W. Reported to overlap with *hrota* on Prince Patrick Island and in the Perry River region. Winters along the Pacific coast of North America from Kodiak Island south to Baja California and Sonora, and casually on the Atlantic coast south to Virginia.

BRANTA RUFICOLLIS

**Branta ruficollis** (Pallas)

*Anser ruficollis* Pallas, 1769, Spicilegia Zool., fasc. 6, p. 21, pl. 4—lower Ob, Siberia.

Siberian tundra from the Yamal Peninsula to the Taymyr Peninsula, north to about lat. 70° N., south to about lat. 67° N. Winters in the Black Sea, the southern part of the Caspian Sea, and the Aral Sea.

GENUS CEREOPSIS LATHAM

*Cereopsis* Latham, 1801, Index Ornith., Suppl., p. 67. Type, by monotypy, *Cereopsis novaehollandiae* Latham.

cf. Guiler, 1967, Emu, 66, pp. 211-235.

Veselovsky, 1970, Zeitschr. Tierpsychol., 27, pp. 915-945 (ethology).

Kear and Murton, 1973, *Wildfowl*, **24**, pp. 141-143 (systematic status).

#### CEREOPSIS NOVAEHOLLANDIAE

##### **Cereopsis novaehollandiae** Latham

*Cereopsis N. Hollandiae* Latham, 1801, *Index Ornith.*, Suppl., p. 67—New South Wales = islands of Bass Strait, *vide* Mathews, 1927, *Syst. Avium Australasianarum*, p. 210.

Islands off southern Australia, from the Recherche Archipelago, Western Australia, on the west to the Furneaux Group, northern Tasmania, on the east.

#### GENUS STICTONETTA REICHENBACH

*Stictonetta* Reichenbach, 1853, *Avium Syst. Nat.* (1852), p. 9. Type, by original designation, *Anas naevosa* Gould.

cf. Frith, 1964, *Nature*, **202**, pp. 1352-1353 (taxonomic relationships).

Frith, 1965, *CSIRO Wildlife Res.*, **10**, pp. 125-139 (ecology).

Johnsgard, 1965, *Wildfowl Trust, Annual Rep.*, **16** (1963-64), pp. 76-80 (behavior and taxonomic relationships).

#### STICTONETTA NAEVOSA

##### **Stictonetta naevosa** (Gould)

*Anas naevosa* Gould, 1841, *Proc. Zool. Soc London* (1840), p. 177—Western Australia.

Breeds regularly only in southwestern Australia and the Murray-Darling basin of southeastern Australia, but with much more widespread breeding during wet years. Nomadic, reaching nearly all parts of Australia and Tasmania.

#### SUBFAMILY TADORNINAE

#### GENUS CYANOCHEN BONAPARTE

*Cyanochen* Bonaparte, 1856, *Compt. Rend. Acad. Sci., Paris*, **43**, p. 648. Type, by monotypy, *Bernicla cyanoptera* Rüppell.

#### CYANOCHEN CYANOPTERUS

##### **Cyanochen cyanopterus** (Rüppell)

*Bernicla cyanoptera* Rüppell, 1845, *Syst. Uebersicht Vögel*

Nord-Ost-Afrika's, p. 129, pl. 47—Shoa, Ethiopia.  
Highlands of Ethiopia above 2,100 meters.

GENUS **CHLOEPHAGA** EYTON

*Chloëphaga* Eyton, 1838, Monogr. Anatidae, p. 13. Type, by original designation, *Anas magellanica* Gmelin = *Anas leucoptera* Gmelin.

*Andichenodes* Boetticher, 1950, Beitr. Gattungssystematik Vögel, p. 43. Type, by original designation, *Anser melanopterus* Eyton.

cf. Hellmayr, 1932, Publ. Field Mus. Nat. Hist., Zool. Ser., **19**, pp. 319–321 (variation in *picta*).

Delacour, 1950, Amer. Mus. Novit., no. 1478, 4 pp. (variation in *picta*).

Rossi, 1960, Physis, **21**, pp. 240–244 (*rubidiceps*).

Pettingill, 1965, Living Bird, **4**, pp. 65–71 (*hybrida*).

Gladstone and Martell, 1968, Wildfowl, **19**, pp. 25–31 (breeding of *picta*).

Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 110–126 (*picta*, *hybrida*, *poliocephala*, *rubidiceps*).

**CHLOEPHAGA MELANOPTERA**

***Chloephaga melanoptera*** (Eyton)

*Anser melanopterus* Eyton, 1838, Monogr. Anatidae, p. 93—Lake Titicaca.

Andes from Peru (Ancash and Junín) south to Chile (Ñuble) and northwestern Argentina, chiefly above 3,200 meters. Winters at lower elevations.

**CHLOEPHAGA PICTA**

***Chloephaga picta picta*** (Gmelin)

*Anas picta* Gmelin, 1789, Syst. Nat., **1**, p. 504; based on "Painted Goose" of Latham, 1785, General Synop. Birds, **3**, p. 443—Staten Island.

*Bernicla dispar* Philippi and Landbeck, 1862, Anales Univ. Chile, **21**, p. 431—Chile.

Southern Chile (Linares) and southern Argentina (Neuquén and Río Negro) to Tierra del Fuego and nearby islands. Winters north to Colchagua, Chile, and Buenos Aires, Argentina.

**Chloephaga picta leucoptera** (Gmelin)

*Anas leucoptera* Gmelin, 1789, Syst. Nat., 1, p. 505; based on "L'oise des îles Malouines ou Falkland" of Buffon, 1783, Hist. Nat. Générale, 24, Hist. Nat. Oiseaux, 9, p. 69, and "White-winged Antarctic Goose" of P. Brown, 1776, New Illus. Zool., pl. 40, etc.—Falkland Islands. Falkland Islands; introduced South Georgia.

## CHLOEPHAGA HYBRIDA

**Chloephaga hybrida hybrida** (Molina)

*Anas Hybrida* Molina, 1782, Saggio Storia Nat. Chili, pp. 241, 344—Chiloé Island.

Chile from Chiloé south to Tierra del Fuego and Cape Horn islands, occasionally north to constal Cautín; Isla Grande and Staten Island, Argentina, north in winter to coastal Santa Cruz and Chubut.

**Chloephaga hybrida malvinarum** Phillips

*Chloëphaga hybrida malvinarum* Phillips, 1916, Auk, 33, p. 423—Port Stephens, West Falkland, Falkland Islands. Falkland Islands.

## CHLOEPHAGA POLIOCEPHALA

**Chloephaga poliocephala** Sclater

*Chloëphaga poliocephala* P. L. Sclater, 1857, Proc. Zool. Soc. London, p. 128; based on "Bernicla inornata" of G. R. Gray, 1844, Gen. Birds, 3, p. [607], col. pl. [165]—Chiloé Island.

Southern Chile from Bío-Bío to the Cape Horn islands, and southern Argentina from Neuquén and Río Negro to Tierra del Fuego; occasional Falkland Islands. Winters north to Colchagua, Chile, and Buenos Aires, Argentina.

## CHLOEPHAGA RUBIDICEPS

**Chloephaga rubidiceps** Sclater

*Chloëphaga rubidiceps* P. L. Sclater, 1861, Proc. Zool. Soc. London (1860), p. 387, pl. 173—Falkland Islands.

Southern Chile from Magallanes and southern Argentina from Santa Cruz to Tierra del Fuego; Falkland Islands. Winters north to Buenos Aires, Argentina.



GENUS **NEOCHEN** OBERHOLSER

*Neochen* Oberholser, 1918, Journ. Washington Acad. Sci., 8, p. 571. Type, by original designation and monotypy, *Anser jubatus* Spix.

**NEOCHEN JUBATA****Neochen jubata** (Spix)

*Anser jubatus* Spix, 1825, Avium Species Novae Itinere Brasiliam, 2, p. 84, pl. 108—"Ad ripam fl. Solimoëns in insula Praya das Onças."

Basins of the Orinoco and the Amazon and their affluents, south to southern Amazonas, northern Mato Grosso, and São Paulo in Brazil, Paraguay, and Jujuy and Salta in Argentina.

GENUS **ALOPOCHEN** STEJNEGER

*Alopochen* Stejneger, 1885, in Kingsley, Standard Nat. Hist., 4, p. 141. Type, by subsequent designation (Oberholser, 1918, Journ. Washington Acad. Sci., 8, p. 572), *Anas aegyptiaca* Linnaeus.

**ALOPOCHEN AEGYPTIACA****Alopochen aegyptiaca** (Linnaeus)

*Anas aegyptiaca* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 197—Egypt.

Africa south of the Sahara; also the entire Nile Valley. Numerous instances of occurrence in Europe (chiefly of feral birds) and in Morocco, Algeria, and Tunisia. Reported from the Danube Valley early eighteenth century. Introduced England.

GENUS **TADORNA** FLEMING

*Tadorna* Boie, 1822 (before May), Tagebuch Reise Norwegen, pp. 140, 351. Type, by tautonymy, *Tadorna familiaris* Boie = *Anas tadorna* Linnaeus.

*Casarca* Bonaparte, 1838, Geogr. Comp. List Birds Europe North Amer., p. 56. Type, by monotypy and tautonymy, *Anas rutila* Pallas = *Anas casarca* Linnaeus = *Anas ferruginea* Pallas.

*Pseudotadorna* Nagamichi Kuroda, 1917, Tori, 1, p. 1. Type,

- by monotypy, *Pseudotadorna cristata* Kuroda.  
*Zesarkaca* Mathews, 1937, *Emu*, **37**, p. 31. Type, by original designation, *Anas variegata* Gmelin.
- cf. Oliver, 1936, *Emu*, **36**, pp. 69-72 (*variegata*).  
 Hori, 1964, *Ibis*, **106**, pp. 333-360 (breeding biology of *tadorna*).  
 Siegfried, 1966, *Ostrich*, **37**, pp. 144-151 (*cana*).  
 FitzGerald, 1969, *Wildfowl*, **20**, pp. 69-70 (*variegata*).  
 Bryant and Leng, 1975, *Wildfowl*, **26**, pp. 20-30 (*tadorna*).  
 Jenkins, Murray, and Hall, 1975, *Journ. Animal Ecol.*, **44**, pp. 201-231 (*tadorna*).  
 Riggert, 1977, *Wildlife Monogr.*, no. 52, 67 pp. (biology of *tadornoides*).

#### TADORNA FERRUGINEA<sup>1</sup>

##### **Tadorna ferruginea** (Pallas)

*Anas ferruginea* Pallas, 1764, in Vroeg, *Cat. Raisonné Coll. Oiseaux, Adumbr.*, p. 5—no locality = Tartary.

Breeds from southern Spain and northwestern Africa east through the Balkans, southern Russia, Kirghiz Steppes, Altai, and Transbaicalia to Amurland, south to Spanish Sahara, Ethiopia, Turkey, Iraq, Iran, Afghanistan, Tibet, western China, Manchuria. Winters from the southern part of breeding range south to the northern Sahara, the Nile Valley to northern Sudan, Arabia, southern India, Korea, Japan (rarely), southern China, Indochina.

#### TADORNA CANA

##### **Tadorna cana** (Gmelin)

*Anas cana* Gmelin, 1789, *Syst. Nat.*, **1**, p. 510; based on "Grey-headed Duck" of Latham, 1785, *General Synop.*

*Birds*, **3**, p. 458—Cape of Good Hope.

Southern Africa from Transvaal and Orange Free State to Cape Province; occasional South West Africa (Namibia), southern Botswana, and Natal.

<sup>1</sup>*T. ferruginea* and *cana* form a superspecies. Delacour and Mayr, 1945, *Wilson Bull.*, **57**, p. 38, also include *tadornoides* and *variegata*.—P. A. J.

## TADORNA VARIEGATA

**Tadorna variegata** (Gmelin)

*Anas variegata* Gmelin, 1789, Syst. Nat., 1, p. 505; based on "Variegated Goose" of Latham, 1785, General Synop. Birds, 3, p. 441—Dusky Bay, New Zealand. New Zealand, including Stewart Island; rare north of lat. 38° S.

## TADORNA CRISTATA

**Tadorna cristata** (Kuroda)

*Pseudotadorna cristata* Nagamichi Kuroda, 1917, Tori, 1, pp. 1, 2, fig. 1—Naktung River near Fusan, Korea. Known only from 3 specimens, 2 from Korea and 1 from near Vladivostok. Now apparently extinct.

## TADORNA TADORNOIDES

**Tadorna tadornoides** (Jardine and Selby)

*Anas tadornoides* Jardine and Selby, 1828, Illus. Ornith., pt. 4, pl. 62 and text—New South Wales. Breeds from southwestern Australia east across South Australia and Victoria to the southern tablelands of New South Wales, wandering far to the north in summer.

## TADORNA TADORNA

**Tadorna tadorna** (Linnaeus)

*Anas Tadorna* Linnaeus, 1758, Syst. Nat., ed. 10, p. 122; based on "The Sheldrake, or Burrough-Duck" of Albin, 1731, Nat. Hist. Birds, 1, p. 90, pl. 94—coasts of Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 40. British Isles, France, Norway, Sweden, Estonia, southeastern Europe east through Siberia to Mongolia and Manchuria, north to about lat. 55° N., south to the Caucasus, Iran, Turkistan, and western China. Winters from the southern part of breeding range to northern Africa, Iraq, India, Burma, southern China, and (rarely) Japan.

## TADORNA RADJAH

**Tadorna radjah radjah** (Lesson)

*Anas radjah* "Garnot" Lesson, 1828, Man. Ornith., 2, p. 417—Buru.

Moluccas (Buru, Ceram), western Papuan islands, New Guinea, Aru Islands, and Fergusson Island.

**Tadorna radjah rufitergum** Hartert

*Tadorna radjah rufitergum* Hartert, 1905, Novit. Zool., **12**, p. 205—South Alligator River, Northern Territory.

Northern Australia from the Fitzroy River, Western Australia, to northern Queensland; formerly south to New South Wales. Intergrades with *radjah* in southern New Guinea.

GENUS TACHYERES OWEN

*Tachyeres* Owen, 1875, Trans. Zool. Soc. London, **9**, p. 254.  
Type, by monotypy, *Anas brachyptera* Latham.

cf. Lowe, 1934, Ibis, pp. 467-495.

Murphy, 1936, Oceanic Birds South Amer., pp. 951-972.

Moynihan, 1958, Auk, **75**, pp. 183-202 (behavior of *patachonicus*).

Pettingill, 1965, Living Bird, **4**, pp. 71-78 (*brachypterus*).

Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 129-139 (*pteneres*, *patachonicus*).

Weller, 1976, Wildfowl, **27**, pp. 45-53 (ecology and behavior).

Jacob, 1977, Journ. Ornith., **118**, pp. 52-59 (systematic position).

TACHYERES PTENERES

**Tachyeres pteneres** (Forster)

*Anas pteneres* J. R. Forster, 1844, Descr. Animal. Itinere Maris Australis Terras, p. 338—Tierra del Fuego.

Breeds coastally in Chile from Chiloé Island south to Cape Horn, and in Argentina from Chubut south to Tierra del Fuego and Staten Island.

TACHYERES BRACHYPTERUS

**Tachyeres brachypterus** (Latham)

*Anas cinerea* Gmelin, 1789, Syst. Nat., **1**, p. 506; based on "Loggerhead Goose" of Latham, 1785, General Synop. Birds, **3**, p. 439—Falkland Islands.

*Anas brachyptera* Latham, 1790, Index Ornith., p. 834. New name for *Anas cinerea* J. F. Gmelin, 1789, preoccupied

by *Anas cinerea* S. G. Gmelin, 1774, Reise Russland, 2, p. 184, pl. 17.

Falkland Islands.

#### TACHYERES PATACHONICUS

##### **Tachyeres patachonicus** (King)

*Oidemia Patachonica* King, 1828, Zool. Journ., 4, p. 100—  
Strait of Magellan.

Breeds in Chile from Concepción and Ñuble south to Isla Hoste and perhaps Cape Horn, and in Argentina from Neuquén and Chubut to Tierra del Fuego and Staten Island; Falkland Islands.

#### SUBFAMILY ANATINAE

##### GENUS PLECTROPTERUS STEPHENS

*Plectropterus* Stephens, 1824, in Shaw, General Zool., 12, pt. 2, p. 6. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 10), *Anas gambensis* Linnaeus.

##### PLECTROPTERUS GAMBENSIS

##### **Plectropterus gambensis gambensis** (Linnaeus)

*Anas gambensis* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 195—Gambia.

Africa from Gambia, Sudan, and Ethiopia south to Angola and the Zambezi.

##### **Plectropterus gambensis niger** Sclater

*Plectropterus niger* P. L. Sclater, 1877, Proc. Zool. Soc. London, p. 47. Type a cage bird said to have come from Zanzibar.

Africa from South West Africa (Namibia) to Rhodesia (Zimbabwe) and south to Cape Province, intergrading with *gambensis* over a wide area.

##### GENUS CAIRINA FLEMING

*Cairina* Fleming, 1822, Philos. Zool., 2, p. 260. Type, by monotypy, *Anas moschata* Linnaeus.

*Asarcornis* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 46 (in key), 59. Type, by original designation and monotypy, *Anas scutulata* S. Müller.

- cf. Leopold, 1959, *Wildlife Mexico*, pp. 163-168 (*moschata*).  
 Mackenzie and Kear, 1976, *Wildfowl*, **27**, pp. 5-17 (*scutulata*).  
 Holmes, 1977, *Wildfowl*, **28**, pp. 61-64 (*scutulata*).

## CAIRINA MOSCHATA

**Cairina moschata** (Linnaeus)

*Anas moschata* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 124—  
 India; Brazil substituted by Berlepsch and Hartert, 1902,  
*Novit. Zool.*, **9**, p. 131.

Mexico from coasts of central Sinaloa and central Tamaulipas south through Central America and South America to the coast of Peru on the west and to Santa Fe, Argentina, and Uruguay, on the east, accidentally to Buenos Aires, Argentina; casual Trinidad.

## CAIRINA SCUTULATA

**Cairina scutulata** (Müller)

*Anas scutulata* S. Müller, 1842, in Temminck (ed.), *Verh. Nat. Geschiedenis Nederlandsche Overzeesche Bezittingen, Land-Volkenkunde*, p. 159, note—Java.

Formerly Assam south through the Malay Peninsula discontinuously to Sumatra and Java. Now very rare, apparently breeding eastern Assam and probably Sumatra and Java (recent sightings).

## GENUS PTERONETTA SALVADORI

*Pteronetta Salvadori*, 1895, *Cat. Birds Brit. Mus.*, **27**, pp. 46 (in key), 63. Type, by original designation and monotypy, *Querquedula hartlaubii* Cassin.

## PTERONETTA HARTLAUBII

**Pteronetta hartlaubii** (Cassin)

*Querquedula Hartlaubii* Cassin, 1859, *Proc. Acad. Nat. Sci. Philadelphia*, p. 175—Camma River, Gabon.

Sierra Leone to Zaire, east to southern Sudan, south to northeastern Angola.

## GENUS SARKIDIORNIS EYTON

*Sarkidiornis* Eyton, 1838, *Monogr. Anatidae*, p. 20. Type, by original designation, *Anser melanotos* Pennant.

## SARKIDIORNIS MELANOTOS

**Sarkidiornis melanotos melanotos** (Pennant)

*Anser melanotos* Pennant, 1769, Ind. Zool., p. 12, pl. 11—Ceylon.

Senegal east to Sudan and Ethiopia, south to northern South West Africa (Namibia), Orange Free State, and Lesotho (Basutoland), more rarely Cape Province; Madagascar; Pakistan, India east to Assam and south to Mysore, formerly Sri Lanka (Ceylon), Burma, southeastern China, Thailand, Indochina.

**Sarkidiornis melanotos sylvicola** Ihering and Ihering

*Anas carunculata* Lichtenstein, 1819, Abh. K. Akad. Wissen. Berlin, Phys. Kl. (1816-17), p. 176; based on "Ipecati Apoa" of Marcgrave, 1648, Hist. Rerum Nat. Brasiliae, p. 218, and "Pato crestudo," no. 428, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 417—no locality.

*Sarkidiornis sylvicola* Ihering and Ihering, 1907, in Mus. Paulista, São Paulo, Cat. Fauna Brazileira, 1, p. 72—Iguapé, São Paulo, Brazil, and Buenos Aires, Argentina. New name for *Anas carunculata* Lichtenstein, 1819, preoccupied by *Anas carunculata* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 109.

Eastern Panama; South America from Colombia and western Ecuador east to Venezuela and Guyana, thence southeast of the Andes to northern Argentina (Córdoba, Santa Fe, Entre Ríos) and Uruguay; casual Trinidad.

## GENUS NETTAPUS BRANDT

*Nettapus* Brandt, 1836, Descr. Icones Animalium Rossicorum Novorum, Aves, fasc. 1, p. 5. Type, by monotypy, *Anas madagascariensis* Gmelin = *Anas aurita* Boddaert.

*Cheniscus* Eyton, 1838, Monogr. Anatidae, p. 15, Type, by original designation, *Anas coromandeliana* Gmelin.

## NETTAPUS PULCHELLUS

**Nettapus pulchellus** Gould

*Nettapus pulchellus* Gould, 1842, Birds Australia, pt. 6, pl. and text—Port Essington, Northern Territory.

Buru, Ceram, southern New Guinea, northern Australia from the Fitzroy River, Western Australia, to Rockhampton, Queensland.

## NETTAPUS COROMANDELIANUS

**Nettapus coromandelianus coromandelianus** (Gmelin)

*Anas coromandeliana* Gmelin, 1789, Syst. Nat., 1, p. 522; based on "Coromandel Teal" of Latham, 1785, General Synop. Birds, 3, p. 556—Coromandel, India.

India, Sri Lanka (Ceylon), and Burma east to eastern China, south to the Andaman Islands, Indochina, and the Malay Peninsula; Sumatra, Java and Bangka, Borneo, northern Luzon, northern Celebes, northern New Guinea.

**Nettapus coromandelianus albipennis** Gould

*Nettapus albipennis* Gould, 1842, Birds Australia, pt. 6, text to plate labeled "Nettapus coromandelianus?"—eastern Australia = Moreton Bay, Queensland, *vide* Mathews, 1912, Novit. Zool., 18, p. 236.

Eastern Australia from north of Innisfail, Queensland, to northern New South Wales.

## NETTAPUS AURITUS

**Nettapus auritus** (Boddaert)

*Anas aurita* Boddaert, 1783, Table Planches Enlum., p. 48; based on "Sarcelle mâle de Madagascar" of Daubenton, 1765-81, Planches Enlum., pl. 770—Madagascar.

Gambia east to Sudan and Ethiopia, south to Angola, northern Botswana, Rhodesia (Zimbabwe), Mozambique, and eastern Cape Province; Pemba, Zanzibar, Mafia, Madagascar.

## GENUS CALLONETTA DELACOUR

*Callonetta* Delacour, 1936, Oiseau, 6, p. 369. Type. by original designation, *Anas leucophrys* Vieillot.

cf. Johnsgard, 1960, Bull. Brit. Ornith. Club, 80, pp. 165-167. Hoy, 1971, Journ. Ornith., 112, p. 158 (breeding biology).

## CALLONETTA LEUCOPHRYS

**Callonetta leucophrys** (Vieillot)

*Anas leucophrys* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 156; based on "Pato ceja blanca," no. 442, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 453—Paraguay.

Southeastern Bolivia, Paraguay, southern Brazil (Mato Grosso



and Rio Grande do Sul), Argentina south to Buenos Aires, Uruguay. Chiefly or solely winter visitant to northern areas.

GENUS **AIX** BOIE

*Aix* Boie, 1828, Isis von Oken, col. 329. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 35), *Anas sponsa* Linnaeus.

*Dendronessa* Swainson, 1832, in Swainson and Richardson, Fauna Boreali-Americana, 2 (1831), p. 497. Type, by original designation, *Anas galericulata* Linnaeus.

## AIX SPONSA

**Aix sponsa** (Linnaeus)

*Anas Sponsa* Linnaeus, 1758, Syst. Nat., ed. 10, p. 128; based on "The Summer Duck" of Catesby, 1732, pt. 5, p. 97, pl. 97, and Edwards, 1747, Nat. Hist. Birds, p. 101, pl. 101—North America = Carolina *ex* Catesby.

British Columbia and southern Alberta south to California, east-central Saskatchewan and southern Manitoba, eastern North Dakota east to Nova Scotia, south to the Gulf coast east from Texas, Florida, Cuba. Winters from western Oregon to central California, Texas to South Carolina and Florida.

## AIX GALERICULATA

**Aix galericulata** (Linnaeus)

*Anas galericulata* Linnaeus, 1758, Syst. Nat., ed. 10, p. 128; based on "The Chinese Teal" of Edwards, 1747, Nat. Hist. Birds, p. 102, pl. 102—China.

Eastern Asia from the Amur and Ussuri Rivers south through Korea, eastern China, and Japan (Hokkaido, Hondo, Kyushu) to the Ryukyus (Okinawa). Winters from its breeding range below lat. 40° N. south to southeastern China and rarely to Taiwan. Introduced Great Britain.

GENUS **CHENONETTA** BRANDT

*Chenonetta* Brandt, 1836, Descr. Icones Animalium Rossicorum Novorum, Aves, fasc. 1, p. 5. Type, by monotypy, *Anser lophotus* Brandt = *Anas jubata* Latham.

## CHENONETTA JUBATA

**Chenonetta jubata** (Latham)

*Anas jubata* Latham, 1801, Index Ornith., Suppl., p. 69—  
New South Wales.

Australia, except for the dry interior; Tasmania.

## GENUS AMAZONETTA BOETTICHER

*Amazonetta* Boetticher, 1929, Anzeiger Ornith. Gesell.  
Bayern, **2**, p. 12. Type, by original designation, *Anas  
brasiliensis* Gmelin.

*Aixopsis* Delacour, 1936, Oiseau, **6**, p. 376. Type, by original  
designation, *Anas brasiliensis* Gmelin.

## AMAZONETTA BRASILIENSIS

**Amazonetta brasiliensis brasiliensis** (Gmelin)

*Anas brasiliensis* Gmelin, 1789, Syst. Nat., **1**, p. 517; based  
on "Mareca alia species" of Marcgrave, 1648, Hist. Rerum  
Nat. Brasiliae, p. 214—northeastern Brazil.

Eastern Colombia, Venezuela, Guyana, and ? Surinam south  
in Brazil to central Mato Grosso and Rio de Janeiro.

**Amazonetta brasiliensis ipecutiri** (Vieillot)

*Anas ipecutiri* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv.  
éd., **5**, p. 120; based on "Pato ipecutiri," no 437, of Azara,  
1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio  
Plata, **3**, p. 445—Paraguay.

*Amazonetta vittata* Derscheid, 1938, Bull. Brit. Ornith. Club,  
**58**, p. 60—Argentina, south of Buenos Aires; cf. Zimmer  
and Mayr, 1943, Auk, **60**, pp. 250-251.

Eastern Bolivia, Paraguay, southern Brazil, Argentina south  
to northern Buenos Aires. Winters northward, occasionally  
to Venezuela.

## GENUS MERGANETTA GOULD

*Merganetta* Gould, 1842, Proc. Zool. Soc. London (1841), p.  
95. Type, by monotypy, *Merganetta armata* Gould.

cf. Conover, 1943, Publ. Field Mus. Nat. Hist., Zool. Ser.,  
**24**, pp. 345-356.

Niethammer, 1952, Journ. Ornith., **93**, pp. 357-360 (ana-  
tomy and systematic position).

- Johnson, 1965, *Birds Chile*, **1**, pp. 211-222.  
 Johnsgard, 1966, Wildfowl Trust, Annual Report, **17**  
 (1964-65), pp. 66-74 (biology and relationships).  
 Weller, 1968, *Wildfowl*, **19**, pp. 33-40 (plumages).  
 Moffett, 1970, *Living Bird*, **9**, pp. 5-27 (breeding biology).  
 Johnson, 1972, *Birds Chile*, Suppl., pp. 67-71 (behavior).

#### MERGANETTA ARMATA

##### **Merganetta armata colombiana** Des Murs

*Merganetta Colombiana* Des Murs, 1845, *Rev. Zool.*, Paris, p. 179—no locality = Colombia, *fide* Berlioz, 1929, *Bull. Mus. Nat. Hist. Nat.*, Paris, sér. 2, **1**, p. 68.

Andes of Colombia, Venezuela, and central Ecuador.

##### **Merganetta armata leucogenis** (Tschudi)

*Anas leucogenis* Tschudi, 1843, *Archiv Naturgeschichte*, **9**, pt. 1, p. 390—high Andes of Peru = Manarimacunan, sources of Río Aynamayo [= upper Río Vitoc], Junín, Peru, *fide* Tschudi, 1846, *Untersuchungen Fauna Peruana, Ornith.*, p. 312.

Northern and central Peru, from Amazonas to northern Lima and Junín.

##### **Merganetta armata turneri** Sclater and Salvin<sup>1</sup>

*Merganetta turneri* P. L. Sclater and Salvin, 1869, *Exotic Ornith.*, pt. 13, p. 199, pl. 100—Tinta, Cuzco, Peru.

Andes of Peru in Cuzco, Puno, and Arequipa; Andes of Arica in northern Chile.

##### **Merganetta armata garleppi** Berlepsch

*Merganetta garleppi* Berlepsch, 1894, *Ornith. Monatsber.*, **2**, p. 110—Cocotal (= Locotal), Bolivia.

Andes of Bolivia (except Tarija).

##### **Merganetta armata berlepschi** Hartert

*Merganetta berlepschi* Hartert, 1909, *Novit. Zool.*, **16**, p. 244—near Tucumán, Argentina; altitude 1,800 meters.

Andes of southeastern Bolivia (Tarija) and of northwestern Argentina (to Catamarca and La Rioja).

<sup>1</sup>The races *turneri*, *garleppi*, and *berlepschi* are poorly characterized and appear quite variable. They are thus questionably distinct from *leucogenis*.—P. A. J.

**Merganetta armata armata** Gould

*Merganetta armata* Gould, 1842, Proc. Zool. Soc. London (1841), p. 95—Andes of Chile, lat. 34°–35° S.

*Merganetta fraenata* Salvadori, 1895, Cat. Birds Brit. Mus., 27, pp. 457 (in key), 458, pl. 5, fig. 1—central Chile.

Andes of Chile (except Arica) to Nahuelbuta, Arauco Province, and of Argentina from Mendoza to Tierra del Fuego.

GENUS **HYMENOLAIMUS** GRAY

*Hymenolaimus* G. R. Gray, 1843, Ann. Mag. Nat. Hist., 11, p. 370. Type, by monotypy, *Anas malacorhynchos* Gmelin.

cf. Kear, 1973, Living Bird, 11 (1972), pp. 175–192.

**HYMENOLAIMUS MALACORHYNCHOS****Hymenolaimus malacorhynchos** (Gmelin)

*Anas malacorhynchos* Gmelin, 1789, Syst. Nat., 1, p. 526; based on “Soft-billed Duck” of Latham, 1785, General Synop. Birds, 3, p. 522—Dusky Sound, South Island, New Zealand.

*Hymenolaimus malacorhynchus hymenolaimus* Mathews, 1937, Emu, 37, p. 32—North Island, New Zealand.

Mountain streams of New Zealand, from Coromandel Range, North Island, to Fiordland, South Island.

GENUS **ANAS** LINNAEUS

*Anas* Linnaeus, 1758, Syst. Nat., ed. 10, p. 122. Type, by subsequent designation (Lesson, 1828, Man. Ornith., 2, p. 417), *Anas boschas* Linnaeus = *Anas platyrhynchos* Linnaeus.

*Spatula* Boie, 1822, Isis von Oken, col. 564. Type, by monotypy, *Anas clypeata* Linnaeus.

*Mareca* Stephens, 1824, in Shaw, General Zool., 12, pt. 2, p. 130. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 33), *Mareca fistularis* Stephens = *Anas penelope* Linnaeus.

*Chaulelasmus* Bonaparte, 1838, Geogr. Comp. List Birds Europe North Amer., p. 46. Type, by monotypy, *Anas strepera* Linnaeus.

*Nesonetta* G. R. Gray, 1844, Gen. Birds, 3, p. [627]. Type,

- by original designation, *Nesonetta aucklandica* G. R. Gray.  
*Salvadorina* Rothschild and Hartert, 1894, Novit. Zool., 1, p. 683. Type, by monotypy, *Salvadorina waigiensis* Rothschild and Hartert.
- Xenonetta* J. H. Fleming, 1935, Occas. Papers Roy. Ontario Mus. Zool., no. 1, p. 1. Type, by original designation, *Xenonetta nesiotis* = *Anas aucklandica* G. R. Gray.
- Dafilonetton* Boetticher, 1937, Anzeiger Ornith. Gesell. Bayern, 2, p. 406. Type, by original designation, *Anas flavirostris* Vieillot.
- Philippinetta* Boetticher, 1937, Festschr. Embrik Strand, 3, p. 585. Type, by original designation, *Anas luzonica* Fraser.
- Aethiopinetta* Boetticher, 1943, Zool. Anzeiger, 142, p. 150. Type, by original designation, *Anas erythrorhyncha* Gmelin.<sup>1</sup>
- cf. Wetmore, 1935, Condor, 27, p. 36 (*strepera couesi*).  
 Mayr and Rand, 1937, Bull. Amer. Mus. Nat. Hist., 73, pp. 9-12 (*waigiensis*).  
 Amadon, 1943, Amer. Mus. Novit., no. 1237, pp. 1-5 (revision of *superciliosa*).  
 Boetticher, 1943, Zool. Anzeiger, 142, pp. 147-151 (systematic position of *erythrorhyncha*).  
 Ripley, 1951, Wilson Bull., 63, pp. 189-191 (*luzonica*).  
 Snyder and Lumsden, 1951, Occas. Papers Roy. Ontario Mus. Zool., no. 10, 18 pp. (variation in *cyanoptera*).  
 Parkes, 1953, Condor, 55, pp. 275-276 (*acuta*).  
 Wiedmann, 1956-58, Zietschr. Tierpsychol., 13, pp. 208-271; 15, pp. 277-300 (behavior of *platyrhynchos*).  
 Lorenz and Wall, 1960, Journ. Ornith., 101, pp. 50-60 (systematic position of *falcata*).  
 Johnsgard, 1961, Auk, 78, pp. 3-43 (relationships of North American *platyrhynchos* and *rubripes*).  
 Rowan, 1963, Ostrich, Suppl. no. 5, 56 pp. (*undulata*).  
 Siegfried, 1965, Ostrich, 36, pp. 155-198 (*smithii*).  
 Dane, 1966, Auk, 83, pp. 389-402 (breeding biology of *discors*).  
 McKinney, 1967, Wildfowl Trust, Annual Rep., 18 (1965-66), pp. 108-121 (breeding behavior of *clypeata*).

<sup>1</sup> Additional synonyms are *Dafila*, *Eunetta*, *Nettion*, *Punanetta*, and *Querquedula*.—P. A. J.

- Moisan, Smith, and Martinson, 1967, U. S. Dept. Interior, Fish Wildlife Serv., Spec. Sci. Rep.—Wildlife no. 100, 256 pp. (*crecca carolinensis*).
- Swedberg, 1967, Koloa, 56 pp. (*platyrhynchos wyvilliana*).
- Oring, 1968, Auk, **85**, pp. 355-380 (*strepera*).
- Siegfried, 1968, Ostrich, **39**, pp. 61-75 (*sparsa*).
- Aldrich and Baer, 1970, Wilson Bull., **82**, pp. 63-73 (status of *platyrhynchos diazi*).
- Humphrey *et al.*, 1970, Birds Isla Grande (Tierra del Fuego), pp. 126-129, 139-148 (*specularoides*, *specularis*, *flavirostris*, *sibilatrix*, *bahamensis*, *versicolor*).
- McKinney, 1970, Living Bird, **9**, pp. 29-64 (displays of *discors*, *cyanoptera*, *smithii*, *clypeata*).
- Winterbottom, 1974, Ostrich, **45**, pp. 110-132 (*capensis*).
- Kear, 1975, Wildfowl, **26**, pp. 104-111 (*waigiensis*).
- Weller, 1975, Auk, **92**, p. 280-297 (ecology of *aucklandica*).
- Weller, 1975, Ibis, **117**, pp. 217-231 (ecology and behavior of *georgica*).
- Hubbard, 1977, New Mexico Dept. Game Fish, Bull. no. 16, 56 pp. (biology and taxonomy of *platyrhynchos diazi*).
- Skead, 1977, Ostrich, Suppl. no. 12, pp. 75-81 (*smithii*).

## ANAS WAIGIUENSIS

**Anas waigiensis** (Rothschild and Hartert)

- Salvadorina waigiensis* Rothschild and Hartert, 1894, Novit. Zool., **1**, p. 683—Waigeo.
- Mountain streams of New Guinea, above 400 meters. Of doubtful occurrence on Waigeo Island.

ANAS PENELOPE<sup>1</sup>**Anas penelope** Linnaeus

- Anas Penelope* Linnaeus, 1758, Syst. Nat., ed. 10, p. 126; based on "The Wigeon or Whewer" of Albin, 1734, Nat. Hist. Birds, **2**, p. 88, pl. 99—coasts and swamps of Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 44.
- Iceland, British Isles, Scandinavia east to Anadyrland, Koryakland, and Kamchatka, south to France and Netherlands

<sup>1</sup>*A. penelope* and *americana* form a superspecies.—P. A. J.

(sporadically), Denmark, northern Germany, central Russia, Transcaucasia, Kazakhstan, Altai, Mongolia, Lake Baykal, and perhaps Amurland, Manchuria, and northern Sakhalin. Winters from western and southern Europe south to Nigeria and Kenya, Azores, Madeira, Canaries, Iraq, Arabia, Iran, India, Sri Lanka (Ceylon) occasionally, southern China, Taiwan, Japan, Indochina, Hainan, Philippines. Regularly in autumn and winter to both coasts and the interior of North America; casual Greenland; has reached West Indies, Hawaii.

#### ANAS AMERICANA

##### **Anas americana** Gmelin

*Anas americana* Gmelin, 1789, Syst. Nat., 1, p. 526; based on "Le Canard jensen, de la Louisiane" of Daubenton, 1765-81, Planches Enlum., pl. 955, and "American Wigeon" of Pennant, 1785, Arctic Zool., p. 567—Louisiana and New York.

Alaska east to northern Ontario and northern Minnesota, with recent scattered breeding areas east to New Brunswick, Prince Edward Island, Nova Scotia, Maine, and Massachusetts, south in the west to northeastern California, Nevada, Utah, Colorado. Winters from Alaska south to Central America, Hawaii, Gulf coast, Atlantic coast from southern New England to Florida, West Indies.

#### ANAS SIBILATRIX

##### **Anas sibilatrix** Poeppig

*Anas sibilatrix* Poeppig, 1829, in Froriep, Notizen, 25, col. 10—Talcahuano, Concepción, Chile.

Chile from Atacama south to Tierra del Fuego, Argentina from Córdoba and Entre Ríos south to Isla Grande, occasionally Uruguay; Falkland Islands. Winters north to Paraguay, southeastern Brazil, Uruguay.

#### ANAS FALCATA

##### **Anas falcata** Georgi

*Anas falcata* Georgi, 1775, Bemerkungen Reise Russischen Reich, p. 167—Lake Baykal.

Central Asia from the upper Yenisey River east to the Sea of Okhotsk and west coast of Kamchatka, south to Lake Baykal, northeastern Mongolia, Manchuria, Amurland, Ussuriland,

Sakhalin, and Kuril Islands to Japan (Hokkaido). Winters from Korea and Japan south to southeastern China and northern Indochina.

#### ANAS STREPERA

##### **Anas strepera strepera** Linnaeus

*Anas strepera* Linnaeus, 1758, Syst. Nat., ed. 10, p. 125—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 43.

Alaska south to California, Idaho, and Utah, Alberta east to Ontario and south to Nebraska, eastern Great Lakes and Atlantic coast from Maine to North Carolina; Iceland, British Isles, and France east to Transbaicalia in Siberia (possibly farther), from near lat. 60° N. south to Yugoslavia, Bulgaria, Caucasus, Iran, Afghanistan, Mongolia (recent eastward extension in both New World and Old). Winters from central and southern parts of breeding range south to Baja California, southern Mexico, Gulf coast, Florida, western West Indies, northern Africa, Iraq, Iran, India, eastern China, Japan, and Thailand.

##### **Anas strepera couesi** (Streets)

*Chaulelasmus couesi* Streets, 1876, Bull. Nuttall Ornith. Club, 1, p. 46—Washington Island, Fanning Group. Washington and New York Islands, Fanning Group, Pacific Ocean. Extinct.

#### ANAS FORMOSA

##### **Anas formosa** Georgi

*Anas formosa* Georgi, 1775, Bemerkungen Reise Russischen Reich, p. 168—Irkutsk and Lake Baykal.

Siberia from west of the Yenisey River east to Anadyrland, Koryakland, and Kamchatka, north to about lat. 70° N., south to the Nishnaya Tunguska and Angara Rivers, northern Lake Baykal, Transbaicalia, and the Gulf of Uda on the Sea of Okhotsk. Winters from Manchuria, Korea, and southern Japan to southeastern China.

#### ANAS CRECCA<sup>1</sup>

##### **Anas crecca crecca** Linnaeus

*Anas Crecca* Linnaeus, 1758, Syst. Nat., ed. 10, p. 126—

<sup>1</sup>*A. crecca* and *flavirostris* form a superspecies.—P. A. J.



Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 45.

Eurasia from Iceland and the British Isles east to Anadyrland, Kamchatka, the Commander and ? Pribilof Islands, north to about lat. 70° N., south to the Mediterranean, northern Balkans, Black Sea, Turkey, Transcaucasia, Kazakhstan, Altai, Mongolia, Manchuria, Amurland, Ussuriland, Sakhalin, Kurils, Japan (Hokkaido, northern Hondo). Winters from southern parts of breeding range south to Africa (Niger, Kenya), Iraq, Iran, India, Sri Lanka (Ceylon), southeastern China, Indochina, Hainan, Philippines.

**Anas crecca nimia** Friedmann

*Anas crecca nimia* Friedmann, 1948, *Proc. Biol. Soc. Washington*, **61**, p. 157—Kiska Island, Alaska.

Aleutian Islands, east to Akutan. Sedentary.

**Anas crecca carolinensis** Gmelin

*Anas carolinensis* Gmelin, 1789, *Syst. Nat.*, **1**, p. 533; based on "American Teal" of Latham, 1785, *General Synop. Birds*, **3**, p. 554, and Pennant, 1785, *Arctic Zool.*, **2**, p. 569—Carolina to Hudson Bay = South Carolina.

Alaska (including Pribilof Islands) east to Labrador and Newfoundland, south to California, Nevada, Utah, Colorado, Nebraska, Minnesota, southern Ontario, southern Quebec, northern Maine, New Brunswick, Nova Scotia. Winters from southeastern Alaska to northern Central America, Gulf coast, Atlantic coast from New Jersey south, Cuba.

ANAS FLAVIROSTRIS

**Anas flavirostris altipetens** (Conover)

*Nettion andium altipetens* Conover, 1941, *Proc. Biol. Soc. Washington*, **54**, p. 143—Páramo San Antonio, Culata Mountains, Mérida, Venezuela; altitude 12,000 feet.

Páramo zone of the Eastern Andes of Colombia, south to Bogotá, and northwestern Venezuela.

**Anas flavirostris andium** (Sclater and Salvin)

*Querquedula andium* P. L. Sclater and Salvin, 1873, *Nomencl. Avium Neotrop.*, p. 162—high Ecuador between Riobamba and Mocha.

Temperate and páramo zones of the Central and Eastern Andes of Colombia, south from Bogotá to northern Ecuador.

**Anas flavirostris oxyptera** Meyen

*Anas oxyptera* Meyen, 1834, *Nova Acta Acad. Caes.*

Leopold.-Carol. Nat. Curiosorum, Halle, 16, Suppl., p. 121, pl. 26—eastern slope of the southern Peruvian Andes, toward Lake Titicaca.

Puna zone (chiefly) of Peru, western Bolivia, northern Chile (also coastal), and northwestern Argentina.

**Anas flavirostris flavirostris** Vieillot

*Anas flavirostris* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 107; based on "Pato pico amarillo y nego," no. 439, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 448—Buenos Aires.

Central Chile, central Argentina, and Uruguay to Tierra del Fuego; Falkland Islands; South Georgia. Winters to northern Argentina, Paraguay, and southeastern Brazil.

ANAS CAPENSIS

**Anas capensis** Gmelin

*Anas capensis* Gmelin, 1789, Syst. Nat., 1, p. 527; based on "Cape Wigeon" of Latham, 1785, General Synop, Birds, 3, p. 519—Cape of Good Hope.

Angola, Sudan, and Ethiopia south to South West Africa (Namibia) and Cape Province. Locally (? as migrants) to Lake Chad and Tibesti. Rare or absent from the Angolan escarpment east to northern Mozambique and along the southeastern coast.

ANAS GIBBERIFRONS<sup>1</sup>

**Anas gibberifrons albogularis** (Hume)

*Mareca albogularis* Hume, 1873, Stray Feathers, 1, p. 303—Andaman Islands.

*Polionetta albogularis* [sic] *leucopareus* J. H. Fleming, 1911, Proc. Biol. Soc. Washington, 24, p. 215—North Reef Island, Andaman Islands.

Andaman Islands.

**Anas gibberifrons gibberifrons** Müller

*Anas (Mareca) gibberifrons* S. Müller, 1842, in Temminck (ed.), Verh. Nat. Geschiedenis Nederlandsche Overzeesche Bezittingen, Land-Volkenkunde, p. 159, note—Celebes.

Java, Celebes, Sula Islands, Salajar, Sumba, Flores, Timor, and Wetar.

<sup>1</sup> *A. gibberifrons* and *bernieri* form a superspecies.—P. A. J.

**Anas gibberifrons gracilis** Buller

*Anas gracilis* Buller, 1869, Ibis, p. 41—Manawatu, North Island, New Zealand.

*Nettion castaneum rogersi* Mathews, 1912, Austral Avian Rec., 1, p. 86—northwestern Australia. Type said to be from Parry's Creek.

*Anas gibberifrons mathewsi* Phillips, 1923, Nat. Hist. Ducks, 2, p. 266 (not *Anas superciliosa rogersi* Mathews). New name for *Nettion castaneum rogersi* Mathews, 1912.

New Guinea, Kai and Aru Islands, Australia, Tasmania, New Zealand; occasional New Caledonia, Lord Howe Island, Macquarie Island.

**Anas gibberifrons remissa** Ripley

*Anas castanea remissa* Ripley, 1942, Auk, 59, p. 94—Rennell Island, Solomon Islands.

Rennell Island, Solomon Islands.

## ANAS BERNIERI

**Anas bernieri** (Hartlaub)

*Querquedula Bernieri* "J. Verr." Hartlaub, 1860, Journ. Ornith., 8, p. 173—Madagascar.

Madagascar. Now rare.

ANAS CASTANEA<sup>1</sup>**Anas castanea** (Eyton)

*Mareca castanea* Eyton, 1838, Monogr. Anatidae, p. 119, pl. 19—New South Wales.

Coastal Australia south from North West Cape, Western Australia, and Bowen, Queensland; interior southwestern Australia, South Australia (north to Lake Frome), southern Queensland, New South Wales, Victoria; Tasmania.

## ANAS AUCKLANDICA

**Anas aucklandica chlorotis** Gray

*Anas chlorotis* G. R. Gray, 1845, in Richardson and J. E. Gray (eds.), Voyage Erebus Terror, 1, Birds, p. 15, pl. 20—New Zealand.

<sup>1</sup>*A. castanea* and *aucklandica* form a superspecies.—P. A. J.

*Elasmonetta chlorotis peculiaris* Mathews, 1937, *Emu*, **37**, p. 31—South Island, New Zealand.

New Zealand; now restricted to northern portion of North Island (including Great Barrier Island), Fiordland of South Island, Stewart Island. Formerly more widely distributed, including Chatham Islands.

***Anas aucklandica aucklandica* (Gray)**

*Nesonetta aucklandica* G. R. Gray, 1844, *Gen. Birds*, **3**, p. [627], plain pl. [169], fig. 4 (head)—Auckland Islands.

Auckland Islands; now chiefly confined to Enderby, Rose, Ocean, Ewing, Disappointment, and Adams Islands.

***Anas aucklandica nesiotis* (Fleming)<sup>1</sup>**

*Xenonetta nesiotis* J. H. Fleming, 1935, *Occas. Papers Roy. Ontario Mus. Zool.*, no. 1, p. 1—Campbell Island.

Recently found on Dent Island, Campbell Island Group.<sup>2</sup> Previously known from Campbell Island (2 specimens, 3 sightings, 1886–1958).

**ANAS PLATYRHYNCHOS<sup>3</sup>**

***Anas platyrhynchos platyrhynchos* Linnaeus**

*Anas platyrhynchos* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 125—Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 42.

North America from Alaska (including Aleutian and Pribilof Islands) east to the west coast of Hudson Bay in Manitoba, west coast of James Bay, southern Quebec, and New England, south to southern California, Arizona, and New Mexico, thence east at about lat. 35°–40° N. to the Atlantic coast; Eurasia from Iceland, Azores, and British Isles east to Sea of Okhotsk, Kamchatka, Karaginsk Island, and Commander Islands, north to about lat. 66°–70° N., south to the Iberian Peninsula, the Mediterranean, northwestern Africa, and Turkey, east to Manchuria, Sakhalin, and Japan. Winters in North America on the Pacific coast from the Aleutians south to Baja California, over much of the southern half of the United States, north-

<sup>1</sup>Doubtfully separable from *aucklandica*; cf. Weller, 1975, *Auk*, **92**, pp. 280–297—P. A. J.

<sup>2</sup>Robertson, 1976, *Wildlife (N. Z. Wildlife Serv.)*, no. 7, pp. 45–46.

<sup>3</sup>*A. platyrhynchos, rubripes, melleri*, and *undulata* form a superspecies.—P. A. J.

eastern Mexico, western West Indies; in the Old World south to northern Africa, Iraq, Iran, Pakistan, central India, Burma, southeastern China. Introduced New Zealand.

**Anas platyrhynchos conboschas** Brehm

*Anas conboschas* C. L. Brehm, 1831, Handb. Naturgeschichte Vögel Deutschlands, p. 865—Greenland.

Resident coasts of Greenland; on the west, from Upernavik south to Julianehaab district; on the east, in Angmagssalik district and at Lindenows Fjord.

**Anas platyrhynchos fulvigula** Ridgway

*Anas obscura* var. *fulvigula* Ridgway, 1874, Amer. Naturalist, 8, p. 111—St. John's River, Florida.

Coastal Alabama and peninsular Florida, south on the west coast from Cedar Key, in the interior from Gainesville, and on the east coast from the St. John's River.

**Anas platyrhynchos maculosa** Sennett

*Anas maculosa* Sennett, 1889, Auk, 6, p. 263—Nueces Bay, Texas.

Gulf coast of the United States from Texas to Mississippi, and coastal Mexico south to central Tamaulipas. Winters to Veracruz.

**Anas platyrhynchos diazi** Ridgway

*Anas diazi* Ridgway, 1886, Auk, 3, p. 332—San Ysidro, Puebla, Mexico.

*Anas novimexicana* Huber, 1920, Auk, 37, p. 273—Rio Grande, west of Las Cruces, Dona Ana County, New Mexico.

Locally southeastern Arizona, southern New Mexico, western Texas, Chihuahua, Durango, northern Jalisco, and the central highlands of Mexico south to the Trans-Mexican Volcanic Belt. Winters over most of the breeding range.

**Anas platyrhynchos wyvilliana** Sclater

*Anas wyvilliana* P. L. Sclater, 1878, Proc. Zool. Soc. London, p. 350—Hawaiian Islands.

Hawaiian Islands. Formerly all main islands except Lanai and Kahoolawe, latterly reduced to Kauai. Recently reintroduced Oahu and Hawaii.

**Anas platyrhynchos laysanensis** Rothschild

*Anas laysanensis* Rothschild, 1892, Bull. Brit. Ornith. Club, 1, p. 17—Laysan Island.

Laysan Island, Leeward Hawaiian Chain. Count of 69 birds 1974 (Auk, 1975, **92**, no. 4, suppl., p. 7B).<sup>1</sup>

#### ANAS RUBRIPES

##### **Anas rubripes** Brewster

*Anas obscura* (nec Linnaeus, 1761) Gmelin, 1789, Syst. Nat., 1, p. 541; based on "Dusky Duck" of Latham, 1785, General Synop. Birds, 3, p. 545, and Pennant, 1785, Arctic Zool., 2, p. 564—New York.

*Anas obscura rubripes* Brewster, 1902, Auk, 19, p. 184—Lake Umbagog, New Hampshire shore.

*Anas rubripes tristis* Brewster, 1909, Auk, 26, p. 176. New name for *Anas obscura* Gmelin, 1789, preoccupied by *Anas obscura* Pontoppidan, 1763, Danske Atlas, 1, p. 620.

Manitoba east to Labrador and Newfoundland, south to Minnesota, Great Lakes states, and coastal North Carolina. Winters from southern part of breeding range south to the Gulf coast (to southern Texas) and northern Florida.

#### ANAS UNDULATA

##### **Anas undulata rueppelli** Blyth

*Anas Ruppelli* [sic] Blyth, 1855, Journ. Asiatic Soc. Bengal, 24, p. 265—central Africa = Ethiopia.

Highlands of Ethiopia.

##### **Anas undulata undulata** Dubois

*Anas undulata* Dubois, 1839, Ornith. Gallerie, 1, p. 119, pl. 77—Cape of Good Hope.

Cameroon, Zaire, Angola, Uganda, and Kenya south to Cape Province.

#### ANAS MELLERI

##### **Anas melleri** Sclater

*Anas melleri* P. L. Sclater, 1865, Proc. Zool. Soc. London (1864), p. 487, pl. 34—Madagascar.

Madagascar. Introduced Mauritius.

<sup>1</sup>*Anas oustaleti* Salvadori, 1894, Bull. Brit. Ornith. Club, 4, p. 1—Mariana Islands = *Anas platyrhynchos* × *A. superciliosa* (cf. Yamashina, 1947, Pacific Sci., 11, pp. 121-124).—P. A. J.

ANAS POECILORHYNCHA<sup>1</sup>**Anas poecilorhyncha zonorhyncha** Swinhoe

*Anas zonorhyncha* Swinhoe, 1866, Ibis, p. 394—Ningpo, China.

Transbaicalia and the Amur River south to western China (Kansu) and eastern China (Kwangtung). Northern populations winter to south.

**Anas poecilorhyncha haringtoni** (Oates)

*Polionetta haringtoni* Oates, 1907, Journ. Bombay Nat. Hist. Soc., 17, p. 558—Shan States.

Eastern Assam, Burma, southwestern China (Yunnan), northern Indochina.

**Anas poecilorhyncha poecilorhyncha** Forster

*Anas poecilorhyncha* J. R. Forster, 1781, Ind. Zool., p. 23, pl. 13, fig. 1—Ceylon.

Indian subcontinent from east of the Indus River to western Assam, south to Mysore and occasionally Sri Lanka (Ceylon).

## ANAS SUPERCILIOSA

**Anas superciliosa pelewensis** Hartlaub and Finsch

*Anas superciliosa* var. *pelewensis* Hartlaub and Finsch, 1872,

Proc. Zool. Soc. London, p. 108—Pelew (= Palau) Islands, Palau and Caroline Islands, northern and central New Guinea, Bismarck Archipelago, Solomon and Santa Cruz Islands, New Hebrides, New Caledonia and Loyalty Islands, Fiji, Tonga, Samoa, Cook, Society, and Austral Islands.

**Anas superciliosa rogersi** Mathews

*Anas superciliosa rogersi* Mathews, 1912, Austral Avian Rec., 1, p. 33—Augusta, southwestern Australia.

*Anas superciliosa percna* Riley, 1919, Proc. Biol. Soc. Washington, 32, p. 93—Kulawi, Celebes.

Sumatra, Java, Kangean, Celebes, Lesser Sunda Islands, Moluccas, western and southern New Guinea, Louisiade Archipelago, Australia, Tasmania.

<sup>1</sup>*A. poecilorhyncha*, *superciliosa*, and *luzonica* form a superspecies, with *superciliosa* doubtfully distinct specifically from *poecilorhyncha*.—P. A. J.

**Anas superciliosa superciliosa** Gmelin

*Anas superciliosa* Gmelin, 1789, Syst. Nat., 1, p. 537; based on "Supercilious Duck" of Latham, 1785, General Synop. Birds, 3, p. 497—New Zealand.

New Zealand, and Kermadec, Chatham, Snares, Auckland, Campbell, and Macquarie Islands.

## ANAS LUZONICA

**Anas luzonica** Fraser

*Anas luzonica* Fraser, 1839, Proc. Zool. Soc. London, p. 113—Luzon.

Philippine Islands.

## ANAS SPARSA

**Anas sparsa leucostigma** Rüppell

*Anas leucostigma* Rüppell, 1845, Syst. Uebersicht Vögel Nord-Ost-Afrika's, pp. 130, 138, pl. 48—southern Abyssinia.

*Anas sparsa maclatchyi* Berlioz, 1947, Oiseau, 17, p. 89—Booué, Gabon.

Cameroon south to Angola; southern Sudan and Ethiopia south to eastern Zaire and Tanzania, with western and southern limits unknown.

**Anas sparsa sparsa** Eyton

*Anas sparsa* Eyton, 1838, Monogr. Anatidae, p. 142—South Africa.

Southern South West Africa (Namibia), Zambia, Malawi south to Cape Province; northern limits uncertain, with perhaps a wide zone of intergradation with *leucostigma*.

ANAS SPECULARIOIDES<sup>1</sup>**Anas specularioides alticola** Ménégaux

*Anas cristata alticola* Ménégaux, 1909, Bull. Soc. Philomath. Paris, sér. 10, 1, p. 224—Lake Poopó, Bolivia.

Central Peru south to Bolivia, central Chile, and northwestern Argentina.

<sup>1</sup>*Anas cristata* Gmelin, 1789, the earliest name for this species, is preoccupied by *Anas cristata* J. B. Fischer, 1778, Versuch Naturgeschichte Livland, p. 81.—P. A. J.



**Anas specularioides specularioides** King

*Anas specularioides* King, 1828, Zool. Journ., 4, p. 98—Strait of Magellan.

Central Chile (Laguna del Maule, Talca) to Tierra del Fuego and Cape Horn; western Argentina south from Neuquén and Atlantic coast from Chubut to Tierra del Fuego; Falkland Islands.

## ANAS SPECULARIS

**Anas specularis** King

*Anas specularis* King, 1828, Zool. Journ., 4, p. 98—Strait of Magellan.

Chile from Talca and Argentina from Neuquén south to Tierra del Fuego. Winters north to Aconcagua, Chile, and Córdoba, Argentina.

ANAS ACUTA<sup>1</sup>**Anas acuta acuta** Linnaeus

*Anas acuta* Linnaeus, 1758, Syst. Nat., ed. 10, p. 126—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 44.

*Anas acuta tzitzihoa*, Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 163; based on "Tzitzihoa" of Hernandez, 1651, Nova Plant. Animal. Mineral. Mex. Hist., Hist. Animal. Mineral., p. 35—Mexico.

North America from the Aleutians and St. Lawrence Island east to northern Ungava, north to southern Banks and Victoria Islands, south to northern Baja California, Arizona, New Mexico, Iowa, Wisconsin, southern Ontario, southern Quebec, and the Maritimes, with local or occasional breeding in eastern United States; western Greenland from about Disko Island south to ? Julianehaab district; Eurasia from Iceland, Faeroes, and British Isles east to Chukchi Peninsula, Anadyrland, Kamchatka, Commander Islands, and Sea of Okhotsk, north to about lat. 71°-74° N., south to about lat. 50° N. from Netherlands east to Sakhalin and northern Kuril Islands, with

<sup>1</sup>*A. acuta* and *georgica* form a superspecies.—P. A. J.

local and sporadic breeding farther south. Winters from British Columbia and the Maritimes south over much of the United States to Colombia and the West Indies, and from western and central Europe, southern Russia, and Turkistan south to Nigeria, Rhodesia (Zimbabwe), Saudi Arabia, Iran, India to Sri Lanka (Ceylon), southern China, Taiwan, Japan to the Ryukyus, Indochina, Malay Peninsula, Philippines, Marianas, eastern Micronesia, and Hawaii.

**Anas acuta eatoni** (Sharpe)

*Querquedula eatoni* Sharpe, 1875, Ibis, p. 328—Kerguelen Island.

Kerguelen Islands. Introduced Amsterdam and St. Paul Islands.

**Anas acuta drygalskii** Reichenow

*Anas drygalskii* Reichenow, 1904, Ornith. Monatsber., 12, p. 47—Crozet Island.

Crozet Islands.

#### ANAS GEORGICA

**Anas georgica niceforoi** Wetmore and Borrero

*Anas niceforoi* Wetmore and Borrero, 1946, Caldasia, 4, p. 68—Laguna de Tota, Boyacá, Colombia; altitude 3,070 meters.

Central Colombia between about 1,000 and 3,000 meters. Now apparently extinct (or very rare).

**Anas georgica spinicauda** Vieillot

*Anas spinicauda* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 135; based on "Pato cola aguda," no. 429, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 421—Buenos Aires.

Southwestern Colombia, Bolivian Chaco, Paraguay, Brazil from São Paulo, and Uruguay south to Tierra del Fuego; Falkland Islands.

**Anas georgica georgica** Gmelin

*Anas georgica* Gmelin, 1789, Syst. Nat., 1, p. 516; based on "Georgia Duck" of Latham, 1785, General Synop. Birds, 3, p. 478—"Georgia Australi America."

South Georgia.

ANAS BAHAMENSIS<sup>1</sup>**Anas bahamensis bahamensis** Linnaeus

*Anas bahamensis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124; based on "The Ithara Duck" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 93, pl. 93—Bahama Islands.

Bahama Islands, Greater and Lesser Antilles, Curaçao, Bonaire, Margarita Island, Trinidad, Tobago, Colombia, coastal Venezuela, Guianas, northeastern Brazil (Amapá).

**Anas bahamensis rubrirostris** Vieillot

*Anas rubrirostris* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 108; based on "Pato pico aplomado y roxo," no. 433, of Azara, 1805, Apuntamientos Hist. Nat. Páxaros Paraguay Rio Plata, 3, p. 436—Buenos Aires.

Southwestern Ecuador, coastal Peru, occasional northern Chile; Brazil west to the Rio Xingu, south to Rio Grande do Sul, eastern Bolivia, Paraguay, Uruguay, eastern Argentina south to Buenos Aires.

**Anas bahamensis galapagensis** (Ridgway)

*Poecilometta galapagensis* Ridgway, 1889, Proc. U. S. Nat. Mus., 12, p. 115—Charles Island, Galapagos.

Galapagos Archipelago.

## ANAS ERYTHORHYNCHA

**Anas erythrorhyncha** Gmelin

*Anas erythrorhyncha* Gmelin, 1789, Syst. Nat., 1, p. 517; based on "Crimson-billed Duck" of Latham, 1785, General Synop. Birds, 3, p. 507—Cape of Good Hope.

Angola, Zaire, and Ethiopia south to Cape Province; Madagascar.

## ANAS VERSICOLOR

**Anas versicolor puna** Tschudi

*Anas Puna* Tschudi (ex Lichtenstein MS), 1844, Archiv Naturgeschichte, 10, pt. 1, p. 315—Peru = Junín. Type in Zoologisches Museum, Berlin.

<sup>1</sup>Considered by Delacour and Mayr, 1945, Wilson Bull., 57, p. 38, to form a superspecies with *erythrorhyncha*.—P. A. J.

Puna zone of Andes from central Peru (Junín) through Bolivia to northern Chile (Antofagasta) and northern Argentina (Jujuy).

**Anas versicolor versicolor** Vieillot

*Anas versicolor* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv. éd., 5, p. 109; based on "Pato pico de tres colores," no. 440, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata, 3, p. 450—Paraguay.

Chile from Valparaíso and Santiago to Chiloé, Bolivian Chaco, Paraguay, southeastern Brazil, Uruguay, Argentina south to Río Negro or Chubut.

**Anas versicolor fretensis** King

*Anas fretensis* King, 1831, Proc. Com. Sci. Corresp. Zool. Soc. London, 1, p. 15—Strait of Magellan.

Chile from Aisén and Argentina from Chubut south to Tierra del Fuego; Falkland Islands.

ANAS HOTTENTOTA<sup>1</sup>

**Anas hottentota** Eyton

*Anas punctata* Burchell, 1822, Travels Interior Southern Africa, 1, p. 283, note—Zak River, Cape Province.

*Querquedula hottentota* Eyton, 1838, Monogr. Anatidae, p. 129—western coast of South Africa, near Orange River, Cape Province.

*Anas punctata delacouri* Neumann, 1932, Ornith. Monatsber., 40, p. 151—Madagascar.

Angola, Zaire, Sudan, and Ethiopia south to Cape Province; Madagascar. Sporadically to northern Nigeria and Lake Chad.

<sup>1</sup>The specific name *hottentota*, as published in the binomen *Querquedula hottentota* Eyton 1838, has been placed on the Official List of Specific Names in Zoology with the Name No. 2600, and the specific name *punctata*, as published in the binomen *Anas punctata* Burchell 1822, has been placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the Name No. 1018, by the International Commission on Zoological Nomenclature, Opin. 1078, 1977, Bull. Zool. Nomencl., 34, pp. 14-15; cf. *Oxyura maccoa*, p. 503, below.—P. A. J.

## ANAS QUERQUEDULA

**Anas querquedula** Linnaeus

*Anas Querquedula* Linnaeus, 1758, Syst. Nat., ed. 10, p. 126—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 45.

Iceland (rarely) and southern England east to the Sea of Okhotsk, Amurland, Sakhalin, and southern Kamchatka, north to about lat. 60°–62° N., south to France and thence east at about lat. 40°–45° N. to Manchuria and Ussuriland, with local or sporadic breeding farther south. Winters to Rhodesia (Zimbabwe), Saudi Arabia, Iran, India, Sri Lanka (Ceylon) and the Maldives, southern China, Taiwan, Indochina, Hainan, Malay Peninsula, Greater Sunda Islands, Philippines, and Marianas.

## ANAS DISCORS

**Anas discors** Linnaeus

*Anas discors* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 205; based chiefly on "The White-face Teal" of Catesby, 1732, Nat. Hist. Carolina, pt. 5, p. 100, pl. 100—North America = Carolina *ex* Catesby.

*Anas discors orphna* Stewart and Aldrich, 1956, Proc. Biol. Soc. Washington, 69, p. 31—Elliott, Dorchester County, Maryland.

Alaska east to Manitoba, Newfoundland, and the Maritimes, south to California, Arizona, New Mexico, Iowa, Great Lakes, western New York, and on the Atlantic coast to North Carolina, with local or sporadic breeding both north and south (recent range extensions). Winters from northern Mexico and the West Indies to Galapagos Archipelago, Peru, Venezuela, the Guianas, and northeastern Brazil; casual farther south.

## ANAS CYANOPTERA

**Anas cyanoptera septentrionalium** Snyder and Lumsden

*Anas cyanoptera septentrionalium* Snyder and Lumsden, 1951, Occas. Papers Roy. Ontario Mus. Zool., no. 10, p. 16—2 miles south of Jensen, Utah.

British Columbia and Alberta east to the western edge of the Great Plains, south to northern Baja California and central

Mexico. Winters from California, Nevada, Utah, and southeastern Texas to northern Colombia; casual east and south.

**Anas cyanoptera tropica** Snyder and Lumsden

*Anas cyanoptera tropica* Snyder and Lumsden, 1951, Occas.

Papers Roy. Ontario Mus. Zool., no. 10, p. 16—Villa Vijos,

Valle de Cauca, Colombia; tropical zone, below 3,000 feet.

Tropical zone of Colombia in the Cauca and Magdalena Valleys.

**Anas cyanoptera borreroi** Snyder and Lumsden

*Anas cyanoptera borreroi* Snyder and Lumsden, 1951, Occas.

Papers Roy. Ontario Mus. Zool., no. 10, p. 15—Sebundoy,

Colombia; altitude about 9,000 feet.

Colombia in the eastern Andes between 1,000 and 3,600 meters, the savanna of Bogotá, Sebundoy, Lakes Tota, Fuguene, and La Cocha.

**Anas cyanoptera orinomus** (Oberholser)

*Querquedula orinomus* Oberholser, 1906, Proc. Biol. Soc.

Washington, 19, p. 93—Puna (= Puno), Lake Titicaca,

Peru; altitude 12,250 feet.

Puna zone of the Andes from southern Peru and Bolivia to Antofagasta, Chile, and Jujuy, Argentina.

**Anas cyanoptera cyanoptera** Vieillot

*Anas cyanoptera* Vieillot, 1816, Nouv. Dict. Hist. Nat., nouv.

éd., 5, p. 104; based on "Pato alas azules," no. 434, of

Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay

Río Plata, 3, p. 437—Río de la Plata and Buenos Aires.

Lowlands of southern Peru and Bolivia, southeastern Brazil, Chile from Atacama to Aisén, Argentina to Tierra del Fuego; Falkland Islands (rare). Winters to north.

ANAS PLATALEA

**Anas platalea** Vieillot

*Anas platalea* Vieillot, 1816, Nouv. Dict. Hist. Nat., 5, p.

157; based on "Pato espátula," no. 431, of Azara, 1805,

Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata,

3, p. 427—Paraguay.

Southern Peru, Bolivia, Paraguay, southeastern Brazil, Uruguay, Argentina south to northern Tierra del Fuego. Migratory in northern and southern parts of range.

## ANAS SMITHII

**Anas smithii** (Hartert)

*Spatula smithii* (nec *capensis* Eyton, 1838) Hartert, 1891, Kat. Vogelsammlung Mus. Senckenberg. Naturforschendengesell. Frankfurt, p. 231, note—Cape Province.

Angola, Botswana, Rhodesia (Zimbabwe) south to Cape Province. Subject to some seasonal movements.

## ANAS RHYNCHOTIS

**Anas rhynchotis rhynchotis** Latham

*Anas Rhynchotis* Latham, 1801, Index Ornith., Suppl., p. 70—New South Wales.

Coastal southwestern Australia, southeastern Australia mainly in the Murray-Darling basin, Tasmania. Nomadic; vagrant far to north.

**Anas rhynchotis variegata** (Gould)

*Spatula variegata* Gould, 1856, Proc. Zool. Soc. London, p. 95—New Zealand.

New Zealand; formerly Chatham Islands.

## ANAS CLYPEATA

**Anas clypeata** Linnaeus

*Anas clypeata* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124—coasts of Europe; restricted to southern Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 42.

North America from Alaska east to Manitoba, south to central California, thence east at about lat. 40°-42° N. to Iowa, with scattered breeding south and east (on the Atlantic coast from Prince Edward Island to North Carolina); in Eurasia from Iceland and British Isles east to the Kolyma delta (rarely Kamchatka), north varyingly to about lat. 76°-73° N., south to France, Austria, northern Balkans, Black Sea coast of Russia, Turkey, Transcaspia, Turkistan, northwestern Mongolia, Transbaicalia, Amurland, Ussuriland, and Sakhalin. Winters from British Columbia and southern United States south to Panama, and from western and southeastern Europe south to tropical Africa, Saudi Arabia, Iran, India to Sri Lanka (Ceylon), China, Japan, Taiwan, Indochina, Philippines, Hawaii.

GENUS **MALACORHYNCHUS** SWAINSON

*Malacorhynchus* Swainson, 1831, Journ. Roy. Institution Great Britain, 2, p. 18. Type, by monotypy, *Anas membranacea* Latham.

cf. Hobbs, 1957, Emu, 57, pp. 265-268.

Warham, 1958, Wildfowl Trust, Annual Rep., 9 (1956-57), pp. 118-127.

**MALACORHYNCHUS MEMBRANACEUS****Malacorhynchus membranaceus** (Latham)

*Anas membranacea* Latham, 1801, Index Ornith., Suppl., p. 69—New South Wales.

Australia and Tasmania, with greatest abundance in south-eastern South Australia, western Victoria, and the Murray-Darling basin. Nomadic, ranging widely over the continent.

GENUS **MARMARONETTA** REICHENBACH

*Marmaronetta* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 9. Type, by original designation, *Anas angustirostris* Ménétriés.

cf. Johnsgard, 1961, Bull. Brit. Ornith. Club, 81, pp. 37-43.

**MARMARONETTA ANGUSTIROSTRIS****Marmaronetta angustirostris** (Ménétriés)

*Anas angustirostris* Ménétriés, 1832, Cat. Raisonné Objets Zool. Recueillis Voyage Caucase, p. 58—Lenkoran.

Cape Verde Islands, northwestern Africa, southern Spain, ? southern Portugal, Egypt, east to Russian Turkistan, Afghanistan, and Pakistan. Winters south to the northern Sahara, Arabia, and northwestern India.

GENUS **RHODONESSA** REICHENBACH

*Rhodonessa* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 9. Type, by original designation, *Anas caryophyllacea* Latham.

cf. Ali, 1960, Wildfowl Trust, Annual Rep., 11 (1958-59), pp. 55-60.

Humphrey and Ripley, 1962, Postilla, no. 61, 21 pp.



- Luther, 1967, *Falke*, **14**, pp. 268-271.  
 Prestwich, 1974, *Avic. Mag.*, **80**, pp. 47-52.

## RHODONESSA CARYOPHYLLACEA

**Rhodonessa caryophyllacea** (Latham)

*Anas caryophyllacea* Latham, 1790, *Index Ornith.*, p. 866—  
 India.

Formerly northeastern and eastern India south to Madras.  
 Apparently extinct.

GENUS **NETTA** KAUP

*Netta* Kaup, 1829, *Skizzirte Entwickelungs-Geschichte  
 Europäisch. Thierwelt*, p. 102. Type, by monotypy, *Anas  
 rufina* Pallas.

*Metopiana* Bonaparte, 1856, *Compt. Rend. Acad. Sci., Paris*,  
**43**, p. 649. Type, by monotypy, *Anas peposaca* Vieillot.

*Phaeonetta* Delacour, 1936, *Oiseau*, **6**, p. 377. Type, by  
 original designation, *Anas erythrophthalma* Wied.

*Phoeoaythia* [sic] Delacour, 1937, *Bull. Brit. Ornith. Club*,  
**57**, p. 157. New name for *Phaeonetta* Delacour, 1936,  
 preoccupied by *Phaeonetta* Stone, 1907, *Auk*, **24**, p. 198.

cf. Middlemiss, 1958, *Ostrich*, *Suppl. no. 2*, 36 pp.  
 (*erythrophthalma*).

Weller, 1967, *Ibis*, **109**, pp. 404-405 (behavior of *peposaca*).

## NETTA RUFINA

**Netta rufina** (Pallas)

*Anas rufina* Pallas, 1773, *Reise Verschiedene Provinzen  
 Russischen Reichs*, **2**, p. 713—Caspian Sea and lakes of  
 the Tartarian Desert.

Western and southern Europe east to Mongolia, north to about  
 lat. 55° N., south to Transcaucasia, Iran, Afghanistan, and  
 Chinese Turkistan. Winters from southern parts of breeding  
 range south to northwestern Africa, Egypt, Iraq, India, Burma,  
 and eastern China.

## NETTA PEPOSACA

**Netta peposaca** (Vieillot)

*Anas peposaca* Vieillot, 1816, *Nouv. Dict. Hist. Nat., nouv.*

éd., 5, p. 132; based on "Pato negrizco ala blanca," no. 430, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Rio Negro, 3, p. 423—Paraguay and Buenos Aires, Argentina.

Chile from Atacama to Magallanes, Paraguay, southeastern Brazil, Uruguay, Argentina south to Río Negro. Migratory in northern and southern parts of range.

#### NETTA ERYTHROPTHALMA

##### *Netta erythrophthalma brunnea* (Eyton)

*Nyroca brunnea* Eyton, 1838, Monogr. Anatidae, p. 161, pl. [23]—southern Africa.

Angola, eastern Zaire, Sudan, and Ethiopia south to Cape Province.

##### *Netta erythrophthalma erythrophthalma* (Wied)

*Anas erythrophthalma* Wied, 1832, Beitr. Naturgeschichte Brasilien, 4, p. 929—Lagoa do Braço, Villa de Belmonte, eastern Brazil.

Colombia, northwestern Venezuela, Ecuador, Peru, eastern Brazil. Scattered and sporadic distribution.

#### GENUS AYTHYA BOIE

*Aythya* Boie, 1822, (before May), Tagebuch Reise Norwegen, p. 351. Type, by monotypy, *Anas marila* Linnaeus.

*Nyroca* J. Fleming, 1822 (June), Philos. Zool., 2, p. 260, Type, by tautonymy, *Anas nyroca* Guldenstadt.

*Zeafulix* Mathews, 1937, Emu, 37, p. 32. Type, by original designation, *Anas novaeseelandiae* Gmelin.

*Dyseonetta* Boetticher, 1950, Beitr. Gattungssystematik Vögel, p. 43. Type, by original designation, *Fuligula americana* Eyton.

cf. Munro, 1941, Canadian Journ. Res., D, 19, pp. 113-138 (*marila*, *affinis*).

Mendall, 1958, Univ. Maine Bull., 60, no. 16, 333 pp. (*collaris*).

Hochbaum, 1959, Canvasback Prairie Marsh, ed. 2, 207 pp. (*valisineria*).

Weller, 1964, Journ. Wildlife Management, 28, pp. 64-103 (*americana*).

Festetics, 1967, Vogelwelt, 88, pp. 43-58 (*fuligula*).

Weller, 1967, *Auk*, **84**, pp. 544-559 (*americana*).

Bezzel, 1969, *Tafelente* (Neue Brehm-Bücherei 405), 108 pp. (*ferina*).

Merilä, Ojanen, and Orell, 1975, *Suomen Riista*, **26**, pp. 53-60 (*fuligula*).

#### AYTHYA VALISINERIA<sup>1</sup>

##### **Aythya valisineria** (Wilson)

*Anas valisineria* Wilson, 1814, *Amer. Ornith.*, **8**, p. 103, pl. 70, fig. 5—eastern United States.

Central Alaska south and east through Canada to British Columbia, eastern Montana, Utah, Wyoming, the Dakotas, and western Minnesota, with isolated breeding populations in Washington, Oregon, California, Nevada, Arizona, Colorado, Nebraska, Kansas, and southern Ontario. Winters from southern British Columbia, Michigan, and New York to Jalisco and Veracruz, Mexico, with major concentrations in San Francisco and San Pablo Bays, California, and Chesapeake Bay, Maryland.

#### AYTHYA FERINA

##### **Aythya ferina** (Linnaeus)

*Anas ferina* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 126—Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 45.

British Isles east to Lake Baykal, north to about lat. 62° N., south to France, Hungary, Balkans, southern Russia, Aral Sea, Lake Balkhash, and Mongolia, with local or sporadic breeding north and especially south of main range. Winters from southern parts of breeding range south to Mediterranean basin, northwestern Africa, Sudan, Saudi Arabia, Iran, India, Burma, southeastern China, Japan.

#### AYTHYA AMERICANA

##### **Aythya americana** (Eyton)

*Fuligula americana* Eyton, 1838, *Monogr. Anatidae*, p. 155—North America.

Eastern Alaska and southern Northwest Territories (Great

<sup>1</sup>*A. valisineria* and *ferina* form a superspecies.—P. A. J.

Slave Lake) south through southern British Columbia and the Canadian prairie provinces to eastern Montana, the Dakotas, Nebraska, northwestern Iowa, and western Minnesota, with breeding also occurring in Washington, Oregon, California, Utah, and to a more limited extent in the other western states, the Great Lakes region, the St. Lawrence Valley, Maine, and New Brunswick; very recently Jalisco, Mexico. Winters from southern British Columbia, Michigan, and New York to Oaxaca, Mexico, with major concentrations along the Gulf coast.

#### AYTHYA COLLARIS<sup>1</sup>

##### *Aythya collaris* (Donovan)

*Anas collaris* Donovan, 1809, Brit. Birds, 6, pl. 147 and text—Lincolnshire, England, from specimen found in Leadenhall Market, London.

Alaska, British Columbia, and southern Mackenzie District east to Quebec, Newfoundland, and the Maritime Provinces, south to Washington, northern North Dakota, Minnesota, Wisconsin, Michigan, Ontario, northern New York, and northern New England, with scattered breeding also in the western states south to California, Nevada, Colorado, and Nebraska. Winters from southern British Columbia to Guatemala, and on the Atlantic coast from Massachusetts to Panama, as well as in the Bahamas and Greater Antilles.

#### AYTHYA AUSTRALIS<sup>2</sup>

##### *Aythya australis australis* (Eyton)

*Nyroca australis* Eyton, 1838, Monogr. Anatidae, p. 160—Australia = New South Wales, *vide* Mathews, 1912, Novit. Zool., 18, p. 239.

*Aythya australis ledeboeri* Bartels and Franck, 1938, Treubia, 16, p. 337—Java.

<sup>1</sup>Considered by Delacour and Mayr, 1945, Wilson Bull., 57, p. 40, to form a superspecies with *novaeseelandiae* and *fuligula*. However, the affinities of *collaris* are apparently closer to *valisineria*, *ferina*, and *americana*.—P. A. J.

<sup>2</sup>Considered by Delacour and Mayr, 1945, Wilson Bull., 57, p. 40, to form a superspecies with *baeri*, *nyroca*, and *innotata*.—P. A. J.

*Aythya australis papuana* Ripley, 1964, Bull. Peabody Mus. Nat. Hist., Yale Univ., no. 19, p. 16—Baliem Valley, Netherlands New Guinea = Irian Jaya. Australia, Tasmania; also recorded from eastern Java, Celebes, New Guinea, and (formerly) New Zealand.

***Aythya australis extima* Mayr**

*Aythya australis extima* Mayr, 1940, Amer. Mus. Novit., no. 1056, p. 7—Gaua, Banks Islands. Banks Islands; probably New Hebrides and New Caledonia.

AYTHYA BAERI

***Aythya baeri* (Radde)**

*Anas (Fuligula) Baeri* Radde, 1863, Reisen Süden Ost-Sibirien, 2, p. 376, pl. 15—middle Amur Valley, eastern Siberia.

Transbaicalia (Argun River) east through the Amur Valley to about the mouth of the Ussuri River, thence south to central Manchuria and southern Ussuriland (Khanka plain). Winters Korea, Japan (rarely), eastern China south to Fukien, occasionally to eastern India, Burma, Thailand.

AYTHYA NYROCA

***Aythya nyroca* (Güldenstädt)**

*Anas nyroca* Güldenstädt, 1770, Novi Commentarii Acad. Sci. Imp. Petropolitanae, 14 (1769), p. 403—southern Russia.

Breeds locally and sporadically from western Europe east to the Altai and the Kara Irtysh in northern Dzungaria, north to about lat. 57° N., south to northwestern Africa, Transcaucasia, Iran, Afghanistan, Tibet, and western China. Winters from southern parts of breeding range to Canaries, Senegal and Nigeria, Uganda and Kenya, Saudi Arabia, Iran, India, Burma, Yangtze Valley in China.

AYTHYA INNOTATA

***Aythya innotata* (Salvadori)**

*Nyroca innotata* Salvadori, 1894, Bull. Brit. Ornith. Club, 4, p. 2—Betsileo, Madagascar. Eastern Madagascar, between 900 and 1,200 meters.

## AYTHYA NOVAESEELANDIAE

**Aythya novaeseelandiae** (Gmelin)

*Anas novae Seelandiae* Gmelin, 1789, Syst. Nat., 1, p. 541; based on "New-Zealand Duck" of Latham, 1785, General Synop. Birds, 3, p. 543—New Zealand = Dusky Sound, South Island, New Zealand, *vide* G. Forster, 1777, Voyage World, 1, p. 168.

*Zeafulix novaeseelandiae maui* Mathews, 1937, Emu, 37, p. 32—North Island, New Zealand.  
New Zealand.

## AYTHYA FULIGULA

**Aythya fuligula** (Linnaeus)

*Anas Fuligula* Linnaeus, 1758, Syst. Nat., ed. 10, p. 128—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 47.

Iceland, British Isles east to the Kolyma basin and Kamchatka, north to about lat. 70° N., south to central Europe, thence east at about lat. 50° N. to Amurland and Ussuriland, Sakhalin, ? Commander Islands, Kuril Islands, and northern Japan, with sporadic breeding south of main range. Winters from southern part of breeding range to northern Africa (occasionally to Sierra Leone, Nigeria, Tanzania, Malawi), Saudi Arabia, Iran, India, southeastern China, Japan, Ryukyu Islands, Taiwan, Indochina, Philippines, and occasionally Malay Peninsula, Borneo, and western Micronesia.

## AYTHYA MARILA

**Aythya marila marila** (Linnaeus)

*Anas Marila* Linnaeus, 1761, Fauna Svecica, ed. 2, p. 39—Lapland.

Iceland and northern Britain east through Scandinavia, Russia, and Siberia, mainly north of lat. 60° N.; eastern limits not defined. Winters south to the Mediterranean, Black and Caspian Seas, Persian Gulf, India.

**Aythya marila mariloides** (Vigors)

*Fuligula Mariloides* Vigors, 1839, in Beechey, Zool. Voyage Pacific Behring's Straits, p. 31, note—no locality = Bering Sea.

*Aythya marila nearctica* Stejneger, 1885, Bull. U. S. Nat.

Mus., no. 29, p. 161—Nearctic Region.

Northeastern Asia, with western limits not defined but possibly to Lena River, south to Sea of Okhotsk and northern Kuril Islands; North America from Aleutian Islands and Alaska east to Keewaytin, Hudson Bay, Ungava Bay, Anticosti, Magdalen Islands, and eastern Newfoundland. Winters south to Korea, Japan, and the Yangtze Valley of China, Pacific coast from southern Alaska to central California, eastern Great Lakes, Gulf of St. Lawrence to South Carolina, occasionally to Baja California and West Indies.

#### AYTHYA AFFINIS<sup>1</sup>

##### *Aythya affinis* (Eyton)

*Fuligula affinis* Eyton, 1838, Monogr. Anatidae, p. 157—North America.

Central Alaska and the Mackenzie Valley southeast to eastern Manitoba, occasionally to southern Ontario and western Quebec, and south to eastern Washington, Montana, the Dakotas, and western Minnesota, with sporadic or local breeding in California, Arizona, Colorado, Nebraska, Indiana. Winters from southern British Columbia, lower Mississippi Valley, Gulf coast, and Middle Atlantic states south to Colombia, Venezuela, and the West Indies.

#### SUBFAMILY MERGINAE

##### GENUS SOMATERIA LEACH

*Somateria* Leach, 1819, in Ross, Voyage Discovery, App., p. 48 (1819, ed. 2, 2, p. 154). Type, by monotypy, *Anas spectabilis* Linnaeus.

*Eider* Jarocki, 1819, Spis Ptakow Gabinetu Zool. Warszawskiego Uniwersytetu, p. 62. Type, by monotypy, *Anas mollissima* Linnaeus.

*Arctonetta* G. R. Gray, 1856, Proc. Zool. Soc. London (1855), p. 212. Type, by monotypy, *Fuligula fischeri* Brandt.

cf. Humphrey, 1958, Condor, 60, pp. 129–135 (classification).

<sup>1</sup> Regarded by Mayr and Short, 1970, Publ. Nuttall Ornith. Club, no. 9, p. 34, as an "emergent superspecies" with *marila*.—P. A. J.

- McKinney, 1961, Behaviour, Suppl. 7, 124 pp. (behavior of *mollissima*).
- Johnsgard, 1964, Condor, **66**, pp. 113-129 (comparative behavior and relationships).
- Johnsgard, 1964, Wildfowl Trust, Annual Rep., **15** (1962-63), pp. 104-107 (biology of *fischeri*).
- Uspenski, 1972, Eiderenten (Neue Brehm-Bücherei 452), 103 pp.
- Kistchinski and Flint, 1974, Wildfowl, **25**, pp. 5-15 (biology of *fischeri*).

#### SOMATERIA MOLLISSIMA

##### **Somateria mollissima mollissima** (Linnaeus)

*Anas mollissima* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124; based on "The Great Black and White Duck" of Edwards, 1747, Nat. Hist. Birds, p. 98, pl. 98—northern Europe; restricted to island of Gotland by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 41.

Iceland and British Isles east to Novaya Zemlya and Vaygach Island, south to coast of western France, Holland, Denmark, Latvia, and Estonia. Largely sedentary, but winters south to southern France and occasionally to Spain and Italy.

##### **Somateria mollissima faeroeensis** Brehm

*Somateria Faeroeensis* C. L. Brehm, 1831, Handb. Naturgeschichte Vögel Deutschlands, p. 893—Faeroes.

Faeroes. Resident.

##### **Somateria mollissima v-nigra** Gray

*Somateria V-nigra* G. R. Gray, 1856, Proc. Zool. Soc. London (1855), p. 212, pl. 107—Kotzebue Sound, Alaska.

New Siberian Archipelago, Wrangel Island, coastal Siberia from Chaun Bay to Cape Dezhnev and south to northeastern Kamchatka, Karagin and Commander Islands, northern coast of the Sea of Okhotsk, islands of the Bering Sea, coasts of Alaska south to Kodiak Island, Cook Inlet, and Glacier Bay, north along the Bering Sea and east along the Beaufort Sea to Victoria Island and Coronation Gulf, Northwest Territories. Winters in the Bering Sea, especially along the Aleutians.

##### **Somateria mollissima borealis** (Brehm)

*Platypus borealis* C. L. Brehm, 1824, Lehrbuch Naturgeschichte Europäischen Vögel, **2**, p. 813—coasts of Baffin



Bay and Davis Strait and west coast of Greenland.

*Somateria Islandica* C. L. Brehm, 1830, Isis von Oken, col. 998—Iceland.

Southeastern Somerset Island and Ellesmere Island south to Southampton Island, Hudson Strait, northern Ungava, northern Labrador, coastal Greenland south from Hall Land on the west and Germania Land on the east, Iceland. Winters from coasts of southern Greenland and Labrador south to Nova Scotia, rarely to Massachusetts and Connecticut.

***Somateria mollissima sedentaria* Snyder**

*Somateria mollissima sedentaria* Snyder, 1941, Occas. Papers Roy. Ontario Mus. Zool., no. 6, p. 3—Churchill, Manitoba.

Coasts and islands of Hudson Bay from Cape Fullerton on the west to the east coast south of Southampton, Coats, and Mansel Islands, south into James Bay. Winters in the vicinity of the Belcher Islands.

***Somateria mollissima dresseri* Sharpe**

*Somateria Dresseri* Sharpe, 1871, Ann. Mag. Nat. Hist., ser. 4, 8, p. 51, fig. 2—North America.

Coasts of Labrador (south of *borealis*), Newfoundland, eastern Quebec, Nova Scotia, New Brunswick, and Maine. Winters from the Gulf of St. Lawrence to Massachusetts and eastern Long Island, New York, rarely farther south.

**SOMATERIA SPECTABILIS**

***Somateria spectabilis* (Linnaeus)**

*Anas spectabilis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 123; based on Rudbeck's unpublished figure of a specimen (Linnaeus, 1746, Fauna Svecica, p. 40) and "The Grey-headed Duck" of Edwards, 1750, Nat. Hist. Birds, p. 154, pl. 154—Canada, Sweden.

Spitsbergen, ? Iceland, arctic coasts and islands of Eurasia from Kolguyev Island and Novaya Zemlya to the Gulf of Anadyr, sporadically farther south, St. Lawrence and St. Matthew Islands in the Bering Sea, arctic coasts of North America from Cape Thompson and the Seward Peninsula, Alaska, east to lower Hudson Bay and Hudson Strait, north to Ellesmere Island, both coasts of Greenland south to about lat. 70° N. Winters from the limits of open water to Iceland, about the Arctic Circle in Norway, Kuril and Aleutian Islands,

southern Greenland, Gulf of St. Lawrence, occasionally to British Isles, Channel coast of France, northern California, Great Lakes, Atlantic coast south to Long Island, New York (rarely farther).

#### SOMATERIA FISCHERI

##### **Somateria fischeri** (Brandt)

*Fuligula (Lampronetta) Fischeri* Brandt, 1847, *Fuligulam (Lampronettam) Fischeri* Novam Rossicarum Avium Speciem, p. 18, pl. 1—St. Michael, Alaska.

Arctic coast of Siberia from the Yana River delta (perhaps the Lena River delta) to Kolyunin Bay, summering but not known to breed in the Siberian Archipelago; in Alaska from the Kuskokwim delta north and east to Demarcation Point, but locally distributed and common only in the Yukon-Kuskokwim area. Probably winters in the Bering Sea, but rarely seen in quantity.

#### GENUS POLYSTICTA EYTON

*Polysticta* Eyton, 1836, *Cat. Brit. Birds*, p. 58. Type, by monotypy, *Anas stelleri* Pallas.

cf. McKinney, 1965, *Condor*, **67**, pp. 273-290 (behavior).

#### POLYSTICTA STELLERI

##### **Polysticta stelleri** (Pallas)

*Anas Stelleri* Pallas, 1769, *Spicilegia Zool.*, fasc. 6, p. 35, pl. 5—Kamchatka.

Novaya Zemlya (rarely northern Scandinavia) east to the Bering Sea, but only locally common (Lena delta, north coast of Chukchi Peninsula), St. Lawrence Island, western Alaska in the Yukon-Kuskokwim delta and northern Alaska from Wainwright east probably to Humphrey Point. Winters on the open waters of northern Norway and northern Finland, Kamchatka, Commander and Kuril Islands, Aleutian Islands, south coast of the Alaska Peninsula, Kodiak Island, and the Kenai Peninsula.

#### GENUS CAMPTORHYNCHUS BONAPARTE

*Camptorhynchus* "Eyton" Bonaparte, 1838, *Geogr. Comp. List Birds Europe North Amer.*, p. 58. Type, by monotypy, *Anas labradoria* Gmelin.

cf. Humphrey and Butsch, 1958, Smithsonian Misc. Coll., 137, no. 7, 23 pp. (anatomy).

#### CAMPTORHYNCHUS LABRADORIUS

##### **Camptorhynchus labradorius** (Gmelin)

*Anas labradoria* Gmelin, 1789, Syst. Nat., 1, p. 537; based on "Pied Duck" of Latham, 1785, General Synop. Birds, 3, p. 497—arctic America, Connecticut, and Labrador.

Believed to have bred formerly in Labrador. Wintered from Grand Manan to ? Chesapeake Bay, but chiefly off Long Island, New York. Extinct.

#### GENUS HISTRIONICUS LESSON

*Histrionicus* Lesson, 1828, Man. Ornith., 2, p. 415. Type, by original designation, *Anas histrionica* Linnaeus.

cf. Bengtson, 1966, Wildfowl Trust, Annual Rep., 17 (1964-65), pp. 79-94.

Bengtson, 1972, Ornis Scand., 3, pp. 1-19.

#### HISTRIONICUS HISTRIONICUS

##### **Histrionicus histrionicus** (Linnaeus)

*Anas histrionicus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 127; based on "The Dusky and Spotted Duck" of Edwards, Nat. Hist. Birds, 1747, p. 99, pl. 99—America = Newfoundland *ex* Edwards.

*Histrionicus histrionicus pacificus* W. S. Brooks, 1915, Bull. Mus. Comp. Zool., 59, p. 393—Cape Shipunski, Kamchatka.

Iceland; eastern Siberia from the Lena River east to Anadyrland, Koryakland, Kamchatka, Commander and Kuril Islands, north to about lat. 68° N., south to Lake Baykal, Stanovoy Range, coast of Sea of Okhotsk, Amurland, Ussuriland, Sakhalin; ? St. Lawrence Island, Aleutian Islands, central western Alaska and Yukon south to California and Wyoming, southern Baffin Island, northern and eastern Quebec, Labrador, Greenland from Holsteinborg district to Julianehaab district on the west and locally at Angmagssalik district and Lindenows Fjord on the east. Winters from Kamchatka and Bering Sea islands south to Japan, Korea, China (to Shantung), California, and from southern Labrador south to Long Island, New York.

GENUS *CLANGULA* LEACH

*Clangula* Leach, 1819, in Ross, Voyage Discovery, App., p. 48 (1819, ed. 2, 2, p. 154). Type, by monotypy, *Anas glacialis* Linnaeus = *Anas hyemalis* Linnaeus.

- cf. Salomonsen, 1941, Journ. Ornith., 89, pp. 282-337 (molts).  
Alison, 1975, Ornith. Monogr. (Amer. Ornith. Union), no. 18, 58 pp.

## CLANGULA HYEMALIS

***Clangula hyemalis* (Linnaeus)**

*Anas hyemalis* Linnaeus, 1758, Syst. Nat., ed. 10, p. 126; based on "The Long-tailed Duck from Hudson's-Bay" of Edwards, 1750, Nat. Hist. Birds, p. 156, pl. 156—arctic Europe and America; restricted to northern Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 44.

In Eurasia from Iceland, Spitsbergen, northern Scandinavia east to Kamchatka and Commander Islands, south to southern limits of forested tundra; in North America from Bering Sea islands east through arctic Canada to Ellesmere Island, south to Hudson Bay; both coasts of Greenland. Winters to British Isles, Brittany, North and Baltic Seas, Caspian Sea, lakes of Turkistan, Japan, Korea, northeastern China, Bering Sea islands, Washington, Great Lakes, Atlantic coast from southern Labrador to the Carolinas.

GENUS *MELANITTA* BOIE

*Melanitta* Boie, 1822 (before May), Tagebuch Reise Norwegen, pp. 308, 351; also 1822, Isis von Oken, col. 564. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 52), *Anas fusca* Linnaeus.

*Oidemia* J. Fleming, 1822, Philos. Zool., 2, p. 260. Type, by subsequent designation (G. R. Gray, 1840, List Gen. Birds, p. 74), *Anas nigra* Linnaeus.

*Pelionetta* Kaup, 1829, Skizzirte Entwickelungs-Geschichte Europäisch. Thierwelt, pp. 107, 196. Type, by monotypy, *Anas perspicillata* Linnaeus.

- cf. Miller, W. D., 1926, Amer. Mus. Novit., no. 243, 5 pp. (structural variations).  
Bengtson, 1966, Vår Fågelvärld, 25, pp. 202-226 (*nigra*).

## MELANITTA NIGRA

**Melanitta nigra nigra** (Linnaeus)

*Anas nigra* Linnaeus, 1758, Syst. Nat., ed. 10, p. 123—  
Lapland, England.

Iceland, British Isles, Spitsbergen east to region between the Khatanga and Lena Rivers, north to about lat. 70°-73° N., south to about lat. 63°-65° N. Winters from coast of Norway and southern Baltic to southwestern Europe, coast of northwestern Africa south to northern Mauritania, and occasionally to the Black and Caspian Seas.

**Melanitta nigra americana** (Swainson)

*Oidemia Americana* Swainson, 1832, in Swainson and Richardson, Fauna Boreali-Americana, 2 (1831), p. 450—  
Hudson Bay.

Northeastern Siberia from the Lena-Yana watershed east to the Anadyr basin and south to Kamchatka, north coast of Sea of Okhotsk and northern Kurils; in North America St. Lawrence Island, coastal Alaska from Kotzebue Sound to Bristol Bay and inland to Mt. McKinley, locally in southern Keewaytin, northern Quebec, and Newfoundland. Winters coastwise from southern limits of breeding range south to China and Japan, Aleutian Islands to California, Great Lakes (irregularly), and Newfoundland to Chesapeake Bay (occasionally to South Carolina).

## MELANITTA PERSPICILLATA

**Melanitta perspicillata** (Linnaeus)

*Anas perspicillata* Linnaeus, 1758, Syst. Nat., ed. 10, p. 125; based on "The Great Black Duck of Hudson's Bay" of Edwards, 1750, Nat. Hist. Birds, p. 155, pl. 155—Canada = Hudson Bay *ex* Edwards.

Coastal Alaska (Kotzebue Sound, Bristol Bay, Cook Inlet), Fort Yukon area, and the Mackenzie delta southeast across Northwest Territories and through northern Alberta, Saskatchewan, Manitoba, and Ontario to western Quebec, the interior of Quebec, and Labrador. Occurs also on Commander Islands and Chukchi Peninsula of Siberia, but not known to breed there. Winters along coasts from the Aleutian Islands to Baja California, and from Nova Scotia to South Carolina.

## MELANITTA FUSCA

**Melanitta fusca fusca** (Linnaeus)

*Anas fusca* Linnaeus, Syst. Nat., 1758, ed. 10, p. 123—  
"Oceano Europaeo"; restricted to coast of Sweden by  
Linnaeus, 1761, Fauna Svecica, ed. 2, p. 39.

Scandinavia and the Baltic Sea east to at least the Yenisey River and perhaps to the mouth of the Khatanga River, with irregular and sporadic northern and especially southern limits (lat. 70° N. on the Yamal Peninsula, 53° N. east of the Urals, Transcaucasia, Armenia). Winters to British Isles, France, Iberian Peninsula, Caspian Sea.

**Melanitta fusca stejnegeri** (Ridgway)

*Oidemia stejnegeri* Ridgway, 1887, Man. North Amer. Birds, p. 112—Kamchatka to Japan.

Central Siberia from west of the upper Yenisey River east to Anadyrland, Koryakland, and Kamchatka, north to about the northern limit of the taiga, south to the Russian Altai, Tannu Tuva, Lake Baykal, Transbaicalia, Amurland, Sakhalin, and Kuril Islands. Winters from Kamchatka and Sea of Okhotsk to Japan, Korea, and China (to the Yangtze Valley).

**Melanitta fusca deglandi** (Bonaparte)

*Oedemia deglandi* Bonaparte, 1850, Rev. Crit. Ornith. Européenne Degland, p. 108—North America.

*Oedemia deglandi dixonii* W. S. Brooks, 1915, Bull. Mus. Comp. Zool., 59, p. 393—Griffin Point, arctic Alaska.

Alaska from Norton Sound east through Yukon and Northwest Territories to central British Columbia and Alberta, southern Saskatchewan and Manitoba, northern North Dakota (rarely), and extreme western Ontario. Winters coastwise from the Aleutian Islands to Baja California, and from the Gulf of St. Lawrence to North Carolina.

## GENUS BUCEPHALA BAIRD

*Bucephala* Baird, 1858, in Baird, Cassin, and Lawrence, Rep. Explor. Surv. Railroad Mississippi Pacific, 9, pp. xxiii, L, 788, 795. Type, by original designation, *Anas albeola* Linnaeus.

*Glaucionetta* Stejneger, 1885, Proc. U. S. Nat. Mus., 8, p. 409. Type, by original designation, *Anas clangula* Linnaeus.

- Clanganas* Oberholser, 1974, Bird Life Texas, p. 974. Type, by original designation, *Anas islandica* Gmelin.
- cf. Munro, 1939, Trans. Roy. Canadian Inst., **22**, pp. 259-318 (*islandica*, *clangula*).
- Dane, Walcott, and Drury, 1959, Behaviour, **14**, pp. 265-281 (*clangula*).
- Lind, 1959, Dansk Ornith. Forenings Tidsskrift, **53**, pp. 177-219 (*clangula*).
- Erskine, 1972, Buffleheads (Canadian Wildlife Serv., Monogr. Ser. no. 4), 240 pp. (*albeola*).

#### BUCEPHALA CLANGULA

##### **Bucephala clangula clangula** (Linnaeus)

*Anas Clangula* Linnaeus, 1758, Syst. Nat., ed. 10, p. 125—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 43.

Scandinavian Peninsula east to Anadyrland and Kamchatka, north to the northern limit of the taiga, south to Germany, central Russia, forested steppes of western Siberia, Semipalatinsk, Russian Altai, Tannu Tuva, Lake Baykal, Transbaicalia, Amurland, northern Manchuria, Ussuriland, and Sakhalin, with sporadic breeding farther south. Winters from the southern limit of breeding range to the British Isles, Mediterranean, Black Sea, Iraq, Caspian Sea, Iran, Japan, Korea, eastern China to Fukien.

##### **Bucephala clangula americana** (Bonaparte)

*Clangula Americana* Bonaparte, 1838, Geogr. Comp. List Birds Europe North Amer., p. 58; based on *Anas clangula* (*nec* Linnaeus) of Wilson, 1814, Amer. Ornith., **8**, p. 62, pl. 67, fig. 5, and Audubon, 1836, Birds Amer., pl. 342—America; restricted type locality eastern United States.

Central Alaska east through Yukon and western Mackenzie south to central British Columbia, the forested parts of central Canada, and the northern parts of North Dakota (infrequent), Minnesota, Wisconsin (rare), Michigan, and the Canadian border states east to Labrador, Newfoundland, and Nova Scotia. Winters from the Aleutian Islands to Baja California, from Maine to southern Texas, and in the interior states on rivers, lakes, and reservoirs north almost to the breeding range.

## BUCEPHALA ISLANDICA

**Bucephala islandica** (Gmelin)

*Anas islandica* Gmelin, 1789, Syst. Nat., 1, p. 541; based on "Hravn Oend" of O. F. Müller, 1776, Zool. Danicae Prodrumus, p. 16—Iceland.

Southwestern and central Alaska and the Yukon south through British Columbia and western Alberta to the central California Sierras, and in the Rockies to western Wyoming; Labrador, southwestern Greenland, Iceland. Winters from southern Alaska to San Francisco Bay, and from Quebec to Long Island, New York; Greenland, Iceland.

## BUCEPHALA ALBEOLA

**Bucephala albeola** (Linnaeus)

*Anas Albeola* Linnaeus, 1758, Syst. Nat., ed. 10, p. 124; based on "The Little Black and White Duck" of Edwards, 1747, Nat. Hist. Birds, p. 100, pl. 100—America = Newfoundland *ex* Edwards.

Central Alaska, Yukon, and southern Mackenzie south through British Columbia and forested parts of central Canada east to western Ontario and rarely beyond; south of Canada limited to northeastern California, western Montana, and northern North Dakota, with local or rare breeding in Washington, Oregon, Idaho, and Wyoming. Winters from the Aleutian Islands to Sinaloa, and from Maine to Tamaulipas, interior central Mexico, and interior United States on ice-free waters.

GENUS **MERGUS** LINNAEUS

*Mergus* Linnaeus, 1758, Syst. Nat., ed. 10, p. 129. Type, by subsequent designation (Eyton, 1838, Monogr. Anatidae, p. 76), *Mergus castor* Linnaeus = *Mergus serrator* Linnaeus.

*Mergellus* Selby, 1840, Cat. Gen. and Sub-gen. Types Class Aves, p. 47. Type, by monotypy, *Mergus albellus* Linnaeus.

*Lophodytes* Reichenbach, 1853, Avium Syst. Nat. (1852), p. 9. Type, by original designation, *Mergus cucullatus* Linnaeus.

cf. Hollom, 1937, Brit. Birds, 31, pp. 106-111 (*albellus*).

Curth, 1954, Mittelsäger (Neue Brehm-Bücherei 126), 102 pp. (*serrator*).



- Partridge, 1956, *Auk*, **53**, pp. 473-488 (*octosetaceus*).  
 White, 1957, Fisheries Res. Board Canada Bull., no. 116,  
 63 pp. (*merganser*).  
 Johnsgard, 1961, *Wilson Bull.*, **73**, pp. 226-236 (*cucullatus*).  
 Nilsson, 1965, *Vår Fågelvärld*, **24**, pp. 244-256 (*serrator*).  
 Nilsson, 1966, *Vår Fågelvärld*, **25**, pp. 148-160 (*merganser*).  
 Kear and Scarlett, 1970, *Wildfowl*, **21**, pp. 78-86 (*australis*).  
 Bouvier, 1974, *Canadian Field-Nat.*, **88**, pp. 323-330 (*cucullatus*).  
 Nilsson, 1974, *Wildfowl*, **25**, pp. 84-88 (*albellus*).

#### MERGUS ALBELLUS

##### **Mergus albellus** Linnaeus

*Mergus Albellus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 129; based on "Mergus tinus" of Hasselquist, 1757, *Iter Palaestinum*, p. 269—Europe; restricted to the Mediterranean near Smyrna by the reference to Hasselquist's journey.

Northern Scandinavia east to Anadyrland and northern Kamchatka, north to about 65°-69° N., south to Novgorod district and thence east at about 50°-55° N. to the Sea of Okhotsk and northern Sakhalin, with sporadic breeding farther south. Winters from southern Scandinavia south to the British Isles, France, Mediterranean, Black Sea, Iraq, Caspian Sea, Iran, northern India, Japan, Korea, and eastern China south to the Yangtze.

#### MERGUS CUCULLATUS

##### **Mergus cucullatus** Linnaeus

*Mergus cucullatus* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 129; based on "The round-crested Duck" of Catesby, 1732, *Nat. Hist. Carolina*, pt. 5, p. 94, pl. 94—America = Virginia and Carolina *ex* Catesby.

Forests from southern Alaska to southern Oregon, south along the Rockies to northwestern Wyoming; also from Manitoba and Minnesota south in the Mississippi and Ohio Valleys to Louisiana, and east through the Great Lakes states to the St. Lawrence Valley and Nova Scotia; from New England southward regular breeding is confined to forested mountains,

with sporadic records south to Florida. Winters along the Pacific coast from British Columbia to southern California, and along the Atlantic coast from New York to the Gulf coast and eastern Mexico.

#### MERGUS OCTOSETACEUS

##### **Mergus octosetaceus** Vieillot

*Mergus octosetaceus* Vieillot, 1817, *Nouv. Dict. Nat. Hist.*, nouv. éd., 14, p. 222—Brazil.

Brazil from upper Rio Tocantins and upper and middle Rio Paraguai and Rio Paraná south to Santa Catarina, eastern Paraguay, and northeastern Argentina.

#### MERGUS SERRATOR

##### **Mergus serrator serrator** Linnaeus

*Mergus Serrator* Linnaeus, 1758, *Syst. Nat.*, ed. 10, p. 129—Europe; restricted to Sweden by Linnaeus, 1761, *Fauna Svecica*, ed. 2, p. 48.

North America from Alaska (including Aleutian Islands and probably St. Lawrence Island) east across Canada to southern Baffin Island, Labrador, Newfoundland, and Nova Scotia, south to northern British Columbia, northern Alberta, central Saskatchewan, southern Manitoba, northern Minnesota, northern Great Lakes, northern New England; Eurasia from Iceland, Faeroes, and British Isles east to Anadyrland, Koryakland, Kamchatka, Commander and northern Kuril Islands, north to about lat. 69°–71° N., south to Denmark, northern Germany, Vologda district of Russia, thence east at about lat. 55°–60° N. to Amurland and the Sea of Okhotsk, with sporadic breeding farther south. Winters in North America on the Pacific coast from the Aleutians south to Baja California and Sinaloa, on the Great Lakes (in small numbers), on the Atlantic coast from New Brunswick to Georgia, and on the Gulf coast from Florida to Tamaulipas; in the Old World south to northwestern Africa, Persian Gulf, eastern Iran, Japan, Korea, and coast of China south to Kwangtung.

##### **Mergus serrator schioeleri** Salomonsen

*Mergus serrator major* Schiøler, 1925, *Dansk Ornith. Forenings Tidsskrift*, 19, p. 115—western Greenland.

*Mergus serrator schioeleri* Salomonsen, 1949, *Dansk Ornith.*

Forenings Tidsskrift, 43, p. 186, note. New name for *Mergus serrator major* Schiøler, 1925, preoccupied by *Mergus major* Dubois, 1860, Planches Color. Oiseaux Belgique, 3, p. 268, a synonym *Mergus merganser* Linnaeus.

Coasts of Greenland, south on the west from the Nugosuaq Peninsula (exceptionally from southern Melville Bay), and on the east at Angmagssalik district, Lindenows Fjord, and probably Scoresby Sound.

#### MERGUS SQUAMATUS

##### **Mergus squamatus** Gould

*Mergus squamatus* Gould, 1864, Proc. Zool. Soc. London, p. 184—China.

Central and southern parts of the Sikhote Alin Range, Ussuriland, and hilly portions of northeastern Manchuria; possibly Amur Valley. Chiefly sedentary, but in winter in small numbers to central and eastern China, south to western Yunnan and Tonkin.

#### MERGUS MERGANSER

##### **Mergus merganser merganser** Linnaeus

*Mergus Merganser* Linnaeus, 1758, Syst. Nat., ed. 10, p. 129; based on "The Red-Breasted Goosander" of Edwards, 1747, Nat. Hist. Birds, p. 95, pl. 95—Europe; restricted to Sweden by Linnaeus, 1761, Fauna Svecica, ed. 2, p. 47.

Iceland, British Isles, Scandinavian Peninsula east to Anadyrland, Kamchatka, and northern Kuril Islands, north to about lat. 64°-69° N., south to Denmark and northern Germany, thence east to about 55°-58° N. to Amurland, Ussuriland, and Sakhalin, with scattered and sporadic breeding farther south. Winters south to the Mediterranean, Black and Caspian Seas, Persian Gulf, eastern Iran, Pakistan, northern India, Japan, and eastern China south to Fukien.

##### **Mergus merganser orientalis** Gould

*Mergus Orientalis* Gould, 1845, Proc. Zool. Soc. London, p. 1—Amoy, China.

*Mergus comatus* Salvadori, 1895, Cat. Birds Brit. Mus., 27, p. 475—"Central Asia, with the Himalayas, where it breeds."

Northeastern Afghanistan east through Tibet and neighboring Himalayas to western China. Winters from breeding grounds to Himalayan foothills and adjacent plains, northern Burma, Yunnan.

***Mergus merganser americanus* Cassin**

*Mergus americanus* Cassin, 1852, Proc. Acad. Nat. Sci. Philadelphia, 6, p. 187—North America.

Southeastern Alaska, southern Yukon, and southern Mackenzie east to southern Labrador, Newfoundland, and Nova Scotia, south to central California, Colorado, Minnesota, Wisconsin, Michigan, northern New York, northern New England, with scattered and sporadic breeding farther south. Winters from the Aleutian Islands south to northwestern Mexico and from the Gulf of St. Lawrence to North Carolina, as well as on ice-free waters of the Great Lakes and other areas north to the breeding range.

MERGUS AUSTRALIS

***Mergus australis* Hombron and Jacquinot**

*Mergus australis* Hombron and Jacquinot, 1841, Ann. Sci. Nat., Zool., Paris, sér. 2, 16, p. 320—Auckland Islands.

Auckland Islands. Apparently extinct since the early 1900s.

SUBFAMILY OXYURINAE

cf. Johnsgard, 1967, Wildfowl Trust, Annual Rep., 18 (1965-66) pp. 98-107 (*Thalassornis* and *Oxyurinae*).

Raikow, 1970, Univ. California Publ. Zool., 52 pp. (evolution of diving apparatus).

GENUS HETERONETTA SALVADORI

*Heteronetta* Salvadori, 1865, Atti Soc. Ital. Sci. Nat., Milan, 8, p. 374. Type, by original designation and monotypy, *Anas melanocephala* Vieillot = *Anas atricapilla* Merrem.

cf. Weller, 1967, Hornero, 10, pp. 299-306.

Weller, 1968, Living Bird, 7, pp. 169-207.

Höhn, 1975, Auk, 92, pp. 566-570.

## HETERONETTA ATRICAPILLA

**Heteronetta atricapilla** (Merrem)

*Anas melanocephala* (nec Gmelin, 1789) Vieillot, 1816, *Nouv. Dict. Hist. Nat.*, nouv. éd., **5**, p. 163; based on "Pato cabeza negra," no. 438, of Azara, 1805, *Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata*, **3**, p. 447—Buenos Aires.

*Anas atricapilla* Merrem, 1841, in Ersch and Gruber, *Allgemeine Encycl. Wissen. Künste*, sec. 1, **35**, p. 26; based on "Pato cabeza negra," no. 438, of Azara, 1805, *Apuntamientos Hist. Nat. Pájaros Paraguay Rio Plata*, **3**, p. 447—Buenos Aires.

Eastern Bolivia, central Chile from Santiago to Valdivia, Paraguay, southeastern Brazil (Rio Grande do Sul), Uruguay, central Argentina (Córdoba, Santa Fe, Entre Ríos, Buenos Aires). Some northward movement in winter.

## GENUS OXYURA BONAPARTE

*Oxyura* Bonaparte, 1828, *Ann. Lyceum Nat. Hist. New York*, **2**, p. 390. Type, by monotypy, *Anas rubidus* Wilson.

*Nomonyx* Ridgway, 1880, *Proc. U. S. Nat. Mus.*, **3**, p. 15.

Type, by original designation, *Anas dominica* Linnaeus.

*Pervicauda* Mathews, 1945, *Emu*, **44**, p. 320. Type, by original designation, *Oxyura australis* Gould.

cf. Clark, 1964, *Ostrich*, **35**, pp. 264-276 (*maccoa*).

Johnson, 1965, *Birds Chile*, **1**, pp. 225-227 (*jamaicensis*, *vittata*).

Wetmore, 1965, *Smithsonian Misc. Coll.*, **150**, pt. 1, pp. 150-153 (*dominica*).

Johnsgard, 1966, *Auk*, **83**, pp. 98-110 (behavior of *australis*).

Weller, 1967, *Ibis*, **109**, pp. 405-406 (behavior of *vittata*).

Johnsgard and Hagemeyer, 1969, *Auk*, **86**, pp. 691-695 (*dominica*).

Mathews and Evans, 1974, *Wildfowl*, **25**, pp. 56-66 (behavior of *leucocephala*).

Siegfried and Van der Merwe, 1974, *Zeitschr. Tierpsychol.*, **37**, pp. 1-23 (behavior of *maccoa*).

Siegfried, 1976, *Auk*, **93**, pp. 560-570 (social organization in *jamaicensis* and *maccoa*).

Siegfried, 1976, *Wilson Bull.*, **88**, pp. 566-574 (breeding biology of *jamaicensis*).

#### OXYURA DOMINICA

##### **Oxyura dominica** (Linnaeus)

*Anas dominica* Linnaeus, 1766, *Syst. Nat.*, ed. 12, **1**, p. 201; based on "La Sarcelle de S. Dominique" of Brisson, 1760, *Ornith.*, **6**, p. 472, pl. 41, fig. 2—South America = Santo Domingo *ex* Brisson.

Coastal southern Texas, Mexico (scattered records), Costa Rica, Panama, West Indies (especially Greater Antilles), Colombia to northwestern Peru, Venezuela and the Guianas south to Argentina (Tucumán, Santiago del Estero, Buenos Aires); Trinidad and Tobago.

#### OXYURA JAMAICENSIS

##### **Oxyura jamaicensis rubida** (Wilson)<sup>1</sup>

*Anas rubidus* Wilson, 1814, *Amer. Ornith.*, **8**, pp. 128, 130, pl. 71, figs. 5-6—Delaware River, near Philadelphia.

Central British Columbia and Great Slave Lake east to Minnesota, south to Baja California, Arizona, New Mexico, Nebraska, and Iowa, with scattered and sporadic breeding east to New York, south to Florida, coastal Texas, and interior central Mexico. Winters from Puget Sound south to Chiapas, and from Massachusetts south to Florida and the Gulf coast. Introduced British Isles.

##### **Oxyura jamaicensis jamaicensis** (Gmelin)

*Anas jamaicensis* Gmelin, 1789, *Syst. Nat.*, **1**, p. 519; based on "Jamaica Shoveler" of Latham, 1785, *General Snyop. Birds*, **3**, p. 513—Jamaica.

Resident in the West Indies (Cuba, Jamaica, Puerto Rico, Virgin Islands, Grenadines).

##### **Oxyura jamaicensis andina** Lehmann

*Oxyura jamaicensis andina* Lehmann, 1946, *Auk*, **63**, p. 221—Lagunas del Páramo de Boca-Grande, Cundinamarca, Eastern Andes of Colombia; altitude 4,000 meters.

<sup>1</sup>Doubtfully distinct from *jamaicensis* (Hellmayr and Conover, 1948, *Publ. Field Mus. Nat. Hist., Zool. Ser.*, **13**, pt. 1, no. 2, p. 400, note).—P. A. J.

Lakes and marshes of the Central and Eastern Andes of Colombia.

**Oxyura jamaicensis ferruginea** (Eyton)

*Erismatura ferruginea* Eyton, 1838, Monogr. Anatidae, p. 170—Chile.

Andean lakes of southern Colombia, Ecuador, Peru (also coastal lagoons), and Bolivia; Andes of Chile south to Aisén and lowland lakes from Aconcagua to Tierra del Fuego; Andean lakes of western Argentina and neighboring foothills and plains from Río Negro to Tierra del Fuego.

OXYURA LEUCOCEPHALA<sup>1</sup>

**Oxyura leucocephala** (Scopoli)

*Anas leucocephala* Scopoli, 1769, Annus I Hist.-Nat., p. 65—no locality, but probably northern Italy. Type in Museo di Zoologia, Turin.

Mediterranean region from Spain and Morocco east through southern Russia, Turkey, and southern Siberia to Dzungaria and Tannu Tuva. Winters north coast of Africa, Nile Valley, Turkey, Iraq, northern India.

OXYURA MACCOA<sup>2</sup>

**Oxyura maccoa** (Eyton)

*Erismatura maccoa* Eyton, 1838, Monogr. Anatidae, p. 169—Indian Isles = South Africa, *ex* A. Smith, 1837, Cat. South Afr. Mus., p. 37.

Ethiopia, Kenya, Rwanda, Burundi, Tanzania, Rhodesia (Zimbabwe), probably Botswana, South West Africa (Namibia), South Africa.

<sup>1</sup>Probably not a superspecies with *jamaicensis*, but instead may be more closely related to *maccoa*.—P. A. J.

<sup>2</sup>The specific name *maccoa*, as published in the binomen *Erismatura maccoa* Eyton 1838, has been placed on the Official List of Specific Names in Zoology with the Name No. 2601 by the International Commission on Zoological Nomenclature, Opin. 1078, 1977, Bull. Zool. Nomencl., 34, pp. 14-15; cf. *Anas hottentota*, p. 476, above.—P. A. J.

OXYURA VITTATA<sup>1</sup>**Oxyura vittata** (Philippi)

*Erismatura vittata* Philippi, 1860, Archiv Naturgeschichte, 26, pt. 1, p. 26—Chile.

Lowlands of Chile from Atacama to Tierra del Fuego and of Argentina from San Juan and La Rioja to Santa Cruz (rarely to Tierra del Fuego). In winter north to Paraguay, Uruguay, and Rio Grande do Sul, Brazil.

## OXYURA AUSTRALIS

**Oxyura australis** Gould

*Oxyura Australis* Gould, 1836, Proc. Zool. Soc. London, p. 85—Swan River, Western Australia.

Southwestern Australia, Lake Eyre region of South Australia, coastal Victoria, Murray-Darling basin, southeastern Queensland; Tasmania.

## GENUS BIZIURA STEPHENS

*Biziura* Stephens, 1824, in Shaw, General Zool., 12, pt. 2, p. 221. Type, by monotypy, *Biziura novaehollandiae* Stephens = *Anas lobata* Shaw.

cf. Johnsgard, 1966, Auk, 83, pp. 98–110.

Lowe, 1966, Emu, 65, pp. 279–290.

Robinson, F. N. and A. H., 1970, CSIRO Wildlife Res., 15, pp. 73–78.

## BIZIURA LOBATA

**Biziura lobata** (Shaw)

*Anas lobata* Shaw, 1796, in Shaw and Nodder, Nat. Misc., 8, pl. 255 and text—New South Wales = King George Sound, Western Australia, *vide* Mathews, 1915, Birds Australia, 4, p. 143.

Southwestern Australia (occasionally ranging north beyond North West Cape), South Australia (including Kangaroo Is-

<sup>1</sup> Probably not very closely related to *jamaicensis ferruginea*, with which it overlaps, and more likely part of a superspecies including *australis*.—P. A. J.



land), Queensland south from Rockhampton, New South Wales, Victoria; Tasmania.

### SUBORDER ANHIMAE

#### FAMILY ANHIMIDAE

- cf. Gysels, 1969, *Zool. Zhurnal*, **48**, pp. 1202-1206 (systematic position).  
 Blake, 1977, *Man. Neotropical Birds*, **1**, pp. 209-211.

#### GENUS ANHIMA BRISSON

- Anhima* Brisson, 1760, *Ornith.*, **1**, p. 48; **5**, p. 518. Type, by tautonymy, *Anhima* = *Palamedea cornuta* Linnaeus.  
 cf. Lint, 1956, *Avic. Mag.*, **62**, pp. 127-128 (breeding in captivity).  
 Gill, F. J. Stokes, and C. C. Stokes, 1974, *Wilson Bull.*, **86**, pp. 43-50 (behavior).

#### ANHIMA CORNUTA

#### *Anhima cornuta* (Linnaeus)

*Palamedea cornuta* Linnaeus, 1766, *Syst. Nat.*, ed. 12, **1**, p. 232; based chiefly on "Anhima" of Marcgrave, 1648, *Hist. Rerum Nat. Brasiliae*, p. 215, and "Le Kamichy" of Brisson, 1760, *Ornith.*, **5**, p. 518—"Brasilia, Guiana"; eastern Brazil (*ex* Marcgrave) designated by Hellmayr, 1908, *Novit. Zool.*, **15**, p. 102.

Northern Colombia (Cauca and Zulia Valleys) and eastern lowlands, Ecuador in Guayas and eastern lowlands on upper Río Pastaza, eastern Peru, eastern Bolivia, northern Venezuela, Surinam, French Guiana, Brazil south to Mato Grosso, Paraná, and São Paulo; formerly Guyana, Trinidad.

#### GENUS CHAUNA ILLIGER

- Chauna* Illiger, 1811, *Prodromus Syst. Mammalium Avium*, p. 253. Type, by monotypy, *Parra chavaria* Linnaeus.  
 cf. Wetmore, 1926, *Bull. U. S. Nat. Mus.*, no. 133, pp. 67-69 (*torquata*).  
 Stonor, 1939, *Ibis*, pp. 45-49 (breeding of *torquata*).  
 DeMay, 1940, *Condor*, **42**, pp. 112-118 (*chavaria*).  
 Weller, 1967, *Ibis*, **109**, pp. 400-401 (*torquata*).

## CHAUNA CHAVARIA

**Chauna chavaria** (Linnaeus)

*Parra Chavaria* Linnaeus, 1766, Syst. Nat., ed. 12, 1, p. 260—lakes near Río Sinú, south of Cartagena, Colombia. Northern Colombia east from lower Río Atrato, northwestern Venezuela (Zulia, Mérida, Trujillo).

## CHAUNA TORQUATA

**Chauna torquata** (Oken)

*Chaja torquata* Oken, 1816, Lehrbuch Naturgeschichte, pt. 3, sec. 2, p. "939" (= 639); based on "Chajá," no. 341, of Azara, 1805, Apuntamientos Hist. Nat. Pájaros Paraguay Río Plata, 3, p. 106—"in Paragai, um Plata." Eastern Bolivia, southern Brazil from Mato Grosso to western São Paulo and Rio Grande do Sul, Paraguay, Uruguay, Argentina south to Mendoza, La Pampa, and Buenos Aires.

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