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THE BIRDS OF NORTH AND MIDDLE AMERICA

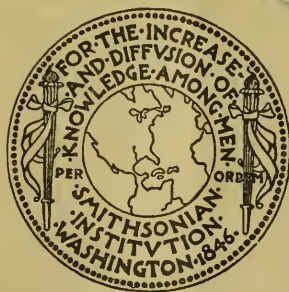
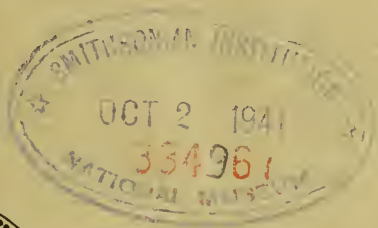
By

ROBERT RIDGWAY

continued by

HERBERT FRIEDMANN

PART IX



SMITHSONIAN INSTITUTION
WASHINGTON
D. C.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
BULLETIN 50

THE BIRDS OF NORTH AND MIDDLE AMERICA

A DESCRIPTIVE CATALOG
OF THE
HIGHER GROUPS, GENERA, SPECIES, AND SUBSPECIES OF BIRDS
KNOWN TO OCCUR IN NORTH AMERICA, FROM THE
ARCTIC LANDS TO THE ISTHMUS OF PANAMA
THE WEST INDIES AND OTHER ISLANDS
OF THE CARIBBEAN SEA, AND THE
GALAPAGOS ARCHIPELAGO

By
ROBERT RIDGWAY
Continued by
HERBERT FRIEDMANN

PART IX

Family Gruidae—The Cranes
Family Rallidae—The Rails, Coots, and Gallinules
Family Heliornithidae—The Sun-grebes
Family Eurypygidae—The Sun-bitterns

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PREFACE

The families of birds included in the present and preceding volumes of this work are as follows:

Part I, issued October 24, 1901, included the Fringillidae (finches) alone.

Part II, issued October 16, 1902, included the Tanagridae (tanagers), Icteridae (troupials), Coerebidae (honeycreepers), and Mniotiltidae (wood warblers).

Part III, issued December 31, 1904, included the Motacillidae (wag-tails and pipits), Hirundinidae (swallows), Ampelidae (waxwings), Ptilogonatidae (silky flycatchers), Dulidae (palm chats), Vireonidae (vireos), Laniidae (shrikes), Corvidae (crows and jays), Paridae (titmice), Sittidae (nuthatches), Certhiidae (creepers), Troglodytidae (wrens), Cinclidae (dippers), Chamaeidae (wrentits), and Sylviidae (warblers).

Part IV, issued July 1, 1907, contained the remaining groups of Oscines, namely, the Turdidae (thrushes), Zeledoniidae (wren-thrushes), Mimidae (mockingbirds), Sturnidae (starlings), Ploceidae (weaverbirds), and Alaudidae (larks), together with the haploophone or oligomyodian Mesomyodi, comprising Oxyruncidae (sharp-bills), Tryannidae (tyrant flycatchers), Pipridae (manakins), and Cotingidae (chatterers).

Part V, issued November 29, 1911, included the tracheophone Mesomyodi, represented by the Pteroptochidae (tapaculos), Formicariidae (antbirds), Furnariidae (ovenbirds), and Dendrocolaptidae (wood-hewers); the Macrochires, containing the Trochilidae (hummingbirds) and Micropodidae (swifts), and the Heterodactylae, represented only by the Trogonidae (trogons).

Part VI, issued April 8, 1914, contains the Picariae, comprising the families Picidae (woodpeckers), Capitonidae (barbets), Ramphastidae (toucans), Bucconidae (puffbirds), and Galbulidae (jacamars); the Anisodactylae, with families Alcedinidae (kingfishers), Todidae (todies), and Momotidae (motmots); the Nycticoraciae, with families Caprimulgidae (goatsuckers) and Nyctibiidae (potoos), and the Striges, consisting of families Tytonidae (barn owls) and Bubonidae (eared owls).

Part VII, issued May 5, 1916, contains the Coccoygiformes (cuckoo-like birds), Psittaciformes (parrots), and Columbiformes (pigeons).

Part VIII, issued June 26, 1919, contains the Charadriiformes (plover-like birds) with families Jacanidae (jacanas), Oedipodidae (thick-knees), Haematopodidae (oystercatchers), Arenariidae (turnstones), Aphriza (surfbirds), Charadriidae (plovers), Scolopacidae (snipes, sandpipers, etc.), Phalaropodidae (phalaropes), Recurvirostridae (avocets and stilts), Rynchopidae (skimmers), Sternidae (terns), Laridae (gulls), Stercorariidae (skuas and jaegers), and Alcidae (auks).

Part IX (the present part) contains the Gruiformes with the families Gruidae (cranes), Rallidae (rails, gallinules, and coots), Heliornithidae (sun-grebes), and Eurypygidae (sun-bitterns). The size of the present volume has been reduced from its original bulk to permit more immediate publication.

Part X, now in course of preparation, will contain the Galliformes, with the families Cracidae (guans and chachalacas), Tetraonidae (grouse and ptarmigan), Phasianidae (pheasants, partridges, and quail), Numididae (guinea fowl), and Meleagrididae (turkeys).

In the nine volumes thus far published there have been treated in detail (that is, with full descriptions and synonymies), besides the families above mentioned and higher groups to which they belong, 667 genera and 2,578 species and subspecies, besides 220 extralimital genera and 626 extralimital species and subspecies whose principal characters are given in the keys and whose principal synonymy is given in footnotes.

Acknowledgments are due for the privilege of examining, or for the loan, of specimens needed in the preparation of the present volume to the authorities of the Academy of Natural Sciences of Philadelphia; American Museum of Natural History, New York; Carnegie Museum, Pittsburgh; Field Museum of Natural History, Chicago; Museum of Comparative Zoology, Cambridge; National Museum of Canada, Ottawa; Royal Ontario Museum of Zoology, Toronto; Museum of Vertebrate Zoology, Berkeley; University Museum, University of Michigan, Ann Arbor; California Academy of Sciences, San Francisco; California Institute of Technology, Pasadena; Princeton University Museum, Princeton; Biological Survey, Washington, D. C.; British Museum (Natural History), London; Muséum d'Histoire Naturelle, Paris; Naturhistorische Museum, Vienna; Natural History Museum, Leyden; and J. H. Fleming, Toronto, and R. T. Moore, Pasadena. The total number of specimens thereby made available for study in the present connection is hard to estimate but runs into the thousands.

The author takes this opportunity to explain the status of his own position in this work. On the death of Robert Ridgway, the late Dr. Charles W. Richmond gathered together all the former's manuscripts

he could find and carefully filed them for future use. Ridgway's notes covered the diagnoses of genera and higher groups and partial synonymies for many of the species and subspecies. Whenever possible, his manuscript has been included with the minimum of change (other than addition to synonymies) permitted by more recent data. In fact, it has been the present author's feeling that this work should be as largely Ridgway's as possible; thus, for instance he has kept and included Ridgway's diagnoses of certain genera now relegated to the position of subgenera, and where Ridgway's manuscript gave extensive synonymies for extralimital forms, he has retained them without attempting to supply equally detailed accounts for other extralimital forms. However, all such manuscript material has been thoroughly studied with the specimens and the literature; nothing has been accepted merely because it was written. From the start, the author has felt himself responsible for the entire contents of this volume and has not considered himself as an editor of an unpublished work.

It has been a great regret to the author that he was not able to begin this work while Dr. Richmond was still alive, as he was so intimately connected with the first eight volumes and had a background of highly valuable experience with the work. It is hardly necessary to state that much of the bibliographic and nomenclatorial excellence of the first eight volumes was due to Richmond's profound knowledge of the literature and to his alert eye in reading proof.

Measurements of specimens for use in preparing this volume were made by the author and Dr. E. M. Hasbrouck under the author's supervision. Maj. Allan Brooks contributed (before the present author began this work) a series of notes on the colors of the unfeathered parts of many of the species discussed herein. The outline drawings of generic details, except those previously published, were made under the author's supervision, by Mrs. Aime Awl, of the United States National Museum staff. The drawings for the genus *Cyanolimnas* are reproduced by kind permission of Dr. Thomas Barbour, from his paper in the Auk for 1928.

Since the publication of Part VIII of this work, Peters' "Check List of Birds of the World" was begun, and four volumes have been published so far. Inasmuch as these four cover all the groups treated in the present part and those left to be treated in the remaining parts of the present work, and especially inasmuch as Peters' work will be the standard list for a long time to come, it has been deemed best to alter somewhat the arrangement of the material herein presented. Ridgway's system begins with the highest and ends with the lowest groups, while Peters is following the reverse order. Therefore, to make the

material in the present and in subsequent parts of this work as easily accessible as possible, the sequence of orders continues to follow Ridgway's plan, but the arrangement of families, genera, species, and subspecies within each order is patterned to agree with that given by Peters. Inasmuch as the present work, like Peters' Check List, is a reference tool, not a book to be read from end to end, no outrage upon truth is committed by this alteration.

HERBERT FRIEDMANN.

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THE BIRDS OF NORTH AND MIDDLE AMERICA

By ROBERT RIDGWAY, continued by HERBERT FRIEDMANN

PART IX

Order GRUIFORMES: Cranelike Birds

- <Fulicarlae NITZSCH, Meckel's Deutsch. Arch. Phys., 1820, 263 (Ralli+Gruidae).—SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 139 (Ralli+Heliornithes+Aramidae).—SHUFELDT, Anat. Rec., ix, 1915, 606 (Heliornithes+Ralli+Aramidae).
- <Alectorides NITZSCH, Obs. Av. Art. Carot. Com., 1829, 17 (Cariamae+Otides).—SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 141 (Eurypyges+Cariamae+Psophiidae).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 350 (Ralli + Grues).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 332 (Aramidae+Gruidae+Eurypygidae).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, xii, 236 (Eurypyges+Grues+Otides).
- ><Alectorides NITZSCH, Syst. Pterylogr., 1840 (Grues+Cariamae+Otides+Palamedeae).
- <Grues BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 97 (Grues+Cariamae).—BEDDARD, Struct. and Classif. Birds, 1898, 366 (Grues+Cariamae+Eurypygeae).
- <Geranomorphæ HUXLEY, Proc. Zool. Soc. London, 1867, 457 (Ralli+Grues+Rhinocetidae+Otides?+Cariamae).—SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 139 (Ralli+Heliornithes+Aramidae).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 314 (Ralli+Heliornithes+Grues).
- <Gruoideæ STEJNEGER, Stand. Nat. Hist., iv, 1885, 121 (Grues+Ralli).
- <Grues aberrantes MILLER (W. DeW.), Bull. Amer. Mus. Nat. Hist., xxxiv, 1915, 133 (Cariamae+Psophiidae+Eurypyges+Heliornithes).
- <Paludicolæ AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, 138; ed. 3, 1910, 100 (Grues+Ralli).—RIDGWAY, Man. North Amer. Birds, 1887, 2, 134 (Grues+Ralli).
- <Gruiformes FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1566 (Eurypygeae+Grues+Cariamae).—SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 74; Hand-list, i, 1899, xvii, 176 (Grues+Eurypygeae+Cariamae).
- =Gruiformes GADOW, Classif. Vertebr., 1898, 34 (Ralli+Grues+Cariamae+Otides+Eurypygeae+Heliornithes).—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 141.

<Ralliformes FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1566 (Heliornithes+Ralli+Mesitidae+Hemipodiidae).—SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (Ralli+Heliornithes, part).—SHUFELDT, Anat. Rec., ix, 1915, 606 (Ralli+Heliornithes+Aramidae).

>Ralliformes P. R. LOWE, Ibis, 1931, 496 (includes only Rallidae and Heliornithidae).

<Ralloidea SHUFELDT, Anat. Rec., ix, 1915, 606 (Ralli+Heliornithes+Aramidae).

<Psophiiformes MATHEWS, Birds Australia, iii, pt. 4, 1913, 373 (Psophiidae+Gruidae).

=Megalornithiformes WETMORE and MILLER, Auk, xliii, 1926, 342.

><Telmatomorphae LOWE, Ibis, 1931, 502 [includes Cariamidae, Gruidae, Psophiidae, Aramidae, Rhinocetidae, Eurypygidae, Otidae (but not Rallidae, Heliornithidae, Mesoanatidae, or Turnicidae), and the families of larolimicoline birds].

><Gruimorphae LOWE, Ibis, 1931, 491 (includes Larolimicolae, but excludes rails, sun-bitterns; contents as in Telmatomorphae).

><Kolobathronithes BOETTICHER, Verh. Orn. Ges. Bay., xvii, 1927, 190 (includes rails, cranes, bustards, gallinaceous birds, plovers, pratincoles, gulls!).

Paludicoline, aquatic, or terrestrial birds with anterior toes very incompletely or (usually) not at all webbed; dorsal vertebrae heterocoelous; distal ends of ilium and ischium united; os quadratus with a double head; accessory femorocaudal muscle without slip above sciatic foramen; coracoids with basal ends separated; spina interna sterni absent (except in Mesites); basipterygoid processes absent; crop absent; hallux, if present, usually elevated (incumbent in Eurypyges).

Palate schizognathous (imperfectly aegithognathous in Turnices, imperfectly desmognathous in Cariamae); nares schizorhinal (Eurypyges, Grues, Cariamae) or holorhinal (Ralli); pervious (Eurypygidae, Mesoanatidae) or impervious (Rhinocetidae); occipital fontanelles present; supraorbital impressions indistinct; interorbital septum fenestrated; lachrymals not blending with ectethmoid; interorbital septum fenestrated; ramphotheca simple; angulare mandibulae truncated; cervical vertebrae 14-20; complete ribs 5-7; ectepicondylar process of humerus absent; spina interna sterni absent; hypotarsus with high ridges (Rhinocetidae, Ralli), complex (Grues, Otides) or simple (Eurypygidae); carotids, 2; caeca present, large or small; gall bladder present; stomach a gizzard, the proventriculus zonary; thigh muscle formula ABXY +, BXY + (*Aramus*, *Balearica*), or XY + (*Grus leucogeranus*); deep plantar tendons of type I, II, IV, or X, united by a strong vinculum; ambiens, semitendinosus, accessory semitendinosus, and expansor secundariorum muscles present; peroneals both present; intestinal convolutions of type I (peri-orthocoelous); oil gland present, tufted (Ralli) or nude (Eurypyges, Grues, Cariamae); aftershaft present (except in Mesoanatides and Heliornithes); rectrices 10-18; primaries 10-11; secondaries quinto- or aquinto-cubital;

young ptilopaedic (except in *Heliornithes*?) and nidifugous (except in *Heliornithes*? and *Eurypyges*).

The above characters are common to a large group of mostly more or less aquatic birds that are related on the one hand to the *Charadriiformes* and on the other to the *Galliformes*, occupying, in fact, a position somewhat intermediate between these two. It is not, however, a homogeneous group, and it is doubtful whether the *Cariamae* and *Heliornithes*, at least, should not be excluded.

The *Gruiformes*, as here defined, agree with both the *Charadriiformes* and *Galliformes* in possession of the following characters:

- (1) Schizognathous palate (desmognathous, however, in *Cariamae* and aegithognathous in *Turnices*).
- (2) Double head to quadrate bone.
- (3) Union of distal ends of ilium and ischium.
- (4) Absence of slip to accessory femorocaudal muscles.

They agree with the *Charadriiformes*, but differ from the *Galliformes*, in the following:

- (1) Basal ends of coracoids separated or merely touch each other.
- (2) Absence of spina interna sterni muscle.
- (3) Intestinal convolutions of Type I (instead of Type V).

From the *Charadriiformes* the *Gruiformes* differ in

- (1) Heterocoelous (instead of opisthocoelous) dorsal vertebrae.
- (2) Absence of basiptyergoid processes.

KEY TO THE SUBORDERS OF GRUIFORMES

a. Palate schizognathous.

b. Accessory tendinosus muscle absent; deep plantar tendons of Types II or X; thigh muscle formula A B X; toes laterally lobed; rectrices 18 or more ----- *Heliornithes* (p. 224)

bb. Accessory tendinosus muscle present; deep plantar tendons of Type I; thigh muscle formula ABXY, or XY; toes not lobed (except in *Ralli*, part); rectrices 10-16.

c. Hallux present; metasternum 2 notched or entire; oil gland present; adult downs on both pterylae and apteria.

d. Metasternum 2 notched.

e. Powder downs absent; cervical vertebrae 14-17; nares holorhinal; hallux elevated.

f. Oil gland tufted; tail of 10-14 rectrices; cervical vertebrae 14-15.
Ralli (p. 38)

ff. Oil gland nude; tail of 16 rectrices; cervical vertebrae 17.

Mesoenatides (extralimital)¹

cc. Powder downs present; cervical vertebrae 18; nares schizorhinal; hallux decumbent; oil gland nude; tail large, fan-shaped, with 12 rectrices; wing eutaxic ----- *Eurypygae* (p. 232)

¹ = *Mesitides* Sharpe, Rev. Rec. Att. Classif. Birds, 1891, 74; Handlist, i, 1899, 180. = *Mesoenatides* Wetmore and Miller, Auk, xliii, 1926, 342.—Wetmore, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—Peters, Check List Birds of World, ii, 1934, 141.

dd. Metasternum entire.

e. Occipital foramina, above foramen magnum, well developed.

Grues (p. 4)

ee. No occipital foramina above the foramen magnum.

Rhynocheti (extralimital) ²

cc. Hallux absent; metasternum 4-notched; oil gland absent; adult downs on apteria only; wing diastataxic----- Otides (extralimital) ³

aa. Palate desmognathous or aegithognathous.

b. Palate desmognathous; deep plantar tendons of type IV; complete ribs 5; wing eutaxic----- Cariamae (extralimital) ⁴

bb. Palate aegithognathous or nearly so----- Turnices (extralimital) ⁵

Suborder GRUES: Cranes and Limpkins

>Grues CUVIER, Règne Anim., ed. 2, i, 1829, 506.

>Grues FÜRBRINGER, Unters. Morph. Syst. Vög., ii, 1888, 1566 (includes Cariamae).—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6 (includes Ralli).

<Grues AMERICAN ORNITHOLOGISTS' UNION, Check List, 3d. ed., 1910, 100 (Gruidae + Aramidae).

<Gruidae FÜRBRINGER, Unters. Syst. Morph. Vög., ii, 1888, 1203 (Gruidae + Aramidae).

=Gruidae GADOW, Classif. Vertebr., 1898, 34.

=Gruidae KNOWLTON, Birds of World, 1909, 49, 327.

<Gruidae BEDDARD, Struct. and Classif. Birds, 1895, 366 (Gruidae + Aramidae).

=Gruoidea SHUFELDT, Anat. Rec., ix, Oct. 1915, 750.

<Grues veri MILLER (W. deW.), Bull. Amer. Mus. Nat. Hist., xxxiv, 1915, 132 (Gruidae + Aramidae).

>Megalornithes WETMORE and MILLER (W. deW.), Auk, xliii, 1926, 342.

²=Rhinochetes Sharpe, Hand-list, i, 1899, 180. =Rhinochetes Sharpe, Rev. Rec. Att. Classif. Birds, 1891, 74. =Rhynocheti Wetmore, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6; Peters, Check List Birds of World, i, 1931, 215. =Rhinocheti Stresemann, Handb. Zool., vii, 1934, 769.

³=Pedionomi Vieillot, Analyse, 1816, 54. >Otides Fürbringer, Unters. Morph. Syst. Vög., ii, 1888, 1566 (suborder of Charadriiformes!; includes Oedienidae). = Otides SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 73; Hand-list, i, 1899, xvi, 173 (suborder of Charadriiformes; Otididae only).—Wetmore, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 7; xcix, No. 7, 1940, 7.—Peters, Check List Birds of World, ii, 1934, 217.

⁴=Cariamoideae Stejneger, Stand. Nat. Hist., iv, 1885, 119 in text. = Dicholophi Sharpe, Rev. Rec. Att. Classif. Birds, 1891, 74; Hand-list, i, 1899, 182. = Cariamoidea Shufeldt, Anat. Rec., ix, 1915, 750. = Cariamae Wetmore, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 7; xcix, No. 7, 1940, 7.—Peters, Check List Birds of World, ii, 1934, 216.

⁵=Turnicomorphae Huxley, Proc. Zool. Soc. London, 1868, 303. = Hemipodii Sharpe, Rev. Rec. Att. Classif. Birds, 1891, 69; Hand-list, i, 1899, 48. = Turnices Wetmore and Miller, Auk, xliii, 1926, 342.—Wetmore, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.

Gruiformes with the metasternum entire; supraorbital furrows present, well developed; occipital foramina present (except in Psophiidae) and furcula Y-shaped.

Palate schizognathous; nares schizorhinal (holorhinal in Psophiidae), pervious; basipterygoid processes absent; occipital fontanelles and supraorbital glands present; interorbital septum incomplete; cervical vertebrae 17-20; fused dorsal vertebrae 2-3 (4); complete ribs 6-7; metasternum entire; spina externa sterni present (except in Psophiidae), "enormous," spina interna absent; hypotarsus complex; thigh-muscle formula ABXY+ (usually), BXY+, XY+; the ambiens, semitendinosus and accessory semitendinosus muscles present; biceps slip present; expansor secundariorum present; anconaeus with a broad humeral slip; deep plantar tendons of type I, united by a strong vinculum; stomach a strong gizzard, the proventriculus zonary; gall bladder present; caeca (1 or 2) large; intestinal convolutions of type I (as in Ralli and Otides); syrinx tracheobronchial; hallux present; oil gland nude or tufted; aftershaft present; powder downs absent; adult downs on both pterylae and apteria; cervical pterylosis with lateral apteria; fifth remex absent (aquincubital) or present (quincubital); rectrices 10-12.

KEY TO THE FAMILIES OF GRUES

- a. Nares holorhinal; occipital foramina absent; hypapophyses on 3 dorsal vertebrae; spina externa sterni absent; wing eutaxic (quintocubital); rectrices 10; bill short, almost galline..... Psophiidae (extralimital)*
- aa. Nares schizorhinal; occipital foramina present; hypapophyses on cervical vertebrae only; spina externa sterni present; wing diastataxic (aquinco-cubital); rectrices 12; bill elongated, nongalline.
- b. Femorocaudal muscle absent; caeca situated laterally and close together (peculiar); hallux large, nearly as long as basal phalanx of middle toe, incumbent; middle toe at least two-thirds as long as tarsus; head completely feathered; bill not shorter than tarsus.... Aramidæ (p. 27)
- bb. Femorocaudal muscle present (except in genus *Balearica*); caeca situated opposite one another; hallux small, much shorter than basal phalanx of middle toe, elevated; middle toe less than half as long as tarsus; head partly naked (except in young) or else with ornamental plumes; bill much shorter than tarsus..... Gruidæ (p. 6)

* =Hilebatæ Vieillot, Analyse, 1816, 60.=Psophidæ Lilljeborg, Proc. Zool. Soc. London, 1866, 15.=Psophiidae Bonaparte, Consp. Gen. Av., ii, 1857, 102.—Carus, Handb. Zool., i, 1868-75, 341.—Fürbringer, Unters. Morph. Syst. Vög., ii, 1888, 1208, 1566.—Peters, Check-list Birds of World, ii, 1934, 155.=Psophiidae Selater and Salvin, Nom. Av. Neotr., 1873, viii, 141.—Stejneger, Stand. Nat. Hist., iv, 1885, 122, in text.—Sharpe, Cat. Birds Brit. Mus. xxiii, 1894, xii, 278; Hand-list, i, 1899, xvii, 181.—Beddard, Struct. and Classif. Birds, 1898, 374.=Psophiinae Bonaparte, Consp. Gen. Av., ii, 1857, 102.—Psophiinae Knowlton, Birds of World, 1909, 337.=Psophinae Lilljeborg, Proc. Zool. Soc. London, 1866, 17.=Psophiæ (suborder) Sharpe, Rev. Rec. Att. Classif. Birds, 1891, 74; Hand-list, i, 1899, xvii, 181. (Composed of a single genus, *Psophia* Linnaeus, containing about half a dozen species, peculiar to the Amazon region and the Guianas in South America.)

Family GRUIDAE: Cranes

- =*Erophoni* VIEILLOT, *Analyse*, 1816, 59.
- =Gruidae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1854], 97.—BAIRD, *Rep. Pacific R. R. Surv.*, ix, 1858, 651, 653.—CARUS, *Handb. Zool.*, i, 1868-75, 342.
- =Gruidae LILLJEBORG, *Proc. Zool. Soc. Lond.*, 1866, 445.—BAIRD, BREWER, and RIDGWAY, *Water Birds North Amer.*, i, 1884, 350, 403.—COUES, *Key North Amer. Birds*, ed. 2, 1884, 666.—STEJNEGER, *Stand. Nat. Hist.*, iv, 1885, 123.—AMERICAN ORNITHOLOGISTS' UNION, *Check List*, 1886, 138; 3d ed., 1910, 100.—SHARPE, *Cat. Birds Brit. Mus.*, xxiii, 1894, xii, 248; *Hand-list*, i, 1899, xvi, 176.—SALVIN and GODMAN, *Biol. Centr.-Amer.*, Aves, iii, 1903, 335.—WETMORE, *Proc. U. S. Nat. Mus.*, lxxvi, 1930, art. 24, 4; *Smiths. Misc. Coll.*, lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.
- =Gruidae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1854], 97.—FÜRBRINGER, *Unters. Morph. Syst. Vög.*, ii, 1888, 1566.—GADOW, *Bronn's Thier Reichs, Vög.*, ii, 1891, 184.
- =Grues AMERICAN ORNITHOLOGISTS' UNION, *Check List*, 1886, 138.—SHARPE, *Rev. Rec. Att. Classif. Birds*, 1891, 74; *Hand-list*, i, 1899, xvi, 176.
- <Grueae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1854], 97 (genera *Grus*, *Antigone*, and *Leucomedontia*).
- <Anthropoideae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1854], 97 (genera *Tetrapteryx*, *Anthropoides*, and *Balearica*).
- =Psophiidae MATHEWS, *Birds Australia*, iii, pt. 4, 1913, 373.
- =Megalornithidae WETMORE and MILLER (W. deW.), *Auk*, xliii, 1926, 341.

Large, long-legged and long-necked Grues with the hallux small (much shorter than basal phalanx of middle toe) and elevated; middle toe less than half as long as tarsus; bill elongated (but much shorter than tarsus), straight, nongalline; femoro-caudal muscle present (except in *Balearica*), and with head partly naked (except in young) or else adorned with ornamental plumes.

As additional anatomical characters, it may be stated that the oil gland is tufted; rectrices 12 in number; fused dorsal vertebrae 2-3; hypapophyses on cervical vertebrae only, these 19-20; spina externa sterni present; and that the wing is diastataxic.

Although bearing some superficial resemblance to the larger herons and storks, the cranes are very different structurally and far more nearly related to the rails. They are omnivorous but are mainly vegetable feeders, eating grain and tender herbage as well as mice and other forms of animal life.

The family has no representatives in South America, in the Malayan Archipelago, or in Polynesia. Two peculiar genera occur in Africa. The remaining genera are Palearctic, Nearctic, and Australian, one only occurring in North America, represented by two species.

Genus GRUS Pallas

- Grus* PALLAS, *Misc. Zool.*, 1766, 66. (Type, by tautonymy, *Ardea grus* Linnæus.)
Pseudogranus SHARPE, *Bull. Brit. Orn. Club*, i, 1893, xxxvii. (Type, *Grus leucauchen* Temminck.)

- Sarcogeranus* SHARPE, Bull. Brit. Orn. Club, i, 1893, xxxvii. (Type, *Grus leucogeranus* Pallas.)
Limnogeranus SHARPE, Bull. Brit. Orn. Club, i, 1893, xxxvii. (Type, *Ardea americana* Linnaeus.)
Megalornis GRAY, List Gen. Birds, 1841, 85. (Type, *Ardea grus* Linnaeus.)

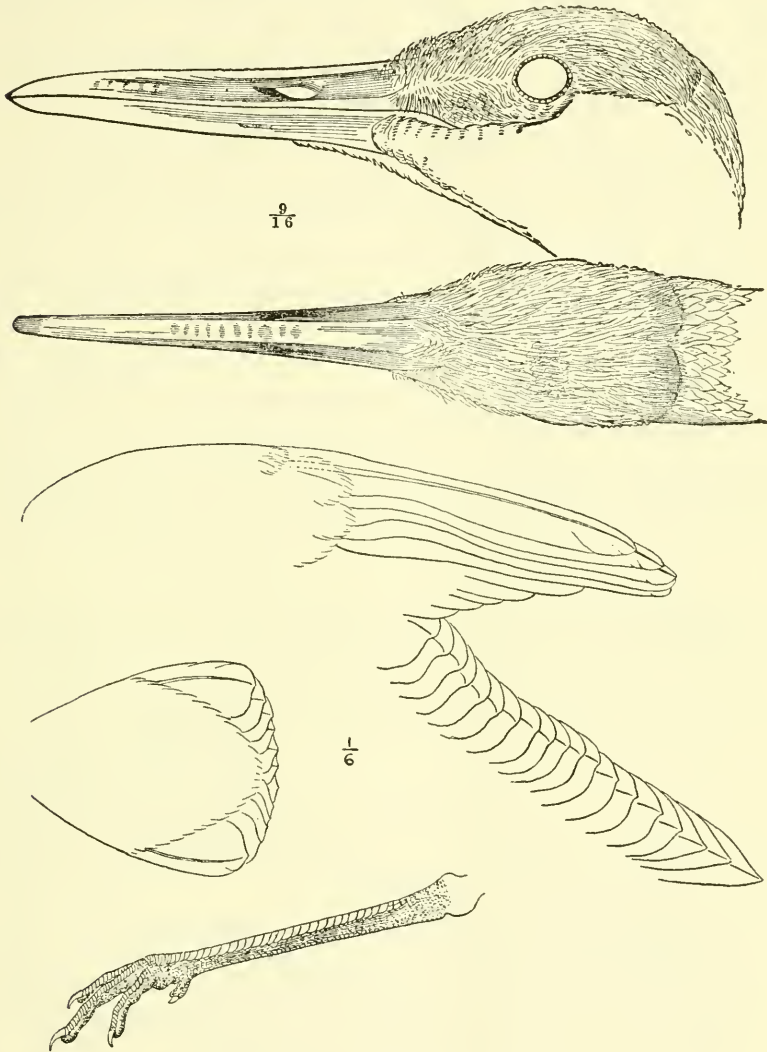


FIGURE 1.—*Grus canadensis canadensis*.

Leucogeranus BONAPARTE, Compt. Rend., xl, 1855, 720. (Type, *Grus leucogeranus* Pallas.)

Antigone REICHENBACH, Handb. Spec. Orn., 1852, xxiii. (Type, *Grus torquata* Vieillot=*Grus collaris* Boddaert.)

Mathewsia IREDALE, Bull. Brit. Orn. Club, xxvii, 1910, 47. (Nom. nov. pro *Antigone* Reichenbach, 1853, not *Antigone* Gray, 1847.)

Mathewsena IREDALE, Austr. Av. Rev., ii, 1814, 82 (Nom. nov. pro *Mathewsia* Iredale, 1911, not *Mathewsia* Saulcy, 1868.)

Generic characters.—Bill lengthened, straight, the upper mandible only slightly decurved at the extreme tip; the commissure and other outlines straight. Nasal groove very large and open, extending over the basal two-thirds of the bill. Nostrils broadly open, pervious; the anterior extremity halfway from the tip of bill to eye. The upper half of the head naked, warty, but with short hairs.

Legs much lengthened; toes short, hardly more than one-third the tarsus. Inner toe rather longer than the outer, its claw much larger. Hind toe elevated, short. Toes connected at the base by membrane. Tarsi broadly scutellate anteriorly. Tertiaries longer than the primaries, decurved, their webs in some species decomposed; first quill not much shorter than the second.

This genus is nearly cosmopolitan, each of the great continents, except Africa and South America, possessing its peculiar species; South America is without a single representative of the family. Asia comes first in number of species (seven), North America coming next, with two, while Europe and Australia possess only one each—the former in common with western Asia (and wintering in Africa).

KEY TO THE AMERICAN SPECIES AND SUBSPECIES OF GRUS

- a. Tarsus usually 275 mm. or more; bill stout, its depth through the base about one-fourth the length of the culmen; distance from posterior end of nostril to base of upper mandible much more than one-half the distance from anterior border of nostril to tip of upper mandible.
 - b. Cheeks bare; plumage pure white except for black primaries.
 - Grus americanus*, ad. (p. 9)
 - bb. Cheeks feathered; plumage white heavily washed with buffy ochraceous.
 - Grus americanus*, young (p. 9)
- aa. Tarsus under 260 mm.; bill more slender; its depth through base less than one-fourth the length of the culmen; distance from posterior end of nostril to base of upper mandible less than one-half the distance from anterior end of nostril to tip of upper mandible.
 - b. Entire plumage deep slate-gray, sometimes tinged with rusty; forehead and anterior part of crown with unfeathered, red, warty skin.
 - c. Size smaller, exposed culmen usually under 100 mm. in length, almost never more than 110 mm.---- *Grus canadensis canadensis*, ad. (p. 14)
 - cc. Size larger, exposed culmen always well over 110 mm. in length.
 - d. Hind neck and occiput paler—pallid mouse gray to pale mouse gray.
 - Grus canadensis tabida*, ad. (p. 20)
 - dd. Hind neck and occiput darker—light mouse gray to mouse gray.
 - e. Tarsus shorter, under 215 mm. *Grus canadensis nesiotis*, ad. (p. 26)
 - ee. Tarsus longer, 220 mm. or over.
 - Grus canadensis pratensis*, ad. (p. 25)
 - bb. Entire plumage brownish washed with rusty; head completely feathered.
 - Grus canadensis*, all races, juv.

GRUS AMERICANUS (Linnaeus)

WHOOPING CRANE

Adult (sexes alike).—Whole crown and anterior part of occiput covered by a warty or granulated carmine reddish skin sparsely covered by black hairlike feathers, these commoner on the crown than on the occiput; lores and malar region, including a narrow angular strip extending from the latter down each side of throat, also naked, carmine, and similarly bristled, the bristles denser anteriorly; an elongate (about 50 mm. long) postoccipital wedge-shaped patch of dark plumbeous feathers; all other plumage of neck, body, wings, and tail pure white except only the primaries and their greater upper coverts and the alula, which are uniform slate black; bill wax yellow tipped with dull greenish or yellowish; iris yellow, tarsi and toes black; the eye surrounded above and below and in front, but not behind, by bare skin, the lower eyelid feathered, the upper nearly bare.

Juvenal (sexes alike)⁷.—Whole head feathered, including forehead and lores, the feathers on the parts that become bare in the adults short and somewhat dusky; rest of plumage except primaries and their greater upper coverts, and the alula whitish, heavily washed, mottled, and blotched with pinkish cinnamon to cinnamon-buff and even to sayal brown, this color practically solid on the top of the head; the upperparts of the body and the wings much mixed with white feathers and cinnamon-buff ones, the latter more numerous on the scapulars, interscapulars, and back, and less so in the wings; the darkest of the colored feathers are in the scapulars as a rule; primaries dull blackish; alula and greater upper primary coverts dull blackish washed with buffy or ochraceous; bill as in adult, but darker, more blackish at tip.

Natal down.—General color of upperparts dull cinnamon to sayal brown, deepening into mikado brown or russet on rump, where still darker (liver brown or bay) along median line, continued along median line of back, paler and grayer on neck, still paler behind wings; underparts pale dull grayish buffy or dull brownish whitish, tipped or suffused with pale cinnamon; bill pale buffy brown, flesh color basally, with a small whitish spot on the upper mandible; tarsi and toes light brownish.

⁷The length of time required to attain adult plumage is not known. It is similarly not definitely known whether there are any progressive changes in young birds or whether the adult plumage is acquired by a postjuvinal molt at the end of the first year.

Adult male.—Wing 550–630 (601.7); tail 205–245 (223.8); exposed culmen 129–147 (138.5); tarsus 265–301 (276.5); middle toe without claw 98–118 (105.2 mm).⁸

Adult female.—Wing 583–610 (one 535), (597.9); tail 194–238 (217.3); exposed culmen 132–148 (one 117), (136.7); tarsus 260–295 (281.4); middle toe without claw 101–114 (107.3) mm.⁹

Range.—Interior of North America, west to the Rocky Mountains, north across the plains of Saskatchewan to southern Mackenzie, south to the southern portion of the Mexican plateau (Jalisco) and south-eastward along the Gulf coast to Florida. Formerly occasional along the Atlantic coast of the United States; breeds from central Illinois, Iowa, etc., northward.

The range of the whooping crane is now only a small fraction of the original distribution as the species is on the verge of extinction and probably breeds only locally in south-central Canada. The accounts given below are for the original distribution of the species.

Breeds from Mackenzie (Fort Simpson; Fort Resolution; Fort Anderson); Alberta (Fort Chippewyan; Whitford Lake, Stony Plain); Saskatchewan (Dundern); Manitoba (Moose Mountain; Shoal Lake; Winnipeg; Fort Churchill); North Dakota (Larimore; Pembina County; Bismarck; Lake Benton); Minnesota (Elbow Lake, Grant County); and Iowa (Hancock County; Eagle Lake; Dubuque; Midway; Spirit Lake) south to eastern Alberta (Whitford Lake); eastern Montana? (no definite breeding records); Nebraska (Word Lake?) and Iowa (Black Hawk County; near Hayfield, Hancock County; Franklin County; Dubuque; Spirit Lake; Baxter; Winnebago County; Crystal Lake).

Winters on the Gulf coast of the United States and central Mexico from Georgia; Florida (Hastings; Lee County; Kissimmee River; Lake Okechobee; Fort Myers); Alabama (Dauphin Island; Prattville; Cypress Slough; Millwood); Louisiana (Avery Island; Vermilion Bay; Pecan Island; Chenier au Tigre); and Texas (San Antonio; Corpus Christi; Padre Island; Brownsville; Brazos River; Galveston Island; Houston; Concho County) to Mexico (Tamaulipas—Matamoras; Jalisco—Hacienda El Morino, and Guadalajara and La Barca; Guanajuato—Silao).

In migration occurs east to Ontario (Yarker; Emsdale); New York (Cayuga Lake), New Jersey (Beesleys Point; Cape May); Pennsylvania (Philadelphia; Chester County); South Carolina (Waccamaw River); and Georgia (St. Simon Island); and west occasionally to Oregon (Washington County); California (Butte and

⁸ Fifteen specimens from Canada, Minnesota, Kansas, Illinois, South Dakota, and Texas. Wings measured (chord) to tip of longest primary (not tertial).

⁹ Seven specimens from Minnesota, Nebraska, South Dakota, and Texas.

Sutter Counties; Imperial Valley?); Wyoming (Yellowstone Park); Colorado (Fort Collins; Loveland); and New Mexico (Fort Thorn). In recent years recorded only from the Great Plains area on migration; southern Texas in winter.

Type locality.—Hudson Bay.

- [*Ardea*] *americana* LINNAEUS, Syst. Nat., ed. 10, i, 1758, 142; ed. 12, i, 1766, 234 (South Carolina; based on *Grus americana alba* Catesby, Carolina, i, 75, pl. 75; Edwards, Av., 132, pl. 132).—GMELIN, Syst. Nat., i. pt. 2, 1789, 621.—LATHAM, Index Orn., ii, 1790, 675.
- Ardea americana* FORSTER, Philos. Trans., lxii, 1772, 409 (York Fort, Hudson Bay).—BODDAERT, Tabl. Pl. Enl., 1783, 53.—TURTON, Syst. Nat., i, 1806, 372.—WILSON, Amer. Orn., viii, 1814, 20, pl. 64, fig. 3.
- A[*rdea*] *americana* BONAPARTE, Journ. Acad. Nat. Sci. Philadelphia, v, pt. i, 1825, 66 (crit.); Obs. Wilson's Amer. Orn., 1826, 178.
- Grus americana* VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 557.—STÉPHIENS, Shaw's Gen. Zool., xi, pt. 2, 1819, 528 (Hudson Bay).—BONAPARTE, Journ. Acad. Nat. Sci. Philadelphia, v, pt. i, 1825, 66; Obs. Wilson's Amer. Orn., 1826 [148]; Contr. Maclurian Lyc., i, 1827, 24; Geogr. and Comp. List, 1838, 46.—ORD, ed. Wilson's Amer. Orn., viii, 1825, 20.—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 372.—LESSON, Traité d'Orn., 1831, 587 (Philadelphia).—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 34.—AUDUBON, Orn. Biogr., iii, 1835, 202, pl. 216; Synopsis, 1839, 219; Birds Amer., 2^{vo} ed., v, 1842, 188, pls. 313, 314.—TOWNSEND (J. K.) Journ. Acad. Nat. Sci. Philadelphia, viii, 1839, 156 (NW. United States).—MCCALL, Proc. Acad. Nat. Sci. Philadelphia, 1851, 223 (San Antonio and Corpus Christi, Tex., Nov.).—THOMPSON, Nat. Hist. Vermont, 1853, 103.—BRYANT, Proc. Boston Soc. Nat. Hist., iv, 1853, 303 (crit.).—WAILES, Geol. Rep. Mississippi, 1854, 321.—KENNICOTT, Trans. Illinois Agr. Assoc., i, 1855, 587 (Illinois).—PUTNAM, Proc. Essex Inst., i, 1856, 229 (very doubtful, according to Coues, Proc. Essex Inst., v, 1868, 289).—?KNEELAND, Proc. Boston Soc. Nat. Hist., vi, 1857, 237 (Keweenaw Point, Lake Superior).—BLAKISTON, Ibis, 1863, 128 (Saskatchewan; Fort Simpson).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 4.—DRESSER, Ibis, 1866, 30 (San Antonio, Point Isabel, Galveston Island, and Brazos River, Tex.; Matamoros, Mexico).—TURNBULL, Birds East Pennsylvania and New Jersey, 1869, 43 (formerly breeding at Cape May, now very rare; 3 at Beasleys Point in 1851).—TRIPPE, Proc. Essex Inst., 1871, 118 (Minnesota, occasionally breeding); Proc. Boston Soc. Nat. Hist., xv, 1872, 240 (Decatur County, Iowa).—AIKEN, Proc. Boston Soc. Nat. Hist., xv, 1872, 209 (Colorado, occasional during migration).—SNOW, Birds Kansas, 1873, 9 (rare in migration).—COUES, Birds Northwest, 1874, 530; Bull. U. S. Geol. and Geogr. Surv. Terr., iv, 1878, 646 (Souris River, N. Dak., Aug.-Oct.); Checklist, ed. 2, 1882, No. 668.—LANGDON, Birds Cincinnati, 1877, 16 (rare migrant).—SENNETT, Bull. U. S. Geol. and Geogr. Surv. Terr., iv, 1878, 61 (Brownsville, Tex., winter and up to Apr. 1); v, 1879, 435 (Padre Island, Tex., Mar.).—ROBERTS and BENNER, Bull. Nutt. Orn. Club, v, 1880, 19 (Grant County, Minn., breeding).—ROBERTS, Amer. Nat., xiv, 1880, 108-114, fig. 11 (descr. trachea).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 582); Nom. North Amer. Birds, 1881, No. 582.—NEHRING, Bull. Nutt. Orn. Club, vii, 1882, 223 (Houston, Tex., Nov.-Mar.).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 404.—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, and ed.

2, 1895, No. 204; ed. 3, 1910, p. 100; ed. 4, 1931, 93.—MACFARLANE, Proc. U. S. Nat. Mus., xiv, 1891, 425 (Fort Anderson, Mackenzie, in migration).—SETON, Auk, iii, 1886, 150 (Moose Mountain and Shoal Lake, Manitoba, breeding).—ANTHONY, Auk, iii, 1886, 164 (Washington County, Oreg., rare in fall).—THOMPSON, Proc. U. S. Nat. Mus., xiii, 1891, 491 (Manitoba; rare summer resident, fairly common migrant).—NUTTING, Bull. Labr. State Univ. Iowa, ii, 1893, 262 (Grand Rapids, lower Saskatchewan, in migration).—JOUY, Proc. U. S. Nat. Mus., xvi, 1894, 790 (Hacienda El Molino, Jalisco).—STONE, Birds Eastern Pennsylvania and New Jersey, 1894, 65 (New Jersey, rare).—COOKE, Birds Colorado, 1897, 62 (Fort Collins; Loveland; rare migrant); U. S. Dept. Agr. Bull. 128, 1914, 4, fig. 1 (range and migration routes).—BUTLER, Rep. State Geol. Indiana for 1897 (1898), 669 (formerly in Lake County and near Bloomington, Ind.).—COBEAUX, Ottawa Nat., 1900, 26 (s. Saskatchewan, migrant).—BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 93 (coast of Louisiana, common in winter).—DRUKY, Journ. Cincinnati Soc. Nat. Hist., xix, 1900, 174 (near Cincinnati, Ohio, Aug. 1895).—PREBLE, North Amer. Fauna, No. 22, 1902, 92 (Hudson Bay, fide Edwards and Hearne); No. 27, 1908, 311 (formerly breeding north to Barren Grounds, Mackenzie).—KUMLIEN and HOLLISTER, Bull. Wisconsin Nat. Hist. Soc., iii, 1903, 36 (last record of capture in Wisconsin, Oct. 1878).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves., iii, 1903, 337 (Matamoras, Tamaulipas; Guadalajara and Hacienda El Molino, Jalisco).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 56 (Chicago area, rare transient).—WIDMANN, Birds Missouri, 1907, 56 (few records).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 101 (Iowa records; habits).—BEYER, ALLISON and KOPMAN, Auk, xxv, 1908, 178 (coast of Louisiana in winter).—CORY, Field Mus. Nat. Hist. Publ. 131, 1909, 376 (Illinois and Wisconsin).—WAYNE, Birds South Carolina, 1910, 33 (Waccamaw River, about 1850; no recent records).—EATON, Birds New York, i, 1910, 260 (no recent record).—BARROWS, Michigan Bird Life, 1912, 148 (no recent record).—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 477 (history).—SWENK, Auk, xxx, 1913, 430 (Wood Lake, Cherry County, Nebr., Oct. 16, 1912, five specimens).—GOLSAN and HOLT, Auk, xxxi, 1914, 218 (near Prattville, Ala., Nov. or Dec. 1899).—FAXON, Bull. Mus. Comp. Zool., lix, 1915, 131 (original of Wilson's fig. in coll. Mus. Comp. Zool.).—TAVERNER, Ottawa Nat., xxxii, 1919, 145 (Shoal Lake, Manitoba, formerly breeding).—HARRIS, Trans. Acad. Sci. St. Louis, xxiii, 1919, 244 (near Kansas City, Mo., spring, 1893, Apr. 14, 1904, and Mar. 27, 1913).—CONOVER, Auk, xxxix, 1922, 412 (Red Deer Lake, Cherry County, Nebr., 2 specimens, Oct. 14, 1921).—WOOD (N. A.), Univ. Michigan Mus. Zool. Misc. Publ. No. 10, 1923, 24 (Pembina County, N. Dak., fall 1909; Bismarck, 2 small flocks, Sept. 16, 1920, and Apr. 8, 1922).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 28 (genl.; Oklahoma).—PINDAR, Wils. Bull., xxxvi, 1924, 204 (very rare in Arkansas).—LARSON, Wils. Bull., xxxvii, 1925, 24 (Sioux Falls region, S. Dak.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (Fulton County, Ky.).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 345 (fig.; descr.; habits; New England).—BLINCOE, Auk, xlii, 1925, 419 (Bardstown, Ky.).—GRISCOM and CROSBY, Auk, xlii, 1925, 526 (Brownsville, Tex.; winter).—TAVERNER, Birds Western Canada, 1926, 121 (fig.; descr.; habits; distr.; w. Canada).—WILLIAMS, Wils. Bull., xxxviii, 1926, 24 (Red River Valley, N. Dak.).—BAILEY, Auk, xlv, 1928, 277 (winter; Chenier au Tigré, La.).—BAILEY (F. M.), Birds New Mexico, 1928, 237 (New Mexico, formerly; Fort Thorn in migration).—NELSON,

- Condor, xxxi, 1929, 146 (Pecan Island, La.).—LEWIS, Wils. Bull., xlii, 1930, 41 (nw. Oklahoma; fairly large flocks seen in 1909, 1910, 1911; one bird seen in 1912; none since).—KEMSIES, Wils. Bull., xlii, 1930, 203 (Yellowstone Park, Wyo.).—HOWARD, Condor, xxxii, 1930, 84 (Pleistocene remains, Rancho la Brea).—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 56 (descr.; Arkansas, formerly a common migrant; only two records—Crocketts Bluff and Sunken Lands).—NICE (M. M.), Birds Oklahoma, rev. ed., 1931, 83 (Oklahoma, formerly a common migrant, not recorded for 20 years; Cleveland County; Woods County; Fort Arbuckle).—SUTTON, Condor, xxxiii, 1931, 157 (near Eskimo Point, Hudson Bay).—ROBERTS, Birds Minnesota, i, 1932, 429 (formerly a summer resident of prairie regions of Minnesota; now a rare migrant; former Minnesota nesting dates—Elbow Lake, Grant County, May 21, 1876; Hancock County, Iowa, just over the State line, May 4, 1883, and May 26, 1894; migration—Heron Lake, Mar. 20—Apr. 10, Nov. 13; Kittson County, April; Roseau County).—HOWELL, Florida Bird Life, 1932, 196 (indefinite records from east of Kissimmee River and Lake Okeechobee; bones from Pleistocene deposits at Melbourne, Seminole, and on the Itchtuckee River).—BURNS, Wils. Bull., xlv, 1932, 28 (specimen in Peale coll.).—GUTHRIE, Wils. Bull., xlv, 1932, 102 in text (eats snakes).—SOPER, Nat. Mus. Canada, Bull. 53, 1928, 95 (southern Baffin Island).—DUMONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 59 (extinct in Iowa; numerous records in earlier times).—BAILEY, Auk, li, 1934, 399 (3 known to winter at Chenier au Tigré, La.; 7 seen Dec. 16).—PETERS, Check-list Birds of World, ii, 1934, 152.—TAVERNER, Birds Canada, 1934, 168 (descr.; habits; Canada west of Great Lakes to foothills of Rocky Mountains; now very rare).—TAVERNER and SUTTON, Ann. Carnegie Mus., xxiii, 1934, 31 (seen, Eskimo Point, 160 miles north of Churchill, Manitoba).—YOUNGWORTH, Wils. Bull., xlvii, 1935, 217 (Fort Sisseton, S. Dak.; no records in recent year).—MCLHENNY, Auk, lv, 1938, 670 (4 seen June 5, 1937, Avery Island, La.).
- Grus americana?* WYMAN, Condor, xxiv, 1922, 182 in text (doubtful sight record, Imperial Valley, Calif.).
- [*Grus*] *americana* BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 99.—GRAY, Hand-list, iii, 1871, 24, No. 10085.
- G[*rus*] *americana* MAXIMILIAN, Journ. für Orn., vii, 1859, 82 (descr. of adult female; Wabash, Ind.; Albion, Ill.; Missouri River; Yellowstone).—COUES, Key North Amer. Birds, 2d ed., 1884, 667.—RIDGWAY, Man. North Amer. Birds, 1887, 135.
- Megalornis americana* BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 193 (Chenier au Tigré, La.).
- Grus americanus* HENRY, Proc. Acad. Nat. Sci. Philadelphia, 1855, 315 (New Mexico); 1859, 108 (New Mexico).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 654.—BAIRD, Cat. North Amer. Birds, 1859, No. 478.—BARNARD, Ann. Rep. Smiths. Inst. for 1860 (1861), 438 (Chester County, Pa.).—COUES, Proc. Boston Soc. Nat. Hist., xii, 1868, 123 (winter; South Carolina).—ALLEN, Bull. Mus. Comp. Zool., iii, 1872, 130 (Leavenworth, Kans.), 182 (e. Kansas).—RIDGWAY, Bull. Essex Inst., v, 1873, 177 (Colorado).—COUES, Check-list, 1874, No. 462.—LLOYD, Auk, iv, 1887, 185 (Concho County, w. Texas, rare migrant).—WOOD (N. A.), Auk, xl, 1923, 692 (near Edinburg, Walsh County, N. Dak., flock of 8, another of 12, spring of 1923); Auk, xlii, 1925, 452 (Lake Benton, N. Dak.).—MERSHON, Auk, xlv, 1928, 202 in text (near Dundern, Saskatchewan).—CHRISTY, Auk, xlv, 1928,

287 (Lake Okeechobee; s. of Immokalee; near Fort Myers; Indian River; near Stuart, Fla.).—[ARTHUR] Birds Louisiana, 1931, 231 (formerly abundant on Louisiana coastal marshes in winter; 4 birds seen on Rockefeller Wildlife Refuge; winter of 1928-29).

[*Grus americanus* COUES, Key North Amer. Birds, 1872, 271.

G[rus] americanus RIDGWAY, Ann. Lye. Nat. Hist. New York, x, 1871, 387 (Illinois).—NELSON, Bull. Essex Inst., viii, 1876, 133 (ne. Illinois, once abundant, now rare; still common and a few breeding in central Illinois).

Limnogeranus americanus SHARPE, Bull. Brit. Orn. Union, i, 1893, p. xxxviii; Cat. Birds Brit. Mus., xxiii, 1894, 259.—OBERHOLSER, Auk, xxxv, 1918, 204.—MCATEE, U. S. Dept. Agr. Bull. 794, 1920, 28 (Post Lake, Brown County, Nebr., flock of 3, Oct. 10, 1915); U. S. Dept. Agr. Misc. Circ. 13, 1923, 39 (local names; range).—HOWELL (A. H.), Birds Alabama, 1924, 84; ed. 2, 1928, 84 (Cypress Slough, Millwood, Prattville, and Dauphin Island, Ala.).—BAILEY (H. H.), Birds Florida, 1925, 39, pl. 20 (fig.; Florida—no definite record).—OBERHOLSER, Bird Life Louisiana, 1938, 194 (formerly common and now rare winter resident in Louisiana—Grand Chenier, Chenier au Tigré, Pecan Island, White Lake, Cameron Parish, near Gueydan, Rockefeller and Louisiana State Wildlife Refuges).

Zimnogeranus americanus SIMMONS, Birds Austin Region, 1925, 43 (Austin, Tex.; habits; descr.).

[*Limnogeranus*] *americanus* SHARPE, Hand-list, i, 1899, 178.

Megalornis americanus HARTERT, Vög. pal. Fauna, iii, 1921, 1818 (crit.).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 219 (life hist.; monogr.).

G[rus] struthio WAGLER, Syst. Av., 1827, 222, Grus, No. 6.

Grus clamator BARTRAM, Travels, 1791, 292.

Grus hoyianus DUDLEY, Proc. Acad. Nat. Sci. Philadelphia, vii, 1854, 64 (= young).—HARTLAUB, Journ. für Orn., 1855, 336, 437 (crit. and refers it to *G. americana*).—STIMPSON, Mem. Chicago Acad. Sci., i, 1868, 129, pl. 19.

Grus hoyiana SCLATER, Proc. Zool. Soc. London, 1857, 8 (crit.).

[*Grus*] *hoyana* GRAY, Hand-list, iii, 1871, 24, No. 10,086.

(?) *Ardea (Grus) buccinator* MÜLLER, Syst. Nat., Suppl., 1776, 110 (America; based on Buffon and Boddaert).

GRUS CANADENSIS CANADENSIS (Linnaeus)

LITTLE BROWN CRANE

Adult (sexes alike).—Forehead, lores, and anterior part of crown (extending posteriorly in a broad supraorbital wedge on either side to about 10-15 mm. behind and above the eye) unfeathered, covered with dull reddish to begonia rose, papillose skin sparsely sprinkled with dusky, short hairlike bristles; entire rest of plumage, except chin, upper throat, primaries, and greater upper primary coverts, ashy pale mouse gray to ashy slate gray, sometimes without any ochraceous or rusty wash but often tinged or even extensively washed with rusty to deep ochraceous, this color due to iron-oxide staining from the water; cheeks paler than the occiput, blending into the pale gull gray to white of chin and upper throat; lower eyelid usually whiter than the upper; primaries and their greater upper coverts dark neutral gray to blackish slate, the coverts with an ashy bloom;

the feathers of the hind neck, back, scapulars, interscapulars, upper wing coverts, breast, and abdomen, narrowly edged with light gull gray to gull gray in fresh plumage; these edges often with a rusty stain¹⁰; bare orbits, lores, and coronal-frontal area varying shades of red, "orange-rufous, bitter-sweet pink, and begonia rose, fading anteriorly into the drab gray or grayish olive base of the upper mandible, through light pinkish gray and light grayish blue-violet toward the tip, with suffusions near the nostrils of light russet vinaceous; under mandible drab gray at the base, fading into grayish olive and pale glass-green toward the tip; eye cadmium-orange in a narrow ring about the pupil, merging quickly into bright grenadine red"¹¹; tarsi and toes dull greenish blackish to very dark olive.

Subadult (sexes alike).—Similar to the adult but with some of the upper wing coverts brown (that is immature ones left by incomplete prenuptial molt). This is hardly a distinct plumage phase.

Immature (sexes alike).—Similar to the adult but with the entire body splashed with earth-brown to dresden-brown feathers, especially on the upperparts.

Juvenal (sexes alike).—Entire head fully feathered, the forehead and anterior part of crown pinkish buff darkening on the midcrown to light ochraceous-salmon, which color extends over the occiput and back and sides of the neck; scapulars, interscapulars, back, and upper wing coverts light neutral gray very heavily and broadly edged and tipped with bright ochraceous-tawny to tawny, the latter color being so extensive as to practically conceal the basal median gray on the interscapulars, scapulars, and back; less extensive on the upper wing coverts; secondaries light neutral gray darkening on the outer ones to neutral gray, tipped with ochraceous-tawny; primaries as in adults; tail as in adults; chin, throat, and upper breast light neutral gray tipped with paler, the upper breast washed with ochraceous-tawny; rest of underparts as in adults, but with a faint ochraceous wash on some of the feathers.

Natal down.—Above light mikado brown to tawny, deeper (russet) on rump and median line of back, becoming paler and grayer on lower hind neck; forehead and most of crown pale tawny posteriorly, fading into pale cinnamon buffy anteriorly; sides of head pale rusty buff to dull light pinkish cinnamon, becoming paler on chin and throat; rest of underparts pale dull buffy suffused or clouded with pale tawny.

Adult male.—Wing 442–498 (474.2); tail 156–187 (167.4); exposed culmen 90–110 (96.4); tarsus 186–228 (200); middle toe without claw 65–77 (70.1 mm.).¹²

¹⁰ Some birds are so heavily stained as to appear almost cinnamomeous.

¹¹ Ex Sutton, Mem. Carnegie Mus., xii, pt. 2, sect. 2, 1932, 104.

¹² Eight specimens from Alaska and Northwest Territories.

Adult female.—Wing 425–475 (446.7); tail 150–165 (159.2); exposed culmen 82–93 (90.4); tarsus 21–26 (23.2); middle toe without claw 65–72 (68.6 mm.).¹³

Range.—Breeds from northeastern Siberia (Semiavine Strait; Providence Bay; East Cape; Anadyr Bay; Cape Tschukoso and probably Koljuchin Bay, Cape Bolschoi Baranowski, Balaga; and Sebiddij Strait); northern Alaska (Point Barrow; Humphrey Point; Kotzebue Sound; Colville River; Circle; St. Michael; St. Lawrence Island; Cape Prince of Wales; Wainwright; Mint River, etc.); northern Mackenzie (Franklin and Liverpool Bays; delta of the Mackenzie River; and probably Cape Kellett, Banks Island); to Melville Sound; the Boothia Peninsula; Igloodik; Baffin Island (Cape Graham Moore and Ponds Inlet), south in Alaska to Hooper Bay; Wrangell; Mushagak, Stikine Flats; Cook Inlet; and Aleutian Chain—Attu Island; central Mackenzie (Fort Resolution, Great Slave Lake, and Nyarling River); and eastern Keewatin (Southampton Island; near Cape Eskimo).

Winters from the southern half of California (San Joaquin Valley; San Rafael; Los Angeles County; Colorado River); and southern Texas (San Patricio; Corpus Christi; Chiltipin Creek; Brownsville, etc.) to northern Lower California (Colorado delta region; Laguna Salada; near Cerro Prieto); and to the mainland of Mexico (San Luis Potosi—Rio Verde; Guanajuato—Silao; Jalisco—Ocotlan).

Casual in Prince Edward Island (Alexander and Earncliffe); Rhode Island (Natick) and South Carolina (Mount Pleasant); the Commander Islands and Japan.

Accidental in Ireland (Clonakilly, Cork County; possibly an escaped cagebird).

Type locality.—North America—Hudson Bay.

[*Ardea*] *canadensis* LINNAEUS, Syst. Nat., ed. 10, i, 1758, 141 (North America; based on *Grus fusca canadensis* Edwards, Nat. Hist., 1750, pl. 133; *Grus Freti Hudsonis* Brisson, Orn., v, 1760, 386); ed. 12, i, 1766, 234.—GMELIN, Syst. Nat., i, pt. 2, 1789, 620.—LATHAM, Index Orn., ii, 1790, 675.

Ardea . . . *canadensis* FORSTER, Philos. Trans., lxii, 1772, 409 (Severn River, Keewatin).

Ardea canadensis PETERS, Auk, xlii, 1925, 120 (crit.; syn.; tax.).

Grus canadensis STEPHENS, Shaw's Gen. Zool., xi, pt. 2, 1819, 526.—TEMMINCK, Man. d'Orn., i, 1820, introd., c.—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1828, 302; Synopsis, 1828, No. 225.—SABINE, Franklin's Journ., 1823, 685.—RICHARDSON, Parry's Second Voy., 1825, 350, No. 14 (Hudson Straits).—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 373, part.—SCLATER, Proc. Zool. Soc. London, 1860, 418 (Fort Churchill, Keewatin).—BLAKISTON, Ibis, 1862, 8 (Saskatchewan).—DALL and BANNISTER, Trans. Chicago Acad. Sci., i, 1869, 289 (St. Michael, Alaska).—TACZANOWSKI, Journ. für Orn.,

¹³ Ten specimens from Alaska, Northwest Territories, Alberta, North Dakota, Nebraska, and Texas.

1873, 182 (ne. Siberia).—COUES, Check-list, 1874, No. 669, part; Birds Northwest, 1874, 532 part.—ADAMS, Ibis, 1878, 437 (St. Michael, Alaska; habits; descr. eggs).—RIDGWAY, Cat. Aquat. and Fish-eating Birds, 1883, 18 (geogr. range).—TURNER, Auk, ii, 1885, 157 (Attu Island, Aleutians, fall straggler); Contr. Nat. Hist. Alaska, 1886, 145 (St. Michael, breeding; habits).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 205; ed. 3, 1910, p. 100.—NELSON, Rep. Nat. Hist. Coll. Alaska, 1887, 94 (St. Michael, Point Barrow, Yukon, etc., and east to Anderson River; habits; descriptions; measurements).—TOWNSEND (C. H.), Auk, iv, 1887, 12 (Kowak River, Alaska); Cruise *Corwin* in 1885 (1887), 91 (Kowak River), 99 (St. Paul Island, Pribilof group, 1 specimen; St. Matthew Island, Bering Sea).—MERRILL (J. C.), Auk, v, 1888, 144 (Fort Klamath, Oregon, June 10; measurements; crit.).—GOSS, Auk, vi, 1889, 124 (Kansas in migration); Hist. Birds Kansas, 1891, 133 (March and October during migration).—BREWSTER, Auk, vii, 1890, 89 (Natick Hill, R. I., Oct. 8 or 9, 1889).—MACFARLANE, Proc. U. S. Nat. Mus., xiv, 1891, 425 (breeding in Franklin and Liverpool Bays and on lower Anderson River, Mackenzie).—FISHER (A. K.), North Amer. Fauna, No. 7, 1893, 20 (Ash Meadows, Nev., Mar. 10; Lone Pine, Owens Valley, Calif., 4 specimens, Dec. 1890).—COOKE, Auk, xi, 1894, 183 (Fort Lyons and Fort Collins, Colo.); Birds Colorado, 1897, 62 (Fort Lyons and Fort Collins); Colorado Agr. Exp. Stat. Bull. 56, 1900, 198 (near Denver, 1 specimen, no date).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 256 (Hudson Bay; St. Michael, Alaska; San Antonio and Corpus Christi, Tex.).—PALMER (W.), Avif. Pribilof Islands, 1899, 398 (St. Paul Islands, several).—WOODCOCK, Oregon Agr. Exp. Stat. Bull. 68, 1902, 18 (Oregon records).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 37 (Wisconsin, rare straggler).—OSGOOD, North Amer. Fauna, No. 24, 1904, 61 (Malchatna River, Alaska, Sept.; habits).—EIFRIG, Auk, xxii, 1905, 238 (Southampton Island).—WIDMANN, Birds Missouri, 1907, 57 (Clark County, Apr. 10, 1896).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 204 (Iowa records).—CORY, Field Mus. Nat. Hist. Publ. 131, 1909, 377 (Rock County, Wis., April 4, 1894; Dane County, late fall 1879).—WAYNE, Birds South Carolina, 1910, 34 (near Mount Pleasant, Oct. 21, 1890).—CLARK (A. H.), Proc. U. S. Nat. Mus., xxxviii, 1910, 49 (Agattu Island, Aleutians, 1 pair).—SWARTH, Univ. California Publ. Zool., vii, 1911, 47 (Mitkof Island and Thomas Bay, southern Alaska, Aug.); Condor, xxi, 1919, 213, in text (Kings County, Calif.; descr.).—BOWLES, Auk, xxviii, 1911, 171 (near Tacoma, Wash., Oct. 10, 1909).—WILLETT, Pacific Coast Avif. No. 7, 1912, 32 (near Newport, Orange County, Calif., flock of 25-30; Centinela Ranch, Los Angeles County, Mar.; Long Beach, Los Angeles County, Mar. 24; near Riverdale, Feb. 19); Condor, xxi, 1919, 200 (between Malheur Lake and Burns, se. Oregon, April, common); xxiii, 1921, 157 (Stikine Flats, Alaska, abundant in fall; breeding at Totem Bay, Kupreanof Island, and Big Joh Bay, between Kupreanof and Kulu Islands).—BUNKER, Kansas Univ. Sci. Bull., vii, 1913, 143 (common migrant in Kansas).—COOKE, U. S. Dept. Agri. Bull. 128, 1914, 7, fig. 2 (range and migration routes).—GRINNELL (J.), Pacific Coast Avif., No. 11, 1915, 45 (wintering in San Joaquin Valley; Newport, Orange County; Long Beach and Riverside, Riverside County; and vicinity Los Baños, Merced County, Calif.).—BROOKS (W. S.), Bull. Mus. Comp. Zool., lix, 1915, 388 (Providence Bay, Siberia, breeding; St. Lawrence Island, breeding; Humphrey Point, Arctic coast, Alaska, May 17).—BRITISH ORNITHOLOGISTS' UNION, List Brit. Birds, ed. 2, 1915, 347 (Cork, Ireland; perhaps an escape).—HANNA, Auk, xxxiv, 1917, 409 (St. Matthew Island, Bering

- Sea, 1 specimen).—HARRIS, Trans. Acad. Sci. St. Louis, xxiii, 1919, 244 (Kansas City, Mo., rare migrant).—OVER and THOMAS, Birds South Dakota, 1921, 61 (Walworth and Edmunds Counties, 1 specimen each, Oct. 22, 1883; Miner County, 1 specimen, 1896).—WOOD (N. A.), Univ. Michigan Mus. Zool. Misc. Publ. 10, 1923, 25 (near Grafton, N. Dak., Sept 30, 1920; Custer Flats, 1912, Sheridan County, 1909).—MALLIARD, Condor, xxiii, 1921, 30 (10 specimens, Merced County, Calif.).—WILLETT, Condor, xxii, 1921, 157 (many localities, se. Alaska).—NICE (M. M. and L. B.) Birds Oklahoma, 1924, 28 (genl.; Oklahoma).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 62 (descr.; range).—LARSON, Wils. Bull., xxxvii, 1925, 24 (Sioux Falls, S. Dak.).—BAILEY, Condor, xxvii, 1925, 232 (habits; Wainwright, Cape Prince of Wales, and Mint River, Alaska).—WOOD, Auk, xlii, 1925, 452 (Foster County, N. Dak.).—GRISCOM and CROSBY, Auk, xlii, 1925, 526 (Brownsville, Tex.).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 347 (descr.; habits; New England—1 record, Natick Hill, R. I., Oct. 8 or 9, 1889).—MALLIARD, Proc. California Acad. Sci., ser. 4, xvi, 1927, 288 (Modoc County, Calif.; crit.).—WILLIAMS, Wils. Bull., xxxviii, 1926, 24 (Red River Valley, ne. North Dakota).—TAVERNER, Birds Western Canada, 1926, 122 (descr.; habits; western Canada); Auk, xlvi, 1929, 228 (plumage var.).—JACQUES, Auk, xlvi, 1929, 230 (flying over Bering Strait); xlvi, 1930, 364 (near Teller, Alaska; East Cape, Siberia).—BAILEY, Auk, xlv, 1927, 192 (Wrangell, se. Alaska).—CONOVER, Auk, xliii, 1926, 303 (habits; growth; Hooper Bay, Alaska).—SOPER, Nat. Mus. Canada Bull. 53, 1928, 96 (S. Baffin Island).—MILLER, Condor, xxx, 1928, 120 (migr. in Pleistocene times).—KEMSIES, Wils. Bull., xlii, 1930, 203 (Yellowstone Park, Wyo.).—MCLEAN, Condor, xxxii, 1930, 1 (habits; Fresno County, Calif.).—HOWARD, Condor, xxxii, 1930, 84 (Pleistocene remains, Rancho La Brea).—BELOPOLSKI, Journ. für Orn., lxxxi, 1933, 422 (Anadyr Gulf, Siberia).—TAVERNER and SUTTON, Ann. Carnegie Mus., xxiii, 1934, 32 (Churchill, Manitoba, rare transient, may nest occasionally).—SWARTH, Pacific Coast Avif. No. 22, 1934, 26 (Nunivak Island, Alaska; nesting; regularly cross Bering Straits to extreme e. Siberia).—SUTTON and BURLIGH, Occ. Papers Mus. Zool. Louisiana State Univ., No. 3, 1939, 28 (seen near Mayran, Coahuila, and south of Nuevo Laredo, northern Nuevo Leon).
- Grus* sp. (*canadensis*?) PALMÉN, Sibir. Ishafsk. Fogelf. 1887, 348 (probable record; eastern Siberia).
- [*Grus*] *canadensis* BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 98, part.—GRAY, Hand-list, iii, 1871, 24, No. 10083, part.—COUES, Key North Amer. Birds, 1872, 271, part.—SHARPE, Hand-list, i, 1899, 177.
- G* [*rus*] *canadensis* COUES, Key North Amer. Birds, ed. 2, 1884, 667.—RIDGWAY, Man. North Amer. Birds, 1887, 135.
- [*Grus canadensis*] *a canadensis* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 404, 407, 408.
- Grus canadensis canadensis* McATEE, U. S. Dept. Agr. Bull. 294, 1920, 28 (Red Deer Lake, Cherry County, Nebr., 2 specimens, Oct. 5, 1915).—DAWSON, Birds California (students' ed.), iii, 1923, 1525 (genl.; California).—BAILEY (F. M.), Birds New Mexico, 1928, 238 (genl.; New Mexico).—AMERICAN ORNITHOLOGISTS' UNION, Check List North Amer. Birds, ed. 4, 1931, 93.—NICE (M. M.), Birds Oklahoma, rev. ed., 1931, 84 (genl.; Oklahoma).—SUTTON, Condor, xxxiii, 1931, 157 (Nunalla, Hudson Bay).—FRIEDMANN, Proc. U. S. Nat. Mus., lxxx, art. 12, 1932, 16 (St. Lawrence Island).—SUTTON, Mem. Carnegie Mus., xii, 1932, 101 (Southampton Island).—ROBERTS, Birds Minnesota, i, 1932, 432 (distr.; habits; Minnesota).—BAILEY, BROWER, and BISHOP,

- Progr. Act. Chicago Acad. Sci., iv, 1933, 24 (Point Barrow, Alaska).—DUMONT, Wils. Bull., xiv, 1933, 13, 14, 15 (meas. of specimens from Iowa and Nebraska).—PETERS, Check-list Birds of World, ii, 1934, 151.—WILLETT, Pacific Coast Avif. No. 21, 1933, 51 (sw. California; migrant; also occasionally in winter).—TAVERNER, Birds Canada, 1934, 170 in text (breeds in Arctic south to Great Slave Lake; migrates through the prairies and British Columbia to Mexico).—DU MONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 60 (migrant Iowa; 22 specimens; status at present not certain).—SUTTON, Ann. Carnegie Mus., xxiv, 1934, 13 (seen in Oklahoma Panhandle, Sept. and Oct.).—MC CREARY and MICKEY, Wils. Bull., xlvii, 1935, 136 (se. Wyoming—Sodergreen Lake, Apr. 3; Glendo, Oct. 7).—LINDALE, Pacific Coast Avif., No. 23, 1933, 50 (Nevada: transient; specimen Ash Meadows, Mar. 10, 1891).—BAKER, Auk, liv, 1937, 388 (bones from Jacob, Jackson County, Ill.).
- G[rus] c[anadensis] canadensis* TAVERNER and SUTTON, Ann. Carnegie Mus., xxiii, 1934, 32 in text (nests from the Arctic Islands southward).
- Megalornis canadensis canadensis* OBERHOLSER, Auk, xxxviii, Jan. 1921, 82.—HARTERT, Vög. pal. Fauna, iii, 1921, 1817.—GRINNELL, Univ. California Publ. Zool., xxxii, 1928, 86 (distr.; Lower California).
- M[egalornis] c[anadensis] canadensis* PETERS, Auk, xlii, 1925, 122, in text.
- Mcgalornis canadensis* MCATEE, U. S. Dept. Agr. Misc. Circ. 13, 1923, 39 (local names; range).—PREBLE, North Amer. Fauna No. 46, 1923, 62 (St. Paul Island, Pribilof group, early summer visitant).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 231 (life hist.; monogr.)
- ? *Grus* (= *Megalornis*) *canadensis* PLESKE, Mem. Boston Soc. Nat. Hist., vi, 1928, 286 (probable records—Koljuchin Bay, Cape Bolschoi Baronowski, Balagan, and Sebiddij Strait, eastern Siberia).
- G[rus] poliophaea* WAGLER, Syst. Av., 1827, *Grus*, sp. 7 (based on *Grus fusca canadensis* Edwards, Nat. Hist., 1750, pl. 133).
- Grus fusca* VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 258, part (based chiefly on *Ardea canadensis* Linnaeus).
- (?) *Grus cinerea longirostris* TEMMINCK and SCHLEGEL, Fauna Japonica, iii, 1850, 117, pl. 72 (Japan; type in Leyden Mus.; see Hartert, Vög. pal. Fauna, iii, 1921, 1818; Peters, Auk, xiii, 1925, 120).—SHARPE, Bull. Brit. Orn. Club, i, 1893, p. xliii, in text (crit.; refers type to "*Grus mexicana*" = *M. canadensis tabida*!).
- (?) *Gr[us] longirostris* BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 98.
- Grus fraterculus* CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 656 (Albuquerque, N. Mex., Oct. 1853; coll. U. S. Nat. Mus.; = young); ed. 1860 (Birds North Amer.), 656, pl. 37.—BAIRD, Cat. North Amer. Birds, 1859, No. 480.—KENNERLY, Rep. Pacific R. R. Surv., x, pt. 3, 1859, 33, pl. 37 (Albuquerque).—SCLATER, Proc. Zool. Soc. London, 1860, 418 (Fort Churchill, Keewatin).—DRESSER, Ibis, 1866, 30 (San Antonio, Tex.).—TACZANOWSKI, Bull. Soc. Zool. France, i, 1876, 246 (Cape Tschukoso, e. Siberia).—ALLEN, Bull. Nutt. Orn. Club, v, 1880, 123 (Rio Verde, N. Mex.; crit.).—RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 187, 188 (crit.; synonymy); Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 584); Nom. North Amer. Birds, 1881, No. 584.—MCLENNAN, Cruise of *Corwin* in 1884 (1889), 121 (Kowak River, nw. Alaska; habits); Cruise of *Corwin* in 1885 (1887), 79 (Noatak River, Alaska).
- [*Grus*] *fraterculus* GRAY, Hand-list, iii, 1871, 24, No. 10084.
- Grus mexicana* (not *Ardea mexicana* Müller) BRYANT, Proc. California Acad. Sci., ser. 2, ii, 1889, 270 (Tia Juana Valley, Lower California).—WAYNE, Auk, viii, 1891, 308 (Mount Pleasant, S. C., Oct. 21, 1890).—PREBLE, North Amer. Fauna, No. 27, 1908, 313 (Great Slave Lake, Mackenzie, May 15).

- Grus niediecki* REICHENOW, Orn. Monatsb., xiv, 1906, 190 (Anadyr Bay, ne. Siberia; see Buturlin, Ibis, 1907, 364, 365).
- (?) *Grus schlegelii* BLYTH, Field, xlii, 1873, 419 (new name for *Grus cinerea longirostris* Temminck and Schlegel).—TEGETMEIER, ed. Blyth's Monogr. Cranes, 1881, 78.
- (?) *Grus cinerea* (not of Meyer and Wolf) SEEBOHM, Birds Japanese Empire, 1890, 348.

GRUS CANADENSIS TABIDA (Peters)

SANDHILL CRANE

All plumages similar to the corresponding stages of the nominate race, but larger.

Adult male.—Wing 502–590 (548.3); tail 141; exposed culmen 132–170 (144.9); tarsus 231–266 (244.1); middle toe without claw 87 mm.¹⁴

Adult female.—Wing 479–524; tail 187; exposed culmen 132–153; tarsus 233–240; middle toe without claw 76 mm.¹⁵

Range.—Breeds from British Columbia (158-mile House; Lac la Hache; Okanagan Valley; lake region; New Westminster); Alberta (Spotted Lake and near Innisfail); Saskatchewan (Big Quill Lake; Balgonie, and Kutanajan Lake); Manitoba (Shell River; Oak Point; Crescent Lake; Ossawo); Minnesota (Herman; Elk River; and Lake Minnetonka); Wisconsin (Plover; Marquette; Peshtigo); Michigan (Taquamenou River; Vans Harbor; Sheldrake Lake; Morrice; Petersburg; Calhoun and Washtenaw Counties); Ontario (Rond Eau); and northern Ohio (near Toledo); south to Washington (Fort Simcoe; Fort Steilacoom; Coulee City; Strait of Juan de Fuca); Oregon (Malheur Lake; Camp Harney; Fort Klamath); California (Fort Crook; Tule Lake; San Joaquin Valley; Surprise Valley; Modoc County); Nevada (Independence Valley; Carson); Arizona (Mormon Lake); Idaho (Fort Sherman); Colorado (Loveland; Middle Park; Gunnison; San Juan County); South Dakota (Sanborn County); and Nebraska (Alda and Omega). Present range much restricted—breeds in southern Canada, Minnesota, and the western and Rocky Mountain States south to northern Colorado.

Winters from California (Modesto; Fresno; Pilo Knob; Pasadena; Salton Sea; San Jacinto Lake); Arizona (near Avondale); and Texas (Eagle Pass; Fredericksburg; Corpus Christi; and Brownsville) south to Lower California (Tia Juana Valley); San Luis Potosi (Angostura); Guanajuato; Jalisco (La Barca); and Sinaloa (Mazatlan) (and Yucatan [Tizimin]?).

¹⁴ Twelve specimens from California; the tail and toe measurements based on a single bird (the measurements of the other 11 birds sent to me, not personally made).

¹⁵ Two specimens from California and Illinois.

Casual in District of Columbia; Pennsylvania (Waynesburg); New York (near Cohoes); ? Rhode Island (Natick); Massachusetts (Buzzards Bay); Vermont (Lunenburg); New Hampshire (Wakefield); and Ontario (Guelph and Beaumaris).

Type locality.—Valley of the south fork of the Humboldt River, Nevada.

(??) *Ardea (Grus) mexicana* MÜLLER, Syst. Nat., Suppl., 1776, 110 (Mexico; based on Boddaert).

[*Ardea canadensis*]β LATHAM, Index Orn., ii, 1790, 676.

Grus mexicana VIEILLOT, Nouv. Dict. Hist. Nat., xii, 1817, 531.—RIDGWAY, Proc. U. S. Nat. Mus., viii, 1885, 356, part.—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, and ed. 2, 1895, No. 206, part; ed. 3, 1910, 100, part.—RALPH and BAGG, Trans. Oneida Hist. Soc., iii, 1886, 110 (New York Mills, Oneida County, N. Y., 1 specimen, 1873).—RHODES, Proc. Acad. Nat. Sci. Philadelphia, 1893, 35 (lake region, British Columbia, breeding).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 254, part (Orcas Island, Vancouver Island).—JOUX, Proc. U. S. Nat. Mus., xvi, 1894, 790 (Hacienda Angostura, San Luis Potosi).—MERRILL (J. C.), Auk, xiv, 1897, 351 (Fort Sherman, Idaho, probably breeding).—BUTLER, Rep. State Geol. Indiana for 1897 (1898), 670 (breeding "in recent years" in Carroll, Fulton, Lake, and Starke Counties, northern Indiana).—BREWSTER, Auk, xviii, 1901, 274 (Wakefield, N. H., 1 specimen, 1896 or 1897).—WOODCOCK, Oregon Agr. Exp. Stat. Bull. 63, 1902, 18 (Oregon Range).—ALLEN (G. M.), Proc. Manchester Inst. Arts and Sci., iv, 1902, 82 (Wakefield, N. H., in 1896 or 1897).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 37 (Wisconsin; habits).—FLEMING, Auk, xxiii, 1906, 447 (Toronto, Ontario; 1 pair, no date).—WIDMANN, Birds Missouri, 1907, 57 (once common migrant, now rare).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 57 (Chicago area; rare migrant).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 205 (Iowa; habits).—CORY, Field Mus. Nat. Hist. Publ. 131, 1909, 377 (Illinois and Wisconsin records).—VISHER, Wils. Bull., xxii, 1910, 115 (Sanborn County, S. Dak., breeding; habits; voice).—EATON, Birds New York, i, 1910, 269, pl. 24 (Albion and Clarendon, N. Y.).—TODD, Auk, xxviii, 1911, 368 (near Plymouth, Huron County, Ohio, Apr. 11, 1911).—WILLETT, Pacific Coast Avif., No. 7, 1912, 32 (common migrant in s. California); Condor, xxi, 1919, 200 (Malheur Lake, etc., se. Oregon, breeding).—BARROWS, Michigan Bird Life, 1912, 149.—WOOD (N. A.), 14th Rep. Michigan Acad. Sci., 1912, 160 (Unadilla, Livingston County, Mich., flock of about 20, Apr. 19, 1911); Auk, xxxviii, 1921, 590 (Washtenaw County, Mich., flock of 15, May 30, 1880, breeding in 1896; Whitefish Point, 1912, 1914, said to breed); Univ. Michigan Mus. Zool. Misc. Publ. 10, 1923, 25 (North Dakota records).—FORBUSH, Game Birds, Wildfowl, and Shore Birds, 1912, 483 (history, etc.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 10, fig. 3, part (range and migration routes).—GRINNELL (J.), Pacific Coast Avif., No. 11, 1915, 45 (summer visitant mainly in California; breeding in ne. California, probably on northern high Sierra Nevada and from San Joaquin Valley south to Tulare Lake; wintering in San Joaquin Valley).—BROOKS (A.), Auk, xxxiv, 1917, 36 (Sumas, British Columbia, breeding up to 1902; still breeding near New Westminster).—MUNRO, Auk, xxxvi, 1919, 65 (Okanagan Valley, British Columbia, common migrant, occasionally breeding).—SWARTH, Condor, xxi, 1919, 212, 213 in text (near Corcoran, Kings County, Calif., Nov. 17, 1918, descr.).—TAV-

- ERNER, Auk, xxxvi, 1919, 264 (Spotted Lake and near Innisfail, Alberta, breeding).—MAILLIARD, Condor, xxiii, 1921, 30 (specimen, Merced County, Calif.; rarer than *G. canadensis canadensis*).—JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).—PINDAR, Wils. Bull., xxxvi, 1924, 204 (e. Arkansas).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 29 (genl.; Oklahoma).—HENSHAW, Condor, xxvii, 1925, 70 in text (aggressive habits).—MAILLIARD, Condor, xxvi, 1924, 216 in text (Surprise Valley, ne. California; nesting).—BLINCOE, Auk, xlii, 1925, 419 (Bardstown, Ky.).—WOOD, Auk, xlii, 1925, 452 (Foster County, N. Dak.).—GRISCOM and CROSBY, Auk, xlii, 1925, 526 (Brownsville, Tex.).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 348 (descr.; habits; formerly common, now extirpated in New England; 2 specimens—Lovell's Pond, Wakefield, N. H., and Connecticut River at Lunenburg, Vt.).—LARSON, Wils. Bull., xxxvii, 1925, 24 (Sioux Falls, S. Dak.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (Fulton County, Ky.).—TAVERNER, Birds Western Canada, 1926, 122, pl. 15, fig. A (col. fig.; descr.; habits; distr.; w. Canada).—WILLIAMS, Wils. Bull., xxxviii, 1926, 25 (Red River Valley, ne. North Dakota).—KELSO, Ibis, 1926, 698 (Arrow Lakes, British Columbia; 2 records).—BRYENS, Auk, xliii, 1926, 367 in text (Luce County, Mich.).—MAILLIARD, Proc. Calif. Acad. Sci., ser. 5, xvi, 1927, 289 (Modoc County, Calif.; migr.; habits).—BAILEY (F. M.), Birds New Mexico, 1928, 239 (genl.; New Mexico).—HOFFMAN, Condor, xxix, 1927, 118 in text (nesting, Modoc County, Calif.).—JOHNSON, Wils. Bull., xxxix, 1927, 157 (Douglas County, Kans.).—JUNG, Wils. Bull., xxxix, 1927, 173 (Star Lake, Wis.).—EIFRIG, Auk, xlii, 1927, 432 (Cary, Fox River, and Hinsdale, Chicago region).—LARSON, Wils. Bull., xl, 1928, 44 (e. McKenzie County, N. Dak.).—ALFORD, Ibis, 1928, 196 (Vancouver Island, British Columbia).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 26 (Washington, D. C.).—BUTLER, Auk, xlvi, 1929, 198 (specimen, Indiana).—FITZPATRICK, Wils. Bull., xlii, 1930, 124 (ne. Colorado).—KEMSIES, Wils. Bull., xlii, 1930, 203 (Yellowstone Park, Wyo.).—PIERCE, Wils. Bull., xlii, 1930, 261 (Buchanan County, Iowa).—WALKINSHAW, Auk, xlviii, 1931, 594 in text (nesting, Calhoun County, Mich.).—GUTHRIE, Wils. Bull., xlii, 1932, 102 in text (food habits; eats snakes).
- G[rus] mexicana* RIDGWAY, Man. North Amer. Birds, 1887, 135, part.
- [Grus] mexicana* SHARPE, Hand-list, i, 1899, 176, part.
- [Grus canadensis]β mexicana* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 404, 407, 408.
- Grus canadensis mexicana* OBERHOLSER, Auk, xxxv, Apr., 1918, 204, part.—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 28 (formerly breeding in sand-hill region of Nebraska).—PRILL, Wils. Bull., xxxiv, 1922, 135 (Lake County, Oreg., breeding).—KOELZ, Wils. Bull., xxxv, 1923, 37 (Jackson County, Mich., breeding).—THOMAS, Wils. Bull., xxxviii, 1926, 118 (Huron County, central Ohio).
- Megalornis canadensis mexicana* SIMMONS, Birds Austin Region, 1925, 44 (Austin, Tex.); habits; descr.).
- Grus mexicanus* TAVERNER, Auk, xlvi, 1929, 228 (plumage var.).—LEWIS, Wils. Bull., xlii, 1930, 42 (nw. Oklahoma).
- Grus canadensis mexicanus* DAWSON, Birds California (students' ed.), iii, 1923, 1526 (genl.; California).
- Megalornis canadensis mexicanus* OBERHOLSER, Auk, xxxviii, Jan. 1921, 82, part.
- Megalornis mexicanus* MCATEE, U. S. Dept. Agr. Misc. Circ. 13, 1923, 40, part (local names; range).—SCHÜZ, Journ. für Orn., lxxv, 1927, 105 in text (powder downs).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 241, part (Northwestern States; monogr.).

Grus fusca VIELLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 558, part.

Grus canadensis (not *Ardea canadensis* Linnaeus) BONAPARTE, Contr. Maclurian Lyc., i, 1927, 24; Ann. Lyc. Nat. Hist. New York, ii, 1827, 302; Synopsis, 1828, No. 225.—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 373, part.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 38.—MCCALL, Proc. Acad. Nat. Sci. Philadelphia, v, 1851, 223 (Texas).—BAIRD, in Stansbury's Expl. and Surv. Great Salt Lake, 1852, 319 (Salt Lake valley, Utah); Rep. U. S. and Mex. Bound. Surv., ii, pt. 2, 1859, 24 (Colorado River, Calif., Feb.); Rep. Pacific R. R. Surv., x, No. 2, 1859, 14 (Rio Grande Valley); Cat. North Amer. Birds, 1859, No. 479; Ives' Rep. Colorado River, pt. 5, 1861, 14.—WOODHOUSE, in Sitgreaves' Expl. Zuñi and Colorado Rivers, 1853, 96 (New Mexico; Arizona).—KENNICOTT, Trans. Illinois Agr. Soc., i, 1855, 587 (Illinois).—HAYMOND, Proc. Acad. Nat. Sci. Philadelphia, viii, 1856, 294 (Whitewater Valley, se. Indiana; 3 specimens).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 655; Proc. Acad. Nat. Sci. Philadelphia, 1862, 321 (California).—NEWBERRY, Rep. Pacific R. R. Surv., x, pt. vi, 1859, 62 (California, etc.).—HENRY, Proc. Acad. Nat. Sci. Philadelphia, 1859, 108 (New Mexico).—COOPER and SUCKLEY, Rep. Pacific R. R. Surv., xii, pt. 2, 1860, 227 (Washington).—WHEATON, Ohio Agr. Rep., 1860, No. 182.—HOY, Ann. Rep. Smiths. Inst. for 1864 (1865) 438 (Missouri).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 2 (descr.; North America to Mexico).—DRESSER, Ibis, 1866, 30 (s. Texas).—MCLWRAITH, Proc. Essex Inst., v, 1866, 91 (Hamilton, Ontario).—COUES, Proc. Acad. Nat. Sci. Philadelphia, 1866, 95 (Fort Whipple, Ariz.); Ibis, 1866, 263 (Colorado and Gila Rivers, Ariz.); Check List, 1874, No. 463, part; Birds Northwest, 1874, 532 part; Bull. U. S. Geol. and Geogr. Surv. Terr., iv, 1878, 646, part (North Dakota).—BUTCHER, Proc. Acad. Nat. Sci. Philadelphia, 1868, 150 (Laredo, Tex.).—BROWN, Ibis, 1868, 424 (Vancouver Island).—ALLEN, Mem. Boston Soc. Nat. Hist., i, 1868, 501 (Iowa, breeding); Proc. Boston Soc. Nat. Hist., xvii, 1874, 37 (Little Missouri River).—SCLATER, Proc. Zool. Soc. London, 1868, 567 (in London Zool. Park).—TRIPPE, Proc. Essex Inst., vi, 1871, 118 (Minnesota, breeding); Proc. Boston Soc. Nat. Hist., xv, 1872, 240 (Iowa, "vast numbers in migration").—AIKEN, Proc. Boston Soc. Nat. Hist., xv, 1872, 209 (Colorado).—MERRIAM, Rep. U. S. Geol. Surv. Terr., 1873, 102 (Idaho, etc.); Birds Connecticut, 1877, 113, note (formerly common in New England).—HENSHAW, Ann. Lyc. Nat. Hist. New York, xi, 1874, 12 (Utah).—LAWRENCE, Mem. Boston Soc. Nat. Hist., ii, 1874, 311 (Mazatlán, Sinaloa, Sept.-Mar.).—JOUY, Field and Forest, 1877, 180 (District of Columbia).—LANGDON, Birds Cincinnati, 1877, 16 (rare migrant).—BENDIRE, Proc. Boston Soc. Nat. Hist., 1877, 143 (Camp Harney, Oreg., breeding; descr. eggs).—BELDING, Proc. U. S. Nat. Mus., i, 1879, 443 (centr. California).—ROBERTS, Amer. Nat., 1880, 108-114, fig. 10 (descr. trachea).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 583), part; Nom. North Amer. Birds, 1881, No. 583, part.—SEON, Auk, iii, 1886, 150 (Manitoba, summer resident).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 336 (Mazatlán, Sinaloa; San Luis Potosi; Guanajuato; Valley of Mexico; Cozumel Islands).—? MILLER, Condor, xxxvii, 1935, 78 (near McKittrick, Calif., winter).—? HARGRAVE, Condor, xli, 1939, 208 (bones from Indian sites in Arizona).

[*Grus*] *canadensis* BONAPARTE, Consp. Gen. Av. ii, 1857 [1854], 98, part.—GRAY, Hand-list, iii, 1871, 24, No. 10083, part.—COUES, Key North Amer. Birds, 1872, 271, part.

- G[rus] canadensis* MAXIMILIAN, Journ. für Orn., vii, 1859, 84 (Wabash River; descr.).—NELSON, Bull. Essex Inst., viii, 1876, 133 (centr. Illinois, breeding numerously).—RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois).
- Grus americana* (not *Ardea americana* Linnaeus) AUDUBON, Orn. Biogr., iil, 1835, 441, pl. 261 (supposed young!); Synopsis, 1839, 219; Birds Amer., 8vo ed., v, 1842, 148, pl. 314.
- Grus pratensis* COUES, Check List, ed. 2, 1882, No. 670, part (ex *Grus pratensis*, *corpore cinereo*, *vertice papilloso* Bartram, Travels, 293).—RIDGWAY, Cat. Aquat. and Fish-eating Birds, 1883, 18, part.
- G[rus] pratensis* COUES, Key North Amer. Birds, ed. 2, 1884, 667, part.
- Megalornis canadensis tabida* PETERS, Auk, xlii, 1925, 122 (valley of south fork of Humboldt River, Nev.; coll. Mus. Comp. Zool.).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 178 (type spec. in Mus. Comp. Zool.; crit.).
- Grus canadensis tabida* GRINNELL, DIXON, and LINSDALE, Univ. California Publ. Zool., xxxv, 1930, 213 (distr.; Lassen Peak region, n. California).—AMERICAN ORNITHOLOGISTS' UNION, Check List North Amer. Birds, ed. 4, 1931, 94.—[ARTHUR] Birds Louisiana, 1931, 232 (descr.; status in Louisiana).—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 56 (descr.; formerly common spring migrant, now rare in Arkansas).—NICE (M. M.), Birds Oklahoma, rev. ed., 1931, 84 (genl.; Oklahoma; many records; transient, once very common).—ROBERTS, Birds Minnesota, i, 1932, 433 (distr.; habits; etc., Minnesota).—DU MONT, Wils. Bull. xlv, 1933, 13, 14, 15 (measurements of specimens from Iowa and Nebraska).—HARROLD, Wils. Bull., xlv, 1933, 19 (Saskatchewan).—WALKINSHAW, Wils. Bull., xlv, 1933, 99 in text (nesting, Calhoun County, Mich.; photos of nest and 2 eggs; young).—WILLETT, Pacific Coast Avif., No. 21, 1933, 51 (status imperfectly known; probably migrates and occasionally winter; sw. California).—MONSON, Wils. Bull., xlvi, 1934, 43 (Cass County, N. Dak., rare, seen Apr. 10 and 15).—PETERS, Check list Birds of World, ii, 1934, 151.—TAVERNER, Birds Canada, 1934, 170 in text (nests throughout Prairie Provinces and s. British Columbia, indefinitely northward; goes south in winter to Mexico).—TYRRELL, Auk, li, 1934, 22 (Whitefish Point, Mich., 6 seen).—DU MONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 61 (rare migrant; several Iowa records).—MC CREARY AND MICKEY, Wils. Bull., xlvii, 1935, 136 (se. Wyoming—Sevenmule Lake and Shell Creek).—ELLIS, Condor, xxxvii, 1935, 86 (specimen, Ruby Lake, ne. Nevada).—YOUNG WORTH, Wils. Bull., xlvii, 1935, 217 (formerly bred; now rare migrant, Fort Sisseton, S. Dak.).—MUNRO, Wils. Bull., xlviii, 1936, 312 in text (Massett, Queen Charlotte Islands, British Columbia, 18 seen May 17).—LINSDALE, Pacific Coast Avif., No. 23, 1936, 50 (Nevada, transient and summer resident at few favorable localities, nests in ne. part of State).—WALKINSHAW, Auk, liv, 1937, 310 in text (Michigan).—OBERHOLSER, Bird Life Louisiana, 1938, 195 (habits; formerly common, now rare winter resident in Gulf coast region, s. Louisiana, Jan. 3 to late February—Cameron Farm, 14 miles south of Vinton, Chenier au Tigré, Gum Cove).—SUGDEN, Condor, xl, 1938, 18 (Fish Springs, Utah, and s. Idaho; nesting).—WILLIAMS, Auk, lv, 1938, 64 (seen Houston, Tex., Sept. 15, 1933 and Dec. 19, 1935).—MONROE, Auk, lv, 1938, 670 (1 seen Jefferson County, Ky., Apr. 3-6, 1938).—HAMERSTROM, Wils. Bull., l, 1938, 175 in text (habits, nesting; central Wisconsin).—WALKINSHAW, Auk, lvi, 1939, 227 in text (Calhoun County, Mich.).

- G[rus] c[anadensis] tabida* TAVERNER AND SUTTON, Ann. Carnegie Mus., xxiii, 1934, 32 in text (southern race).
Grus fraterculus BOUCAED, Proc. Zool. Soc. London, 1883, 461 (Tizimin, Yucatan).
Megalornis c.-woodi BAILEY (H. H.), Bailey Mus. and Libr. Nat. Hist. Bull., 4, 1930, [2] (Peninsula of Michigan).

GRUS CANADENSIS PRATENSIS Meyer

FLORIDA SANDHILL CRANE

All plumages as in *Grus canadensis canadensis* and *Grus canadensis tabida*, but larger than the former, and the adults with the occiput and hind neck darker than the latter—light mouse gray to mouse gray, instead of pallid to pale mouse gray.

Adult male.—Wing 487–525 (507.2); tail 183–206 (191.7); exposed culmen 115–143 (130.6); tarsus 220–264 (251.1); middle toe without claw 77–86.5 (80.1 mm.).¹⁶

Adult female.—Wing 450–485 (473.4); tail 154–182 (170.5); exposed culmen 119–135.5 (125.1); tarsus 228–241 (235); middle toe without claw 74–80 (76.6 mm.).¹⁷

Range.—Resident in southern Georgia (Okefenokee Swamp); Florida (Micanopy; Waukeelah; Lake Monroe; Lake Kissimmee; Micco; Fort Pierce; Daytona; Fort Myers; Charlotte Harbor; Miakka; Longwood; Tarpon Springs; Cedar Key; Lake Wimlico; De Soto County); southern Alabama (Baldwin County; Perdido Bay; Foley); and coastal Louisiana (Houma; Calcasieu Pass; Cameron Parish; Black Bayou; Mer Rouge—in winter).

Casual in South Carolina (Waccamaw River; Sandy Knowe; between Punta Gorda and Fisheating Creek); Mississippi (Waverly, winter); and Texas (Sabine Pass—in winter).

Type locality.—Alachua Savanna, Clay County, Fla.

Grus pratensis MEYER, Zool. Annot., i, 1794, 266, 266 (Florida; based on *Grus pratensis, corpore cinereo, vertice papilloso* Bartram, Travels, 1791, 263).—COUES, Check-list, ed. 2, 1882, No. 670, part (ex Bartram).—RINGWAX, Cat. Aquat. and Fish-eating Birds, 1883, 18, part.

G[rus] pratensis COUES, Key North Amer. Birds, ed. 2, 1884, 687, part.

Grus canadensis pratensis AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 94.—HOWELL, Florida Bird Life, 1932, 197 (genl.; Florida).—PETERS, Check-list Birds of World, ii, 1934, 152.—OBERHOLSER, Bird Life Louisiana, 1938, 196 (rare, permanent resident in s.w. Louisiana; breeding Cameron Parish, July 1919; formerly more numerous).—MCLHENNY, Auk, iv, 1928, 598 (resident—Mississippi; nesting 7 miles east of Ocean Springs).

Megalornis canadensis pratensis HARTERT, Vög. pal. Fauna, iii, 1921, 1818 (crit.).—PETERS, Auk, xiii, Jan. 1925, 121, 122 (crit.; type locality fixed as Clay County, Fla.).—BAILEY and WRIGHT, Wild. Bull., xliii, 1931, 193 (s. Louisiana; nesting, Cameron Parish, 1917).

¹⁶ Specimens from Florida (8) and Georgia (1).

¹⁷ Eight specimens from Florida.

Grus canadensis (not *Ardea canadensis* Linnaeus) BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 655, part (Florida); Cat. North Amer. Birds, 1859, No. 479, part.—TAYLOR, Ibis, 1862, 129 (Florida).—ALLEN, Bull. Mus. Comp. Zool., i, 1871, 157 (e. Florida); ii, 1871, 357 (Florida).—COUES, Check-list, 1874, No. 463, part; Birds Northwest, 1874, 532, part (Florida).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 583), part; Nom. North Amer. Birds, 1881, No. 583, part.

[*Grus*] *canadensis* COUES, Key North Amer. Birds, 1872, 271, part.

Grus mexicana (not *Ardea (Grus) mexicana* Müller) AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 206, part (Florida); ed. 3, 1910, 100.—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 254, part (Tarpon Springs and De Soto County, Fla.).—(?) BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 93 (coast of Louisiana, abundant resident).—(?) BEYER, ALLISON, and KOPMAN, Auk, xxv, 1908, 170 (coast of Louisiana, resident).—(?) WAYNE, Birds South Carolina, 1910, 34 (formerly on Waccamaw River, now apparently extirpated in the State; breeding in Okefenokee Swamp, Ga.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 10, fig. 3, part (range).—(?) FIGGINS, Auk, xl, 1923, 673 (Black Bayou, La., breeding).—BENT and COPELAND, Auk, xlv, 1927, 377 (between Punta Gorda and Fisheating Creek, Charlotte County; near Bassinger, Fla.).—METCALF, Auk, xlvi, 1929, 248 (Sandy Knove, S. C.).—NICHOLSON, Auk, xlvii, 1930, 267 (breeding, Kissimmee Prairie, Fla.).—HOLT, Wils. Bull., xlii, 1930, 163 in text (habits; nesting; Florida).

G[rus] mexicana RIDGWAY, Man. North Amer. Birds, 1887, 135 part (Florida).

Grus canadensis mexicana OBERHOLSER, Auk, xxxv, Apr. 1918, 204, part.

Grus americana (not *Ardea americana* Linnaeus) FISHER (G. C.), Wils. Bull., xxii, 1910, 45 (Lake Wimlico, Fla.)

Megalornis canadensis mexicana HOWELL, Birds Alabama, 1924, 84; ed. 2, 1928, 84 (few breeding in Baldwin County, Ala.; Perdido Bay and Foley; winter).—BAILEY (H. H.), Birds Florida, 1925, 39, pl. 20 (col. pl., distr., etc., Florida).

Megalornis canadensis mexicanus OBERHOLSER, Auk, xxxviii, 1921, 82, part.—BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 193 (winter in Louisiana, formerly common in western part, now rare; Cameron Farm, Cameron Parish; Chenier au Tigre).

Megalornis mexicanus MCATEE, U. S. Dept. Agr. Misc. Circ. 13, 1923, 40, part (local names; range).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 241, part (Florida and Gulf States; life hist.; monogr.).

GRUS CANADENSIS NESIOTES Bangs and Zappey

CUBAN SANDHILL CRANE

Adults.—Similar to *Grus canadensis pratensis* but smaller, with shorter tarsus; bill shorter and relatively heavier.

Young.—Apparently unknown but probably like the corresponding stage of the Florida bird.

Adult male.—Wing 460-474; tail 171-187; exposed column 123-125; tarsus 204-209 mm.¹³

¹³Two specimens from Isle of Pines; measurements ex Todd, Ann. Carnegie Mus., x, 1916, 206.

Adult female.—Wing 425–475 (440.8); tail 162–171 (167.2); exposed culmen 100–124 (110.2); tarsus 187–214 (196.8 mm.)¹⁹

Range.—Resident in Cuba (western Pinar del Rio—chiefly in arid savanna country—Viñales, Mendoza; Guane; Matanzos Province—Alacranes; Union de Reyes; Aguada de Pasajeros; Puerto Principe); and the Isle of Pines (Pasadeta; La Vega; Los Indios).

Type locality.—La Vega, Isle of Pines.

Grus canadensis (not *Ardea canadensis* Linnaeus) HARTLAUB, Naumannia, ii, 1852, 54 (Cuba).—CARANIS, Journ. für Orn., 1856, 339 (Cuba; habits).—THEINEMANN, Journ. für Orn., 1857, 154 (Cuba; descr. eggs).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).—GUNDLACH, Journ. für Orn., 1862, 81 (Cuba; crit.); 1875, 293 (Cuba; habits); Contr. Orn. Cubana, 1876, 143.

[*Grus*] *canadensis* GUNDLACH, Journ. für Orn., 1861, 338 (Cuba); Rep. Físico-Nat. Cuba, i, 1865–66, 347.

Grus poliophaea (not of Wagler) LEMBÉYE, Aves Isla de Cuba, 1850, 80.—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).

[*Grus*] *mexicana* (not *Ardea (Grus) mexicana* Müller) COBY, List Birds West Indies, 1885, and rev. ed. 1886, 29 (Cuba).

Grus mexicana COBY, Auk, v, 1888, 50 (Cuba; references); Birds West Indies, 1889, 251 (Cuba); Cat. West Indian Birds, 1892, 90 (Cuba; Isle of Pines).

Grus nesiotes BANGS and ZAPPEY, Amer. Nat., xxxix, Apr. 1905, 190 (La Vega, Isle of Pines, Cuba; coll. E. and O. Bangs).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 178 (type spec. in Mus. Comp. Zool.).

Grus mexicana nesiotes TODD, Ann. Carnegie Mus., x, 1916, 205 (Los Indios, Isle of Pines; measurements; habits; food).

Grus mexicanus nesiotes BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 58 (Province Pinar del Rio, Cuba; Isle of Pines; crit.).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 425 (seen near Ciego de Avila, Cuba).

Grus canadensis nesiotes PETERS, Check-list Birds of World, ii, 1934, 152.

[*Grus*] *c[anadensis] nesiotes* BOND, Birds West Indies, 1936, 83 in text (descr.; Cuba, especially western part, and Isle of Pines).

Megalornis canadensis nesiotes OBERHOLSER, Auk, xxxviii, Jan. 1921, 82.—HARTERT, Vög. pal. Fauna, iii, 1921, 1818 (crit.).

Megalornis nesiotes PETERS, Auk, xlii, 1925, 120, in text.

Megalornis mexicanus BENT, U. S. Nat. Mus. Bull. 135, 1927, 241, part (Cuba; life hist.).

Family ARAMIDAE: Courlans, or Limpkins

=Aramidae BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 103.—BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 651, 657.—FÜRBRINGER, Unters. Morph. Syst. Vög., ii, 1888, 1207.—WETMORE and MILLER, Auk, xliii, 1926, 342.—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 155.

=Aramidae SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 141.—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 350, 398.—COUES,

¹⁹ Four specimens, from Cuba and Isle of Pines; measurements ex Todd, Ann. Carnegie Mus., x, 1916, 206.

- Key North Amer. Birds, ed. 2, 1884, 667.—STEJNEGER, Stand. Nat. Hist., iv, 1885, 127, in text.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, 139; ed. 3, 1910, 101.—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, xii, 236; Hand-list, i, 1899, xvii, 180.—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 332.
- =Araminae BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 103.—FÜRBRINGER, Unters. Morph. Syst. Vög., ii, 1888, 1566.—GADOW, Bronn's Thier Reich, Vög, ii, 1891, 184.
- =Araminae KNOWLTON, Birds of World, 1909, 336.
- =Arami SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 74; Hand-list, i, 1899, xvii, 180.

Medium-sized, long-necked and long-legged Grues with the hallux well developed (nearly as long as basal phalanx of middle toe) and incumbent; middle toe at least two-thirds as long as tarsus; bill greatly elongated, not shorter than tarsus; head completely feathered; rectrices (12) well developed, firm, and femoro-caudal muscle absent; wing diastatic (aquintocubital).

The Aramidae are intermediate in structural characters between the Gruidae and Rallidae, agreeing best (indeed almost entirely) with the former in osteological characters and pterylosis, but more like the latter in their digestive organs, external characters (including the well-developed, incumbent hallux, completely feathered head, and form of wings), general habits, and nidification.

The family is peculiar to Tropical America, where represented by a single genus containing only one species.

The limpkins inhabit swamps, both wooded and open, where their gait while walking, accompanied by a jerking or flirting of the elevated tail, is precisely that of the larger rails (*Rallus*). The nest is built among reeds, rushes, or other aquatic vegetation, and the numerous (10-12) eggs are in shape and coloration very similar to those of the larger rails. Owing to their loud, wailing cries (uttered mostly at night), they are known to the people of the countries they inhabit by such names as "crazy widow" and "crying bird," etc., while in Florida the northern race is known as the "limpkin," in allusion, it is said, to its peculiar gait.

Genus ARAMUS Vieillot

Aramus VIEILLOT, Analyse, 1816, 58. (Type, by monotypy, "Courlini Buff." = *Ardea scolopacca* Gmelin.)

Notherodius WAGLER, Syst. Av., 1827 [147]. (New name for *Aramus* Vieillot.)

Bill elongated (about twice as long as head, nearly as long as tarsus), compressed, its depth at base nearly twice its width at same point; culmen straight for basal two-thirds or more, then gently but decidedly decurved to tip, the²⁰ the mesorhinium broad and flattened;

²⁰The tip of the bill is frequently turned slightly to one side (usually to the right).

gonys approximately half as long as exposed culmen, nearly straight (or faintly convex proximally and faintly concave distally), slightly

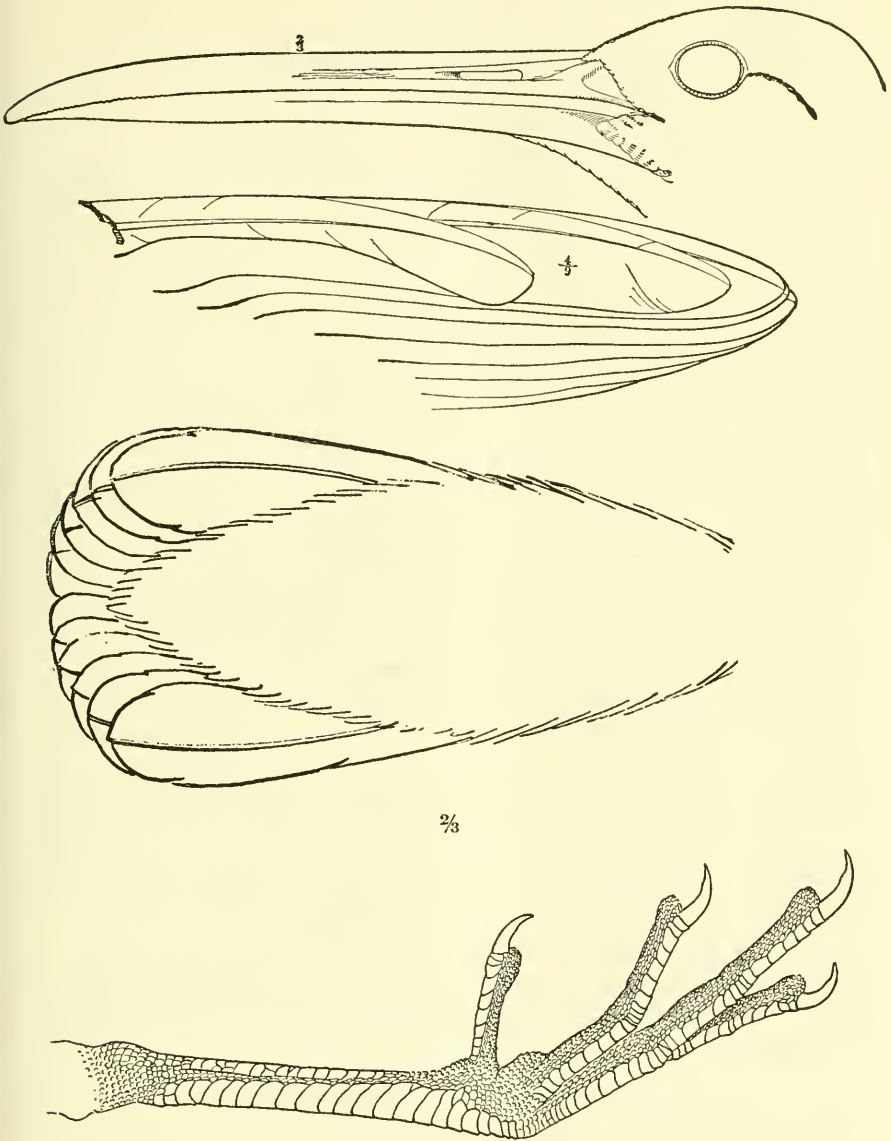


FIGURE 2.—*Aramus scolopaceus pictus*.

prominent basally from slight contraction of anterior portion of rami, both upper and lower outlines of the latter strongly deflexed

basally; nasal fossa broad, extending for more than one-third the length of maxilla, but becoming gradually narrower and indistinct anteriorly; nostril longitudinally elliptical (sometimes slightly more elevated anteriorly and slightly narrower as well as more pointed posteriorly), pervious, separated by more than its length from loreal feathering. Wing large, broad, and rounded, the broad proximal secondaries extending as far as tips of longest primaries, the latter exceeding distal secondaries by a little less than length of exposed culmen; third and fourth primaries (from outside) longest, the first (outermost) shorter than eighth, sometimes shorter than ninth; inner web of outermost primary excised for most of its length, most deeply subbasally, where not more (sometimes much less) than half as wide as on distal portion. Tail between one-third and one-half as long as wing, slightly but distinctly rounded, composed of 12 broad, moderately stiff rectrices. Tarsus slightly longer than culmen, decidedly longer than middle toe with claw, the acrotarsium with a continuous row of broad transverse scutella, the planta tarsi with two or three rows of large hexagonal scales; outer toe (without claw) reaching to or beyond middle of penultimate phalanx of middle toe, the inner decidedly shorter, reaching beyond penultimate articulation of middle toe; hallux incumbent (or nearly so), nearly as long (without claw) as basal phalanx of outer toe, all the toes with very distinct broad transverse scutella; claws moderate in size, curvature and acuteness; no trace of web between anterior toes.

Plumage and coloration.—Head completely feathered, the feathering rather short (except on pileum) and soft; feathering of neck longer, the feathers rather narrow and lax, that of body much more full, more compact on back, etc., more lax on underparts, the under tail coverts broad and soft, extending nearly to tip of tail. General color olive-brownish (remiges and rectrices faintly glossed with purplish), the head and neck, sometimes back, wing coverts, and under parts also, striped with white. Sexes alike.

Nidification.—Nest placed among reeds, rushes, or other aquatic vegetation. Eggs four to seven or more, pale dull buffy, spotted, and stained with brown and purplish gray. Young ptilopaedic and nidifugous.

KEY TO THE SUBSPECIES OF ARAMUS SCOLOPACEUS

- a.* Interscapulars and upper wing coverts with lanceolate white streaks.
- b.* A white area at base of secondaries extending along the outer web next to the shaft for about 150 mm----- *Aramus scolopaceus dolosus* (p. 31)
- bb.* No such white extension along the shaft of the secondaries.
- c.* The white streaks reduced to narrow shaft stripes on the lesser upper wing coverts----- *Aramus scolopaceus elucus* (p. 36)
- cc.* The white streaks on the lesser upper wing coverts fairly broad.
Aramus scolopaceus pictus (p. 32)

aa. Interscapulars and upper wing coverts with no white streaks.

b. Bill longer, over 110 mm.---- *Aramus scolopaceus carau* (extralimital)²¹

bb. Bill shorter, under 110 mm.

Aramus scolopaceus scolopaceus (extralimital)²²

ARAMUS SCOLOPACEUS DOLOSUS Peters

CENTRAL AMERICAN LIMPKIN

Adult (sexes alike).—Similar to that of *Aramus scolopaceus pictus*, but with a white basal area on the secondaries which extends on the outer web next to the shaft for a third to more than half the length of the feather.

Other plumages not known.

Adult male.—Wing 310–330 (319.5); tail 138–158 (144.3); exposed culmen 106–125 (117.7); tarsus 117–142 (128); middle toe without claw 83–95 (88 mm.).²³

Adult female.—Wing 300–305 (303); tail 134–138 (136); exposed culmen 108–118 (113); tarsus 115–121 (119); middle toe without claw 84–86 mm. (85 mm.).²⁴

Range.—Resident from south-central Mexico (Tehuantepec; Veracruz—Alvarado, Tlacotalpam, Uvero, and Santa Ana; Oaxaca—Huilopec, Santa Efigenia, and Cacoprieto; Yucatan; Cozumel Island; and Quintana Roo); British Honduras (Belize); and Honduras (Omoa; Martinez Creek, west of Tela); south to Nicaragua (Ometepe Island; Sucuyá; Lake Nicaragua), and Costa Rica (La Palma de Nicoya; Rio Frio; Bolson; Bebedero; Guanacaste). Not recorded from Guatemala.

Casual in the lower Rio Grande of Texas (Brownsville).

Type locality.—Bolson, Costa Rica.

Aramus pictus (not of Meyer, 1794) NUTTING, Proc. U. S. Nat. Mus., v, 1882, 409 (La Palma de Nicoya, Costa Rica); vi, 1884, 389 (Sucuyá, Nicaragua); 396 (Ometepe, Nicaragua).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 400, part.—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 238, part (w. Mexico to Panama; specimens listed from Tlacotalpam and Cozumel Island, Mexico, and Costa Rica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 333, part (Alvarado, Uvero, Tlacotalpam, and Santa

²¹ *Aramus carau* Vieillot, Nouv. Diet. Hist. Nat., xiii, 1817, 300 (Paraguay, ex Azara).—*Rallus gigas* Lichtenstein, Verz. Doubl., 1823, 78.—*Rallus ardeoides* Spix, Av. Brasil, ii, 1825, 72, pl. 91.—*Aramus scolopaceus carau* Peters, Occ. Pap. Boston Soc. Nat. Hist., v, 1925, 142; Check-list Birds of World, ii, 1934, 155.

²² [*Ardea*] *scolopacca* Gmelin, Syst. Nat., i, pt. 2, 1789, 647 (Cayenne).—*Notherodius guarana* Wagler, Syst. Av., i, 1827, [147].—*Aramus guarana* Des Murs, Castlenau's Exp. Amérique Sud, Ois., 1855, 87.—*Aramus scolopaceus scolopaccus* Peters, Occ. Pap. Boston Soc. Nat. Hist., v, 1925, 141; Check-list Birds of World, ii, 1934, 155.

²³ Six specimens from Mexico, British Honduras, and Costa Rica.

²⁴ Three specimens from Texas, Mexico, and Nicaragua.

- Ana, Veracruz; Santa Efigenia and Cacoprieto, Oaxaca; Cozumel Island; Belize River, British Honduras; Omoa, Honduras; Sucuya and Omotepe, Nicaragua; La Palma de Nicoya and Rio Frio, Costa Rica).
- Aramus scolopaceus* (not *Ardea scolopacea* Gmelin) MOORE, Proc. Zool. Soc. London, 1859, 64 (Belize River, British Honduras; near Omoa, Honduras).—SCLATER and SALVIN, Ibis, 1859, 227 (Belize; Omoa).—SALVIN, Ibis, 1870, 116 (Costa Rica).
- [*Notherodius*] *scolopaceus* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 321, part (Mexico).
- Aramus vociferus* AMERICAN ORNITHOLOGISTS' UNION, Auk, xxv, 1908, 364, part; Checklist North Amer. Birds, ed. 3, 1910, 101, part (Texas).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 425 (Bolson, Bebedero, La Palma de Nicoya, and Guanacaste, Costa Rica).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 13, fig. 4, part (range).—GRISCOM and CROSBY, Auk, xlii, 1925, 527 (Brownsville, s. Texas).
- Aramus vociferus* subsp. GRISCOM, Amer. Mus. Nov., No. 235, 1926, 8 (e. Quintana Roo, Yucatan).
- Aramus giganteus* AMERICAN ORNITHOLOGISTS' UNION, Checklist North Amer. Birds, 1886, and ed. 2, 1895, No. 207, part (Central America).—FERRARI-PEREZ, Proc. U. S. Nat. Mus., ix, 1886, 177 (Santa Ana, Veracruz).—ZELEDON, Anal. Mus. Nac. Costa Rica, i, 1888, 131 (Costa Rica).—SALVIN, Ibis, 1889, 378 (Cozumel Island, Yucatan).—RICHMOND, Proc. U. S. Nat. Mus., xvi, 1893, 528 (Rio Frio, Costa Rica).—LANTZ, Trans. Kansas Acad. Sci., 1896-97 (1899), 219 (Belize, British Honduras).—STRECKER, Baylor Univ. Bull. 15, 1912, 18 (occasional, coast of Texas).
- A[ramus] giganteus* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 141, part.—RIDGWAY, Man. North Amer. Birds, 1887, 136, part (Gulf of Mexico to Costa Rica).
- Aramus scolopaceus*, var. *giganteus* LAWRENCE, U. S. Nat. Mus. Bull. 4, 1876, 49 (Santa Efigenia, Oaxaca).
- Aramus holostictus* SCLATER and SALVIN, Ibis, 1859, 227 (Belize; Omoa).—SALVIN, Ibis, 1870, 116 (Costa Rica).
- Aramus vociferus holostictus* MILLER (W. DeW.) and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 12, 13, part (Brownsville, Tex.; e. Mexico south to Panama).—OBERHOLSER, Auk, xl, 1923, 678 (Texas).
- Aramus pictus dolosus* PETERS, Occ. Papers Boston Soc. Nat. Hist., v, 1925, 144 (Bolson, Costa Rica; orig. descr.; tax.; range); Bull. Mus. Comp. Zool., lxi, 1929, 409 (Martinez Creek, west of Tela, Honduras, habits; crit.)—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 179 (type specimen in Mus. Comp. Zool.).—SASSI, Temminckia, iii, 1938, 306 (Costa Rica, Bebedero, 6 specimens; meas.; crit.).
- Aramus scolopaceus dolosus* PETERS, Checklist, Birds of World, ii, 1934, 155.—DEIGNAN, Auk, liii, 1936, 188 (specimen, La Ceiba, Honduras; colors of soft parts).—VAN ROSSEM, Birds El Salvador, 1938, 158 (El Salvador, Barra de Santiago; San Sebastian; rare in spring and summer in the mangroves and costal swampy forests; colors of soft parts).

ARAMUS SCOLOPACEUS PICTUS (Meyer)

FLORIDA LIMPKIN

Adult (sexes alike).—Entire plumage except the chin and upper throat olive-brown to raw umber, darkest on the hind neck, interscapulars, and back; much marked with white as follows: Forehead

and anterior part of crown slightly washed with pale ashy grayish and with whitish shaft streaks, these streaks narrowing considerably on the hind crown, where they are often tinged with pale tawny, making that area look generally darker than the forehead; occiput, nape, and hind neck with broad, terminally widening, white mesial streaks sharply contrasting with the dark brown, these streaks increasing in width and length posteriorly and becoming, on the interscapulars and upper wing coverts, very extensive, pointed white wedges or lanceolate areas, narrowing again and becoming restricted to the outer webs of the greater upper secondary coverts; remiges olive-brown with no white; back, rump, upper tail coverts, and tail uniform dark raw umber to mummy brown, the tail with a bronzy sheen; lores, cheeks, and auriculars largely grayish white, the brown restricted to narrow edgings and relatively pale and ashy like the forehead; chin and immediately adjacent part of upper throat whitish, unmarked, rest of throat and sides of neck like hind neck, but the brown averaging paler—pale olive-brown; breast, center of abdomen, and thighs olive-brown, with broad, terminally pointed, mesial white streaks; sides and flanks with little or no white; under tail coverts uniform mummy brown; under wing coverts olive-brown to raw umber, with very broad median white areas; iris Vandyke brown; eyelid dull yellow; bill grayish olive, black at tip, deep ochre at base of upper mandible, reddish at base of lower mandible; tarsi and toes blackish olive; claws blackish olive.

Juvenal (sexes alike).—Similar to adult, but the white markings on the upperparts somewhat smaller; plumage looser in texture; not readily distinguishable in most cases from the adult.

Natal down.—Long, thick, soft down varying from cinnamon-brown to snuff brown above, paler on the sides of the head and almost white on the chin; lowerparts of body pale like the sides of the head.

Adult male.—Wing 311–339 (323.7); tail 125–160 (140.3); exposed culmen 118–131 (123.8); tarsus 123–141 (131.7); middle toe without claw 88–100 (91.8 mm.).²⁵

Adult female.—Wing 298–313 (305.5); tail 127–139 (133.7); exposed culmen 108–124 (116.0); tarsus 113–130 (122.2); middle toe without claw 81–90 (86.7 mm.).²⁶

Range.—Resident in southeastern Georgia (Okefenokee Swamp; St. Simon Island); and peninsular Florida, but not west of Wakulla County (upper Wacissa River; Suwannee River; Tuskawilla Creek; Gainesville; Wakulla River; Lake Wekiva; Wekiva River; Malabar; St. Johns River; Kissimmee River; Alachua County; Palm Beach

²⁵ Ten specimens from Florida.

²⁶ Ten specimens, 2 from Cuba, 8 from Florida.

County; Oklawaha River; Weekiwachee River; Lee, Orange, and Putnam Counties; Emeralda Marsh between Lake Yale and Lake Griffin; Withlacoochee River; Chassahowitzka River); and also in Cuba (Camaguay; San Pablo; Aguada de Pasajeros; Zapata Swamp; rare in western Cuba); the Isle of Pines (Nueva Gerona; Santa Barbara; Nuevas River; West McKinley; Pasadita); and Jamaica (Bluefields; St. Davids Parish; the mountainous districts of St. Ann, St. Dorothy, and the Coona-coonas; Cayamanas district; Paradise River; Grand Vale; Hampstead).

Casual in the Florida Keys (Indian Key; Dry Tortugas); and in South Carolina (Charleston; Twigs Dead River; Aiken County).

Doubtful, accidental record from Illinois (Philo, Champaign County), and New Jersey (Long Branch).

Type locality.—St. Johns River, Fla.

Tantalus pictus "Bartram," MEYER (F. A. A.), Zool. Annal., i, 1794, 287 (St. Johns River, Fla.).—ALLEN (J. A.), Amer. Nat., x, 1876, 28.

Aramus pictus COUES, Proc. Acad. Nat. Sci. Philadelphia, 1875, 354 (Florida; based on *Tantalus pictus*, etc., Bartram, Travels, 293); Bull. Nutt. Orn. Club, v, 1880, 101; Check List, ed. 2, 1882, No. 671.—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 581); Nom. North Amer. Birds, 1881, No. 581.—BREWSTER, Bull. Nutt. Orn. Club, vi, 1881, 43, in text (Wekiva River, nw. Florida; habits, notes, etc.).—BAILEY (H. B.), Bull. Nutt. Orn. Club, viii, 1883, 42 (St. Simon Island, Ga., breeding).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 400, part.—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 238, part (Florida; Jamaica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 333, part (West Indies).—? WETMORE, Smiths. Misc. Coll., lxxxv, No. 2, 1931, 37 (Pleistocene remains; Florida-Seminole area and Itahutucknee River).

A [ramus] pictus COUES, Key North Amer. Birds, ed. 2, 1884, 668.

Aramus pictus pictus PETERS, Occ. Pap. Boston Soc. Nat. Hist., v, 1925, 142 (crit.; syn.; descr.; range).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 94.—DUMONT, Auk, xlix, 1932, 237 (Kissimmee River, Fla.).—HOWELL, Florida Bird Life, 1932, 199 (genl.; Florida).—HAVEMEYER, Auk, i, 1933, 370 (large colony between Lake Rosalie and Tiger Lake, Fla.).—COTTAM, Wils. Bull. xlvi, 1936, 11 in text (food habits).—OBERHOLSER, Bird Life Louisiana, 1938, 197 (Moss Lake, La., May 1935, only record for the State).

Aramus scolopaccus pictus PETERS, Check-list Birds of World, ii, 1934, 155.

A[ramus] s[colopaccus] pictus BOND, Birds West Indies, 1936, 85 in text (Cuba, Isle of Pines, and Jamaica; accidental on Cay Lobos, Bahamas; also Florida and se. Georgia).

N[umcnius] vociferus LATHAM, Index Orn., Suppl., 1801, lxxv (Georgia; based on *Ephoukyca*, *Crying Bird* Bartram, Travels, 1791, 145, 291; etc.).

Numenius vociferus VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 305 (Florida; Georgia).

Ibis vociferus STEPHENS, Shaw's Gen. Zool., xii, pt. i, 1824, 8 (St. Johns River, Fla.; lakes of Florida and Georgia).

Aramus vociferus AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xxv, 1908, 364, part; Check List, ed. 3, 1910, 101, part.—CORY, Field Mus. Nat. Hist. Publ. 131, 1909, 380 (Philo, Champaign County, Ill., 1 specimen, 1896).—

- WAYNE, Birds South Carolina, 1910, 35 (Aiken County, October 18, 1890; Charleston, July 1904).—BAYNARD, Auk, xxx, 1913, 243 (Alachua County, Fla., breeding).—WRIGHT and HARPER, Auk, xxx, 1913, 493 (Okefenokee Swamp, Ga.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 13, fig. 4, part (range and migration routes).—SHUFFELDT, Anat. Rec., ix, 1915, 591-606 (osteology).—TODD, Ann. Carnegie Mus., x, 1916, 204 (Nueva Gerona and Pasadita, Isle of Pines; crit., measurements; habits).—BANGS and KENNARD, List Birds Jamaica, 1920, 6 (formerly common resident, now nearly extirpated by mongoose).—PEARSON, Auk, xxxviii, 1921, 599 (now rare along Oklawaha River, Fla.).—BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 57 (Cuba; resident; habits).—PEARSON, Auk, xli, 1924, 599 in text (Camaguay, Cuba).—BAILEY, Birds Florida, 1925, 40, pl. 20 (fig., descr.; distr.; Florida).—GARDNER, Proc. U. S. Nat. Mus., lxxvii, art. 19, 1925, 16 in text, pl. 7 (structure of tongue).—BENT and COPELAND, Auk, xlv, 1927, 377 (Wekiva Lake; Weekiwachee River, Fla.).
- Aramus vociferus vociferus* MILLER (W. DeW.) and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 12, 13 (Florida; Okefenokee Swamp, Ga.; South Carolina).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 255 (life history; monogr.).
- Aramus v[ociferus] vociferus* CHRISTY, Auk, xlv, 1928, 287 (Everglades, s. Florida).
- R[allus] giganteus* BONAPARTE, Journ. Acad. Nat. Sci. Philadelphia, v, pt. 1, 1825, 31 (type locality, by context, Florida; Long Branch, N. J.).
- Aramus giganteus* BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 657 (Indian Key, Fla.); Cat. North Amer. Birds, 1859, No. 481.—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica); Rev. List Birds Jamaica, 1910, 20.—TAYLOR, Ibis, 1862, 129 (Florida).—ALBRECHT, Journ. für Orn., x, 1862, 206 (Jamaica).—ALLEN, Bull. Mus. Comp. Zool. ii, 1871, 302 (e. Florida).—MERRIAM, Amer. Nat., viii, 1874, 89 (Florida).—GUNDLACH, Journ. für Orn., xxii, 1874, 353 (Cuba; habits); Contr. Orn. Cubana, 1876, 186; Orn. Cubana, 1895, 237.—AMERICAN ORNITHOLOGISTS' UNION Check-list, 1886, and ed. 2, 1895, No. 207, part.—WAYNE, Auk, x, 1893, 337 (Suwannee River, nw. Florida, breeding); xxiii, 1906, 231 in text (Twiggs Dead River, Aiken County, S. C., 2 specimens, Oct. 18, 1890).—CORY, Auk, v, 1888, 50, part (Cuba); Birds West Indies, 1889, 251, part; Cat. West Indian Birds, 1892, 90, part (Cuba, Isle of Pines; Jamaica).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., iv, 1892, 288 (San Pablo, s. Cuba).—FIELD, Auk, xi, 1894, 122 (Jamaica).—BONHOTE, Auk, xx, 1903, 175 (Cay Lobos, Bahamas, 3 specimens, Jan. 28, 1901).—NICHOLSON, Auk, xlvii, 1930, 267 (nesting in Florida).
- [*Aramus*] *giganteus* GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); Rep. Fisico-Nat. Cuba, i, 1865-1866, 360.—GRAY, Hand-list, iii, 1871, 59, No. 10407 (Jamaica).—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29, part.—SHARPE, Hand-list, i, 1899, 180, part.
- A[ramus] giganteus* NEWTON (A. and E.), Handb. Jamaica, 1881, 115.—RIDGWAY, Man. North Amer. Birds, 1887, 136, part (Greater Antilles and Florida).
- [*Aramus scolopaceus*] var. *giganteus* COUES, Key North Amer. Birds, 1872, 271. *Aramus scolopaceus* . . . var. *giganteus* COUES, Check List, 1874, No. 464.
- Rallus scolopaceus* (not *Ardea scolopacca* Gmelin) BONAPARTE, Ann. Lyc. Nat. Hist. New York, iii, 1826-28, 156, in text part.
- Aramus scolopaceus* VIGORS, Zool. Journ., iii, 1827, 447 (Cuba).—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 309; Contr. Maclurian Lyc., i, 1827, 25; Amer. Orn., iii, 1828, 111, pl. 26; Geogr. and Comp. List, 1838, 53.—LESSON, Traité d'Orn., 1831, 569, part (s. United States; Florida; Cuba).—NUTTALL,

Man. Orn. United States and Canada, Water Birds, 1834, 68.—AUDUBON, Orn. Biogr., iv, 1838, 543 (not pl. 377, which=true *A. scolopaceus!*); Synopsis, 1839, 217; Birds Amer., 8vo ed., v, 1842, 181 (not pl. 312, which=*A. scolopaceus*).—GOSSE, Birds Jamaica, 1847, 355 (Jamaica).—BRYANT, Proc. Boston Soc. Nat. Hist., 1854, 20 (descr. trachea).

[*Aramus scolopacea* BONAPARTE, Consp. Gen. Av., ii, 1857 [1854], 103, part (supposed young).

Notherodius scolopaceus CABANIS, Journ. für Orn., iv, 1856, 426 (Cuba).—GUNDLACH, Journ. für Orn., x, 1862, 89 (Cuba; crit.).

Notherodius holostictus CABANIS, Journ. für Orn., iv, 1856, 426 (Cuba).

[*Notherodius*] *scolopaceus* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 321, part (Cuba).

Aramus vociferus holostictus MILLER (W. DeW.) and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 12, 13, part (Greater Antilles).—OBERHOLSER, Auk, xi, 1923, 678.

Aramus guarana (not *Scolopax guarana* Gmelin) D'ORBIGNY, in La Sagra's Hist. Nat. Cuba, Ois., 1839, 256 (Spanish ed., p. 177).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).

A[ramus] Guarana LEMBEYE, Aves Isle de Cuba, 1850, 134.

Notherodius guarana WAGLER, Isis, 1829, 657 (Cuba).

ARAMUS SCOLOPACEUS ELUCUS Peters

HISPANIOLAN LIMPKIN

Adult (sexes alike).—Similar to *Aramus scolopaceus pictus* but averaging slightly darker brown—dark raw umber to dark mummy brown and dark sepia; the white streaks smaller generally, and especially on the lesser upper wing coverts, where they are reduced to narrow shaft stripes.

Other plumages not known.

Adult male.—Wing 313–323 (319); tail 130–140 (135); exposed culmen 100–110 (106.2); tarsus 107–113 (109.5); middle toe without claw 77–81 (79.2 mm.).²⁷

Adult female: Wing 290–302 (295.7); tail 121–129 (125.3); exposed culmen 85–101 (94.3); tarsus 102–108 (105); middle toe without claw 73–80 (77.3 mm.).²⁸

Range.—Resident in Puerto Rico (the vicinity of Hacienda Jobo; Lares; Quebradillas; Utuado; slopes of El Yunque; between Adjuntas and Maricao; formerly also Rio Grande and the mountains of El Guilarte); and the island of Hispaniola (Haiti and the Dominican Republic—Almercen; Rio Yuna; Bonao; Gonave; Tortue; Villa Alta Gracia; Montet; Sosúa).

Type locality.—Sosúa, Dominican Republic.

Ardea scolopacca RITTER, Naturh. Reise westind., Insel Hayti, 1836, 157 (Haiti).

Aramus scolopaceus SALLÉ, Proc. Zool. Soc. London, 1857, 236 (Dominican Republic; habits).

²⁷ Four specimens from Haiti and the Dominican Republic.

²⁸ Three specimens from Haiti and the Dominican Republic.

Aramus scolopaceus giganteus CORY, Bull. Nutt. Orn. Club, vi, 1881, 155 (Haiti; spec.).

Hians scolopaceus LEDRU, Voy. Îles Ténériffe, Trinité, Saint-Thomas, Sainte-Croix, et Porto-Ricco, ii, 1810, 208 (Puerto Rico).

Aramus giganteus BRYANT, Journ. für Orn., xiv, 1866, 191 (Puerto Rico); Proc. Boston Soc. Nat. Hist., x, 1866, 217 (Puerto Rico); xi, 1867, 97 (Santo Domingo).—SUNDEVALL, Öfv. Vet.-Akad. Förh., 1869, 601 (Puerto Rico).—GUNDLACH, Journ. für Orn., xxii, 1874, 314 (Lares; Quebradillas; Utuado, Puerto Rico); xxvi, 1878, 162, 189 (Puerto Rico); Anal. Soc. Esp. Hist. Nat., vii, 1878, 387 (nesting; (Puerto Rico).—STAHL, Faun. Puerto Rico, 1883, 63, 152 (spec.; Puerto Rico).—CORY, Auk, v, 1888, 50, part; Birds West Indies, 1889, 251, part; Cat. West Indian Birds, 1892, 90, part (Haiti; Puerto Rico).—TRISTRAM, Cat. Coll. Birds H. B. Tristram, 1889, 267 (Almercen, Hispaniola; spec.).—VERRILL, Proc. Acad. Nat. Sci. Philadelphia, 1909, 356 (Dominican Republic).—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 37-38 (north slopes of El Yunque; between Adjuntas and Maricao, and near Utuado, Puerto Rico).

[*Aramus*] *giganteus* SHARPE, Hand-list, i, 1899, 180, part (Greater Antilles part).

A[ramus] giganteus RIDGWAY, Man. North Amer. Birds, 1887, 136, part (Greater Antilles, part).

Aramus pictus CORY, Birds Haiti and San Domingo, 1885, 157.—TIPPENHAUER, Die Insel Haiti, 1892, 323 (Haiti).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 238, part (Haiti).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 333, part [West Indies, part (= Haiti, based on Sharpe)].

Aramus pictus pictus MOLTONI, Att. Soc. Ital. Scienz. Nat., lxxviii, 1929, 311 (Rio Yuna; Bonaó, Haiti; specimen).

Aramus vociferus AMERICAN ORNITHOLOGISTS' UNION, Check List North Amer. Birds, ed. 3, 1910, 101, part (Greater Antilles, part).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 13, fig. 4, part (Puerto Rico; Haiti).—PETERS, Bull. Mus. Comp. Zool., lxi, 1917, 403 (Sosúa, Dominican Republic; specimen).

Aramus pictus elucus PETERS, Occ. Pap. Boston Soc. Nat. Hist., v, 1925, 143 (Sosúa, Dominican Republic).—WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 333 (genl.; Puerto Rico; now rare; recently found only on the Hacienda Jobo, between Utuado and Arecibo; formerly also on the slopes of El Yunque, above Rio Grande, and the peaks of El Guilarte, west of Adjuntas; near Lares; and Quebradillas).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 494 (Haiti, Gonave, and Tortue; habits).—WETMORE, Auk, xlvii, 1930, 485 (Rabié painting, Hispaniola).—DANFORTH, Auk, xlvi, 1929, 362 (Bonaó, Villa Alta Gracia, Hispaniola).—LÖNNBERG, Fauna och Flora, 1929, 100-101 (Haiti).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 179 (type specimen in Mus. Comp. Zool.; crit.).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 123 (habits; distr.; Hispaniola).—WETMORE, Proc. U. S. Nat. Mus., lxxxii, art. 2, 1932, 15 (Montet, Haiti; measurements).—WETMORE and LINCOLN, Proc. U. S. Nat. Mus., lxxxii, art. 25, 1933, 22 (Dornien and Barahona, Haiti).

Aramus scolopaceus elucus PETERS, Check-list Birds of World, ii, 1934, 155.

A[ramus] s[colopaceus] elucus BOND, Birds West Indies, 1936, 85 in text (Hispaniola, including Gonave and Tortuga Islands; and Puerto Rico).

Suborder RALLI: Raillike Birds, Coots, and Gallinules

- =Paludicolae BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 688, 745.
- >Fulicariæ SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 139 (Ralli+Heliornithes+Aramidae).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, ix, 1 (Ralli+Heliornithes).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 314 (Ralli+Heliornithes).
- >Fulicariæ FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1235, 1566 (Ralli+Heliornithes).
- >Ralli AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, 139 (Ralli+Aramidae).—BEDDARD, Struct. and Classif. Birds, 1898, 321 (Ralli+Heliornithes).
- =Ralli SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70.
- >Ralliformes FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1566 (Ralli+Heliornithes+Hemipodii).—SHARPE, Hand-list, i, 1899, xii, 93 (Ralli+Heliornithes).
- =Ralliformes SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70.
- =Rallidae GADOW, in Bronn's Thier Reich, Vög., ii, 1891, 182; Classif. Vertebr., 1898, 34 (includes fossil *Aptornis*, *Diaphorapteryx*, and *Gypsornis*).
- >Rallidae CARUS, Handb. Zool., i, 1868-75, 339 (includes Heliornithidae and Aramidae).
- =Ralloidea SHUFELDT, Anat. Rec. ix, 1915, 750.
- >Megalornithiformes WETMORE and MILLER (W. DeW.), Auk, xliii, 1926, 342.
- >Grues WETMORE, Proc. U. S. Nat. Mus., lxxvi, 1930, art. 24, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6 (includes Gruidae).

Very small to large holorhinal Gruiformes with basipterygoid processes, supraorbital foramina, and powder downs absent; cervical vertebrae 14 or 15; thigh muscle formula ABXY+; caeca long; oil gland tufted (usually)²⁹; hallux well-developed, nearly incumbent, and rectrices 10-14, the tail small, soft, not fan-shaped.

Palate schizognathous; nares holorhinal; basipterygoid processes, occipital foramina, and supraorbital grooves absent; interorbital septum incomplete (fenestrate); lachrymal not joined to ectethmoid, the latter with an upturned process joining frontal bone, leaving a foramen for passage of nerves; cervical vertebrae 14 or 15; no fused dorsal vertebrae; atlas without lateral canals, notched for the odontoid process; sternum with a very long lateral process, the spina externa sterni present, the metasternum 2-notched, clavicles in near relation with both precoracoids and scapula, separated from carina sterni; preacetabulum longer than postacetabulum; ilia vertical in their plane anteriorly; pubes strong, not ankylosed with ischia; carotids 2; caeca long;³⁰ crop absent; stomach a gizzard, the proventriculans zonary; gall bladder present; liver with right lobe longer than left; syrinx tracheobronchial, but intrinsic muscles attached rather far down; thigh muscle formula ABXY+; deep flexor tendons usually of type I; tensor patagii brevis without

²⁹ Said to be nude in *Porzana carolina*.

³⁰ These characters shared by Heliornithes.

recurrent slip to tensor patagii longus³¹; no distal patagial fan; expansor secundariorum muscle present³²; biceps slip usually present but small³²; anconaeus with a humeral slip; dorsal apterion long, narrow; aftershaft present; powder downs absent; oil gland usually tufted; wing diastataxic (aquincubital); rectrices 10-14.

The suborder Ralli contains a single family, the Rallidae.

Family RALLIDAE: Rails, Gallinules, and Coots

- =Macrodactyli VIEILLOT, Analyse, 1816, 61.
- =Rallidæ LILLJEBORG, Proc. Zool. Soc. London, 1866, 445.—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 350.—COUES, Key North Amer. Birds, ed. 2, 1884, 669.—STEJNEGER, Stand. Nat. Hist., iv, 1885, 127, in text.—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, 140; ed. 3, 1910, 101.—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, ix, 1; Hand-list, i, 1899, xii, 93.—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 315.—KNOWLTON, Birds of World, 1909, 49, 320.
- <Rallidæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (excludes "Gallinulidae" and "Ortygometridae").
- >Rallidae CARUS, Handb. Zool., i, 1868-75, 339 (includes Heliornithidae and Aramidæ!).
- =Rallidæ FÜRBRINGER, Unters. Morph. Syst. Vög., ii, 1888, 1237.—GADOW, Bronn's Thier Reich, Vög., ii, 1891, 181; Classif. Vertebr., 1898, 34.—HARTERT, Vög. pal. Fauna, iii, 1921, 1823.—WETMORE and MILLER, Auk, xliii, 1926, 342.—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 157.
- =Rallinæ BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 746.
- ><Rallinæ CARUS, Handb. Zool., i, 1868-75, 339 (includes Aramidæ!; excludes *Gallinula*, *Fulica*, etc.).
- <Rallinæ CARUS, Handb. Zool., i, 1868-75, 339 (excludes *Gallinula*, *Fulica*, etc.).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 351 (excludes *Gallinula*, *Porphyryula*, *Fulica*, etc.).—COUES, Key North Amer. Birds, ed. 2, 1884, 670 (excludes *Gallinula*, *Porphyryula*, etc.).—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, 140; ed. 3, 1910, 101 (excludes *Gallinula*, *Porphyryula*, *Fulica*, etc.).—SHARPE, Hand-list, i, 1899, xii, 93 (excludes only *Fulica*, *Palaeolimnas*, and *Lcguatia*).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 315 (excludes *Fulica*).
- ><Gallinulinae CARUS, Handb. Zool., i, 1868-75, 340 (includes Heliornithidae).
- <Gallinulinae BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 351 (*Gallinula*+*Porphyryula*).—COUES, Key North Amer. Birds, ed. 2, 1884, 675 (*Gallinula*+*Porphyryula*).—AMERICAN ORNITHOLOGISTS' UNION, Check List North Amer. Birds, 1886, 143; ed. 3, 1910, 105 (*Gallinula*+*Porphyryula*).
- <Gallinulidæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (*Gallinula*, *Porphyryula*, *Fulica*, etc.)
- <Ortygometridæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70.

³¹ These characters shared by Heliornithes.

³² Said to be absent in *Ocydromus (earlei)* and *Limnopardalis (maculatus)*.

- <Fulicinae BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 351 (*Fulica* only).—COUES, Key North Amer. Birds, ed. 2, 1884, 676.—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, 144; ed. 3, 1910, 101.—SHARPE, Hand-list, i, 1899, xiii, 109 (*Fulica*+*Palaeolimnas*+*Leguatia*).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 329.
- <Fuliceae BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 746 (*Fulica*+*Gallinula*+*Porphyryla*).
- <Rallaeae BAIRD, Rep. Pacific R. R. Surv., ix, 1858, 746 (*Rallus*+*Porzana*+*Creciscus*+*Coturnicops*).

The osteological and other anatomical characters of the Rallidae are the same as those given for the Ralli, on page 38. In external characters there is so great a range of variation that it is somewhat difficult to define the family with precision, as based on these alone. The bill varies from short to long, and the basal portion of the rhinotheca is sometimes (in the genera *Gallinula*, *Fulica*, *Porphyrio*, etc.) developed into a conspicuous, expanded (sometimes ridged or "crested") frontal shield. The toes are relatively long, with rather long and slightly curved claws, the hallux being much longer than in other groups of so-called water birds, but more nearly incumbent, and in the genus *Fulica*, they are conspicuously lobed laterally (much as in the Heliornithidae and Phalaropodidae). The head is completely feathered (except when a frontal shield is present). The body is distinctly compressed, to facilitate the passage through close-growing aquatic plants. The wings are relatively small, rounded, and very concave beneath, the ability to fly being poorly developed, some forms being quite unable to fly. In short, the Rallidae are water birds, usually of small size, with compressed body, long toes, incumbent or nearly incumbent hallux, muscular thighs, and with relatively short, rounded and concave wings which are sometimes so feeble as to be useless for flight. They are very retiring and crepuscular or nocturnal in their habits, and live in marshes and swamps, where their food, consisting largely of aquatic insects or plants and small mollusks, is picked from the surface of the water or mud, or from aquatic plants, and probed for in the soft mud or ooze as in the case of the Limicolae. Many of the species have remarkably loud, often discordant voices.

Their nests consist of more or less crude though rather bulky platforms of dead grasses, sedges, or other aquatic plants supported by upright growing plants. The eggs are numerous and are always more or less spotted or speckled, the ground color varying from nearly white to buff or clay color. The young are densely clothed with milky down (often black in color) and the head is sometimes (notably in the genus *Fulica*) ornamented by brightly colored (yellowish, orange, or even red) filaments. They are highly "precocious," leaving the nest and swimming about almost as soon as hatched.

Notwithstanding the great dissimilarity in appearance between the typical rails, with their completely feathered head, long legs, and slender toes, and the coots, with a conspicuous frontal shield and conspicuously lobed toes, there is so complete a gradation from one extreme to the other in forms of intermediate characters that it is doubtful whether any subfamilies can be satisfactorily defined. Thus, the gallinules (genera *Gallinula*, *Porphyryla*, etc.), while closely resembling the coots in the form of the bill, development of the frontal shield, and even in coloration, agree with the true rails in the unlobed toes, and are insensibly connected with the latter by intermediate forms. In short, while both the gallinules and coots have the rhinotrochæ or covering of the maxilla continued upon the forehead, where it widens into a more or less gibbous or expanded plate or frontal shield, the coots alone possess conspicuous scalloped flaps or lobes along the edges of the toes, in which respect the latter differ from all other members of the family, and thus, for convenience only, may be considered as constituting a subfamily.

The family is cosmopolitan and is apparently a very ancient one as a number of highly peculiar genera occur in remote oceanic islands.

Students of Mallophaga have suggested a closer relationship than that usually assumed between the rails and the very primitive kiwis (Apterygidae) of New Zealand, but the birds themselves do not bear this out with any trenchant characters.

KEY TO THE NORTH AND MIDDLE AMERICAN GENERA AND SUBGENERA OF
RALLIDÆ³³

- a. Toes without distinct lateral membranes (if with obvious narrow membrane this on inner side only).
- b. Without a distinct frontal shield.
- c. Bill longer than head, culmen more than three-fourths as long as tarsus.
- d. Loral antia at upper margin of nasal fossa, anterior outline of loral feathering receding downward to rictus (sometimes very slightly oblique or nearly vertical).
- e. Bill shorter, culmen much shorter than tarsus— *Aramides* (p. 110)
- ee. Bill longer, culmen as long as or longer than tarsus.
- f. Bill swollen basally, its depth at base one-third length of exposed culmen; flanks uniform----- *Cyanolimnas* (p. 98)

³³ The following American genera of Rallidæ have not been examined in connection with the present work:

Anurolimnas Sharpe, Bull. Brit. Orn. Club, i, No. 5, 1893, p. xxviii. (Type, by monotypy and original designation, *Porzana castaneiceps* Sclater and Salvin.) South America (Upper Amazons). One species.

Stictolimnas Büttikofer, Notes Leyden Mus., xv, 1893, 274. (Type, by monotypy and original designation, *S. sharpei* Büttikofer.) South America. Monotypic. Said to be a young *Hypotaenidia* with erroneous locality (Old World).

Micropygia Bonaparte, Compt. Rend. Acad. Sci. Paris, xliii, 1856, 599. (Type, by monotypy, *Crex schomburgki* Cabanis.) South America (Venezuela to Brazil).

- ff.* Bill not swollen basally, its depth at base much less than one-third length of exposed culmen; flanks conspicuously barred with whitish----- *Rallus* (p. 45)
- dd.* Loral antia at lower margin of nasal fossa, anterior outline of loral feathering receding upward toward forehead.
- c.* Mandible with a distinct lateral groove, extending for greater part of its length; bill slender and greatly compressed, its depth at posterior end of nostril equal to less than one-sixth length of culmen, its width at some point equal to only about one-half the depth; base of culmen very broad, with rounded (convex) outline; anterior portion of nasal fossa deep and sharply defined; tarsus slenderer, the acrotarsium with 11 large scutella; wing more rounded, the outermost primary shorter than eighth (from outside), sometimes shortest; coloration uniform or nearly so (olive above, slaty below)
Ortygonax (extralimital)³⁴
- ee.* Mandible without a distinct lateral groove; bill much shorter, its depth at posterior end of nostril equal to more than one-fifth the length of culmen, its width at same point equal to much more than one-half the depth; base of culmen both broad and elevated, irregularly corrugated, with obtusely angled posterior outline; nasal fossa short and indistinct anterior to nostril; tarsus stouter, the acrotarsium with 9 large scutella; wing more pointed, the outermost primary longer than seventh (from outside); coloration conspicuously variegated (spotted and barred with white beneath, streaked with white above)----- *Pardirallus* (p. 100)
- cc.* Bill shorter than head, the culmen not more (usually much less) than three-fourths as long as tarsus.
- d.* Toes relatively shorter, the inner toe (without claw) not longer than culmen.
- e.* Gonyes not more than one-fourth as long as culmen, strongly ascending terminally, the mandibular rami rather distinctly arched; alula extending for only about half the length of primary coverts; hallux (without claw) not more than two-thirds as long as basal phalanx of inner toe; claws shorter, less curved, blunter----- *Crex* (p. 126)
- ee.* Gonyes more than one-fourth (usually more than one-third) as long as culmen, not strongly ascending terminally; mandibular rami not noticeably, if at all, arched; alula extending for decidedly more than half the length of primary coverts; hallux (without claw) more than two-thirds as long as basal phalanx of inner toe; claws longer, more curved, more acute.
- f.* Nostril impervious for basal half or more.
- g.* Middle toe, without claw, nearly as long as tarsus; nostril relatively much smaller, the pervious anterior portion very small and circular; mandibular rami without lateral groove; feathers of alula more compact and rigid, the two outermost acuminate

³⁴ *Ortygonax* Heine, in Heine and Reichenow's *Nom. Mus. Hein. Orn.*, 1890, 321 (type, as designated by Sclater, 1891, *Rallus rytirhyuchus* Vieillot). South America. Two or more species.

"I cannot imagine why the species of this genus should ever have been referred to *Limnopardalis*, which is conspicuously different, both in appearance and structural details. The general resemblance to *Rallus* is far greater." (R. R.)

or subacuminate; upper parts striped with black, under parts gray, the flanks barred----- *Porzana*, part (extralimital)³⁵

- gg.* Middle toe, without claw, much shorter than tarsus; nostril relatively much larger, the pervious anterior portion longer and longitudinally elliptical; mandibular rami with a distinct lateral groove; feathers of alula rounded terminally; upperparts not striped (plumage wholly plain rufescent).
Amaurolimnas (p. 106)
- ff.* Nostril wholly pervious. (Color plain olive above, the head, neck, and underparts plain gray, the flanks barred).
Neocrex (extralimital)³⁶
- dd.* Toes relatively much longer, the inner toe (without claw) longer than culmen.
- e.* Longest primaries exceeding distal secondaries by one-third, or more, length of wing, outermost as long as or longer than sixth (from outside); alula falling far short of tips of longest primary coverts; tail half as long as wing, or more, the rectrices distinct, much longer than upper coverts----- *Porzana* part (p. 132)
- ee.* Longest primaries exceeding distal secondaries by much less than one-third length of wing, outermost shorter than seventh (from outside) or else (*Coturnicops*) secondaries partly white and axillars white; alula falling little short of tips of longest primary coverts, sometimes extending beyond them; tail much less than half as long as wing, the rectrices indistinct, scarcely, if at all, longer than upper coverts.
- f.* Longest feather of alula falling short of tips of longest primary coverts.
- g.* Bill much shorter, not more than half as long as head; toes shorter, first two phalanges of middle toe (together) decidedly shorter than tarsus, hallux (without claw) less than half as long as tarsus; no black loreal streak nor white supraloral streak.
- h.* Nasal fossa indistinct anterior to nostril, the latter more oblique (higher anteriorly, lower posteriorly), more distinctly operculate; secondaries partly white; under wing coverts and axillars immaculate white; plumage of upperparts glossy, broadly striped with black and narrowly barred with white, the chest, etc., buffy, ochraceous, or brownish, more or less distinctly barred----- *Coturnicops* (p. 170)
- hh.* Nasal fossa very distinct anterior to nostril, the latter more in line with axis of maxilla, less distinctly operculate; secondaries without white; under wing coverts and axillars dusky, narrowly barred with white; plumage of upperparts

³⁵ *Porzana albicollis* (Vieillot).—*Rallus albicollis* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 561 (Paraguay).—*Mustellirallus* Bonaparte, Compt. Rend., xliii, Sept. 1856, 599 (type, by monotypy, *Rallus albicollis* Vieillot).—*Mustellirallus* (emendation) Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320.—*Galcolimnas* Heine, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320 (new name for *Mustellirallus* on grounds of purism). South America.

³⁶ *Neocrex* (subgenus of *Porzana*) Sclater and Salvin, Proc. Zool. Soc. London, 1868 (published Apr. 1869), 450, 457 (type, by monotypy, *Porzana erythropros* Sclater). South America. One species.

not glossy, dusky or dusky olive, with or without white dots, the chest, etc., plain gray or slate color.

Laterallus (subgenus *Creciscus*) (p. 148)

- gg.* Bill longer, more than half (nearly as long) as head; toes longer, first two phalanges (together) of middle toe as long as tarsus, the hallux (without claw) half as long as tarsus; a black loreal and a white supraloral streak.

Porzana, part (subgenus *Hapalocrex*) (p. 134)

- ff.* Longest feather of alula extending considerably beyond tips of longest primary coverts.

- g.* Nostril narrowly elliptical; tarsus shorter than middle toe with claw; outermost primary equal to or longer than distal secondaries; proximal secondaries shorter than longest primaries.

- h.* Bill more cuneate (tapering) in lateral outline, its depth at base of gonys much less than at posterior end of nostril, the mesorhinium elevated and more or less arched, the distal portion of culmen strongly decurved or convex; tarsus shorter than middle toe without claw; under tail coverts barred with white and blackish.

Laterallus (subgenus *Limnocrex*) (p. 150)

- hh.* Bill more uniform in lateral width, its depth at base of gonys nearly equal to that of posterior end of nostril, the mesorhinium much less elevated, not arched, terminal portion of culmen not strongly convex; tarsus as long as or longer than middle toe without claw; under tail coverts plain cinnamon-rufous.

- i.* Malar antia slightly posterior to the obtusely angled loreal antia; bill much more compressed, its width at posterior end of nostril equal to but little more than half the depth at same point; tarsus not longer than middle toe without claw; underparts white medially and posteriorly (except under tail coverts), the flanks and axillars barred with white and dusky, the under wing coverts white.

Laterallus (subgenus *Laterallus*) (extralimital)²⁷

- ii.* Malar antia slightly but distinctly anterior to the broadly rounded loreal antia; bill much less compressed, its width at posterior end of nostril equal to decidedly more than half its depth at same point; tarsus longer than middle toe without claw, underparts wholly cinnamon-rufous, the under wing coverts and axillars also cinnamon-rufous.----- *Laterallus* (subgenus *Thryocrex*) (p. 151)

- gg.* Nostril rather broadly ovate or triangular; tarsus longer than middle toe with claw; outermost primary much shorter than distal secondaries; proximal secondaries longer than longest

²⁷ *Laterallus* Gray, Cat. Gen. and Subgen. Birds, 1855, 120 (type, by monotypy, *Rallus melanophaius* Vieillot; ex Bonaparte, 1854, *nomen nudum*).—*Laterallus* (emendation) Bonaparte, Compt. Rend., xliii, 1856, 599.—*Crybastes* Cabanis, Journ. für Orn., 1856 (published 1857), 428 (new name for *Laterallus*, on grounds of purism).—*Donacophilus* Reichenow, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320 (new name for *Laterallus* on grounds of purism). South America.

primaries. (Above olive, the pileum and entire underparts rufous.)

Laterallus (subgenus *Rufirallus*) (extralimital)³⁸

- bb.* With a distinct frontal shield (the rhinotheca extended onto the forehead, where more or less elevated and expanded)-----(*Gallinuleae*)
- c.* Anterior end of nostril much nearer to tip of maxilla than to nearest loreal feathering; frontal shield small, its posterior extremity forming an acute angle; gonys much shorter (its length equal to less than depth of bill at posterior end of nostril), strongly ascending terminally; flanks spotted with white-----*Porphyriops* (extralimital)³⁹
- cc.* Anterior end of nostril much nearer to loreal antia than to tip of maxilla; frontal shield large, its posterior extremity broadly rounded or nearly truncated; gonys much longer (its length greater than depth of bill at posterior end of nostril), less strongly ascending terminally; flanks not spotted.
- d.* Bill much stouter, its depth at posterior end of nostril exceeding half the distance from posterior end of nostril to tip of maxilla; frontal shield extending to beyond posterior angle of eyes, its posterior extremity forming a broad, obtuse angle; nostril relatively shorter and much broader, the nasal fossa not distinctly defined; anterior outline of feathering on sides of head forming a practically straight nearly vertical line; tarsus longer than outer toe without claw, the inner side of planta tarsi with a single continuous series of large transverse or quadrate scutella; coloration (of adults) green, blue, and purplish; flanks without white. *Porphyru* (p. 192)
- dd.* Bill more slender, its depth at posterior end of nostril less than half the distance from posterior end of nostril to tip of maxilla; frontal shield extending only as far as middle of eye, its posterior extremity broadly rounded to nearly truncated; nostril relatively longer and narrower, the nasal fossa very distinctly defined; anterior outline of feathering on sides of head forming a very oblique line, broken at rictus; tarsus not longer (sometimes shorter) than outer toe without claw, inner side of planta tarsi with broken series of smaller, more irregular scutella; coloration without green, blue, or purplish; flanks striped with white----- *Gallinula* (p. 180)
- aa.* Toes with distinct lateral lobes or marginal membrane----- *Fulica* (p. 204)

Genus RALLUS Linnaeus

Rallus LINNAEUS, Syst. Nat., ed. 10, i, 1758, 153. (Type, as designated by Fleming, 1821, *R. aquaticus* Linnaeus).

Ralus (emendation) VIEILLOT, Analyse, 1816, 61.

Hyporallus IREDALE and MATHEWS, Bull. Brit. Orn. Club, xlvi, 1926, 76. (Type, by original designation, *Rallus muelleri* Rothschild.)

³⁸ *Rufirallus* Bonaparte, Compt. Rend., xliii, 1856, 599 (type, as designated by Sclater and Salvin, 1869, *Rallus cayennensis* Gmelin=*R. cayanensis* Boddaert=*R. viridis* Müller).—*Erythrolimnas* Heine, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320 (substitute for *Rufirallus*, on grounds of purism). South America.

³⁹ *Porphyriops* Pucheran, Rev. Zool., viii, 1845, 278 (type, by monotypy, *Fulica crassirostris* J. E. Gray=*Rallus melanops* Vieillot).—*Porphyreops* (emendation) Zuchold, Journ. für Orn., 1854, 353.—*Hydroci* Cabanis, Wiegmann's Archiv für Naturg., 1847, i, 351 (type, by monotypy, *Rallus melanops* Vieillot). South America. Monotypic.

- Tahitornis* MATHEWS, Syst. Av. Austral., ii, 1930, app. 904, note. (Type, by original designation, *Rallus pacificus* Gmelin=*Rallus ecaudata* J. F. Miller.)
- Hypotaenidia* REICHENBACH, Av. Syst. Nat., 1852, xxiii. (Type, by original designation, *Rallus pectoralis* "Cuvier," not *Rallus pectoralis* Temminck =*Hypotaenidia australis* Pelzeln.)
- Stictolimnas* BÜTTIKOFER, Notes Leyden Mus., xv, No. 4, 1893, 274. (Type, by original designation, *Stictolimnas sharpei* Büttikofer=young *Hypotaenidia* sp.)
- Lewinia* GRAY, Cat. Gen. Subgen. Birds, 1855, 120. (Type, by monotypy, *Rallus lewinii* Swainson=*Rallus pectoralis* Temminck and Laugier.)
- Donacias* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 321. (Nom. nov. pro *Lewinia* Gray.)

Rather small to rather large Ralli with culmen as long as or longer than tarsus, second primary (from outside) longest or equal to longest, flanks conspicuously barred with white, and dorsal region striped with black or dusky.

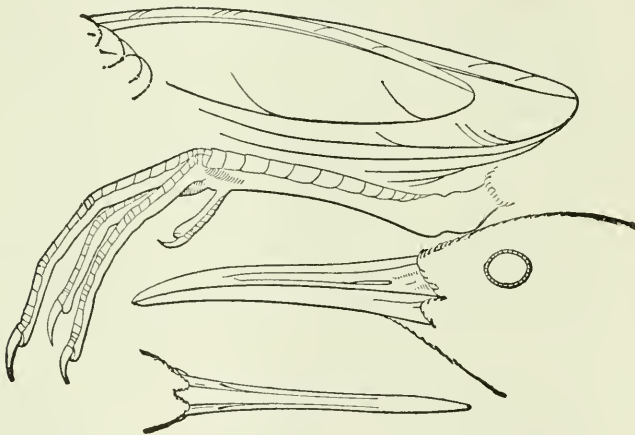


FIGURE 3.—*Rallus limicola limicola*. Natural size.

Bill slender to moderately stout, longer than head, the culmen as narrowly elliptical or slitlike, on line with axis of maxilla, much posterior to middle of maxilla, its posterior end separated from laterofrontal antia by a space about equal to basal height of maxilla; laterofrontal angle at base of upper edge of nasal fossa, thence long as or longer than tarsus, slightly elevated and widened basally, slightly depressed and more constricted medially, slightly (but usually decidedly) decurved distally, rounded (in transverse section) throughout; gonys about half as long as mandibular rami (sometimes more, sometimes less), nearly straight (except at tip, where more or less convex), not prominent basally, the mandibular rami without distinct lateral groove; nasal fossa extending for much more than half (sometimes for two-thirds) the length of maxilla (measured from laterofrontal antia), well-defined throughout; nostril very receding in a straight or gently curved line to the rictus; malar antia

decidedly posterior to laterofrontal antia, the mental antia about on line or slightly anterior to proximal end of nostril. Wing short and much rounded, the longest primaries exceeding distal secondaries by a little less (*R. limicola*) to decidedly more than one-fourth (*R. elegans*, *R. aquaticus*) the length of wing; outermost primary much longer than distal secondaries and about equal to seventh or eighth, from outside, the second, second and third, or second, third, and fourth (from outside) longest; proximal secondaries shorter than longest primaries (nearly equal in *R. aquaticus*). Tail less than half as long as wing, the rectrices rather soft, mostly hidden by the coverts. Tarsus about one-third as long as wing, slightly shorter (*R. aquaticus*) to slightly longer (*R. elegans*) or equal in length (*R. limicola*) to middle toe without claw, the acrotarsium with a continuous series of broad, transverse scutella, the rather broadly rounded planta tarsi with a continuous posterior series of similar, but smaller scutella; outer toe, with claw, falling slightly short of base of claw of middle toe, that of inner toe reaching to about, or slightly beyond, middle of subterminal phalanx of middle toe; hallux small, its length (without claw) decidedly less than that of basal phalanx of inner toe; claws rather small, slightly but distinctly curved moderately acute to rather blunt.

Plumage and coloration.—Plumage of head and neck soft and blended, rather short, that of underparts fuller, rather loosely webbed, that of back, scapulars, etc., harsher, the feathers more distinctly outlined. Upper parts olive or grayish, striped with darker; breast, etc., plain slate-gray, rufescent, or buffy; flanks barred with white.

Range.—Palearctic, Indian, African, Nearctic, and Neotropical regions, but absent from Arctic and sub-Arctic districts. (About 15 species.)

KEY TO ADULTS OF THE NORTH AND MIDDLE AMERICAN SPECIES AND SUBSPECIES
OF RALLUS ⁴⁰

- a. Size larger; wing over 120 mm. in length.
 - b. With the following combination of characters: Lesser upper wing coverts russet to chestnut; edges of feathers of upperparts of body buffy (not ashy gray), washed with olive or brownish.
 - c. Smaller, wing less than 155 mm.----- *Rallus elegans ramsdeni* (p. 89)
 - cc. Larger, wing over 155 mm.----- *Rallus elegans elegans* (p. 83)
 - bb. Lesser upper wing coverts olive-brown to olive-russet; edges of feathers of upperparts of body ashy gray washed with olive or brownish, often very heavily so, but never with lively buff tone.⁴¹

⁴⁰ Based on adults only.

⁴¹ This character is not very obvious but is one that grows on the observer only after some study. There is no trenchant difference between the species *elegans* and *longirostris*. If the two did not occur together in a few places I would certainly consider them one species.

- c. Cheeks and postocular area with a brownish wash, or, if grayish, not bluish or ashy gray.
- d. Flanks pinkish umber, narrowly and indistinctly barred with rusty white to pale cinnamon---- *Rallus longirostris tenuirostris* (p. 81)
- dd. Flanks not pinkish umber.
- e. Breast less pinkish—light ochraceous-buff.
- f. Wing very short, less than 130 mm.
Rallus longirostris cypereti (extralimital)⁴²
- ff. Wing longer 150–170 mm.— *Rallus longirostris obsoletus* (p. 73)
- ce. Breast more pinkish—pinkish cinnamon to pinkish orange-cinnamon.
- f. Dark centers of dorsal feathers dark sepia to fuscous.
Rallus longirostris levipes (p. 75)
- ff. Dark centers of dorsal feathers dark fuscous to fuscous-black.
Rallus longirostris beldingi (p. 78)
- cc. Cheeks and postocular area generally bluish or ashy gray.
- d. Bill very long; the exposed culmen over 73 mm. in length.
Rallus longirostris manglecola (p. 70)
- dd. Bill shorter; exposed culmen less than 73 mm. in length.
- e. With breast and lower throat only very slightly washed with pale pinkish buff, and with an ashy tinge.
- f. Dark areas of dorsal feathers paler—buffy brown
Rallus longirostris coryi (p. 62)
- ff. Dark areas of dorsal feathers darker—fuscous.
Rallus longirostris leucophaeus, pale phase (p. 66)
- ce. With breast and lower throat cinnamon-buff to light pinkish cinnamon, and even slightly darker.
- f. Chin and upper throat slightly washed with pale pinkish buff.
- g. Dark areas of dorsal feathers sepia to dark clove brown.
- h. Dark areas of dorsal feathers darker—dark clove brown
Rallus longirostris pelodramus (extralimital)⁴³
- hh. Dark areas of dorsal feathers paler—sepia.
Rallus longirostris longirostris (extralimital)⁴⁴
- gg. Dark areas of dorsal feathers Saccardo's umber.
Rallus longirostris caribaeus (p. 64)

⁴² *Rallus longirostris cypereti*.—*Rallus cypereti* Taczanowski, Proc. Zool. Soc. London, 1877, 747 (Santa Lucia, Tumbes, nw. Peru; coll. Warsaw Mus.); Orn. Pérou, iii, 1886, 315.—[*Rallus*] *cypereti* Brabourne and Chubb, Birds South America, i, 1912, 21 (w. Ecuador; nw. Peru).—*R[allus] longirostris cypereti* Hellmayr, Nov. Zool., xiii, 1906, 52 (Vacqueria, w. Ecuador; Tumbes, nw. Peru).—*Rallus longirostris* (not of Boddaert) Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 10, part (Santa Lucia, w. Peru).—[*Rallus*] *longirostris* Sharpe, Hand-list, i, 1899, 93, part (Peru).—*Rallus longirostris cypereti* Chapman, Bull. Amer. Mus. Nat. Hist., iv, 1926, 174 (Ecuador); Peters, Checklist Birds of World, ii, 1934, 159.

⁴³ *Rallus longirostris pelodramus* Oberholser, Proc. U. S. Nat. Mus., lxxxiv, 1937, 323 (Caroni Swamp, Trinidad).

⁴⁴ *Rallus longirostris longirostris*.—*Rallus longirostris* Boddaert, Tabl. Pl. Enl., 1783, 52 (Cayenne; based on *râle à long bec, de Cayenne* Daubenton, Pl. Enl., pl. 849); Turton, Syst. Nat., i, 1806, 433; Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 557; Lesson, Traité d'Orn., 1831, 536; Reichenbach, Handb., Fulicariae, 1851, pl. 106, figs. 1150, 1151; Schlegel, Mus. Pays. Bas, v, No. 30, livr. 7, 1865, 11; Selater and Salvin, Proc. Zool. Soc. London, 1868, 444, part (monogr.);

ff. Chin and upper throat pure white.

g. Bill stouter, height at base almost one-third length of exposed culmen----- *Rallus longirostris crassirostris* (extralimital)⁴⁶

gg. Bill less stout; height at base much less than one-third length of exposed culmen.

h. Sides of neck, lower throat, and breast with no grayish wash—pale ochraceous-buff to light pinkish cinnamon.

i. Upperparts with a decided olive-brownish wash.

Rallus longirostris yumanensis (p. 77)

ii. Upperparts with no decided olive-brown wash; edges of feathers gray to olive-gray.

j. Abdomen largely whitish; flank color restricted to extreme sides----- *Rallus longirostris nayaritensis* (p. 80)

Coues, Birds Northwest, 1874, 536, footnote, part (in synonymy); Salvin, Ibis, 1886, 176 (Brit. Guiana); Sennett, Auk, vi, 1889, 165, part (diagnosis; range); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 10, part (Berbice, Guiana); Berlepsch, Nov. Zool., xv, 1908, 299 (Cayenne).—[*Rallus longirostris* Gmelin, Syst. Nat., i, pt. ii, 1789, 718; Latham, Index Orn., ii, 1790, 759; Sclater and Salvin, Nom. Av. Neotr., 1873, 139, part; Coues, Key North Amer. Birds, 1872, 273, part; Sharpe, Hand-list, i, 1899, 93, part; Brabourne and Chubb, Birds South America, i, 1912, 21 part (Brit. Guiana; Cayenne).—[*Rallus longirostris*] a. var. *longirostris* Ridgway, Bull. Nutt. Orn. Club, v, July 1880, 139, 140, part (diagnosis; synonymy).—[*Rallus longirostris*] a. *longirostris* Baird, Brewer, and Ridgway, Water Birds North Amer., i, 1884, 358, 360, part; American Ornithologists' Union, Check-list, ed. 3, 1910, 103.—[*Aramus longirostris* Gray, Hand-list, iii, 1871, 59, No. 10418.—[*Limnopardalis longirostris* Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320.—*R[allus] crepitans* (not of Gmelin) Cabanis, in Schomburgk's Reis. Britisch Guiana, iii, 1848, 760.—*Rallus longirostris longirostris* Peters, Check-list Birds of World, ii, 1934, 159.

⁴⁶ *Rallus longirostris crassirostris*.—*Rallus longirostris* (not of Boddaert) Burmeister, Syst. Ueb. Thiere Bras., Aves, ii, 1856, 381; Sclater and Salvin, Proc. Zool. Soc. London, 1868, 444, part (monogr.); Lawrence, Ann. Lyc. Nat. Hist. New York, x, 1871, 19 (Bahia, Brazil; crit.); Coues, Birds Northwest, 1874, 536, part (in synonymy); (?) Forbes, Ibis, 1881, 358 (Pernambuco, Brazil); Sennett, Auk, vi, 1889, 165, part; Koenigswald, Journ. für Orn., 1896, 392 (São Paulo, s. Brazil).—[*Rallus longirostris* Pelzeln, Orn. Bras., iv, Abth., 1870, 458; Coues, Key North Amer. Birds, 1872, 273, part; Sclater and Salvin, Nom. Av. Neotr., 1873, 139, part.—[*Rallus longirostris*] a. *longirostris* Baird, Brewer, and Ridgway, Water Birds North Amer., i, 1884, 358, 360, part.—[*Rallus longirostris*] a. var. *longirostris* Ridgway, Bull. Nutt. Orn. Club, v, 1880, 139, part.—*Rallus crassirostris* Lawrence, Ann. Lyc. Nat. Hist. New York, x, 1871, 19, 20 (Bahia, Brazil; coll. G. N. Lawrence).—[*Rallus*] *crassirostris* Sharpe, Hand-list, i, 1899, 93; Brabourne and Chubb, Birds South America, i, 1912, 21 (Pernambuco to São Paulo, e. Brazil).—*R[allus] longirostris crassirostris* Hellmayr, Nov. Zool., xiii, 1906, 521 (Bahia, Pernambuco, São Paulo, and Iguape, e. Brazil).—[*Rallus*] *longirostris crassirostris* Ihering (H. and R.), Aves Brazil, 1907, 26 (São Paulo; Bahia; Pernambuco).—[*Rallus longirostris*.] subsp. a. *Rallus crassirostris* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 11, (Bahia).—*Rallus longirostris crassirostris* Hellmayr, Field Mus. Nat. Hist. Zool. Ser., xii, No. 18, 1929, 480 (Maranhão).—Peters, Check-list Birds of World, ii, 1934, 159.

jj. Abdomen narrowly whitish in midventral part; flank color extensive.

***Rallus longirostris rhizophorae* (p. 79)**

hh. Sides of neck, lower throat, and breast with a grayish wash.

i. Dark medial portions of feathers of upperparts very dark—dark fuscous to fuscous-black.

j. Margins of dorsal feathers pale olive-gray.

***Rallus longirostris belizensis* (p. 72)**

jj. Margins of dorsal feathers olive or brownish.

k. Flanks dark hair brown.

***Rallus longirostris saturatus* (p. 60)**

kk. Flanks darker and less grayish—dark sepia.

l. Lower throat and breast paler—light pinkish cinnamon heavily washed with grayish.

***Rallus longirostris vafer*, dark phase (p. 67)**

ll. Lower throat and breast darker—light ochraceous-salmon heavily washed with grayish.

***Rallus longirostris scottii* (p. 57)**

ii. Dark medial portions of feathers of upperparts paler—buffy brown to sepia.

j. Medial portions of feathers of upperparts of body very pale—buffy brown to rather light olive-brown.

k. Breast pale ochraceous-buff or light pinkish cinnamon

***Rallus longirostris vafer*, pale phase (p. 67)**

kk. Breast grayish or only lightly washed with ochraceous-buff.

l. Flanks dark, dark hair brown.

m. Bill shorter, 53 mm.

***Rallus longirostris pallidus* (p. 71)**

mm. Bill longer, over 53 mm.

***Rallus longirostris waynei*, light phase (p. 55)**

ll. Flanks paler, dusky drab.

***Rallus longirostris crepitans* (p. 51)**

jj. Medial portions of feathers of upperparts of body darker—dark olive-brown to sepia.

k. Sides of neck decidedly more brownish than grayish.

l. Larger; wings, ♂, averaging 155 mm., female 138 mm.

***Rallus longirostris vafer*, intermediate phase (p. 67)**

ll. Smaller; wing, ♂, averaging 145 mm., female 137 mm.

***Rallus longirostris limnetis* (p. 68)**

kk. Sides of neck decidedly more grayish than brownish.

l. Sides of head below and behind eye paler—light neutral gray.

m. Gray margins of feathers of upperparts very distinct from dark medial areas.

***Rallus longirostris insularum* (p. 59)**

mm. Grayish margins of feathers of upperpart washed with brownish and not very distinct from dark medial areas.

n. Color of lower throat and breast more grayish than buff.

***Rallus longirostris leucophaeus*, dark phase (p. 66)**

nn. Color of lower throat and breast more buff than grayish.

Rallus longirostris cubanus (p. 65)

ll. Sides of head below and behind eye darker—neutral gray.

Rallus longirostris waynei, dark phase (p. 55)

aa. Size smaller, wing less than 120 mm. in length.

b. Scapulars and inner secondaries with pale sandy-brown margins.

Rallus limicola antarcticus (extralimital)⁴⁶

bb. Scapulars and inner secondaries with castaneous-brown margins.

c. Lateral under tail coverts pure white with no black centers or black on inner web----- *Rallus limicola aequatorialis* (extralimital)⁴⁷

cc. Lateral under tail coverts with black centers or black on inner web.

Rallus limicola limicola (p. 90)

RALLUS LONGIROSTRIS CREPITANS Gmelin

NORTHERN CLAPPER RAIL

Adults (sexes alike).—Forehead, crown, occiput, nape, hind neck, scapulars, interscapulars, back, rump, upper wing coverts, and upper tail coverts buffy olive-brown to light sepia, the feathers of the back and rump, the scapulars, interscapulars, upper tail coverts, and some of the inner, lesser, and median upper wing coverts conspicuously margined with neutral gray to olive-gray, the margins most pronounced on the interscapulars, scapulars, and upper back, the brownish centers of the feathers usually darkest (sepia to clove brown in some) on the long scapulars; rest of upper wing coverts dark buffy brown to olive-brown,

⁴⁶ *Rallus antarcticus* King, Zool. Journ., iv, 1828, 95 (Straits of Magellan).—Sc Slater, Proc. Zool. Soc. London, 1867, 333 (Chile).—Sc Slater and Salvin, Nom. Av. Neotr., 1873, 138.—Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 19.—*Rallus rufopennis* Gray, List Grallae in Brit. Mus., 1844, 116.—*Ortygometra antarctica* Gray, Gen. Birds, iii, 1846, 594.—*Rallus uliginosus* Filippi, Arch. Nat., 1858, 83 (Santiago).—*Aramus antarcticus* Gray, Hand-list Birds, iii, 1871, 59, No. 10420.—(?) *Rallus peruvianus* Taczanowski, Orn. Pérou, iii, 1886, 313.—(?) *Rallus limicola peruvianus* Peters, Check-list Birds of World, ii, 1934, 161.—*Rallus limicola antarcticus* Peters, Check-list Birds of World, ii, 1934, 161.

⁴⁷ *Rallus aequatorialis*.—*Rallus virginianus* (not of Linnaeus) Sc Slater, Proc. Zool. Soc. London, 1877, 523, footnote (Lima, Peru); Berlepsch and Taczanowski, Proc. Zool. Soc. London, 1884, 313 (Yoyacsi (w. Ecuador), 9,000 ft.); Taczanowski and Berlepsch, Proc. Zool. Soc. London, 1885, 112 (Reobamba, w. Ecuador); Taczanowski, Orn. Pérou, iii, 1886, 314; Berlepsch and Stolzmann, Proc. Zool. Soc. London, 1892, 399 (Lima, Peru).—*Rallus aequatorialis* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 18, pl. 2, fig. 1 (Bogota, Colombia; San Lucas and Intaj, Ecuador; Lima, Peru; type locality not designated).—[*Rallus*] *aequatorialis* Sharpe, Hand-list, i, 1899, 94; Brabourne and Chubb, Birds South America, i, 1912, 22 (Colombia; Ecuador; Peru).—*Rallus virginianus aequatorialis* Chapman, Bull. Amer. Mus. Nat. Hist., lv, 1926, 174 (Ecuador).—*Rallus limicola aequatorialis* Peters, Check-list Birds of World, ii, 1934, 160.

or Saccardo's umber narrowly edged with slightly paler shade of the same; remiges olive-brown on outer web, slightly darker on the inner web; rectrices dark olive-brown; a stripe from the base of the maxilla to above, but not behind, eye white, often washed with buffy; lores deep mouse gray with a faint brownish tinge; eyelids whitish or pale buffy; cheeks, auriculars, and sides of occiput neutral gray to deep neutral gray, washed lightly with brownish in some specimens, not so washed in others; chin and upper throat white; side of neck and the lower throat grayish hair brown to dusky grayish buffy brown in some specimens, while in others these areas are pale cinnamon-buff slightly clouded with grayish; breast like lower throat in each case, but paler, less grayish (in specimens with grayish hair brown or dusky buffy brown throats the breast is lighter and washed with very pale cinnamon-buff; in birds with pale cinnamon-buff throats the breast is slightly paler and free of the grayish cloudiness); abdomen whitish, to pale buffy white; sides and flanks dusky drab barred with white, the white bars about one-third to one-half the width of the dark interspaces; vent like flanks; thighs like abdomen but washed or barred with dusky drab; longer under tail coverts almost wholly white, the others dusky drab barred with white; under wing coverts Dresden brown to Prout's brown crossed by narrow white bars; iris reddish brown to pale yellow; bill yellow, dusky on culmen and at tip; tarsi and toes grayish with yellow or orange tinge at the tibiotarsal joint.⁴⁸

Juvenal (sexes alike).—Similar to adult above and varying in like fashion in the color of the feather edges, but with the lower back, rump, and upper tail coverts much more uniformly olive-brown to sepia, the margins there being much reduced and obscured; the greater and median upper wing coverts more generally tipped narrowly with whitish and subterminally crossed by a narrow bar of the same; below as in adults, varying in the color of the lower throat and breast, but always with a grayish wash; abdomen more extensively white; sides and flanks mouse gray to deep mouse gray barred irregularly with grayish white, the sides washed with pale cinnamon-buff; thighs white anteriorly, deep mouse gray posteriorly.

Natal down.—Black with a faint greenish gloss on the top of the head and the upperparts generally; washed with dark brown and without any gloss on the underparts.

⁴⁸ Some investigators prefer to segregate specimens of this rail into several color phases instead of considering them individual variations, as follows: 1, A bird with grayish margins to the feathers of the upperparts of the body and with grayish hair brown lower throat; 2, similar above but with cinnamon-buff on the lower throat; 3, olive-gray margins above and a grayish hair-brown lower throat; 4, olive-gray margins above and cinnamon-buff lower throat. However, these phases are less distinct in this race than in some others, and are so similar that I prefer to call them individual variations.

Adult male.—Wing 142.5–159.5 (151.1); tail 55–69 (64.6); exposed culmen 55–69.5 (63.3); tarsus 48–56 (51.7); middle toe without claw 45.5–53.5 (48.8 mm.).⁴⁹

Adult female.—Wing 135.5–160 (146.8); tail 55–69.5 (61.9); exposed culmen 53.5–67 (59.6); tarsus 41–56 (48.1); middle toe without claw 40–52 (45.9 mm.).⁵⁰

Range.—Breeds in salt marshes of the Atlantic coast from Connecticut (Saybrook); New York (Long Island; Staten Island); and New Jersey (Avalon, Atlantic City, Cape May, South Amboy, Brigantine) south to Virginia (Smith Island, Wachapreague, Cobb Island); North Carolina (Pea and Brodie Islands; Hatteras); and South Carolina (Beaufort).

Winters from southern part of its breeding range, chiefly south of New Jersey, occasionally as far north as southern Connecticut and southern Massachusetts; New York (Far Rockaway, Long Island), and south to Georgia (Savannah, St. Marys, and Sapelo Island) and to Florida (Amelia Island).

Casual in Massachusetts (Ipswich, East Orleans, Springfield, Kingston, Boston, Plymouth); New Hampshire (Portsmouth); Vermont (Burlington); and Maine (Popham Beach, Sabattus Pond), and in the interior of New York State (Ossining) and Virginia (Lexington).

Accidental in Bahama Islands; one record from Watling Island.

Type locality.—"In Noveboraco"; restricted type locality, Long Island, N. Y.

[*Rallus*] *crepitans* GMELIN, Syst. Nat., i, pt. 2, 1789, 713 (summer in New York; based on *Clapper Rail* Pennant, Arctic Zool., ii, 1781, 490; Latham, Synopsis Birds, iii, 1785, 229).—LATHAM, Index Orn., ii, 1790, 756.—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).—SHARPE, Hand-list, i, 1899, 94, part.

Rallus crepitans TURTON, Syst. Nat., i, 1806, 430 (New York).—WILSON, Amer. Orn., vii, 1813, 112, part (not pl. 62, fig. 2, which=*R. elegans*).—VIEILLOR, Nouv. Dict. Hist. Nat., xxviii, 1819, 550.—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 333; Geogr. and Comp. List, 1838, 53.—LESSON, Traité d'Orn., 1831, 536.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 201.—AUDUBON, Orn. Biogr., iii, 1835, 33, pl. 214; v, 1839, 570; Synopsis, 1839, 215; Birds Amer., 8vo ed., v, 1842, 165, pl. 310.—GIRAUD, Birds Long Island, 1844, 206.—PUTNAM, Proc. Essex Inst., i, 1856, 229 (Essex County, Mass.).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 747, part (Cape May, N. J.).—BAIRD, Cat. North Amer. Birds, 1859, No. 553, part.—ALLEN, Proc. Essex Inst., iv, 1864, 87 (rare in Massachusetts).—McILWRAITH, Proc. Essex Inst., v, 1866, 93 (Massachusetts).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).—COUES, Proc. Essex Inst., v, 1868, 296 (New England); Amer. Nat., iii, 1870,

⁴⁹ Twenty-one specimens from Massachusetts, New York, New Jersey, Virginia, and North Carolina.

⁵⁰ Seventeen specimens from New Jersey, Virginia, and North Carolina.

- 601 (biography); Proc. Acad. Nat. Sci. Philadelphia, xxiii, 1871, 34 (Fort Macon, N. C.).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—JONES, Amer. Nat., iii, 1869, 48 (Cape Charles, Va.).—BREWER, Proc. Boston Soc. Nat. Hist. xix, 1878, 307 (Boston Harbor, May 1876).—SENNETT, Auk, vi, 1889, 163, 165, part (crit.; diagnosis).—(?) DUEY and KELLOGG, Journ. Cincinnati Soc. Nat. Hist., 1891, 44 (Suspension Bridge, Cincinnati, May 1891).—AMERICAN ORNITHOLOGISTS' COMMITTEE, Auk, vii, 1890, 64; Check-list, ed. 2, 1895, No. 211.—BREWSTER, Auk, xviii, 1901, 136 (East Orleans, Mass., Nov. 30, 1895).—ALLEN (G. M.), Proc. Manchester Inst. Sci. and Arts, iv, 1902, 189 (Portsmouth, N. H.).—KNIGHT, Birds Maine, 1908, 139 (Maine records).—WAYNE, Birds South Carolina, 1910, 36 (winter resident).—EATON, Birds New York, i, 1910, 272, pl. 25.—GRISCOM, Birds New York City Region, 1923, 134 (status in New York City region).—?JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).—URNER, Auk, xli, 1924, 168 (North Beach, Barnegat Bay, N. J.; breeding); Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 65 (Union County, N. J.)—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314 in text.
- R[allus] crepitans* BONAPARTE, Obs. Nom. Wilson's Amer. Orn., 1826, 191.—ROTHSCHILD, Bull. Brit. Orn. Club, xlvi, 1928, 122 (eggs).
- Rallus crepitans crepitans* AMERICAN ORNITHOLOGISTS' UNION, Check List, ed. 3, 1910, 102.—PHILLIPS, Auk, xxviii, 1911, 119 (Ipswich, Mass., Oct. 20, 1910).—FORBUSH, Game-birds, Wild-fowl, and Shore Birds, 1912, 205 (Massachusetts records).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 48.—COOKE, U. S. Dept. Agr. Bull. 123, 1914, 19, fig. 9, map (range and migration routes).—NICHOLS, MURPHY, and GRISCOM, Auk, xxxiv, 1917, 440 (Long Beach, Long Island, 2 specimens, Jan. 28, 1912).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 354, pl. 23 (col. fig.; habits; etc.; New England).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 26 (Washington, D. C.).
- Rallus c [repitans] crepitans* SHELLEY, Auk, li, 1934, 391 (Eel Pond, N. H., 1 seen Sept. 9, 1933).
- Rallus longirostris crepitans* RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 201 (Cat. North Amer. Birds, No. 571); Nom. North Amer. Birds, 1881, No. 571.—MEARNS, Bull. Essex Inst., xiii, 1881, 81 (Hudson Highlands, N. Y., occasional in fall).—COUES, Check-list, ed. 2, 1882, No. 673, part.—LAWRENCE (N. T.), Auk, ii, 1885, 274 (Long Island, winter resident).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, No. 211, part.—BROWNE, Auk, iv, 1887, 344 (Kingston, Mass., Dec. 29, 1885).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 277 (life hist.; monogr.).—MURRAY, Auk, xlvi, 1929, 107 in text (Lexington, Va.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 96.—HOWELL, Florida Bird Life, 1932, 205 (genl.; Florida, winter).—PETERS, Check-list Birds of World, ii, 1934, 157.—MURRAY, Wils. Bull., xlvi, 1935, 65 (near Lexington, Va.).—BURLEIGH, Auk, liv, 1937, 453 (Beaufort, N. C.; common).—PETTINGILL, Auk, lv, 1938, 411 (behavior, nests, etc.; Cobb Island Va.).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 351 (crit., monogr.).
- R[allus] longirostris crepitans* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 359, under figure.—COUES, Key North Amer. Birds, ed. 2, 1884, 672, part.—RIDGWAY, Man. North Amer. Birds, 1887, 137, part.
- [Rallus longirostris] b. var. crepitans* RIDGWAY, Bull. Nutt. Orn. Club, vi, 1880, 140.
- [Rallus longirostris] b. crepitans* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 358, 360.

[*Rallus longirostris*.] subsp. B. *Rallus crepitans* SHARPE, Cat. Birds Brit. Mus. xxiii, 1894, 12, part (Virginia).

[*Rallus*] *longirostris* (not of Boddaert) COUES, Key North Amer. Birds, 1872, 273, part.

Rallus longirostris COUES, Check-list, 1874, No. 465, part; Birds Northwest, 1874, 536, part (in synonymy).—PURDIE, Bull. Nutt. Orn. Club, i, 1876, 22 (Boston Harbor, May 4, 1875).—BAILEY (H. B.), Bull. Nutt. Orn. Club, i, 1876, 27 (Cobb Island, Va., breeding; habits).—BROWN (N. C.), Bull. Nutt. Orn. Club, iv, 1879, 108 (Falmouth, Maine, 3 specimens, Oct. 10, 1866).—SCOTT, Bull. Nutt. Orn. Club, iv, 1879, 226 (Long Beach, N. J., breeding).—BREWSTER, Bull. Nutt. Orn. Club, vi, 1881, 62 (Plymouth, Mass., Oct. 1879).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 358, part (excl. references under *a. longirostris*, *c. saturatus*, and *d. caribaeus*).

RALLUS LONGIROSTRIS WAYNEI Brewster

WAYNE'S CLAPPER RAIL

Adult, light phase (sexes alike).—Similar to *Rallus longirostris crepitans* but with the sides and flanks darker—dark hair brown, instead of dusky drab. Varies like *crepitans* in the color of the margins of the dorsal feathers and in the grayness or cinnamon-pink of the lower throat and breast.

Adult, dark phase (sexes alike).—Similar to the light phase but with the centers of the dorsal feathers darker—dark sepia to fuscous, and the lower throat and breast, when gray, duskiest and not paling on the breast; when cinnamon-buff, slightly deeper and brighter.

Juvenal (sexes alike).—Similar to the adult (either phase according to the individual specimen), but the feathers of the lower back and rump with no or only inconspicuous margins, making these areas look uniformly dark; the outer median and greater upper wing coverts tipped and subterminally crossed by a narrow white line (this character is somewhat irregular and variable); the sides and flanks grayer and paler than in adults and inconspicuously and irregularly crossed with whitish bars, not producing the regularly barred appearance of the adult flanks; abdomen more extensively white.

Natal down.—Like that of *Rallus longirostris crepitans*, but the whole upperpart more strongly glossed with dark greenish, and underparts dull black, not brownish.

Adult male.—Wing 135–152 (145.1); tail 57.5–72 (61.9); exposed culmen 54–67.5 (62.2); tarsus 46.5–53.5 (48.2); middle toe without claw 40–48 (45.4 mm.).⁵¹

⁵¹ Fifteen specimens, including the type, from South Carolina, Georgia, and Florida.

Adult female.—Wing 129.5–146.5 (138.4); tail 56–63.5 (59.9); exposed culmen 53–62.5 (58.7); tarsus 43.5–50 (46.7); middle toe without claw 41.5–47.5 (44.4 mm.).⁵²

Range.—Resident in coastal marshes from South Carolina (Mount Pleasant; Charleston; Frogmore) south to Georgia (Savannah; St. Catherines Island; Blackbeard Island; Darien; St. Simon Island; Cumberland; St. Marys; and St. Germain) and Florida (along the northeast coast from Amelia Island to Merritt Island—Amelia Island, Matanzas Inlet, New Smyrna; Dummitt Creek, Palsiesier Creek, and northern Brevard County).

Type locality.—St. Marys, Camden County, Ga.

- ? *Rallus crepitans* (not of Gmelin?) TAYLOR, Ibis, 1862, 129 (Florida).—ALLEN, Bull. Mus. Comp. Zool., ii, 1871, 357 (e. Florida).
- Rallus crepitans* (not of Gmelin) COUES, Proc. Boston Soc. Nat. Hist., xii, 1868, 124 (South Carolina).—SENNETT, Auk, vi, 1889, 163, 165, part.—PHILIPP, Auk, xxvii, 1910, 315 (Charleston Harbor, str., S. C., breeding).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 2, 1895, 211, part.
- [*Rallus longirostris*] b. var. *crepitans* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 140, part.
- Rallus longirostris crepitans* RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 201 (Cat. North Amer. Birds, No. 571), part; Nom. North Amer. Birds, 1881, No. 571, part.—COUES, Check List, ed. 2, 1882, No. 673, part.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, No. 221, part.
- R[allus] longirostris crepitans* COUES, Key North Amer. Birds, ed. 2, 1884, 672, part.—RIDGWAY, Man. North Amer. Birds, 1887, 137, part.
- [*Rallus longirostris*] b. *crepitans* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 358, 360, part.
- [*Rallus longirostris*] subsp. B. *Rallus crepitans* SILARPE, Cat. Birds Brit. Mus., xxiii, 1894, 12, part (Georgia).
- [*Rallus*] *longirostris* (not of Boddaert) COUES, Key North Amer. Birds, 1872, 273, part.
- Rallus longirostris* COUES, Check-list, 1874, No. 465, part; Birds Northwest, 1874, 536, part (in synonymy).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 358, part.
- Rallus crepitans waynei* BREWSTER, Proc. New England Zool. Club, i, 1899, 50 (St. Marys, Camden County, Ga.; coll. Wm. Brewster).—? BISHOP, Auk, xviii, 1901, 265 (Pea Island, N. C.; fresh colors of nude parts [= *crepitans*?]).—WAYNE, Birds South Carolina, 1910, 36 (resident along coast; habits).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 3, 1910, 102.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 21, fig. 9, map (range and migr. routes).—ERICHSEN, Auk, xxxvi, 1919, 384 (Liberty County, Ga., breeding); Wils. Bull., xxxiii, 1921, 74 (Chatham County, Ga., breeding; habits).—HOLT and SUTTON, Ann. Carnegie Mus., xvi, 1926, 424 (habits, s. Florida).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 167 (type specimen in Mus. Comp. Zool., crit.).
- Rallus longirostris waynei* BAILEY, Birds Florida, 1925, 41, pl. 23 (col. fig.; distr.; Florida).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 290 (life hist.; monogr.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 96.—HOWELL, Florida Bird Life, 1932, 204 (genl.; distr.; Florida).—PETERS,

⁵² Sixteen specimens, from South Carolina, Georgia, and Florida.

Check-list Birds of World, ii, 1934, 157.—OBERHOLSER, Proc. U. S. Nat. Mus. lxxxiv, 1937, 349 (monogr.; crit.; meas.; breeding north to Santee River, S. C.; s. to Merritt Island, Fla.); 351, 352 in text.

RALLUS LONGIROSTRIS SCOTTII Sennett

FLORIDA CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris saturatus*, dark phase, but darker, the centers of the feathers of the upperparts of the body fuscous to dark fuscous-black, the edges either light brownish olive to brownish olive or gull gray with a very faint olive tinge, thus producing two distinct color phases; sides of neck, the lower throat, breast, and upper abdomen darker—light pinkish cinnamon to light tawny-olive, more or less clouded with grayish, the clouding generally but not always restricted to the throat and upper breast and sides of the neck; sides and flanks olive-brown to sepia, the white bars generally somewhat narrower than in *saturatus*; the darkest above of all the races of the species.⁵³

Adult male (type, Amer. Mus. Nat. Hist. No. 35222, Tarpon Springs, Fla., Dec. 27, 1886; W. E. D. Scott).—Above brownish black, quite uniform on pileum and hind neck, but on back and scapulars streaked with dull olive-grayish, these streaks (edgings of feathers) broader on scapulars; rump and upper tail coverts dull sepia-brown, broadly streaked or striped with dull black; upper wing coverts warm bister-brown, darker centrally, these darker centers more distinct on innermost coverts; anterior edge of wing (narrowly) white; primaries uniform dusky brown; lores dusky, bordered above by a line of pale brownish buff along each side of forehead; a broad post-ocular stripe, extending to nape, and an indistinct stripe from rictus to ears, dull plumbeous or mouse gray, the two areas separated by a narrower ill-defined dusky stripe from lens beneath eyes and along upper edge of auriculars; chin and throat dull white, the latter bordered laterally and posteriorly with pale fawn color, this changing on foreneck to dull grayish olive or hair brown, becoming still grayer on sides of head, the middle of chest and breast full fawn color; sides and flanks sepia brown, barred with white, these bars averaging about 0.05 mm. wide, the interspace about 0.30–0.35 mm.; axillars

⁵³ It has been suggested that four color phases may be recognized: 1, With brownish edges to the dorsal feathers and with the neck and breast heavily washed with gray; 2, the same but with little or no gray on the neck and breast; 3, with grayish edges to the dorsal feathers and with the neck and breast washed with gray; 4, the same as No. 3 but with little or no grayish wash on neck and breast. It seems simpler and truer to recognize two phases based on the color of the edges of the dorsal feathers, as most birds are definitely one or the other, while the ventral grayness varies imperceptibly from one extreme to the other.

and under wing coverts similar, but white bars much narrower; middle of abdomen and anal region dull pale buffy, the feathers brownish gray beneath . . .; under tail coverts dusky, broadly barred or banded with white, the anterior feathers much mixed with cinnamon-buff; upper mandible dusky brown, lower pale brown (in dried skin); iris "red-brown"; "legs and feet horn-brown" (R. R.).

Juvenal (sexes alike).—Like the adult of corresponding phase but with the lower back and rump more uniformly dark fuscous-black, the margins being greatly reduced or absent; the lower throat, sides of neck, breast, and most of abdomen, sides, flanks, and thighs grayish buffy brown, washed with ochraceous-buff on the breast and neck; the flanks only slightly and irregularly barred with white; thighs indistinctly barred with grayish buff; chin and upper throat clouded with grayish ochraceous-buff.

Natal down.—Jet black with a greenish gloss, above and below; no brownish on abdomen, but the gloss very faint there.

Adult male.—Wing 135-155 (146.0); tail 56.5-72.0 (63.3); exposed culmen 56-66 (61.6); tarsus 42-55.5 (49.8); middle toe without claw 39.5-49 (45.5 mm.).⁵⁴

Adult female.—Wing 128.5-145 (137); tail 54.5-63.5 (59.2); exposed culmen 51.5-60 (55.9); tarsus 42-51 (45.6); middle toe without claw 37-45 (41.9 mm.).⁵⁵

Range.—Resident along the Gulf coast of Florida from Pensacola south to Cape Sable (St. Marks, mouth of Suwannee River, Cedar Keys, Anclote Keys, Tarpon Springs, Clearwater, Tampa Bay, Charlotte Harbor, Westbay, Horseshoe Point, Goose Neck Creek, Caloosahatchie River, Port Richey, Punta Gorda, Chassahowitzka Bay, to Flamingo, West Palm Beach, and Fort Myers); and on the east coast north to Jupiter.

Occasional as a wanderer (not breeding) in extreme southwestern Alabama (Perdido Bay).

Type locality.—Tarpon Springs, Fla.

Rallus longirostris scottii SENNETT, Auk, v, 1888, 305 (Tarpon Springs, w. Florida; Coll. Amer. Mus. Nat. Hist.).—CHAPMAN, Auk, v, 1888, 394.—SCOTT, Auk, vi, 1889, 153 (Cedar Keys to Charlotte Harbor, w. Florida; habits; color variations).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Suppl. and Check-list, 1889, 6 (No. 211b).—RIDGWAY, Man. North Amer. Birds, ed. 2, 1895, 587.—HOWELL, Birds Alabama, 1924, 88; ed. 2, 1928, 88 (distr.; habits; Alabama).—PETERS, Check-list Birds of World, ii, 1934, 157.—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 346 (monogr.; crit.; meas.; Florida from Cape Sable n. to Jupiter and Pensacola; casual to sw. Alabama).

Rallus longirostris scottii BAILEY, Birds Florida, 1925, 41, pl. 13 (col. fig.; distr.; Florida).—CHRISTY, Auk, xlv, 1928, 287 in text (shore of Biscayne Bay,

⁵⁴ Twenty-three specimens from Florida.

⁵⁵ Eighteen specimens from Florida and Alabama.

Fla.)—BENT, U. S. Nat. Mus. Bull., 135, 1927, 287 (monogr.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 96.—HOWELL, Florida Bird Life, 1932, 203 (genl.; Florida).

Rallus scottii SENNETT, Auk, vi, 1889, 165 (crit.), 166 (diagnosis).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, vii, 1890, 65 (2d. Suppl. Check-list, 1890, No. 211.1); Check-list, ed. 2, 1895, No. 211.1.—BREWSTER and CHAPMAN, Auk, viii, 1891, 133, 135, 137 (Suwannee River, nw. Florida; crit.).—SCOTT, Auk, ix, 1892, 212 (Caloosahatchie River regions).

Rallus scotti SHARPE, Hand-list, i, 1899, 94.

Rallus crepitans scotti AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 3, 1910, 102; ed. 4, 1931, 96.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 20, fig. 9, map (range).—WILLIAMS (R. W.), Auk, xxxvi, 1919, 51 (Goose Creek, nw. Florida, Nov., abundant).—FARGO, Wils. Bull., xxxviii, 1926, 147 (Pinellas and Pasco Counties, Fla.).—BENT and COPELAND, Auk, xlv, 1927, 377 (coast of Florida).—GANDER, Auk, xlvi, 1929, 106 in text (habits).

(?) *Rallus crepitans* (not of Gmelin?) SCOTT, Auk, ix, 1892, 212 (Caloosahatchie River, rare in winter).

Rallus longirostris, subsp. *Rallus saturatus* (not *Rallus longirostris saturatus* Ridgway) SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part (Tarpon Springs, w. Florida).

Rallus longirostris saturatus AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, No. 211a, part.

RALLUS LONGIROSTRIS INSULARUM W. S. Brooks

BROOKS'S CLAPPER RAIL

Adult (sexes alike).—Similar to that of *Rallus longirostris waynei*, pale phase, but smaller, and with the sides of the neck more grayish, the grayish tone more noticeable than the brownish; the breast less washed with grayish, and the flanks averaging paler (but variable in this respect), usually as in *crepitans* but sometimes as in *waynei*; the edges of the feathers of the upperparts in all specimens examined are gray; whether an olive or brownish-gray phase occurs is not clear; the dark centers of these feathers vary as in *waynei*; iris brownish; bill blackish on culmen, light brown below becoming more reddish at base and at gape; tarsi and toes grayish.

Juvenal.—Similar to that of *Rallus longirostris waynei*.

Natal down.—Not recorded.

Adult male.—Wing 140–148 (144.8); tail 51–64 (57.5); exposed culmen 59–615 (60.6) tarsus 47–54 (50.4); middle toe without claw 45–45.5 (45.2 mm.).⁵⁶

Adult female.—Wing 129.5–136.5 (133.8); tail 57–60 (58); exposed culmen 53–59 (55); tarsus 44–47 (45.1); middle toe without claw 39–42 (40.5 mm.).⁵⁷

Range.—Resident and confined to the Florida Keys wherever mangrove swamps occur (Torch Key; Big Pine Key; Key Largo; Rac-

⁵⁶ Four specimens from Florida Keys.

⁵⁷ Four specimens from Florida Keys.

coon Key; New Found Harbor; Key West; Riding Key; West Cudjoes Key; Boca Grande).

Type locality.—Big Pine Key, Fla.

(?) *Rallus crepitans scottii* FOWLER, Auk, xxiii, 1906, 398 (West Cudjoes and Riding Keys, s. Florida).

(?) *Rallus longirostris crepitans* SCOTT, Auk, vi, 1889, 153 (Anclote Keys and Key West, Fla.).

Rallus longirostris insularum BROOKS (W. S.), Proc. New England Zool. Club, vii, 1920, 53 (Big Pine Key, s. Florida).—OBERHOLSER, Auk, xxxviii, 1921, 265.—BAILEY, Birds Florida, 1925, 42, pl. 23 (col. fig.; distr.; Florida).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 167 (type specimen in Mus. Comp. Zool., crit.).—AMERICAN ONITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 96.—HOWELL, Florida Bird Life, 1932, 205 (genl.; Florida).—PETERS, Check-list Birds of World, ii, 1934, 157.—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 348 (monogr.; crit.).

Rallus longirostris helius BARTSCH, Year Book 18, Carnegie Inst. Wash., for 1919 (1920), 210 (Florida Keys).—BROOKS, Proc. New England Zool. Club, vii, 1920, 54 in text.—OBERHOLSER, Proc. Biol. Soc. Washington, xxxiii, 1920, 33 (Sixth Key in Newfoundland Harbor group, sw. of Big Pine Key, s. Florida; coll. U. S. Nat. Mus.); Auk, xxxviii, 1921, 265.

RALLUS LONGIROSTRIS SATURATUS Ridgway

LOUISIANA CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris crepitans* but smaller and much darker and browner, more cinnamomeous on breast. There are two main phases differing in the color of the dark centers of the feathers of the upper parts of the body.

Adult, pale phase (sexes alike).—Centers of dorsal feathers dark buffy brown to pale olive-brown, the edges varying from nearly pure deep gull gray to olive-gray and brownish olive-gray; flanks darker than in *crepitans*—hair brown to dark hair brown, with the white bars averaging a little wider; lower throat and breast usually definitely pale light pinkish cinnamon, not chiefly grayish, the sides of the neck and the upper breast washed with grayish (rarely birds occur that are as gray as *crepitans* in these areas), supraloral stripe averaging whiter than in *crepitans*; iris orange; culmen dusky, gonys flesh color, the sides of bill reddish yellow; tarsi and toes pale bluish horn color.

Adult, dark phase (sexes alike).—Like the above but darker, the centers of the feathers of the upper parts of the body as in the dark phase of *Rallus longirostris waynei*, the edges varying as in the above; flanks dark hair brown with a slight sepia tinge; lower throat, breast, and upper abdomen pale ochraceous-buff with a cinnamomeous tinge.

Juvenal (sexes alike).—Like the adults of corresponding phase but darker, the edges lacking on the feathers of the lower back and

rump; the outer upper wing coverts subterminally barred and tipped very narrowly with white; in general like the juvenal of *crepitans* but darker and more richly colored.

Natal down.—Above deep black with a greenish gloss; below brownish black with a very faint greenish gloss, which is lacking on the middle of the abdomen, which is the brownest part.

Adult male.—Wing 140.5–163 (150.4); tail 58–68 (63.6); exposed culmen 54–69 (61.7); tarsus 47–55 (50.9); middle toe without claw 43–52.5 (47.6 mm.).⁵⁸

Adult female.—Wing 131–154 (141.3); tail 56–66 (60.9); exposed culmen 55.5–64 (59.9); tarsus 42–52.5 (47.7); middle toe without claw 37–47 (43.9 mm.).⁵⁹

Range.—Resident in the salt marshes of the Gulf coast from southwestern Alabama (Perdido Bay, Grande Batture Island, Bayou La Batre) west through Mississippi (Biloxi, Bay St. Louis, Gulfport); Louisiana (New Orleans, Grand Island, Vermillion Bay, Octave Pass and Main Pass in the Mississippi Delta, Timbalier Island, Petite Anse Island, Raccoon Pass, Lake Borgne); and Texas (Galveston, Port Lavaca, Corpus Christi, Tarpon, Rockport, Peat Island in Laguna Madre, Sabine, southeast of Houston, Brownsville).

Type locality.—The Rigolets lighthouse between Lake Pontchartrain and Lake Borgne, La.

[*Rallus longirostris*] d. var. *saturatus* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 140 (Lake Borgne, La.; type now in coll. Brit. Mus.; ex "*Rallus longirostris saturatus* Henshaw, Ms.").

Rallus longirostris saturatus RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 201 (Cat. North Amer. Birds, No. 571a); Nom. North Amer. Birds, 1881, No. 571a.—COUES, Check-list, ed. 2, 1882, No. 675.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, No. 211a, part (Louisiana); ed. 4, 1931, 96.—GREGORY, Auk, xxxviii, 1921, 455 (Gulfport, Harrison County, Miss., Jan. 18, 1919).—HOWELL, Birds Alabama, 1924, 86; ed. 2, 1928, 86 (distr.; habits; Alabama).—BAILEY, Birds Florida, 1925, 41 pl. 23 (col. fig.; distr.; Florida).—[ARTHUR], Birds Louisiana, 1931, 236 (descr.; status in Louisiana).—BAILEY and WRIGHT, Wils. Bull. xliii, 1931, 194 (Snake Island; Alexander Island; Chenier au Tigré, La.).—PETERS, Check-list Birds of World, ii, 1934, 158.—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 344 (monogr.; crit.; permanent resident from sw. Alabama west to s. Mississippi, s. Louisiana and s. c. Texas; casual to w. Florida); Bird Life Louisiana, 1938, 200 (common in Gulf coast marshes; many locality records).

R[*allus*] l[*ongirostris*] *saturatus* COUES, Key North Amer. Birds, ed. 2, 1884, 672.

R[*allus*] *longirostris saturatus* RIDGWAY, Man. North Amer. Birds, 1887, 137, part (Louisiana).

[*Rallus longirostris*] c. *saturatus* BAIRD, BREWER, and RIDGWAY, Water Birds, North Amer., i, 1884, 359.

⁵⁸ Twenty-three specimens from Louisiana and Texas.

⁵⁹ Sixteen specimens from Louisiana, Mississippi, and Texas.

- Rallus longirostris* (not of Boddaert) SENNETT, Bull. U. S. Geol. and Geogr. Surv., iv, No. 1, 1878, 61 (Galveston, Tex., Feb. 28).—? WILLIAMS, Auk, iv, 1938, 64 (upper Texas coast).
- Rallus longirostris* subsp. ? BROOKS, Auk, 1, 1933, 62 (Port Isabel, Tex.; meas.).
- [*Rallus longirostris*] d. *saturatus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 360 (diagnosis).
- Rallus longirostris* var. *saturatus* REICHENOW and SCHALOW, Journ. für Orn., xxix, 1881, 72 (reprint of orig. descr.).
- [*Rallus longirostris*.] Subsp. ♂ *Rallus saturatus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part, pl. 1 (Lake Borgne, La.).
- Rallus crepitans saturatus* SENNETT, Auk, vi, 1889, 164 (crit.), 166 (diagnosis).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, vii, 1890, 65; Check-list, ed. 2, 1895, No. 211a; ed. 3 1910, p. 102.—BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 93 (salt marshes of Louisiana, rare resident).—BEYER, ALLISON, and KOPMAN, Auk, xxv, 1908, 176 (coast of Louisiana and up Mississippi River to upper quarantine station).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 20 fig. 9, map (range).—SIMMONS, Auk, xxxi, 1914, 363 [-384] (coast prairies of Texas se. of Houston; historical; crit.; habits, etc.).—BENT, Wils. Bull., xxxvi, 1924, 10 (coastal marshes from Galveston Bay to Aransas Pass, se. Texas); U. S. Nat. Mus. Bull. 135, 1927, 283 (life hist. monogr.).—BAILEY, Auk, xlv, 1928, 277 (winter in Chenier au Tigre, La.).
- Rallus saturatus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, pl. 1.
- [*Rallus*] *saturatus* SHARPE, Hand-list, i, 1899, 94.
- Rallus longirostris crepitans* (not *R. crepitans* Gmelin) FISHER (A. K.), Auk, v, 1888, 108 (Grand Isle, La., breeding).
- [*Rallus longirostris*.] Subsp. β *Rallus crepitans* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 12, part (Corpus Christi, Tex.).
- (?) *Rallus crepitans* BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 93 (salt marshes of Louisiana, resident).
- Rallus longirostris caribæus* (not of Ridgway) SENNETT, Auk, v, 1888, 319 (Galveston and Corpus Christi, Tex.); vi, 1889, 163 (crit.), 164 (diagnosis).—AMERICAN ORNITHOLOGISTS' UNION, Abridged Check-list, 1889, No. 211c: Check-list, ed. 2, 1895, No. 211.2, part (Texas localities); ed. 3, 1910, p. 103, part (Texas localities).—RIDGWAY, Man. North Amer. Birds, ed. 2, 1896, 587, part (Galveston and Corpus Christi, Tex.).
- Rallus longirostris caribæus* COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22 part (range).

RALLUS LONGIROSTRIS CORYI Maynard

BAHAMA CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris crepitans* but slightly paler above, the crown, hind neck, and the centers of the feathers of the back, interscapulars, scapulars, etc., very slightly paler, more olive, less brownish—light brownish olive, and the margins, in comparable plumages, slightly broader and paler—pallid neutral gray; the sides of neck, lower throat, breast, and upper abdomen paler—pale pinkish buff with a faint wash of light pinkish cinnamon; middle of abdomen cartridge buff; flanks averaging slightly paler, more grayish, less brownish than in *crepitans*, but occasionally as dark as in that form; "iris reddish brown; bill orange

brown, culminal ridge and tip blackish; feet pale brownish orange or olive-gray."

Juvenal male (no young female seen, but probably similar).—Similar to that of *Rallus longirostris crepitans*, but generally paler, the upperparts differing as do the respective adults; abdomen white, the dusky mottling and clouding restricted to the sides and flanks; only the lower throat and upper breast with a faint pale pinkish buff wash, laterally suffused with light grayish.

Natal down.—Unrecorded.

Adult male.—Wing 137–150 (146); tail 53.5–67 (61.3); exposed culmen 53–65 (59.5); tarsus 45–53.5 (49.4); middle toe without claw 44.5–49.8 (47.8 mm.).⁶⁰

Adult female.—Wing 128.5–141 (134.7); tail 54–62 (57.5); exposed culmen 52–60.5 (55.3); tarsus 42–50 (46.9); middle toe without claw 39.5–45 (43.2 mm.).⁶¹

Range.—Resident in the mangrove swamps of the Bahama Islands (Andros Island; Watling Island; Berry Island; New Providence; Abaco Island; Ragged Island; Eleuthera Island).

Type locality.—Island off the south shore of Andros Island, Bahamas.

Rallus crepitans (not of Gmelin) BRYANT, Proc. Boston Soc. Nat. Hist., vii, 1859, 122 (Nassau?, Bahamas).—ALBRECHT, Journ. für Orn., ix, 1861, 56 (Bahamas).

[*Rallus*] *longirostris crepitans* CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29 (Bahamas).

Rallus longirostris crepitans CORY, Auk, v, 1888, 53 (Bahama references); Birds West Indies, 1889, 254 (Bahamas).

Rallus longirostris (not of Boddaert) CORY, Birds Bahama Islands, 1880, 176 (New Providence).

Rallus corrius [typog. error] MAYNARD, Amer. Exch. and Mart, Jan. 15, 1887, 69.

Rallus coryi MAYNARD, Amer. Exch. and Mart, Feb. 5, 1887, 69 (Andros Island, Bahamas; coll. C. J. Maynard); Contr. Sci., i, 1890, 39.—CORY, Auk, v, 1888, 53 (Andros Island); viii, 1891, 294 (New Providence Island), 295 (Berry Islands); Birds West Indies, 1889, 254 (Andros Is.); Introd. to Rev. Ed. Birds Bahamas, 1890, no paging; Cat. West Indian Birds, 1892, 137.—SENNETT, Auk, vi, 1889, 165 (diagnosis).—NORTHROP, Auk, viii, 1891, 77 (Andros Island); descr. eggs).—CHAPMAN, Amer. Nat., xxv, 1891, 530 (Andros Island).—BONHOTE, Ibis, 1903, 308 (Andros Island; crit.).—ALLEN (G. M.), Auk, xxii, 1905, 122 (Great Abaco Island).—ALLEN, Auk, viii, 1891, 77, in text (Andros Island; crit.).

[*Rallus*] *coryi* SHARPE, Hand-list, i, 1899, 93.

Rallus longirostris coryi CORY, Cat. West Indian Birds, 1892, 9, 91, 126, 137 (Abaco; Berry Islands; New Providence; Abaco.).—PETERS, Check-list Birds of World, ii, 1934, 158.

R[*allus*] [*ongirostris*] *coryi* BOND, Birds West Indies, 1936, 87, 88 in text (Bahama Islands).

⁶⁰ Seven specimens, including the type.

⁶¹ Ten specimens.

Rallus crepitans coryi RILEY, Auk. xxii, Oct. 1905, 352; in Shattuck, Bahama Islands, 1905, 360 (New Providence, Andros, and Eleuthera Islands; habits; crit.).—TODD and WORTHINGTON, Ann. Carnegie Mus., vii, 1911, 412 (meas., crit.; colors of soft parts).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22 (range).

[*Rallus longirostris*] subsp. γ *Rallus caribæus* (not *Rallus longirostris caribæus* Ridgway) SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part (in synonymy; Bahamas).

Rallus longirostris corrius OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 329 (monogr., crit.; meas.; permanent resident in central and northern Bahama Islands, north to Abaco Island and Berry Islands; west to Andros Island and the Keys nearby; south to Ragged Island; east to Watling Island, New Providence Island, and Eleuthera Island).

RALLUS LONGIROSTRIS CARIBÆUS Ridgway

CARIBBEAN CLAPPER RAIL

Adult (sexes alike).—Similar to that of *Rallus longirostris crepitans* but generally more rufescent above and below; the top of head and back of neck and the centers of the feathers of the upperparts of the body darker—snuff brown to sepia, the edges of the latter grayish tawny olive; chin and throat suffused with pale buffy; lower throat, breast, and upper middle abdomen somewhat more ochraceous-cinnamon; flanks as in the palest specimens of *crepitans*.

Juvenal.—Not recorded.

Natal down.—Not recorded.

Adult male.—Wing 148.5–150; tail 60–66.5; exposed culmen 58.5–62; tarsus 53–55; middle toe without claw 48–50 mm.⁶²

Adult female.—Wing 142.5; tail 61.5; exposed culmen 55; tarsus 49; middle toe without claw 44 mm.⁶³

Range.—Resident in and confined to the mangrove swamps of Jamaica (Great Salt Pond; near Spanish Town; Passage Fort; Crabpond).

Type locality.—Near Spanish Town, Jamaica.

Rallus longirostris (not of Boddaert) GOSSE, Birds Jamaica, 1847, 364.—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 444, part.

R[allus] longirostris NEWTON (A. and E.), Handb. Jamaica, 1881, 114.

Rallus crepitans (not of Gmelin) SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—ALBRECHT, Journ. für Orn., x, 1862, 206 (Jamaica).

?*Rallus elegans* (not of Audubon) MARCH, Proc. Acad. Nat. Sci. Philadelphia, 1864, 69 (Jamaica).

[*Rallus longirostris*] c. var. *caribæus* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 140, part (meas.).

[*Rallus longirostris*] d. *caribæus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 359, part (synonymy).

⁶² Two specimens.

⁶³ One specimen.

- Rallus longirostris* c. *caribæus* BAIRD, BREWER and RIDGWAY, Water Birds North Amer., i, 1884, 360, part (Jamaica).
- Rallus longirostris* var. *caribæus* REICHENOW and SCHALOW, Journ. für Orn., xxix, 1881, 72 (reprint of orig. descr.).
- [*Rallus*] *longirostris caribæus* CORY, List Birds West Indies, 1885, and revised ed., 1886, 29, part ("Antilles").
- Rallus longirostris caribæus* CORY, Auk, v, 1888, 53 (Jamaican references); Birds West Indies, 1889, 254, part (Jamaica); Cat. West Indian Birds, 1892, 9, 91, part (Jamaica).—SENNETT, Auk, v, 1888, 319, part.—SCOTT, Auk, ix, 1892, 11 (Jamaica; nesting).—FIELD, Auk, xi, 1894, 122 (Jamaica; habits; descr. nest).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 2, 1895, No. 211.2, part ("West Indies"); ed. 3, 1910, p. 103, part ("West Indies").—BANGS and KENNARD, Handb. Jamaica, 1920, 689 (Jamaica).—WETMORE, Proc. Biol. Soc. Wash., xli, 1928, 122.—DANFORTH, Auk, xiv, 1928, 482 (near Kingston, Jamaica).
- Rallus longirostris caribæus* COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22, part (range).—PETERS, Check-list Birds of World, ii, 1934, 158.—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 334 (monogr.; crit.)
- R[allus] l[ongirostris] caribæus* BOND, Birds West Indies, 1936, 87, part (Jamaica).
- [*Rallus longirostris*] subsp. γ *Rallus caribæus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part (Jamaica).
- Rallus caribæus* NICOLL, Ibis, 1904, 577 (Kingston, Jamaica).—SCLATER, Rev. Cat. Birds Jamaica, 1910, 614 (19 in reprint).
- [*Rallus*] *caribæus* SHARPE, Hand-list, i, 1899, 94, part ("Greater and Lesser Antilles").

RALLUS LONGIROSTRIS CUBANUS Chapman

CUBAN CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris insularum*, but with the margins of the feathers of the upperparts not pure gray but olive-gray to brownish olive to olive-brown, not pronouncedly or very strikingly distinct from the darker olive-brown to sepia to deep fuscous centers. Two color phases—a light one with dark olive-brown centers to dorsal feathers and a dark phase with these centers. Darker generally above and below than *Rallus longirostris caribæus*.

Juvenal (sexes alike).—Darker than adult of corresponding phase; forehead, crown, occiput, hind neck, and entire upperparts of body dull sepia in light phase and dull chaetura black in dark phase; in the light phase the interscapulars, scapulars, and feathers of upper back with somewhat indistinct olive-gray edges; in the dark phase the edges narrower and duskier; sides of neck, lower throat, side of breast, and flanks grayer than adult in light phase, blacker in dark phase (between dark hair brown and chaetura drab): the flanks only slightly and irregularly barred with whitish, feathers of the sides, flanks, and thighs frequently tipped with darker producing a veiled spotting or incomplete, broken barring.

Natal down.—Unrecorded.

Adult male.—Wing 142.5–159 (149.0); tail 57–67 (61.8); exposed culmen 58–66 (62.7); tarsus 52.5–55.5 (54.9); middle toe without claw 45–51.5 (48.2 mm.).⁶⁴

Adult female.—Wing 128–139.5 (132.6); tail 49–65 (58.5); exposed culmen 57–61 (59); tarsus 48–54 (52); middle toe without claw 43.5–45.5 (44.8 mm.).⁶⁵

Range.—Resident and common in the coastal mangrove swamps of Cuba (Trinidad; Mariel; Preston; Manati; Guantanamo; Wharf Los Canos Estate; Casilda; near Nipe Bay).

Type locality.—Casilda, coast of southern Cuba.

Rallus longirostris (not of Boddaert) D'ORBIGNY, in La Sagra's Hist. Nat. Cuba, Ois., 1839, 260, pl. 31, fig. 5 (Spanish ed., 1839, 179).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 444 (Cuba).—GUNDLACH, Orn. Cubana, 1895, 241.

Rallus crepitans (not of Gmelin) CABANIS, Journ. für Orn., 1856, 427 (Cuba).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).—GUNDLACH, Journ. für Orn., 1875, 356 (Cuba; habits); Contr. Orn. Cubana, 1876, 189.

R[allus] crepitans GUNDLACH, Anal. Hist. Nat., ii, 1874, 165 (Cuba).

[*Rallus*] *crepitans* GUNDLACH, Journ. für Orn., 1861, 342 (Cuba); Repert. Físico-Nat. Cuba, i, 1865–66, 361 (Cuba).

Rallus longirostris caribæus (not of Ridgway) CORY, Auk, v, 1888, 53, part (Cuban references); Birds West Indies, 1889, 254, part (Cuban references).

Rallus longirostris caribæus PETERS, Check-list Birds of World, ii, 1934, 158 part.

R[allus] [ongirostris] caribæus BOND, Birds West Indies, 1936, 87, part (Cuba).

Rallus longirostris cubanus CHAPMAN, Bull. Amer. Mus. Nat. Hist., iv, 1892, 288 (Casilda, s. coast of Cuba; coll. Amer. Mus. Nat. Hist.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22 (Cuba).—BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 53 (distr.).—DANFORTH, Wils. Bull., xl, 1928, 179 (near Santiago de Cuba, Cuba).—OBERHOLSER, Proc. U. S. Nat. Mus. lxxxiv, 1937, 331 (monogr.; crit.).

Rallus cubanus SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 329.

[*Rallus*] *cubanus* SHARPE, Hand-list, i, 1899, 93.

RALLUS LONGIROSTRIS LEUCOPHAEUS Todd

ISLE OF PINES CLAPPER RAIL

Adult (sexes alike), *pale phase*.—Similar to *Rallus longirostris cubanus* and *Rallus longirostris waynei* on the upper parts but much paler below; the throat, breast, and abdomen being dull white washed with pale cinnamon-buff on the upper breast and with a mixture of the same and pale gray on the sides of the throat; paler and whiter than *Rallus longirostris coryi*; flanks grayer and slightly paler than in *cubanus*.

Adult female, dark phase (no males seen).—Differs from the pale phase only on the underparts; entire lower throat, sides of neck, the breast and the upper abdomen heavily washed with light grayish olive suffused with very pale avellaneous to pale pinkish buff. In this

⁶⁴ Eight specimens.

⁶⁵ Four specimens.

plumage this race differs from the Cuban birds only in that the grayish predominates over the buff on the breast and throat in former and the opposite is true in the latter.⁶⁶

Juvenal.—Similar to the pale juvenals of *Rallus longirostris cubanus* but whiter on the abdomen and slightly more grayish, less pinkish buff on the sides of neck and the lower throat.

Natal down.—Unrecorded.

Adult male.—Wing 135–155 (146); tail 57.5–67.5 (61.8); exposed culmen 60.5–66 (63.3); tarsus 50–59 (55.3); middle toe without claw 44–49.5 (46.4 mm.).⁶⁷

Adult female.—Wing 127.5–149 (134.3); tail 53–62.5 (58.6); exposed culmen 51.5–59.5 (56.3); tarsus 45–51.5 (49.3); middle toe without claw 39–43.5 (41.2 mm.)

Range.—Resident in and restricted to the mangrove swamps of the Isle of Pines (Majagua River; Los Indios; Nueva Gerona).

Type locality.—Majagua River, Isle of Pines.

Rallus longirostris leucophaeus TODD, Proc. Biol. Soc. Washington, xxvi, 1913, 174 (Rio Majagua, Isle of Pines, Cuba; Coll. Carnegie Mus.); Ann. Carnegie Mus., x, 1916, 201 (Los Indios and Rio Majagua, Isle of Pines; descr.; measurements; crit.; habits); xviii, 1928, 336 (type spec.; crit.).—BARBOUR, Birds Cuba, 1923, 53.—OBERHOLSER, Proc. U. S. Nat. Mus. lxxxiv, 1937, 332 (monogr.; crit.).

Rallus longirostris caribaicus PETERS, Check-list Birds of World, ii, 1934, 15S, part.

R[allus] l[angirostris] caribaicus BOND, Birds West Indies, 1936, 87, part (Isle of Pines).

RALLUS LONGIROSTRIS VAFER Wetmore

HISPANIOLAN CLAPPER RAIL

Adult (sexes alike).—Three “phases” according to the intensity of the color of the centers of the dorsal body feathers—dark fuscous to fuscous-black; sepia; or olive-brown to buffy brown; generally similar to *limnetis* but larger and darker above, the edges of the dorsal body feathers more brownish and with a cinnamomeous malar stripe better developed; the light phase similar below to the paler specimens of *limnetis*; the intermediate one like the darker Puerto Rican birds; the dark phase very dark below—the entire sides of neck, throat,

⁶⁶ I have seen six specimens of the pale phase and only two of the dark phase. That this proportion may not be typical is suggested by Peters (Check-list Birds of World, ii, 1934, 15S, footnote) who writes that “none of a series of fourteen adults . . . from the Isle of Pines even approach the characters claimed for *leucophaeus* in the original description, but are indistinguishable from a series of seven adults from Cuba.” His birds sound like dark phase examples, which are very close to Cuban birds. If the dark phase should prove to be the commoner of the two, it might be well to lump *leucophaeus* and *cubanus*, with merely a geographical phase variation within the subspecies.

⁶⁷ Twelve specimens of each sex, including the type.

except a small whitish patch next to the chin, all the breast, and the upper abdomen dusky drab slightly tinged with cinnamon-buff, especially on the upper abdomen; flanks of dark phase dark blackish olive-brown, barred with white; iris "clear brown"; bill dull brown, tip paler, basal two-thirds of mandible and sides of maxilla below and behind nostril dull yellowish; tarsi and toes dull brown (in dried skin).

Juvenal.—None seen.

Natal down.—Coal black.

Adult male.—Wing 151–159.5 (155); tail 61.5–66.4 (63.3); exposed culmen 63.8–68.5 (65.5); tarsus 57–61 (59); middle toe without claw 50–54 (51.9 mm.).⁶⁸

Adult female.—Wing 134.5–144.5 (138.4); tail 54.4–60 (56.9): exposed culmen 53.6–63 (58.7); tarsus 46.4–59.5 (52.8); middle toe without claw 40.5–45 (43.2 mm.).⁶⁹

Range.—Resident in the coastal mangrove swamps of Haiti (Fort Liberté; Caracol; Petit Trou de Nippes; Grande Cayemite; Etroites; Gonave Island; Picmy; Bizoton; Aquin; Cap-Haïtien); and the Dominican Republic (Monte Cristi); everywhere local in occurrence.

Type locality.—Etroites, Gonave Island, Haiti.

Rallus longirostris BARTSCH, Proc. Biol. Soc. Washington, xxx, 1917, 132 (Haiti).—BEEBE, New York Zool. Soc. Bull., xxx, 1927, 139 (Bizoton); Beneath Tropic Seas, 1928, 129.

Rallus longirostris caribacus PETERS, Bull. Mus. Comp. Zool., lxi, 1917, 402 (Monte Cristi, Dominican Republic.); Check-list Birds of World, ii, 1934, 158, part. *R[allus] l[ongirostris] caribacus* BOND, Birds West Indies, 1936, 87, part (Hispaniola, Gonave Island, Ile à Vache).

Rallus longirostris vafer WETMORE, Proc. Biol. Soc. Washington, xli, 1928, 121 (Etroites, Gonave Island, Haiti).—BOND, Proc. Acad. Nat. Sci. Phil., 1928, 495 (Port-au-Prince, Caracol, Jaquesy, Fort Liberté).—DANFORTH, Auk, xlvi, 1929, 362 (Monte Cristi, Les Salines, Gonave).—WETMORE and SWALES, U. S. Nat. Mus., Bull. 155, 1931, 130 (habits; distr; Hispaniola).—WETMORE, Proc. U. S. Nat. Mus., lxxxi, art. 2, 1932, 5, 6, 15 (Petite Gonave Island; Grande Cayemite Island; Petit Trou de Nippes, Haiti; meas.).—WETMORE and LINCOLN, Proc. U. S. Nat. Mus., lxxxii, art. 25, 1933, 10 ((Île à Vache).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 328 (monogr.; crit.).

RALLUS LONGIROSTRIS LIMNETIS Oberholser

PUERTO RICAN CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris crepitans* but slightly browner above and more pinkish cinnamon on the lower throat and breast; flanks darker; differs from *caribacus* in being less rufescent, more grayish brown; two phases—the pale one with the crown, occiput, hind neck, and the centers of the feathers of the upperparts

⁶⁸ Four specimens; all measurements except middle toe, ex Wetmore.

⁶⁹ Seven specimens; all measurements except middle toe, ex Wetmore.

of the body buffy brown darkening to olive-brown on the long scapulars, their edges pale olive-gray; flanks Saccardo's umber barred with white; lower throat, sides of neck, and breast pale ochraceous-buff with a faint light cinnamon wash, only the sides of neck and middle of throat lightly tinged with grayish; and the dark phase with the crown, occiput, hind neck, and the centers of the feathers of the upperparts sepia, the latter feathers edged with smoke gray washed with pale olive brownish; sides of neck, entire lower throat, and upper breast darker than in light phase—washed with drab; otherwise similar; iris reddish hazel; culmen and tip of lower mandible brown, the base reddish; tarsi and toes liver brown, redder on the forepart of the tibiae.

Juvenal.—None seen.

Natal down.—Coal black; bill with the mandible and distal half of maxilla and an elongated patch over each nostril scarlet, the rest livid pink.

Adult male.—Wing 138.5–150 (145.5); tail 56.5–63.5 (61.2); exposed culmen 62–68 (63.9); tarsus 50–56.5 (54.2); middle toe without claw 47–49.5 (47.4 mm.).⁷⁰

Adult female.—Wing 136.5–139.5 (137.6); tail 56–60 (57.7); exposed culmen 55–60 (58.2); tarsus 43.5–50 (47.4); middle toe without claw 41.5–43.5 (42.5 mm.).⁷¹

Range.—Resident in mangrove swamps of Puerto Rico (San Juan; Boqueron; Parguera; Tallaboa; Mayaguez; Mameyes; La Playita near Salinas; Puerto Real; Aguadilla); Culebra Island; Vieques Island; Tortola; St. Croix; and St. Thomas.

Type locality.—Mameyes, Puerto Rico.

Rallus longirostris (not of Boddaert) NEWTON (A. and E.), Ibis, 1859, 260 (St. Croix; habits, fresh colors of soft parts).—CASSIN, Proc. Acad. Nat. Sci. Philadelphia, 1860, 378 (St. Thomas; crit.)—WETMORE, Journ. Agr. Univ. Puerto Rico, xxi, 1937, 8 (St. Croix; kitchen middens).

Rallus crepitans (not of Gmelin) GUNDLACH, Journ. für Orn., xxvi, 1878, 162, 189 (Puerto Rico); Anal. Soc. Esp. Hist. Nat., vii, 1878, 388 (Puerto Rico).—STAHL, Fauna de Puerto Rico, 1883, 63, 152 (Puerto Rico; specimen).

(?) [*Rallus longirostris*] c. var. *caribæus* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 140, part.

[*Rallus longirostris*] d. *caribæus*, BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 359 part (synonymy).

[*Rallus longirostris*] c. *caribæus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 360, part (St. Croix).

[*Rallus*] *longirostris caribæus* CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29, part ("Antilles").

⁷⁰ Eight specimens from Puerto Rico, Culebra Island, and St. Thomas.

⁷¹ Five specimens from Puerto Rico and St. Thomas.

- Rallus longirostris caribæus* CORY, Auk, v, 1888, 53 part; Birds West Indies, 1889, 254, part; Cat. West Indian Birds, 1892, 90, part (Puerto Rico).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 2, 1895, No. 211.2, part ("West Indies"); ed. 3, 1910, 103, part ("West Indies").—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 36 (Puerto Rico, resident; habits; food); Auk, xxxiii, 1916, 411 (Vieques Island); xxxiv, 1917, 58 (Culebra Island; notes).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22, part.—STEUTHERS, Auk, xl, 1923, 472 (Boqueron, Puerto Rico; nesting).
- Rallus longirostris caribæus* WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, ix, pt. 3, 1927, 335 (genl.; Puerto Rico; Vieques; Culebra; St. Thomas; St. Croix).—DANFORTH, Journ. Dept. Agr. Puerto Rico, xiv, 1930, 115 (Tortola, Virgin Islands); xv, 1931, 49 (Joyuda, Puerto Real, Boqueron, Faro de Cabo Roja, etc., Puerto Rico).—BEATTY, Journ. Dept. Agr. Puerto Rico, xiv, 1930, 139 (St. Croix, Krause Lagoon; breeding.)—PETERS, Check-list Birds of World, ii, 1934, 158, part.
- R[allus] l[ongirostris] caribæus* BOND, Birds West Indies, 1936, 87, part (Puerto Rico; Vieques; Culebra; St. Croix; St. Thomas; Tortola).
- Rallus longirostris* subsp. *Rallus caribæus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part (St. Croix; St. Thomas).
- Rallus longirostris* subsp. DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 417, 466 (Culebra, St. Croix, Vieques; St. Thomas; Tortola).
- Rallus caribæus* SHARPE, Hand-list, i, 1899, 94, part.
- Rallus longirostris limnetis* OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 326 (orig. descr.; monogr.; Puerto Rico; Culebra; Vieques; Tortola; St. Croix; St. Thomas).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xxi, 1937, 543 (Punta Arena, Playa Grande, and Cayo Verdiales all in Vieques Island, Puerto Rico).

RALLUS LONGIROSTRIS MANGLECOLA Danforth

ANTIGUA CLAPPER RAIL

Adult (sexes alike).⁷²—Similar to pale phase of *Rallus longirostris limnetis* below but the breast purer and slightly brighter light pinkish cinnamon, and like the dark phase of *limnetis* on the upper parts, but with longer bill.

Juvenal (unsexed).—Similar to that of *Rallus longirostris saturatus*, but the upper parts more olive brownish, the edges of the feathers of the back, scapulars, etc., less grayish, more olive brownish.

Natal down.—Unrecorded.

Adult male (type).—Wing 146.1; tail 60.5; exposed culmen 73.9; tarsus 54; middle toe without claw 50 mm.).

Adult female.—Wing 135.5; tail 60.7; exposed culmen 64.8; tarsus 45.8 mm.⁷³

⁷² Only male seen, but female said not to differ except in size.

⁷³ One specimen of each, the female not seen, all measurements except the middle toe without claw ex Danforth, who also sends the following measurements of 7 unsexed birds in the Musée L'Herminier at Point-à-Pitre, Guadeloupe; culmen from base 60.5 (immature, 65.6, 63.3, 73.0, 64.8, 66.1, 70.1 mm.); tarsus (approximate only) 43, 51.6, 48, 48.5, 53.0, 47.3, 47.8 mm.

Range.—Resident in mangrove swamps on Antigua (Five Islands); Guadeloupe and probably Barbuda; one doubtful record for St. Kitts.⁷⁴

Type locality.—Five Islands, Antigua.

Rallus crepitans (not of Gmelin) LAWRENCE, Proc. U. S. Nat. Mus., i, 1879, 461 (Guadeloupe), 487 (Barbuda; Antigua: Guadeloupe).—MIMI, La Guadeloupe du Tricentenaire, 1935, 137 (Guadeloupe).

? [*Rallus longirostris*] c. var. *caribæus* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 140, part.

[*Rallus longirostris*] d. *caribæus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 359, part (synonymy).

[*Rallus longirostris*] c. *caribæus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 360, part.

[*Rallus*] *longirostris caribæus* CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29 part ("Antilles").

Rallus longirostris caribæus CORY, Auk, v, 1888, 53, part: Birds West Indies, 1889, 254, part; Cat. West Indian Birds, 1892, 9, 91, part (Barbuda; Antigua; Guadeloupe).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 2, 1895, no. 211.2, part ("West Indies"); ed. 3, 1910, 103, part ("West Indies").—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22, part.

Rallus longirostris caribæus PETERS, Check-list Birds of World, ii, 1934, 158, part.

[*Rallus longirostris*] subsp. γ *Rallus caribæus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 13, part (Guadeloupe; Barbuda; Antigua).

[*Rallus*] *caribæus* SHARPE, Hand-list, 1, 1899, 94 part.

Rallus longirostris subsp. nov. DANFORTH, Supplement, Leeward Islands Gazette, Nov. 16, 1933, 2 (Antigua).

Rallus longirostris manglecola DANFORTH, Proc. Biol. Soc. Wash., xlvii, 1934, 19 (orig. descr.; Five Islands, Antigua; meas.); Auk, li, 1934, 357 (common in mangroves at Five Islands, Antigua); Journ. Agr. Univ. Puerto Rico, xix, 1935, 477 (Barbuda, spec. needed to make ident. certain).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 324 (monogr.; Antigua and Guadeloupe).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xxiii, 1939, 22 (not common in Guadeloupe; 7 specimens in Musée L'Herminier).

[*Rallus*] [*longirostris*] *manglecola* BOND, Birds West Indies, 1936, 87 and 88 in text (Guadeloupe and possibly Martinique).

RALLUS LONGIROSTRIS PALLIDUS Nelson

YUCATAN CLAPPER RAIL

Adult female (only specimen known of race).—Similar to *Rallus longirostris crepitans*, but upperparts, including wings and tail, more rufescent, less grayish; dark centers of feathers of back, scapulars, etc., olive-brown. "Top of head and neck bister brown; feathers of back, scapulars, tertials, rump, and upper tail coverts olivaceous bister brown, broadly edged with ashy gray producing strongly marked streaks of gray and brown; upper surface of primaries and second-

⁷⁴ Burdon, Handbook St. Kitts-Nevis, 1920, 108 (Rail St. Kitts "nests on ground in the Eastern swamps"). This probably applies to *manglecola*, but it is not certain.

aries nearly Isabella color with a wash of cinnamon; wing coverts decidedly more cinnamon than primaries and sparingly marked with transverse bars of white; upper surface of tail feathers bister brown edged with hair brown; lower eyelid and supraloral stripe from base of bill to top of orbit white; lores, sides of head below and back of eyes, down to a little below line of gape, plumbeous with a brownish wash on lores; chin and throat pure white (this area extending up nearly to line of gape but indistinctly suffused with buffy along upper and posterior borders); sides of neck olivaceous bister brown streaked with grayish and shading through grayish brown into dingy cinnamon washed with dull gray along median line; breast light cinnamon rufous; sides of body and flanks varying from olive brown to dark hair brown strongly marked with transverse white bars; under tail coverts white with narrow shaft streaks of dusky brown" (Nelson; orig. descr.).

Wing, 143; tail 59.5, exposed culmen 53; tarsus 48; middle toe without claw 48 mm.

Range.—Known only from the type locality; probably limited to the arid coast region of northwest Yucatan, possibly to Campeche as well.

Type locality.—Rio Lagartos, Yucatan, Mexico.

Rallus pallidus NELSON, Proc. Biol. Soc. Washington, xviii, 1905, 141 (Rio Lagartos, Yucatan; coll. Field Mus. Nat. Hist.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 22 (range).—(?) GRISCOM, Amer. Mus. Nov., No. 235, 1926, 7 (Culebra Keys, eastern Quintana Roo, Yucatan; bird heard only, not seen or collected).

Rallus longirostris pallidus PETERS, Check-list Birds of World, ii, 1934, 158 part (Yucatan).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 335 (crit.; northern Yucatan and eastern Quintana Roo, Mexico).

RALLUS LONGIROSTRIS BELIZENSIS Oberholser

HONDURANIAN CLAPPER RAIL

Adult female (unique, type).—Similar to *Rallus longirostris saturatus*, but the edges of the feathers of the upper parts of the body pale olive-gray, not brownish olive; and the breast clearer, light pinkish cinnamon. Top of head and hind neck sepia, the latter with narrow, dull, buff feather margins producing a somewhat streaked effect; scapulars and interscapulars with dark clove-brown centers edged with pale olive-gray: lower back, rump, and upper tail coverts sepia to clove-brown, edged with dull olive-gray; rectrices grayish bister with clove-brown centers; remiges sepia, the outer margins lighter above; upper wing coverts light bister, becoming grayish on the margins on the inner greater and median ones; sides of head olive-gray with a white supraloral stripe and subocular spot; sides of

upper throat dull ochraceous-buff; sides of lower throat wood brown inconspicuously streaked with dull brown; chin and throat white; breast and middle abdomen light cinnamon to light pinkish cinnamon fading into dull white on the midabdomen; sides and flanks pale chaetura drab crossed by fairly broad (1.5–2 mm.) white bars.

Wing 141.5; tail 57; exposed culmen 57; tarsus 48; middle toe without claw 43 mm.

Range.—Known only from the type locality.

Type locality.—Yacos Lagoon, British Honduras.

Rallus pallidus (not of Nelson) BANGS, Proc. Biol. Soc. Washington, xxi, 1908, 43 (Yacos Lagoon and mouth of Manatee River, Brit. Honduras; *crit.*).

Rallus longirostris pallidus PETERS, Check-list Birds of World, ii, 1934, 158, part (Brit. Honduras).

Rallus longirostris belizensis OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 335 (Yacos Lagoon, Brit. Honduras; monogr.)

RALLUS LONGIROSTRIS OBSOLETUS Ridgway

CALIFORNIA CLAPPER RAIL

Adult (sexes alike).—Clapper rails with the cheeks and auriculars brownish, not grayish; breast light ochraceous-buff. Two phases, according to the color of the edges of the feathers of the upperparts, as follows:

BROWN PHASE: Forehead, crown, occiput, and hind neck Saccardo's umber, the frontal and coronal feathers with shiny black shafts, those of the hind neck with paler, tawny-olive edges; scapulars, interscapulars, feathers of back, rump, and the upper tail coverts sepia very broadly margined with ashy buffy brown washed with olive, the dark centers reduced to the vanishing point on the rump and upper tail coverts; rectrices like the back, but the dark centers verging indistinctly into the paler margins, not sharply distinct; outer, upper, lesser, and median wing coverts sayal brown to tawny-olive; inner ones olive buffy brown to sepia, paling to snuff brown on the outer webs, the innermost secondaries like the long scapulars; supraloral stripe pinkish buff washed with rusty; lores, cheeks, and auriculars brownish drab; malar stripe light ochraceous-buff; chin and upper throat white, sometimes faintly washed with buffy; sides of neck, lower throat, breast, and upper abdomen light ochraceous-buff, becoming slightly darker and more ochraceous in the middle of the breast, sides, and flanks; and vent grayish buffy brown barred with white; lower abdomen whitish lightly washed with pale ochraceous-buff; lateral under tail coverts largely white; the median ones like the flanks; under wing coverts slightly browner, more sepia, than the flanks; soft parts apparently unrecorded (!), but probably as in the other races of the species.

OLIVE PHASE: Like the above but the top of head and the dark centers of the dorsal body feathers blacker—dark fuscous to fuscous-black, and the margins of the latter feathers less brownish, more olive—grayish olive with a faint drab tinge.

Juvenal (sexes alike).—Much darker than adults above; top of head, hind neck, centers of scapulars, interscapulars, and feathers of upper back, entire feathers of lower back, rump, and upper tail coverts fuscous-black, the margins of the scapulars, interscapulars, and feathers of the upper back dull, ashy, brownish olive; supraloral stripe less rufescent than in adult; lores, cheeks, and auriculars like crown but washed with cinnamon; chin and upper throat white; lower throat, sides of neck, breast, and upper abdomen pale cinnamon clouded and mottled with grayish drab; middle of upper and all of lower abdomen white washed with pale buff; sides and flanks grayish drab indistinctly banded with paler mixed with ochraceous-cinnamon; thighs like lower abdomen anteriorly, like flanks posteriorly.

Natal down.—Jet black with a greenish gloss above.

Adult male.—Wing 153.5–170 (161.7); tail 68–80 (73.1); exposed culmen 55–66 (60.3); tarsus 52–61 (56.1); middle toe without claw 47–56 (51.3 mm.).⁷⁵

Adult female.—Wing 147–161 (151.6); tail 60–76 (65.3); exposed culmen 49–61 (55.0); tarsus 45–63 (51.1); middle toe without claw 44–51.5 (47.4 mm.).⁷⁶

Range.—Resident in the salt-water marshes of California from Humboldt Bay south to Monterey Bay (Redwood and Point San Mateo, San Mateo County; San Francisco Bay; Berkeley; Bay Farm Island, Alameda County; Alviso and vicinity and Palo Alto, Santa Clara County; Oakland; Marin County; Petaluma; Tomales Bay; etc.). Accidental on South Farallon Islands.

Type locality.—San Francisco, Calif.

Rallus elegans (not of Audubon) KENNERLY, Rep. Pacific R. R. Surv., iv, pt. vi, 1856, 17 (San Francisco, Calif.); x, No. 3, 1859 (Whipple Route), 30 (San Francisco).—NEWBERRY, Rep. Pacific R. R. Surv., vi, 1857, 96 (San Francisco and San Pablo Bays, Calif.).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 756, part (San Francisco); Proc. Acad. Nat. Sci. Philadelphia, xiv, 1862, 22 (California).—HEERMANN, Rep. Pacific R. R. Surv., x, pt. 6, 1859, 2 (California).—COOPER and SUCKLEY, Rep. Pacific R. R. Surv. xii, pt. 2, 1860, 246 (San Francisco and Humboldt Bays, Calif.).

Rallus elegans obsoletus PETERS, Check-list Birds of World, ii, 1934, 159.

Rallus elegans, var. *obsoletus* RIDGWAY, Amer. Nat., viii, No. 2, 1874, 111 (San Francisco, Calif., coll. U. S. Nat. Mus.).—GRINNELL, Univ. California Publ. Zool., xxxviii, 1932, 270 (type loc.; crit.).

Rallus elegans . . . var. *obsoletus* COUES, Check-list, 1874, App., 137, No. 466a.

⁷⁵ Twenty-nine specimens.

⁷⁶ Twenty-four specimens.

[*Rallus elegans*] *b. obsoletus* COUES, Birds Northwest, 1874, 535 (synonymy).

Rallus obsoletus RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 11 (Cat. North Amer. Birds, No. 570); Bull. Nutt. Orn. Club, v, 1880, 139 (diagnosis); Nom. North Amer. Birds, 1881, No. 570.—BRYANT (W. E.), Bull. Nutt. Orn. Club, v, 1880, 124 (Oakland and San Mateo, Calif.; descr. nest and eggs).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 357.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 210, part; ed. 3, 1910, p. 102.—SENNETT, Auk, vi, 1889, 165 (crit.), 166 (diagnosis).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 18, fig. 7, map (range and migration routes).—GRINNELL (J.), Pacific Coast Avif., No. 11, 1915, 46 (San Francisco Bay; Petaluma; Farallon Islands; Tomales Bay; Humboldt Bay).—DAWSON, Birds California (students' ed.), iii, 1923, 1530 (genl.; California).—DE GROOT, CONDOR, xxix, 1927, 259 (nesting habits; enemies; ecol.).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 267 (monogr.).—WILLIAMS, CONDOR, xxxi, 1929, 52 (behavior; feeding).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314 in text.—ORR, CONDOR, xli, 1939, 151 (fall wanderings away from marshes).

[*Rallus*] *obsoletus* SHARPE, Hand-list, i, 1899, 94.

R[*allus*] *obsoletus* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 139 (diagnosis); Man. North Amer. Birds, 1887, 137.

Rallus longirostris obsoletus COUES, Check-list, ed. 2, 1882, No. 674.—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 340 (monogr.; crit.).

R[*allus*] [*ongirostris*] *obsoletus* COUES, Key North Amer. Birds, ed. 2, 1884, 672.

[*Rallus longirostris*] subsp. ϵ *Rallus obsoletus* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 15 (San Francisco and Redwood City, Calif.).

Rallus obsoletus obsoletus VAN ROSSEM, CONDOR, xxxi, 1929, 214 (crit.; range).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 95.—LINSDALE, CONDOR, xxxviii, 1936, 216 (Berkeley and Oakland, Calif.).—WYTHE, CONDOR, xxxix, 1937, 44 (Berkeley, Calif.).

RALLUS LONGIROSTRIS LEVIPES Bangs

LIGHT-FOOTED CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris obsoletus* (both phases present, but the olive-gray one decidedly less common than the brownish one), but bill slenderer; the dark centers of the dorsal body feathers dark sepia to fuscous, the margins darker, less grayish, more heavily washed with brownish olive; the malar stripe, sides of neck, the lower throat, breast, and upper abdomen richer and darker—light vinaceous-cinnamon to vinaceous-cinnamon; flanks and vent less grayish, more brownish—almost olive-brown.

Juvenal (sexes alike).—Similar to that of *Rallus longirostris obsoletus* but slightly darker.

Natal down.—Jet black with a greenish gloss above.

Adult male.—Wing 154.5–167 (161.9); tail 62.5–69 (66.7); exposed culmen 56–61 (58.9); tarsus 53–60.5 (56.9); middle toe without claw 50–54 (51.2 mm.).⁷⁷

⁷⁷ 10 specimens.

Adult female.—Wing 138–155.5 (147.3); tail 57–67 (62.6); exposed culmen 51.5–58 (54.2); tarsus 47–51 (49.5); middle toe without claw 41–48 (44.9 mm.).⁷⁸

Range.—Resident in the salt marshes of southern California from Santa Barbara south to San Diego Bay; occasional in fresh and brackish sloughs a short distance inland (Santa Barbara; mouth of Tia Juana River; Wilmington; False Bay; National City; Pacific Beach; Newport Landing; Bolsa Chica Shooting Preserves, and Sunset Beach, Orange County); south to northwestern Lower California (San Quentin Bay).

Type locality.—Newport Landing, Los Angeles County (now in Orange County), Calif.

Rallus elegans (not of Audubon) HENSHAW, Rep. Orn. Spec. Wheelers' Surv., 1876, 273 (Santa Barbara, Calif.).

Rallus elegans levipes PETERS, Check-list Birds of World, ii, 1934, 159.

Rallus obsoletus (not of Ridgway) BELDING, Proc. U. S. Nat. Mus., v, 1883, 529 (San Quentin Bay, Lower California, breeding).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 210, part.—BRYANT (W. E.), Proc. California Acad. Sci., ser. 2, ii, 1889, 270 (San Quentin Bay).

Rallus levipes BANGS, Proc. New England Zool. Club, i, 1899, 45 (Newport Landing, Los Angeles County, Calif.; coll. E. A. and O. Bangs).—GRINNELL (J.), Pacific Coast Avif., No. 3, 1902, 24 (Santa Barbara to Newport Bay); No. 11, 1915, 46 (coast marshes, San Diego distr. to Los Angeles Co.).—WILLETT, Condor, viii, 1906, 15 (Los Angeles County, breeding), 151 (Los Angeles County; descr. nest and eggs); Pacific Coast Avif., No. 7, 1912, 32 (Bay City, Orange County, and Nigger Slough, Los Angeles County, breeding).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xxv, 1908, 340; Check-list, ed. 3, 1910, 102.—COOKE, U. S. Dept. Agr., Bull. 128, 1914, 18, fig. 7 map (range and migration routes).—DAWSON, Birds California, (students' ed.), iii, 1923, 1533 (genl.; California).—HANNA, Condor, xxvi, 1924, 147 in text (egg weights).—GARDNER, Proc. U. S. Nat. Mus., lxvii, art. 19, 1925, 16 in text, pl. 7 (structure of tongue).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 62 (descr.; distr.).—BANCROFT, Condor, xxix, 1927, 47 and 194 in text (breeds in San Quentin region, Lower California).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 272 (life hist.; monogr.).—GRINNELL, Univ. California Publ. Zool., xxxii, 1928, 86 (distr.; Lower California).—BANGS, Bull. Mus. Comp. Zool. lxx, 1930, 167 (type specimen in Mus. Comp. Zool., crit.).—GRINNELL, Univ. California Publ. Zool., xxxviii, 1932, 271 (type loc.; crit.).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314 in text.

Rallus obsoletus levipes VAN ROSSEM, Condor, xxxi, 1929, 214 (crit.; range).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 95.—WILLETT, Pacific Coast, Avif., No. 21, 1933, 52 (sw. Calif.; resident in salt marshes Santa Barbara to San Diego; nests Mar. 19 to June 14).—HUEY, Condor, xl, 1938, 106 (type specimen mentioned).

Rallus longirostris levipes OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 338 (monogr.; crit.).

⁷⁸ 12 specimens.

RALLUS LONGIROSTRIS YUMANENSIS Dickey

YUMA CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris saturatus*, but bill shorter, the cinnamon of the throat, breast, and anterior part of abdomen brighter, more pinkish, not washed with grayish. Forehead, crown, occiput grayish olive-brown, the feathers with shiny blackish shafts, hind neck slightly paler and more grayish and the feathers clouded with dusky hair brown, especially medially; interscapulars, scapulars, back, rump, and upper tail coverts dark sepia, the feathers very broadly edged and tipped with dull light grayish olive washed faintly with brownish, the margins widest, the dark central area narrowest, on the rump and upper tail coverts; exposed surface of greater upper secondary coverts (in folded wing) between buffy brown and Saccardo's umber, rather darker outwardly; the inner median and lesser coverts between buffy brown and citrine drab; outer median and lesser coverts snuff brown to Saccardo's umber; primaries, greater primary coverts, and secondaries fuscous, the innermost secondary like the long scapulars, but less brownish marginally than the latter; rectrices fuscous edged like their upper coverts with brownish pale grayish olive, the margin widest on the median pair; sides of head dull mouse gray, the lores darker and more brownish; the lower eyelid dull creamy white; supraloral stripe buffy white flecked with rusty; malar stripe not well defined, dull light pinkish cinnamon fading to almost white anteriorly; sides of neck like the hind neck but paler and more or less suffused with light pinkish cinnamon; chin and throat white; throat and breast avellaneous with a cinnamon tinge, paling to light avellaneous on the middle of the breast; abdomen dull creamy white; sides, flanks, vent, and under tail coverts deep grayish hair brown, the flanks lighter, all barred with white, the lateral under tail coverts nearly all white on their outer webs, a few nearly all white on both webs, thighs between drab and hair brown posteriorly, dull creamy white anteriorly; under wing coverts grayish hair brown with very narrow, widely spaced bars of dull white; bill (in dried skin) ochraceous-orange, darkening to olive-brown terminally and to bister along the culmen; tarsi and toes bister.

Other plumages not known.

Adult male (type).—Wing 156; tail 71; exposed culmen 58; tarsus 51.5; middle toe without claw 46 mm.

Adult female.—Wing 142–148; tail 62–63; exposed culmen 53.5; tarsus 50; middle toe without claw 44–45 mm.⁷⁹

⁷⁹ Two specimens.

Range.—Known only from the fresh-water swamps along the Colorado River above Yuma and the adjacent irrigation canals in the vicinity of Laguna Dam, and to the lower Salton Sea.

Type locality.—Bard, Imperial County, Calif.

Rallus yumanensis DICKEY, Auk, xl, 1923, 90 (orig. descr.; Bard, Imperial County, Calif.)—DAWSON, Birds California (students' ed.), iii, 1923, 1536 (genl.)—OBERHOLSER, Auk, xli, 1924, 592 (add to North Amer. Check-list).—GRINNELL, Condor, xxvii, 1925, 76 (add to California list).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 275 (monogr.).—GRINNELL, Univ. California Publ. Zool., xxxviii, 1932, 271 (type loc., crit.).

Rallus obsoletus yumanensis VAN ROSSEM, Condor, xxxi, 1929, 215 (crit.; distr.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 96.—MOFFITT, Condor, xxxiv, 1932, 137 (marshes of Salton Sea, Calif.).—ABBOTT, Condor, xlii, 1940, 264 (breeding; Salton Sea).

Rallus elegans yumanensis PETERS, Check-list Birds of World, ii, 1934, 159.

Rallus longirostris yumanensis OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 341 (crit.; monogr.).

RALLUS LONGIROSTRIS BELDINGI Ridgway

BELDING'S CLAPPER RAIL

Adult (sexes alike).—Similar to *Rallus longirostris levipes* but darker, the top of the head and the centers of the feathers of the upper-parts of the body deep fuscous to fuscous-black, the margins of the latter feathers browner—buffy brown to ashy snuff brown; lower throat, sides of neck, breast, and upper abdomen darker and more richly colored—fawn color with a cinnamomeous wash; flanks darker, the interspaces between the white bars clove brown, frequently darkening to black next to the white bars.

Juvenal.—Apparently unrecorded.

Natal down.—Not recorded.

Adult male.—Wing 147–160 (155.1); tail 55–73 (64.8); exposed culmen 53–63 (56.2); tarsus 48–57 (53.1); middle toe without claw 43–50 (47.8 mm.).⁸⁰

Adult female.—Wing 140–150 (144.8); tail 54–68 (63.2); exposed culmen 49–55.5 (52.7); tarsus 45–53 (49.2); middle toe without claw 40–47 (43.9 mm.).⁸¹

Range.—Resident in the mangrove swamps of Lower California from the Cape district north on the Pacific side to latitude 28°N., including many near shore islands, and on the Gulf of California side to San Jose Island (Espiritu Santo Island; La Paz; San Jose Island; Santa Margarita and Magdalena Islands; Magdalena Bay; San Ignacio Lagoon; Pond Lagoon; Scammons Lagoon, San Jorge).

Type locality.—Espiritu Santo Island, Lower California.

⁸⁰ Fourteen specimens.

⁸¹ Twelve specimens.

Rallus beldingi RIDGWAY, Proc. U. S. Nat. Mus., v, 1882, 345 (Espiritu Santo Island, Lower California; coll. U. S. Nat. Mus.); Bull. Nutt. Orn. Club, vii, 1882, 258.—REICHENOW, Journ. für Orn., xxxi, 1883, 402 (reprint of orig. descr.).—BELDING, Proc. U. S. Nat. Mus., v, 1883, 545 (rare; southern Lower California).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 356.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 209; ed. 3, 1910, p. 102.—BREWSTER, Bull. Mus. Comp. Zool., xli, 1902, 55 (near La Paz, Lower California).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 17, fig. 6, map (range and migration routes).—ANTHONY, Proc. California Acad. Sci., ser. 4, xiv, 1925, 291 (mangroves at Magdalena Bay, Mexico).—BANCROFT, Condor, xxix, 1927, 47, 48 in text (breeding at Scammons Lagoon, Lower California).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 266 (life hist.; monogr.).—HUEY, Condor, xxix, 1927, 241 in text (San Ignacio Lagoon, Lower California).—GRINNEL, Univ. California Publ. Zool., xxxii, No. 1, 1928, 86 (distr.; Lower Calif.).—ROWLEY, Condor, xxxvii, 1935, 163 (nest and 7 eggs, near La Paz, Lower California, May 3).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314 in text.

R[*allus*]*beldingi* RIDGWAY, Man. North Amer. Birds, 1887, 133.

[*Rallus*] *beldingi* SHARPE, Hand-list, i, 1899, 93.

[*Rallus elegans*] subsp. a. *Rallus beldingi* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 10.

Rallus elegans beldingi PETERS, Check-list Birds of World, ii, 1934, 159.

Rallus obsoletus beldingi VAN ROSSEM, Condor, xxxi, 1929, 214 (crit.; range).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 95.

Rallus longirostris beldingi OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 338 (monogr.; crit.).

RALLUS LONGIROSTRIS RHIZOPHORAE Dickey

SONORA CLAPPER RAIL

Adult (sexes alike).—Very similar to *Rallus longirostris yumanensis* but less brownish above—the top of head dusker—mummy brown to fuscous, the dark centers of the feathers of the upper parts of the body blacker—fuscous-black, and the edges of these feathers more grayish—smoke gray to light grayish drab; sides of neck much more washed with grayish.

Other plumages unknown.

Adult male.—Wing 147–155.5 (151.8); tail 60.5–65 (63.3); exposed culmen 56–60.5 (59); tarsus 54.5–58.5 (56.4); middle toe without claw 45.5–51.5 (48.3 mm.).⁸²

Adult female.—Wing 139.5–148 (142.6); tail 58–65 (61.6); exposed culmen 53–57.5 (55.2); tarsus 49–56 (50.9); middle toe without claw 42–47 (43.8 mm.).⁸³

Range.—Coastal marshes of Sonora from Guaymas south to the Sonora—Sinaloa boundary (Guaymas; Tobari Bay; Viejo Yaqui Lagoon).

⁸² Five specimens from Sonora, Mexico, including the type.

⁸³ Nine specimens from Sonora, Mexico.

Type locality.—Tobari Bay, Sonora, Mexico.

Rallus obsoletus rhizophorae DICKEY, Trans. San Diego Soc. Nat. Hist., vi, 1930, 235 (orig. descr.; Tobari Bay, Sonora, Mexico).

Rallus elegans rhizophorae PETERS, Check-list Birds of World, ii, 1934, 159.

Rallus longirostris rhizophorae OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 342 (monogr.; crit.).

RALLUS LONGIROSTRIS NAYARITENSIS McLellan

SAN BLAS CLAPPER RAIL

Adult (unsexed; only the type known).—Similar to *Rallus longirostris yumanensis*, but the top of the head, hind neck, and the centers of the feathers of the upperparts of the body darker—deep fuscous, becoming hair brown on the head, the upper breast brighter—light ochraceous-salmon, the lower breast and abdomen much paler and whiter—very pale pinkish buff; sides and flanks slightly paler and grayer. Forehead dark hair brown, darkening to fuscous on the crown, the feathers with stiff, shiny blackish shafts; occiput and nape dark hair brown with narrow lighter edgings between drab and grayish olive, these edges imparting a streaked appearance; scapulars, interscapulars, back, rump, and upper tail coverts fuscous-black, the feathers of the anterior parts all margined with light grayish olive and those of the rump and the upper tail coverts with brownish deep grayish olive; rectrices with an even darker shade on their edges; wings fuscous, the lesser upper wing coverts, with the outer portion of the outer median and lesser coverts more or less extensively rufescent brown (between snuff brown and Saccardo's umber), the inner coverts, the innermost secondaries, and the scapulars broadly margined with dull grayish olive, sides of head mouse gray rather than darker on the lores; the auriculars with a buffy wash; supraloral streak creamy white; sides of neck mouse gray washed with buffy; chin and upper throat pure white; malar stripe and lower throat between avellaneous and pinkish cinnamon; breast light ochraceous-salmon, paling posteriorly to light pinkish cinnamon and then to very pale pinkish buff; sides and flanks between hair brown and chaetura drab, narrowly barred with dull white, the posterior portion of flanks paler and washed with buffy; abdomen very pale pinkish buff paling to creamy white on the midventral area; lower tail coverts between hair brown and chaetura drab, narrowly barred with white, and slightly tinged with buff anteriorly, the lateral feathers almost wholly white; thighs anteriorly buffy white; posteriorly dull hair brown; under wing coverts dark chaetura drab, narrowly barred with white.

Wing 129+ (molting); tail 56.5; exposed culmen 59; tarsus 50.5; middle toe without claw 49 mm.

Range.—Known only from the type locality. Uncertainly recorded from Mazatlán, Sinaloa.

Type locality.—San Blas, Nayarit, Mexico.

(?) *Rallus elegans* LAWRENCE, Mem. Boston Soc. Nat. Hist., ii, 1874, 311 (Mazatlán, Sinaloa).

(?) [*Rallus elegans*] b. var. *tenuirostris* RIDGWAY, Bull. Nutt. Orn. Club., v, 1880, 139, part (Mazatlán).

(?) *Rallus tenuirostris* SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 316 part (Mazatlán).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 17, part (Mazatlán).

Rallus nayaritensis McLELLAN, Proc. California Acad. Sci., ser. 4, xvi, 1927, 9 (orig. descr.; San Blas; Nayarit, Mexico).—VAN ROSSEM, Trans. San Diego Soc. Nat. Hist., vi, 1930, 236 (crit.).

Rallus obsoletus nayaritensis VAN ROSSEM, Trans. San Diego Soc. Nat. Hist., vi, 1930, 235.

Rallus elegans nayaritensis PETERS, Check-list Birds of World, ii, 1934, 160.

Rallus longirostris nayaritensis OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937 343 (monogr.; crit.).

RALLUS LONGIROSTRIS TENUIROSTRIS Ridgway

MEXICAN CLAPPER RAIL

Adult (sexes alike).—The most rufescent on the flanks of all the races of the species, these parts being pinkish umber broadly barred with white. Two phases occur, as follows:

DARK-BREADED PHASE: Forehead, crown, and occiput Dresden brown to Prout's brown, the feathers with shiny black shafts; nape and hind neck paler and slightly more grayish, the feathers dark sepia along the shafts; scapulars, interscapulars, feathers of the back, rump, and upper tail coverts bister to mummy brown very broadly edged with tawny-olive to grayish olive, the medial dark areas very greatly reduced on the rump and upper tail coverts; upper wing coverts deep snuff brown with a slight grayish wash to bright Sayal brown; bend of wing whitish; remiges dull bister, the innermost secondaries like the long scapulars; rectrices like their upper coverts; supraloral line whitish washed with buff and rusty; lores, cheeks, and auriculars Saccardo's umber washed with grayish drab; malar stripe broad and bright light pinkish cinnamon to pinkish cinnamon; chin and upper throat white; lower throat, breast, and upper abdomen cinnamon, with or without a very faint vinaceous-russet tinge; sides, flanks, and vent Saccardo's umber with a pinkish or pinkish cinnamon wash, the wash sometimes so pronounced as to make the light cross bars pale pinkish cinnamon instead of white; middle of lower abdomen pale pinkish buff; thighs anteriorly pale pinkish buff indistinctly barred with pale pinkish drab, dusky drab posteriorly; under wing coverts like the flanks; under tail coverts largely white, the

longer ones with a few longitudinal bister marks, and some of the others with irregular bars of the same.

LIGHT-BREASTED PHASE: Similar to the dark-breasted phase on the upperparts, but with the broad center of the breast and the whole upper abdomen except its extreme lateral portion whitish washed with pale pinkish cinnamon.

Juvenal (sexes alike).—Similar to the adults above but the top of head and the centers of the feathers of the upperparts of the body darker—dull fuscous-black, the lower back, rump, and upper tail coverts practically uniformly of this color as the pale edges are lacking; lores and subocular area posterior to the auriculars blacker, less rufescent; sides of neck mottled indistinctly with dusky; lower throat and upper breast washed with light pinkish cinnamon; lower breast and abdomen whitish laterally suffused, clouded, and mottled with dusky grayish hair brown washed with pale pinkish cinnamon; thighs buffy, whitish indistinctly barred with pale hair brown.

Natal down.—Jet black with a faint greenish sheen on the upperparts of head and body.

Adult male.—Wing, 151–159.5 (156.5); tail 62–70.5 (66.5); exposed culmen 62–65.5 (63.5); tarsus 56–59 (57.8); middle toe without claw 49–53 (51.1 mm.).⁸⁴

Adult female.—Wing, 139–144.5 (142.4); tail 59–65 (62.9); exposed culmen 56–60 (68); tarsus 47.5–53 (51.3); middle tone without claw 44.5–48 (46.6 mm.).⁸⁵

Range.—Resident in the fresh-water marshes of the Valley of Mexico (Lerma, Laguna del Rosario, Tlaxcala; near City of Mexico).

Type locality.—Valley of Mexico.

Rallus longirostris (not of Boddaert) SCLATER, Proc. Zool. Soc. London, 1864, 179 (near City of Mexico).

[*Rallus elegans* (not of Audubon) SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.

Rallus elegans, var. *tenuirostris* "Lawrence" RIDGWAY, Amer. Nat., viii, 1874, 111 (City of Mexico; coll. G. N. Lawrence).

[*Rallus elegans*] C. var. *tenuirostris* RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 139, part (diagnosis; City of Mexico).

Rallus elegans tenuirostris RIDGWAY, Bull. Nutt. Orn. Club, v, 1880, 139, footnote.—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 354, under fig.—FERRARI-PEREZ, Proc. U. S. Nat. Mus., ix, 1886, 177 (Laguna del Rosario, Tlaxcala).—PETERS, Check-list Birds of World, ii, 1934, 160.

[*Rallus elegans*] b. *tenuirostris* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 353.

[*Rallus elegans*] B. *tenuirostris* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 354.

[*Rallus elegans*] subsp. β . *Rallus tenuirostris* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 10 (near City of Mexico).

⁸⁴ Four specimens.

⁸⁵ Six specimens.

R[allus] tenuirostris RIDGWAY, Man. North Amer. Birds, 1887, 138.

Rallus tenuirostris SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 316, part (City of Mexico; Laguna del Rosario).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 17, part (geogr. range).

Rallus tenuirostris SHARPE, Hand-list, i, 1899, 93.

Rallus longirostris tenuirostris OBERHOLSER, Proc. U. S. Nat. Mus. lxxxiv, 1937, 336 (monogr., crit.).

RALLUS ELEGANS ELEGANS Audubon

KING RAIL

Adult (sexes alike), *dark phase*.—Forehead, crown, occiput, and nape deep, rich mummy brown, the feathers of the forehead and crown with shiny black shafts; scapulars, interscapulars, upper and lower back, rump, upper tail coverts, and rectrices deep fuscous to fuscous-black, the feathers broadly edged with tawny-olive to buckthorn brown, the edges becoming broader on the more posterior parts, often occupying (between the two margins) more than half the width of the feather on the long scapulars and the feathers of the rump and the upper tail coverts, narrow on the anterior interscapulars; upper wing coverts deep hazel to bright russet, some of the outer median and greater coverts with narrow whitish tips and a concealed narrow subterminal whitish band; remiges sepia, the outer web of the outermost primary often slightly paler—Saccardo's umber; a light stripe from the base of the maxilla over and behind the eye light pinkish cinnamon; rest of lores, circumocular area, cheeks, and auriculars grayish mummy brown; lower cheeks and sides of throat cinnamon; chin and middle of upper throat white; lower throat, breast, and upper abdomen cinnamon becoming paler in the mid-ventral part of the upper abdomen, the feathers faintly tipped with white on the upper abdomen, without pale tips on the breast feathers; middle of abdomen light buff; thighs similar but transversely barred with deep drab to hair brown; flanks sepia barred with white, the feathers tipped with white and crossed by two or three white bars each; vent similar to flanks; under tail coverts white, not buffy, and with the sepia areas reduced making the white bars wider; the outer webs of the lateral ones wholly white; axillars and under wing coverts deep rich sepia tipped and crossed by narrow bars of white; iris light burnt sienna; most of lower mandible and the maxillary tomium dull reddish brown, the extreme base of maxilla (near the gape and below) ochre-yellow; tarsi and toes and claws pale brownish gray.

Adult (sexes alike), *light phase*.—Similar to the dark phase but with forehead, crown, occiput, and nape Prout's brown; feathers of upper parts of the body with paler margins—pinkish buff with a

faint ashy wash on the more anterior areas, and with a pale olive wash on the feathers of the more posterior parts; upper wing coverts dark rich tawny; remiges as in dark phase but washed with olive; superciliaries pale cream-buff; lores, cheeks, and auriculars dusky drab; the lower cheeks, malar area, and sides of upper throat pale, light ochraceous-buff washed more or less with grayish; chin and upper throat whitish, often pure, sometimes lightly tinged with light buff; lower throat, breast, and upper abdomen light ochraceous-buff darkening laterally on the breast to ochraceous-buff; flanks slightly paler sepia than in the dark phase; under wing coverts with the sepia areas washed with hair brown; soft parts as in dark phase but paler (in dried skins).⁸⁶

Juvenal (sexes alike).—Above similar to the adult, dark phase, but the dark centers of the feathers of the back, etc., less fuscous, more dull black, the edges grayer and less well developed on the interscapulars and not at all developed on the lower back and rump, which are uniformly blackish, the long scapulars being the only feathers with well-developed tawny-olive margins; lesser and some of the outer greater upper wing coverts tipped with white and crossed by another narrow white band about 7 mm. anterior to the tip; sides of head as in pale phase adult, but the light ochraceous-buff areas cross-banded with narrow dusky lines (actually the tips of the feathers); lower throat pale, light ochraceous-buff narrowly barred with grayish hair brown to deep drab; anterior part of breast more heavily washed with pale ochraceous-buff; rest of breast and entire abdomen white, crossed by broad, closely spaced, but somewhat broken bands of grayish hair brown, the middle of the abdomen and lower breast unbarred; sides and flanks dusky grayish olive-brown barred with white or buffy white; thighs and vent like sides of breast but somewhat darker; under tail coverts and under wing coverts as in adult.

Natal down.—Short, thick, black down completely covering the head and body.

Adult male.—Wing 159–177 (163.4); tail 56–72.5 (65.9); exposed culmen 58–65.5 (62.5); tarsus 52–64 (58.4); middle toe without claw 50.5–60 (55.1 mm.).⁸⁷

⁸⁶ It is suggested by Bent (U. S. Nat. Mus. Bull. 135, 1927, 262) that this phase is an early adult plumage and that the dark phase is acquired later. I know of no evidence supporting this statement and have yet to see a pale adult molting into a dark one. The light phase is rarer than the dark one.

⁸⁷ Eighteen specimens from Illinois, Missouri, District of Columbia, Virginia, Alabama, Louisiana, South Carolina, and Florida.

Adult female.—Wing 147–162 (154.3); tail 60–70 (64.4); exposed column 50–63 (61.9); tarsus 49.5–58 (54); middle toe without claw 46–56 (50.8 mm.).⁸⁸

Range.—Breeds in marshes, almost always fresh, occasionally brackish, but not salt, from southern Minnesota (Jackson; Faribault; Waseca; Minneapolis); southern Wisconsin (Madison; Janesville; Jefferson County; Racine); southern Ontario (St. Clair Flats; Listowel); northern Ohio (Port Clinton; Middle Bass Island; Cleveland); New York (Buffalo; Branchport; Ithaca; near New York City; Long Island); and Connecticut (Saybrook); south through New Jersey (Avalon; Summit; Newark; etc.); Pennsylvania (near Philadelphia); Maryland (Marlborough; Tolchester); District of Columbia; Virginia (Wallops Island; Alexandria; Woodbridge; etc.); North Carolina (Raleigh; Lake Ellis); South Carolina (Waverly Mills; Mount Pleasant; Frogmore); and Georgia (Savannah; Blackbeard Island); to Florida (Titusville; Fort Myers; Tarpon Springs; Tallahassee); Mississippi (Vicksburg); Louisiana (Calcasieu); and rarely Texas (Corpus Christi); west to Oklahoma (Wister); northwestern Arkansas (Eureka Springs); eastern Kansas (Wichita; Stafford County; Manhattan); eastern Nebraska (Falls City; Lincoln; Omaha); western Iowa (Wall Lake; probably Sioux City); and southwestern Minnesota (Heron Lake).

Winters in the southern part of the breeding range and coast regions of Louisiana and Texas, rarely to east-central Mexico. North to Texas (Brownsville; Corpus Christi); southern Louisiana (New Orleans; Octave Pass; Vermilion Bay; Mandeville); Mississippi (Hancock County); Alabama (Greensboro); and South Carolina (Mount Pleasant; Port Royal; Frogmore); Georgia (Savannah; Blackbeard Island); and south to Florida (Titusville; Fort Myers); and rarely Mexico (Veracruz—Tlacotalpan). Occasional in winter in Michigan.

Type locality.—Kentucky, South Carolina, Louisiana, and north to Camden, N. J., and Philadelphia=Charleston, S. C.

Rallus crepitans (not of Gmelin) WILSON, Amer. Orn., vii, 1813, 112, part, pl. 62, fig. 2 (original of figures now in coll. Mus. Comp. Zool., see Faxon, Bull. Mus. Comp. Zool., lix, 1915, 132).

(?) *Rallus crepitans* ALLEN, Bull. Mus. Comp. Zool., iii, 1872, 172, 182 (Ogden, Utah).

Rallus elegans AUDUBON, Orn. Biogr., iii, 1835, 27, pl. 203 (s. e. United States or interior of South Carolina); Synopsis, 1839, 215; Birds Amer., 8vo ed., v, 1842, 160, pl. 309.—BONAPARTE, Geogr. and Comp. List, 1838, 52.—KENN-

⁸⁸ Fourteen specimens from Illinois, District of Columbia, Maryland, Virginia, Louisiana, and Florida.

COTT, Trans. Illinois Agr. Assoc., i, 1855, 386 (Illinois).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 746.—BAIRD, Cat. Birds North Amer., 1859, no. 552.—HOY, Ann. Rep. Smiths. Inst. for 1864 (1865), 438 (Missouri).—DRESSER, Ibis, 1866, 401 (s. Texas).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 444, part (monogr.).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—SNOW, Birds Kansas, 1873, 10.—COUES, Check-list, 1874, No. 466, ed. 2, 1882, No. 676; Birds Northwest, 1874, 535, part (excl. synonyms under "b. *obsoletus*").—PURDIE, Bull. Nutt. Orn. Club, ii, 1877, 22 (Nahant, Mass., Nov. 21, 1875); iii, 1878, 140 (Sudbury Meadows, Mass.).—BREWER, Proc. Boston Soc. Nat. Hist., xix, 1878, 307 (Nahant, Mass., spring 1876).—BROWN (N. C.), Bull. Nutt. Orn. Club, vii, 1882, 60 (Scarboro Marsh, near Portland, Maine, Oct. 8, 1881), 124 (Portland, Conn., Sept. 17, 1879).—BAILEY (H. B.), Bull. Nutt. Orn. Club, viii, 1883, 42 (St. Simon Island, Ga., breeding).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 353, part (excl. syn. "b. *tenuirostris*").—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 208; ed. 3, 1910, p. 101.—DUTCHER, Auk, v, 1888, 176 (Long Island records).—SCOTT, Auk, vi, 1889, 153 (Tarpon Springs and Caloosahatchee River, Fla.); ix, 1892, 212 (Caloosahatchee River, breeding).—THOMPSON, Proc. U. S. Nat. Mus., xiii, 1890, 494 (Winnipeg and Carberry, Manitoba).—MILLER (G. S.), Auk, ix, 1892, 396 (North Truro, Mass., Feb. 1892).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 8, part (Kankakee and Chicago, Ill.; De Soto County and Tarpon Springs, Fla.; Brownsville, Tex.).—STONE, Birds Eastern Pennsylvania and New Jersey, 1894, 66 (records).—BROCK, Auk, xiii, 1896, 79 (Falmouth, Mass., Sept. 19, 1895).—MORRIS, Auk, xiii, 1896, 86 (near Springfield, Mass., Oct. 9, 1895); xxix, 1912, 237 (near Springfield, Mass., Aug. 30, 1911); xxx, 1913, 580 (near Springfield, Aug. 22, 1913).—POSSON, Auk, xvi, 1899, 194, (Carleton, Orleans County, N. Y., Aug. 1880).—BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 93 (Louisiana, abundant winter resident).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 38 (Wisconsin; habits).—WILLIAMS (R. W.), Auk, xxi, 1904, 452 (Leon County, Fla., resident).—RHODES and PENNOCK, Auk, xxii, 1905, 198 (Delaware, resident).—FARLEY, Auk, xxii, 1905, 409 (Cambridge, Mass. Dec. 30, 1896).—WILSON (B. H.), Wils. Bull., No. 54, 1906, 2 (Scott County, Iowa, breeding).—FLEMING, Auk, xxiii, 1906, 447 (Toronto, Ontario, rare migrant); xxx, 1913, 226 (Toronto, Apr. 24, 1907).—HOLMES, Wils. Bull., No. 58, 1907, 22 (Summit, N. J., breeding).—BURNS, Wils. Bull., No. 58, 1907, 32 (Chester County, Pa., May 4).—WIDMANN, Birds Missouri, 1907, 58 (common summer resident).—TAVERNER and SWALES, Wils. Bull., No. 60, 1907, 83 (Point Pelee, Ontario, June, Sept., Nov., and Dec. 31).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 206, (Iowa; habits).—KNIGHT, Birds Maine, 1908, 138 (Maine records).—KENNARD, Auk, xxv, 1908, 218 (Needham, Mass., Oct. 10, 1907).—MILLER (R. F.), Auk, xxv, 1908, 218 (Philadelphia County, Pa., breeding).—ALLEN (G. M.), Auk, xxv, 1908, 234 (Peabody, Mass., Mar. 13, 1905).—PHILIPP, Auk, xxvii, 1910, 315 (Ellis Lake, N. C., breeding).—CORY, Field Mus. Nat. Hist., Publ. 131, 1909, 381 (Illinois; Wisconsin).—WAYNE, Birds South Carolina, 1910, 35 (resident in fresh-water ponds and marshes; habits).—EATON, Birds New York, i, 1910, 271, pl. 25 (summer resident).—HOWE, Auk, xxvii, 1910, 339 (New Barnstable, Mass., Dec. 30 or 31, 1909).—BARROWS, Michigan Bird Life, 1912, 152.—FORBUSH, Game-birds, Wild-fowl,

and Shore-birds, 1912, 203 (biography).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 48.—BAYNARD, Auk, xxx, 1913, 243 (Alachua County, Fla., breeding).—ROSS, Auk, xxx, 1913, 436 (Bennington, Vt., 1 specimen, May).—HATHAWAY, Auk, xxx, 1913, 549 (Rhode Island records).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 14, fig. 5, map (range and migr. routes).—GOLSAN and HOLT, Auk, xxxi, 1914, 218 (Autauga and Montgomery Counties, Ala., breeding; descr. nest).—FAXON, Bull. Mus. Comp. Zool., lix, 1915, 132 (original of fig. of "*Rallus crepitans*" of Wilson's Amer. Orn. in coll. Mus. Comp. Zool.).—HARLOW, Auk, xxxv, 1918, 21 (breeding in Delaware Valley, Pennsylvania and New Jersey).—PANGBURN, Auk, xxxvi, 1919, 398 (Pinellas County, Fla.).—WILLIAMS (J.), Wils. Bull. xxxi, 1919, 116 (Wakulla County, Fla., breeding).—PHILLIPS, Auk, xxxvi, 1919, 277 (Bucksport, Maine, Nov. 22, 1909).—ERICHSEN, Auk, xxxvi, 1919, 334 (Liberty County, Ga., breeding); Wils. Bull., xxxiii, 1921, 74 (Chatham County, Ga., breeding).—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 29 (Trout Lake, Nebr., formerly breeding).—FLEMING and LLOYD, Auk, xxxvii, 1920, 432 (Pictou Bay, Quebec, Mar. 28, 1917).—CAHN, Wils. Bull., xxxiii, 1921, 171 (near Lake Caddo, ne. Texas; breeding?).—HOWELL (A. H.), Auk, xxxviii, 1921, 255 (Royal Palm Hammock, s. Florida, rare resident, probably breeding).—COURT, Auk, xxxviii, 1921, 281 (breeding near Washington, D. C.).—BISHOP, Auk, xxxviii, 1921, 584 (Quinipiac marshes, Conn., Oct. 29, 1914).—JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).—GRISCOM, Birds New York City Region, 1923, 133 (status, New York City Region).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 29 (genl., Oklahoma).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 352, pl. 23 (col. fig.; descr.; habits; New England).—LARSON, Wils. Bull., xxxvii, 1925, 25 (Sioux Falls, S. Dak.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (Fulton County, Ky.).—HAMILTON, Auk, xlii, 1925, 128 in text (nesting; Long Island, N. Y.); 266 in text (Bayside, Long Island).—GRISCOM and CROSBY, Auk, xlii, 1925, 527 (Brownsville, Tex., status).—KUEZL, Auk, xliii, 1926, 234 in text (New York City).—TAVERNER, Birds Western Canada, 1926, 125 (descr.; habits; distr.; w. Canada).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 260 (life hist.; monogr.).—LINSDALE and HALL, Wils. Bull., xxxix, 1927, 94 (s. of Lawrence, Douglas County, Kans.).—LINSDALE, Auk, xliv, 1927, 52 (Pratt, Kans.).—BALL, Auk, xliv, 1927, 258 (near Washington, D. C.).—BENT and COPELAND, Auk, xliv, 1927, 377 (near Plant City, Fla.).—PICKENS, Auk, xliv, 1927, 428 (near Greenwood, Fla.).—POTTER, Auk, xlv, 1928, 94 in text (feeding on crabs).—BAILEY, Auk, xlv, 1928, 277 (winter; Chenier au Tigre, La.).—CHRISTY, Auk, xlv, 1928, 287 in text (Everglades, s. Florida).—PICKENS, Wils. Bull., xl, 1928, 188 (lower Piedmont, near Greenwood, S. C.).—WILSON, Wils. Bull., xli, 1929, 183 (lake near Bowling Green, Ky.).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 26 (Washington, D. C.).—URNER, Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 65 (Union County, N. J.).—FLEMING, Auk, xlvii, 1930, 67 (specimen, Frenchmans Bay, Lake Ontario).—CAHN, Wils. Bull., xlii, 1930, 215 (Little Egypt, Ill.).—PIERCE, Wils. Bull., xlii, 1930, 262 (status, Buchanan County, Iowa).—BROWN, Auk, xlviii, 1931, 130 (Berkshire County, Mass.).—DUMONT, Auk, xlviii, 1931, 249 (Floating Island, s. of Tarpon Springs; s. of Wall Springs, Fla.).—CHRISTY, Auk, xlviii, 1931, 367 (change in status; Sandusky Bay, Lake Erie).—BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 193 (Avery Island; Chenier au Tigre, La.).—TAVERNER, Birds Canada,

- 1934, 72 (Canada; regular in southern Ontario; one record for Manitoba).—**OBERHOLSER**, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314 in text, 316 in text, 337 in text, 345 in text (crit.).—**GOWER**, Wils. Bull., li, 1939, 44 in text (near Prudenville, Mich., Dec. 9, 1938).
- (?) *Rallus elegans* **HENSHAW**, Ann. Lyc. Nat. Hist. New York, xi, 1874, 11 (Ogden, Utah).—**CHAPMAN**, Bull. Amer. Mus. Nat. Hist., iii, 1891, 320 (Neuces Bay, Tex.; notes).
- [*Rallus*] *elegans* **COUES**, Key North Amer. Birds, 1872, 273.—**SHARPE**, Hand-list, i, 1899, 93, part.
- R[*allus*] *elegans* **RIDGWAY**, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 138.—**COUES**, Key North Amer. Birds, ed. 2, 1884, 672.—**ROTHSCHILD**, Bull. Brit. Orn. Club, xlviii, 1928, 122 (eggs).
- [*Rallus elegans*] a. *elegans* **COUES**, Birds Northwest, 1874, 535 part (excl. syn. part).—**BAIRD**, **BREWER**, and **RIDGWAY**, Water Birds North Amer., i, 1884, 353, 354.
- [*Rallus elegans*] a. var. *elegans* **RIDGWAY**, Bull. Nutt. Orn. Club, v, 1880, 139 (diagnosis).
- [*Aramus*] *elegans* **GRAY**, Hand-list, iii, 1871, 59, No. 10417.
- [*Limnopardalis*] *elegans* **HEINE** and **REICHENOW**, Nom. Mus. Hein. Orn., 1890, 320 (Texas; New York; "Central Amerika").
- Rallus elegans elegans* **HOWELL**, Birds Alabama, 1924, 85; ed. 2, 1928, 85 (distr.; habits; Alabama).—**BAILEY**, Birds Florida, 1925, 40, pl. 20 (col. fig.; distr.; Florida).—**WORTHINGTON** and **TODD**, Wils. Bull., xxxviii, 1926, 209 (Choctawhatchee Bay, Fla.).—**NICE**, Birds Oklahoma, rev. ed., 1931, 84 (genl.; Oklahoma).—**BAEBG**, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 57 (deser.; distr.; Arkansas).—[**ARTHUR**], Birds Louisiana, 1931, 234 (deser.; status; Louisiana).—**AMERICAN ORNITHOLOGISTS' UNION**, Check-list North Amer. Birds, ed. 4, 1931, 95.—**HOWELL**, Florida Bird Life, 1932, 202 (genl.; Florida).—**ROBERTS**, Birds Minnesota, i, 1932, 440 (distr.; habits; Minnesota).—**BAKER**, Auk, xlix, 1932, 100 (Crane Lake, Ontario).—**POOLE**, Auk, xlix, 1932, 234 (Lake Ontelaunee, Pa.).—**GRISCOM**, Trans. Linn. Soc. New York, iii, 1933, 97 (Dutchess County, N. Y.; rare summer resident).—**PETERS**, Check-list Birds of World, ii, 1934, 160.—**CAMPBELL** and **CAMPBELL**, Wils. Bull., xlvi, 1934, 122 (2 specimens; Erie Marsh, Monroe County, Mich., Feb. 8, 1934; Jerusalem Township, Lucas County, Ohio, Feb. 11).—**BROOKS**, Auk, li, 1934, 249 (near Winfield, W. Va., Dec. 31, 1930).—**BAILEY**, Auk, li, 1934, 399 (spec., Chenier au Tigre, La., January 1-5).—**DU MONT**, Univ. Iowa Studies Nat. Hist., xv, 1934, 61 (Iowa; uncommon migrant and rare summer resident).—**DEADERICK**, Auk, liii, 1936, 455 (12 miles north of Hot Springs, Ark., Dec. 22, 1935; spec.).—**DUVALL**, Auk, liv, 1937, 462 (Knotts Island, N. C.).—**OBERHOLSER**, Bird Life Louisiana, 1938, 197 (fairly common permanent resident in Louisiana—from Cameron Parish, Chenier au Tigre, New Iberia, and Octave Pass, north to the northwestern corner of the State).—**WILLIAMS**, Auk, lv, 1938, 64 (not common, Galveston Island, Tex.).—**POLAND**, Auk, lv, 1938, 128 (Leetown, W. Va.; breeding).—**FORD**, Auk, lv, 1938, 133 (seen near Port Isabel, Tex., Mar. 19, 1937).—**SUTTON**, Auk, lv, 1938, 503 (breeding near Gate, Beaver County, Okla.).—**DEADERICK**, Wils. Bull., i, 1938, 263 (Hot Springs National Park, Ark., Dec. 22, 1935).—**BENNETT** and **HENDRICKSON**, Auk, lvi, 1939, 36 (adaptability to environment).

Rallus elegans *elegans* RILEY, Proc. Biol. Soc. Wash., xxvi, Mar. 22, 1913, 84, 85, in text.—HICKS, Wils. Bull., xlv, 1933, 180 (Ashtabula County, Ohio; very rare and local; nest and 7 eggs June 30).—ELIOT and BAGO, Auk, li, 1934, 246 (seen at Northampton, Mass., Sept. 13, 1933).—HICKS, Auk, liii, 1936, 228 (nesting near South Zanesville, and at Cambridge, Ohio).—POOLE, Auk, lv, 1938, 516 (weight and wing surface).

RALLUS ELEGANS RAMSDENI Riley

CUBAN KING RAIL

Adults (sexes alike).—Similar to the light phase of *Rallus elegans elegans* but smaller, more extensively white on the abdomen and lower breast, and with the upper part of the cheeks and auriculars slightly more grayish—gull gray to pale neutral gray.

Juvenal.—Similar to that of the nominate race.

Natal down.—Unknown.

Adult male.—Wing 149–152.8 (151.2); tail 53–65 (56.4); exposed culmen 53–58 (56.7); tarsus 52–56 (54.6); middle toe without claw 45–50 (47.8 mm.).⁸⁹

Adult female.—Wing 134–144.2 (141.4); tail 52–58.5 (57); exposed culmen 46–54 (51.4); tarsus 49–55 (51.9); middle toe without claw 41.5–44 (42.8 mm.).⁹⁰

Range.—Resident, but scarce, in Cuba (Guantanamo, Habana, Aguada de Pasajeros, Lake Ariguanaba, Bucuranao, Laguna del Siteo, Zapata Swamp, not in the larger lakes of the island); and the Isle of Pines (Sigüanea, Los Indios, Pasadita, and Nueva Gerona).

Type locality.—Guantanamo, Cuba.

Rallus elegans (not of Audubon) CABANIS, Journ. für Orn., iv, 1856, 427 (Cuba).—GUNDLACH, Journ. für Orn., x, 1862, 90 (Cuba; crit.); Contr. Orn. Cubana, 1876, 188; Orn. Cubana, 1895, 239.—THIENEMANN, Journ. für Orn., v, 1857, 156 (Cuba; descr. eggs).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308.—CORY, Auk, v, 1888, 82 (Cuba; references); ix, 1892, 272 (Cuba); Birds West Indies, 1889, 253 (Cuba; excl. syn. part); Cat. West Indian Birds, 1892, 91 (Cuba).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 8, part (Cuba).—BOND, Birds West Indies, 1936, 87 (Cuba and Isle of Pines).

(?) *Rallus elegans* BANGS and ZAPPEY, Amer. Nat., xxxix, 1905, 192 (Isle of Pines, Cuba).

[*Rallus*] *elegans* GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); Rep. Físico-Nat. Cuba, i, 1865–66, 360.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139, part (Cuba).—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29 (Cuba).—SHARPE, Hand-list, i, 1899, 93, part (Cuba).

R[*allus*] *elegans* COUES, Key North Amer. Birds, ed. 2, 1884, 672, part (Cuba).

[*Rallus elegans*] *a. elegans* COUES, Birds Northwest, 1874, 538 (in synonymy).

⁸⁹ Seven specimens from Cuba and the Isle of Pines.

⁹⁰ Nine specimens from Cuba and the Isle of Pines.

- Rallus elegans ramsdeni* RILEY, Proc. Biol. Soc. Washington, xxvi, 1913, 83. (Guantanamo, Cuba; coll. U. S. Nat. Mus.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 17 (range).—TODD, Ann. Carnegie Mus., x, 1916, 200 (Siguanea, Isle of Pines; crit.).—BARBOUR, Mem. Nutt. Orn. Cl., vi, 1923, 52.—DANFORTH, Wils. Bull., xl, 1928, 179 (Laguna del Siteo, Cuba).—BENT, U. S. Nat. Mus. Bull. 135, 1927, 264, in text (Cuba).—PETERS, Check-list Birds of World, ii, 1934, 160.—DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 425 (Guane, Cuba; spec.; food habits).—OBERHOLSER, Proc. U. S. Nat. Mus., lxxxiv, 1937, 314, 315 in text.
- R[allus] e[elegans] ramsdeni* BOND, Birds West Indies, 1936, 87 in text (Cuba and Isle of Pines; descr.).

RALLUS LIMICOLA LIMICOLA Vieillot

VIRGINIA RAIL

Adult (sexes alike).—Similar to the dark phase of *Rallus elegans elegans* but generally darker, the sides of the head more distinctly and more uniformly grayish plumbeous, the sides and abdomen cinnamonaceous like the breast but paler, instead of being barred like the flanks, and the under wing coverts and axillars not barred but irregularly marked with white on the tips and margins of the feathers. The birds are subject to considerable variation, but the variations are difficult to group into definite color phases: Forehead, crown, occiput, and upper nape dark fuscous, the feathers edged narrowly with mummy brown to sepia; the hind neck, scapulars, interscapulars, upper and lower back dark fuscous to fuscous-black medially, broadly edged with Saccardo's umber to buffy Dresden brown; the dark centers increasing in width posteriorly, the rump, upper tail coverts, and rectrices with the dark centers extending over all but the narrow lateral margins of the feathers; upper wing coverts cinnamon-rufous to russet, dusky at their extreme bases, which are completely hidden, and on the inner portion of the inner web of the greater coverts; remiges sepia to slightly grayish sepia, the outer web of the outermost primary very slightly paler; a light stripe from the base of the maxilla to the anteromedian portion of the eye pinkish buff to light pinkish cinnamon; rest of lores, cheeks, circumocular area, and auriculars deep neutral gray, paling posteriorly (on auriculars) to neutral gray, occasionally washed slightly with hair brown; malar area, lower cheeks, and lower sides of neck, entire throat, breast, and sides of upper abdomen pinkish cinnamon to orange-cinnamon, darkest and richest on the lower throat, the breast, and the sides of the upper abdomen; the upper part of the sides of the neck pale Saccardo's umber to Dresden brown, the feathers with obscure dusky median stripes; chin varying from pure white to light pinkish cinnamon; median and lower portions of abdomen light ochraceous-salmon to light ochraceous-buff; the feathers of the upper median part of the

abdomen faintly and narrowly tipped with white; flanks fuscous-black to black barred with white, the black interspaces two to three times as wide as the narrow white bars; thighs like the lower abdomen but washed with hair brown; under tail coverts white tipped with cinnamon and subterminally marked with blackish on their inner webs; under wing coverts like the remiges but edged and tipped with very pale buffy or whitish in varying amounts; iris bright red; bill brownish on maxilla, dull orange red on mandible, the tip dusky; tarsi and toes dusky brownish red.

Juvenal (sexes alike).—Forehead, crown, occiput, nape, upper and lower back, rump, and upper tail coverts dull black, the feathers of the head very narrowly and faintly edged with brownish; hind neck, scapulars, and interscapulars dull black edged with Dresden brown; wings as in adult but the upper coverts mixed with dull sepia; rectrices dull fuscous-black very narrowly edged with Dresden brown; superciliary stripe from base of maxilla to upper midpoint of eye whitish; lores, cheeks, auriculars deep mouse gray mottled with whitish (caused by the narrow tips of the feathers); chin and upper throat white to grayish white, the throat mottled with dusky gray; lower throat, breast, sides, flanks, and abdomen dull fuscous-black mottled with white, the center of the breast and abdomen largely whitish; thighs dark hair brown mottled with darker; under tail coverts broadly tipped with pale cinnamon, otherwise black barred with white; in some specimens the abdomen is slightly suffused with pinkish buff; "iris pale gray brown; bill-maxilla blackish, mandible reddish brown; feet light reddish brown" (Brooks).

Natal down.—"Long, thick, rather coarse, black down, glossed bluish on the head and greenish on the back" (Bent); none seen in connection with the present writing, but two young birds in post-natal molt have the head down greenish, not bluish (U. S. N. M. Nos. 141073 and 261990).

Adult male.—Wing, 94–113 (105.9); tail 38.5–54 (44.3); culmen 36.5–44.5 (41.7); tarsus 31.5–39 (35.4); middle toe without claw 34.5–39.5 (36.7 mm.).⁹¹

⁹¹ Twenty-six specimens from Massachusetts, New Jersey, Pennsylvania, District of Columbia, Virginia, Illinois, Missouri, Minnesota, Utah, Montana, British Columbia, Washington, California, and Arizona.

Dickey (Condor, xxx, 1928, 322) separated the birds of western North America, on the basis of larger size, under the name of *pacificus*. The material studied in the present connection does not bear out the degree of difference Dickey reported. While it is true that the maximal measurements of western birds are greater than those of eastern ones, the bulk of the material of both lies within the limits of overlapping measurements, so that only a comparatively small percent of the specimens could actually be separated by their size char-

Adult female.—Wing 95–105.5 (101.2); tail, 38–47.5 (45.0); culmen 36–42.5 (40.2); tarsus 31–37.5 (34.1); middle toe without claw 32–37.5 (34.3 mm.).⁹²

Range.—Breeds in fresh-water marshes or, at least, near fresh water from Nova Scotia (Kentville); New Brunswick (Scotch Lake; St. John); southern Quebec (Quebec; Montreal); Ontario (Ottawa; Toronto; Kingston; King Township; Hamilton; York Factory (?); Wellington and Waterloo Counties); Michigan (Detroit; Cheboygan County; Bay City; Huron Mountain; Pontiac; Douglas Lake); Wisconsin (West De Pere; Kelley Brook; Madison); Minnesota (Leach Lake; Fort Snelling; Millelacs Lake); southern Manitoba (Shoal

acters. The table below gives the actual data on which this conclusion is based. As may be seen from it, the supposed size discrepancy does not exist at all in the females examined:

Locality	Number of specimens	Wing	Tail	Culmen	Tarsus	Middle toe without claw
<i>Males</i>						
Massachusetts.....	1	105.5	44.5	40.5	34	37
New Jersey.....	1	104	43	44.5	33	37.5
Pennsylvania.....	1	105.5	41	42	35.5	38.5
District of Columbia.....	4	{ 103–107 (105)	43.44 (43.8)	38–42.5 (40.5)	34–35 (34.8)	34.5–37 (34.6)
Virginia.....	2	105–109	44–45	40–42	34–36	35–36
Illinois.....	1	94	42	36.5	31.5	35
Missouri.....	1	103	43	39	33.5	37
Minnesota.....	1	104	44	43	35.5	39.5
Montana.....	1	99	38.5	42.5	35	36.5
Utah.....	1	109	43	45	37	36
British Columbia.....	1	113	48	43.5	39	39
Washington.....	1	110.5	54	44	35	38.5
California.....	9	{ 103–111 (107.4)	41–48.5 (44.8)	36.5–44.5 (40.8)	31.5–39 (36.8)	35–39 (36.4)
Arizona.....	1	106	45	41	36	39
<i>Females</i>						
Massachusetts.....	1	101	44	37	33	32
Rhode Island.....	1	105	42	42.5	35	37
New Jersey.....	1	105.5	41	40	36	37.5
Pennsylvania.....	2	95–100	40–44	36.5–37	32–33	35–35
District of Columbia.....	1	102	45	38	32.5	33.5
Virginia.....	1	101.5	47.5	40	35	34
Alabama.....	1	98	42	36	31	33.5
Illinois.....	1	95	41	37.5	32.5	33
Utah.....	2	103–103	41–44	39–39.5	32–33	33.5–34
New Mexico.....	1	103	44	37	35	35
California.....	6	{ 97–104 (101.4)	38–48 (42.8)	35–39 (37.4)	32–37 (34.3)	30–35.5 (33.3)
Mexico, Lower California.....	1	99	43	38.5	37.5	35

⁹² Nineteen specimens from Massachusetts, Rhode Island, New Jersey, Pennsylvania, District of Columbia, Virginia, Alabama, Illinois, Utah, New Mexico, California, and Mexico (Lower California).

Lake; Chemawawin; Winnipeg; Winnipegosis; Reabwin); southern Saskatchewan (Indian Head); Montana (Columbia Falls; Great Falls; Fort Keogh); and southern British Columbia (Beaver Creek; Goldstream; Chilliwack; and probably 158-mile House and Okanagan); south to North Carolina (Gull Shoal); Ohio (Lewiston Reservoir); Indiana (Bluffton); Kentucky (Henderson); Illinois (Chicago; Mount Carmel; Vandalia); Missouri (rarely—Clark County); Iowa (Newton; Boone); Nebraska (London; Lincoln; Valentine); Colorado (Clear Creek; Fountain; San Luis Lakes); New Mexico (probably, Lake Burford); Mexico (Valley of Mexico; Lerma; possibly Santa Cruz; Sonora; Tizimin, Yucatan); Nevada (Carson City); California (throughout south to Escondido); and Lower California (Pacific slope of the northwestern section of the peninsula, San Ramon, and probably El Rosario).

Winters from North Carolina (Pea Island); southern Illinois (Mount Carmel); Arkansas (Stuttgart); Colorado (Clear Creek; Barr); Utah (Provo; St. George ?); and southern British Columbia (Chilliwack; Okanagan); south to Florida (uncommon in northern half of State; Coronado Beach; Orlando; Cedar Keys; Lukens; St. Marks; Pensacola; Daytona Beach; Leon County; Goose Creek; Wakulla County; Tarpon Springs; Sanibel Island; Titusville; Fort Myers); Bermuda (rarely); the Gulf States; Mexico (Jalapa; Veracruz; Lerma, Valley of Mexico; Sinaloa, Mazatlán); Lower California (San Quentin; Cape district; Colorado delta); and to Guatemala (Antigua; Dueñas; Ciudad Vieja—taken only in September and October).

Casual in summer in Newfoundland (Reeks) and Labrador (Hamilton Inlet ?); in winter north to Massachusetts (Barnstable; Cape Cod; Worcester); New York (Long Island); New Jersey (near Trenton); Maryland (Easton); Virginia (Virginia Beach); and Montana (Helena).

Accidental in Cuba, the Isle of Pines, and Bermuda.

Type locality.—États Unis=Pennsylvania.

[*Rallus*] *virginianus* (not of Linnaeus, Syst. Nat., ed. 12, i, 1766, 263: Virginia; based on Catesby, i, 70; Brisson, v, 175) GMELIN, Syst. Nat., i, pt. ii, 1789, 716 (Pennsylvania).—DENNY, Proc. Zool. Soc. London, 1847, 40 (Jamaica; Mexico; United States).—CABANIS, Journ. für Orn., 1861, 342 (Cuba).—GUNDLACH, Rep. Físico-Nat. Cuba, i, 1865-66, 361 (Cuba).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).—COUES, Key North Amer. Birds, 1872, 273.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29 (Cuba).—SHARPE, Hand-list, i, 1899, 94.

Rallus virginianus TURTON, Syst. Nat., i, 1806, 432.—WILSON, Amer. Orn., vii, 1813, 109, pl. 62, fig. 1 (not of vol. vi, 1812, pl. 48, fig. 1, which = sora rail).—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 334; Geogr. and Comp. List, 1838, 53.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 205.—AUDUBON, Orn. Biogr., iii, 1935, 41, pl. 205; v, 1839, 573; Synopsis,

1839, 216; *Birds Amer.*, 8vo ed., v, 1842, 174, pl. 311.—PEABODY, Rep. Orn. Massachusetts, 1839, 374.—WOODHOUSE, Rep. Sitgreaves' Expl. Zuñi and Colorado Rivers, 1853, 101 (Rio Laguna; specimen).—THOMPSON, Nat. Hist. Vermont, 1853, 106.—HENRY, Proc. Acad. Nat. Sci. Philadelphia, vii, 1855, 314 (New Mexico); xi, 1859, 108 (New Mexico).—KENNICOTT, Trans. Illinois Agr. Assoc., i, 1855, 587 (Illinois).—CABANIS, Journ. für Orn., 1856, 427 (Cuba).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 748; Proc. Acad. Nat. Sci. Philadelphia, xiv, 1862, 322 (California).—XANTUS, Proc. Acad. Nat. Sci. Philadelphia, xi, 1859, 192 (Fort Tejon, Calif.).—MARTENS, Journ. für Orn., 1859, 220 (Bermuda).—BAIRD, Cat. North Amer. Birds, 1859, No. 554; Rep. U. S. and Mex. Bound. Surv., ii, pt. 2, 1859, 26 (Santa Cruz, Sonora; June).—SALVIN and SCLATER, Ibis, 1860, 277 (Antigua, Guatemala; Sept.).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).—GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); 1875, 357 (Cuba; habits); Contr. Orn. Cubana, 1876, 189; Orn. Cubana, 1895, 241.—VERRILL, Proc. Essex Inst., iii, 1862, 158 (Maine; breeds; uncommon).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 10.—DRESSER, Ibis, 1866, 40 (s. Texas).—MCLWRAITH, Proc. Essex Inst., v, 1866, 93 (Hamilton, Ontario).—COUES, Proc. Acad. Nat. Sci. Philadelphia, xviii, 1866, 98 (Fort Whipple, Ariz.); Ibis, 1866, 265 (Mojave River); Check List, 1874, No. 467; ed. 2, 1882, No. 677; Birds Northwest, 1874, 536.—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 445 (monogr.).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—AIKEN, Proc. Boston Soc. Nat. Hist., xv, 1872, 210 (Colorado, breeding).—HENSHAW, Ann. Lyc. Nat. Hist. New York, xi, 1874, 11 (Utah).—LAWRENCE, Mem. Boston Soc. Nat. Hist., ii, 1874, 311 (Matztlán, Sinaloa, in winter).—RIDGWAY, Orn. 40th Parallel, 1877, 612 (near Pyranid Lake, Nev., May); Orn. Illinois, ii, pt. i, 1895, 91.—BREWSTER, Bull. Nutt. Orn. Club, iv, 1879, 45 (descr. downy young).—MEARNS, Bull. Nutt. Orn. Club, iv, 1879, 197 (Fort Klamath, Oreg., July).—REID, U. S. Nat. Mus. Bull. 25, 1884, 246 (Bermuda, Nov. 6, 1851).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 363.—TURNER, Proc. U. S. Nat. Mus., viii, 1885, 248 (Hamilton Inlet, Ungava).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 212; ed. 3, 1910, p. 103.—GOSS, Auk, iii, 1886, 115 (Kansas, breeding).—SETON, Auk, iii, 1886, 150 (Winnipeg and Winnipegosis region, Manitoba, summer resident).—DWIGHT, Auk, iv, 1887, 16 (Cape Breton Island, Nova Scotia).—COOPER, Auk, iv, 1887, 90 (Saticoy, Ventura County, Calif., resident).—BECKHAM, Auk, iv, 1887, 124 (Pueblo, Colo., Nov.).—CORY, Auk, v, 1888, 53 (Cuban references); Birds West Indies, 1889, 254; Cat. West Indian Birds, 1892, 91; Field Mus. Nat. Hist., Pub. 131, 1909, 382 (Illinois; Wisconsin).—BRYANT (W. E.), Proc. California Acad. Sci., ser. 2, ii, 1889, 270 (San Quentin, Lower California, winter).—THOMPSON, Proc. U. S. Nat. Mus., xiii, 1890, 494 (Winnipeg and Carberry, Manitoba).—LAWRENCE (R. H.), Auk, ix, 1892, 309 (Grays Harbor, Wash.).—FISHER (A. K.), North Amer. Fauna, No. 7, 1893, 21 (Death Valley, Calif., Feb. 3; Ash Meadows, Nev., Mar.; Lone Pine, Owens Valley, June 7-10).—SHARPE, Cat. Birds Brit. Mus. xxiii, 1894, 16, pl. 2, fig. 2 (Tizimin, Yucatan, June 23; Dueñas, Guatemala, Oct.; Ciudad Viejo, Guatemala, Sept.).—ROTZELL, Birds Nazareth, Pa., 1895, 3 (summer resident).—HOFFMANN, Auk, xii, 1895, 188 (Barnstable, Cape Cod, Mass., Dec. 31, 1894).—DAWSON, Auk, xiv, 1897, 172 (Okawgan, Wash., breeding).—GRINNELL (J.), Pasadena Acad. Sci. Publ. 2, 1898, 15 (Los Angeles County, Calif., breeding ?); Pacific Coast Avif., No. 11, 1915, 46 (breeding s. to Escondido, San Diego County, Calif.; common in winter).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., x, 1898, 36 (Jalafa, Vera-

cruz).—COOKE, Bull. Colorado Agr. Exp. Stat., 1898, 158 (near Fountain, El Paso County, Colo., breeding); U. S. Dept. Agr. Bull. 128, 1914, 22, fig. 10 (range and migr. routes).—BUTLER, Rep. State Geol. Indiana, for 1897 (1898), 674 (breeding in De Kalb, Lake, La Porte, Elkhart, and Starke Counties, n. Indiana).—MAILLIARD, Condor, iii, 1901, 121 (San Benito County, Calif., resident).—WOODCOCK, Oregon Agr. Exp. Stat. Bull. 68, 1902, 19 (Oregon range).—BREWSTER, Bull. Mus. Comp. Zool., xli, 1902, 56 (San Jose del Cabo, Lower California, Oct. 24, Nov. 4; San Quintin, winter).—ALLEN (G. M.), Proc. Manchester Inst. Arts and Sci., iv, 1902, 83 (New Hampshire, local summer resident).—PREBLE, North Amer. Fauna, No. 22, 1902, 92 (York Factory, n. Ontario, Chemawawin, Saskatchewan).—SALVIN and GODMAN, Biol. Centr. Amer., Aves, iii, 1903, 316 (Mazatlán, Sinaloa; Matamoros, Tamaulipas; Jalapa, Veracruz; Tizimin, Yucatan; Dueñas, Ciudad Viejo, and Antigua, Guatemala).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 38 (Wisconsin; habits).—RHODES and PENNOCK, Auk, xxii, 1905, 198 (Delaware, summer resident).—BOWLES, Auk, xxiii, 1906, 141 (Tacoma, Washington, breeding).—FLEMING, Auk, xxiii, 1906, 447 (Toronto, Ontario, summer resident).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 58 (Chicago area, common summer resident).—WIDMANN, Birds Missouri, 1907, 59 (one breeding record).—SHARP, Condor, ix, 1907, 86 (San Diego County, Calif., breeding).—ANDERSON, Proc. Davenport, Acad. Sci., xi, 1907, 207 (Iowa; habits).—HUNT, Auk, xxv, 1908, 81 (Camden, N. J., breeding).—KNIGHT, Birds Maine, 1908, 140 (summer resident).—GOLDMAN, Condor, x, 1908, 181 (Lerma, Valley of Toluca, Mexico, breeding), 202 (Tulare County, Calif.; breeding?).—PENNOCK, Auk, xxv, 1908, 219 (Philadelphia County, Pa., breeding).—MILLER (R. F.), Auk, xxv, 1908, 219 (Philadelphia County, Pa., breeding).—JONES (L.), Wils. Bull., xxi, 1909, 122 (Lorain County, n. Ohio, breeding).—HENDERSON, Univ. Colorado Stud. Zool., vi, 1909, 227 (Boulder County, Colo., breeding).—WAYNE, Birds South Carolina, 1910, 37 (winter resident; crit.).—EATON, Birds New York, i, 1910, 274, pl. 25 (col. fig.; descr; distr. New York; habits).—VISHER, Auk, xxviii, 1911, 9 (Harding County, S. Dak., breeding).—SWARTH, Rep. Birds and Mam. Vancouver Island, 1912, 18 (breeding).—WILLETT, Pacific Coast Avif., No. 7, 1912, 32 (breeding in San Diego, Orange, Ventura, and Los Angeles Counties, s. California).—BARROWS, Michigan Bird Life, 1912, 154 (Michigan; genl.).—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 207 (habits).—HARLOW, Auk, xxix, 1912, 468 (Chester County, Pa., breeding); xxxv, 1918, 21 (breeding nearly throughout Pennsylvania and in Ocean and Burlington Counties, N. J.).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 49 (genl.; Connecticut).—BUNKER, Kansas Univ. Sci. Bull. 7, 1913, 143 (Kansas, rare summer resident).—BETTS, Univ. Colorado Stud. Zool., x, 1913, 188 (Boulder County, Colo., breeding).—HATHAWAY, Auk, xxx, 1913, 550 (Point Judith, etc., R. I., breeding).—MOUSLEY, Auk, xxxiii, 1916, 63 (Hatley, Quebec, rare transient).—BROOKS (A.), Auk, xxxiv, 1917, 36 (Chilliwack, British Columbia, resident).—MCATEE, U. S. Dept. Agr. Bull. 794, 1920, 29 (Cherry County, Nebr., June; breeding?).—CAHN, Wils. Bull., xxxii, 1920, 40 (Itasca County, Minn., breeding).—LINCOLN, Auk, xxxvii, 1920, 64 (Clear Creek district, Colo., resident).—EVERMANN, Proc. Indiana Acad. Sci. for 1920 (1921), 331 (Vigo County, Ind., rare summer resident, breeding).—WETMORE, Auk, xxxvii, 1920, 394 (Lake Burford, N. Mex., May, June; breeding?).—COURT, Auk, xxxviii, 1921, 281 (near Washington, D. C., breeding).—JEWETT, Condor, xxiii, 1921, 92 (Netarts Bay, Oreg.).—ROBERTSON, Condor, xxiv, 1922, 34 in text (San Bernardino Mountains).—DAWSON, Birds California (students'

- ed.), iii, 1923, 1537 (genl.; California).—GRISCOM, Birds New York City Region, 1923, 134 (New York City region).—JOHNSTON, Birds West Virginia, 1923, 87 (status in West Virginia).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 29 (genl.; Oklahoma).—GRINNELL and STORER, Animal Life in Yosemite, 1924, 260 (descr.; distr.; habits; Yosemite).—HOWELL, Birds Alabama, 1924, 88; ed. 2, 1928, 88 (distr. in Alabama).—MILLER, Bull. Amer. Mus. Nat. Hist., 1, 1924, 308 (ptilosis).—BURLEIGH, Wils. Bull. xxxvi, 1924, 70 (breeding; Centre County, Pa.).—PINDAR, Wils. Bull., xxxvi, 1924, 204 (eastern Arkansas).—SIMMONS, Birds Austin Region, 1925, 45 (Austin, Texas; habits; descr.; etc.).—BAILEY, Birds Florida, 1925, 42, pl. 23 (col. fig.; distr.; Florida).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 62 (distr.; descr.).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 355, pl. 23 (col. fig.; descr.; habits; N. England).—LARSON, Wils. Bull., xxxvii, 1925, 25 (Sioux Falls region, S. Dak.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (status Fulton County, Ky.).—CHRISTY, Wils. Bull., xxxvii, 1925, 209 (summer; Huron Mountain, Mich.).—NEILSON, Condor, xxvii, 1925, 72 (Wheatland, Wyo.).—WOOD, Auk, xlii, 1925, 146 (Grafton, N. Dak.).—BLINCOE, Auk, xlii, 1925, 419 (Bardstown, Ky.).—GOLDMAN, Condor, xxviii, 1926, 163 (nesting in Marsh Lake, White Mountains, Ariz.).—HUEY, Auk, xliii, 1926, 351 (Laguna Hanson, Sierra Juarez; San Ramon; El Rosario; all nw. Lower California).—LONGSTREET, Auk, xliii, 1926, 379 (salt marshes opposite Coronado, Fla.).—WILLIAMS, Wils. Bull., xxxviii, 1926, 25 (status in Red River Valley, N. Dak.).—TAVERNER, Birds Western Canada, 1926, 125 (fig.; descr.; distr. in w. Canada).—LAMB, Condor, xxix, 1927, 156 (Todos Santos and San José del Cabo, Lower California).—HUEY, Condor, xxix, 1927, 243 in text (Pond Lagoon, Lower California).—SMYTH, Auk, xliv, 1927, 44 (Montgomery County, Va.).—CAHN, Wils. Bull., xxxix, 1927, 26 (summer; Vilas County, Wis.).—LINSDALE and HALL, Wils. Bull., xxxix, 1927, 95 (s. of Lawrence, Kans.).—BAILEY, Wils. Bull., xxxix, 1927, 175 (distr.).—HUEY, Condor, xxx, 1928, 159 in text (Laguna Hanson, n. Lower California).—BAILEY, Birds New Mexico, 1928, 241 (genl.; distr.; New Mexico).—GRINNELL, Univ. California Publ. Zool., xxxii, 1928, 87 (distr., Lower California).—PICKENS, Wils. Bull., xl, 1928, 188 (upper South Carolina).—GRINNELL and HUNT, Condor, xxxi, 1929, 67 (Morro Bay, Calif.).—SWARTH, Proc. California Acad. Sci., ser. 4, xviii, 1929, 286 (Ashburn Ranch, Sonoita Valley, s. Arizona).—BURLEIGH, Auk, xlvi, 1929, 507 (Lake Washington and swamp s. of Tacoma, Wash.).—CAHN and HYDE, Wils. Bull., xli, 1929, 36 (ecol. distr.; Little Egypt, Ill.).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 26 (Washington, D. C.).—LONGSTREET, Auk, xlvii, 1930, 95 (New Smyrna, Fla.).—KELSO, Auk, xlvii, 1930, 247 (Aurora, Colo.).—LEWIS, Wils. Bull., xlii, 1930, 42 (nw. Oklahoma).—PIERCE, Wils. Bull., xlii, 1930, 262 (Buchanan County, Iowa).—URNER, Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 65 (Union County, N. J.).—SNYDER, Trans. Roy. Can. Inst., xvii, 1930, 185 (summer; King Township, Ontario).—BURLEIGH, Wils. Bull., xliii, 1931, 37 (breeding; State College, Pa.).—BAILEY and WRIGHT, Wils. Bull. xliii, 1931, 194 (southern Louisiana).—CHRISTY, Auk, xlviii, 1931, 375 (change of status at Sandusky Bay, Lake Erie).—ESTEN, Auk, xlvii, 1931, 573 (weight).—GUTHRIE, Wils. Bull., xlv, 1932, 102 in text (eats snakes).
- R[allus] virginianus* BONAPARTE, Obs. Nom. Wilson's Amer. Orn., 1820, 191.—RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 138.—COUES, Key North Amer. Birds, ed. 2, 1884, 673.—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 122 (eggs).
- Rallus virginianus* ANON., Alauda, ii, 1930, 518 (in rev. of lit.).

[*Aramus virginianus* GRAY, Hand-list, iii, 1871, 59, No. 10419.

Rallus virginianus virginianus DICKEY, Condor, xxx, 1928, 322 in text (crit.).—[Arthur], Birds Louisiana, 1931, 238 (descr.; status in Louisiana).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 120 (distr., Guatemala—only in Sept. and Oct.)

[*Rallus aquaticus*] β LATHAM, Index Orn., ii, 1790, 755 (cites *Rallus virginianus* Linnaeus).

Rallus limicola VIEILLIOTT, Nouv. Dict. Hist. Nat., xxviii, 1819, 558 (new name for *Rallus virginianus* Linnaeus).—STONE, Auk, xlvii, 1930, 560 in text (nomen.).—CRAMER, Auk, xlix, 1932, 80 in text (young eaten by frog).—TAVERNER, Birds Canada, 1934, 172 (descr., breeds across Canada throughout the Prairies, perhaps north of them, and in British Columbia into Cariboo District).—HANNA, Condor, xxxvii, 1935, 81 in text (San Bernardino County, Calif.).—DIXON, Condor, xxxvii, 1935, 87 in text (Yosemite Valley).—CLARY and CLARY, Condor, xxxviii, 1936, 125 (winter; Coachella Valley, Calif.).—BOND, Birds West Indies, 1936, 96 (Cuba, very rare winter resident; one doubtful record from Isle of Pines).—MOUSLEY, Wils. Bull., xlix, 1937, 80 in text (habits; nesting; near Montreal, Canada; photos).—ROWLEY, Condor, xli, 1939, 248 (breeding; McGee Creek, Mono County, Calif.).

Rallus limicola limicola AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 97.—BAERO, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 57 (descr.; distr. in Arkansas).—NICE, Birds Oklahoma, rev. ed., 1931, 85 (genl.; Oklahoma).—STONER, Roosevelt Wild Life Ann., ii, 1932, 442 (Oneida Lake region, N. Y.).—AUSTIN, Mem. Nutt. Orn. Club, vii, 1932, 80 (hypoth.; Newfoundland Labrador).—ROBERTS, Birds Minnesota, i, 1932, 443 (descr.; habits; Minn.).—HOWELL, Florida Bird Life, 1932, 206 (genl.; Florida).—PETERS, Check-list Birds of World, ii, 1934, 160.—GRISCOM, Trans. Linn. Soc. New York, iii, 1933, 98 (Dutchess County, N. Y., common summer resident).—WILLETT, Pacific Coast Avif., No. 21, 1933, 52 (sw. Calif.; fairly common resident to San Diego County; nests April to June).—BROOKS, Auk, i, 1933, 62 (Brownsville, Tex.).—EDWARDS, Auk, i, 1933, 369 (near Loxley, Baldwin County, Ala., Dec. 3, 1932; spec.).—MONSON, Wils. Bull., xlvi, 1934, 43 (Cass County, N. Dak., rare summer resident, occ. spring migr.).—BROOKS, Auk, ii, 1934, 249 (nest and eggs, near Winfield, W. Va.).—DU MONT, Univ. Iowa Stud. Nat. Hist., xv., 1934, 61 (Iowa, uncommon migrant, rare summer resident).—SPIKER, New York State Coll. Forestry Bull. 8, 1935, 456 (Finger Lakes, N. Y., breeds).—MC CREARY and MICKEY, Wils. Bull., xlvii, 1935, 136 (se. Wyoming; May 1—Oct. 8).—YOUNG WORTH, Wils. Bull., xlvii, 1935, 217 (not uncommon summer resident, Fort Sisseton, S. Dak.).—HUEY, Wils. Bull., xlviii, 1936, 122 (White Mountains, Ariz.; birds heard).—LINS DALE, Pacific Coast Avif., No. 23, 1936, 50 (Nevada, summer resident, not known to nest).—WALKINSHAW, Auk, liv, 1937, 310, 311 in text (Michigan); 464 (habits, nests and eggs, etc., Michigan).—WOOD, Auk, liv, 1937, 535 (incubation period).—POLAND, Auk, lv, 1938, 128 (breeding, Leetown, W. Va.).—SMITH, Auk, lv, 1938, 549 (Wolfville, Nova Scotia, Oct. 27, 1937; spec.).—OBERHOLSER, Bird Life Louisiana, 1938, 202 (uncommon winter resident, Sept. to June in southern Louisiana).—BENNETT and HENDRICKSON, Auk, lvi, 1939, 36 (adap. to environment).—WALKINSHAW, Auk, lvi, 1939, 230 in text (eggs).

Rallus [limicola] limicola DALES, Wils. Bull., xliii, 1931, 310 in text (Sioux City, Iowa).—HICKS, Wils. Bull., xlv, 1933, 180 (Ashtabula County, Ohio; uncommon).—MURRAY, Wils. Bull., xlvii, 1935, 65 (1 seen, Big Spring Pond,

Va., Sept. 26 and Oct.).—HICKS, Auk, liii, 1936, 228 (nesting, South Zanesville and Cambridge, Ohio).

R[allus] l[imicola] limicola BOND, Birds West Indies, 1936, 96 in text (rare in winter in Cuba; doubtful record for Isle of Pines).

Rallus virginianus pacificus (not of Gmelin, 1789) DICKEY, Condor, xxx, 1928, 322 in text (orig. descr.; 5 miles west of Corona, Riverside County, Calif.).—GRINNELL, DIXON, and LINDSALE, Univ. California Publ. Zool., xxxv, 1930, 214 (distr., Lassen Peak region, northern California).—GRINNELL, Univ. California Publ. Zool., xxxviii, 1932, 271 (type loc.; crit.).

Rallus limicola pacificus ANDERSON, Condor, xxxvi, 1934, 82.

Rallus limicola zetarius PETERS, Check-list Birds of World, ii, 1934, 160 (new name for *pacificus* Dickey).—STONE, Auk, li, 1934, 540 in text.

Genus CYANOLIMNAS Barbour and Peters

Cyanolimnas BARBOUR and PETERS, Proc. New England Zool. Club, ix, 1927, 95. (Type, by monotypy, *Cyanolimnas cerverei* Barbour and Peters.)

Apparently flightless, medium-sized Ralli with very short rounded wing (99–110 mm.), very short tail, and relatively short tarsi and toes, and the bill somewhat distended basally and brightly colored (red) there, resembling somewhat, in a superficial way, the gallinules.

Bill moderate, slightly longer than head, swollen basally so that its depth at base is about one-third the length of the exposed culmen and the width at the gape equal to the basal height of the maxilla, but there is no expansion into a frontal shield as in *Gallinula*, more like a cere superficially; the base of the culmen definitely elevated and broadened and flattened and situated anterior to the eye; the culmen narrower and very slightly depressed as well as compressed above the nostrils; thence gently decurved to the tip; gonys more than two-thirds as long as mandibular rami, and entirely straight to the tip; mandibular rami with a rather indistinct lateral groove formed by the slight swelling of the basal part of the mandibular tomium; nasal fossa well marked and extending for slightly more than half the length of the maxilla; nostril narrowly ovate, almost slitlike, and much nearer to the maxillary tomium than to the culmen; separated from the loreal antia by a space a little less than its length; anterior outline of loreal feathering with a rounded apex (antia) above center of nasal fossa, receding downward and backward to the angle of the mouth and backward and upward to the pointed base of the culmen; malar antia posterior to the loreal antia, the mental antia on a line with the posterior end of the nostril. Wing very short (the bird apparently flightless), concave beneath, and very rounded, the longest primaries exceeding the distal secondaries by less than one-tenth the length of the wing, and slightly exceeded by the elongated proximal secondaries; third and fourth primaries (from outside) the longest; the first the shortest, shorter even than the shortest secondary. Tail a little less than half as

long as wing; strongly graduated; the rectrices with extremely sparsely barbed webs. Tarsus slightly less than half as long as wing, about equal to exposed culmen and to middle toe without claw; stout for its length; the acrotarsium with a continuous single row of broad scutella, the planta tarsi with a single row of similar, but smaller, scutella on the outer side, basally and distally, but not medially, separated from those of the acrotarsium by a single row

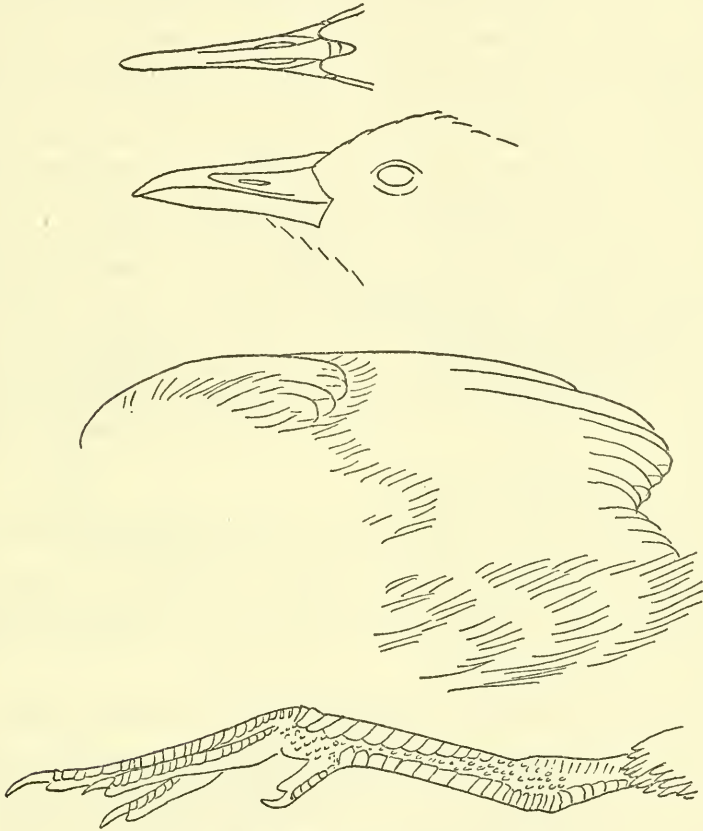


FIGURE 4.—*Cyanolimnas cerverai*. Natural size.

of smaller, hexagonal scutella on the outer side, the inner side with smaller, irregular, much smaller scales; the outer toe with claw reaching to the base of the claw of the middle toe; the inner toe about the same as the outer one; hallux without claw about as long as basal phalanx of outer toe, or, with claw, as long as basal phalanx of middle toe; anterior toes without a marginal membrane along each side (present in gallinules, to which this bird bears a slight superficial resemblance).

Plumage and coloration.—Plumage rather loose, denser below than above; remiges and rectrices weak. Above, olive-brown; sides

of head and entire underparts plumbeous except chin and upper throat, which are white.

Range.—Confined to the Zapata Swamp, Cuba. (Monotypic.)

CYANOLIMNAS CERVERAI Barbour and Peters

ZAPATA RAIL

Adult (sexes alike).—Forehead, anterior part of crown, circum-ocular area, lores, cheeks, auriculars, lower sides of neck, lower throat, breast, upper abdomen, sides, and thighs, slate-gray; the crown becoming olive-brown posteriorly, which color extends over the occiput, hindneck, scapulars, interscapulars, and upper wing coverts; the hindneck and interscapulars a trifle more olive and less brownish than the hind crown and occiput; remiges and rectrices fuscous black; back, rump, and upper tail coverts sepia to bistre with a faint olive tinge; lower abdomen and thighs dusky slate with a faint fuscous tinge and the feathers very narrowly tipped with white; flanks olive sepia narrowly tipped with white; shorter under tail coverts avellaneous, the longer ones white; under wing coverts dull fuscous-black narrowly tipped with white; iris red; bill red basally; greenish medially and yellowish green terminally; tarsi and toes red.

Juvenal female.—Like adult, but the colors generally slightly duller.

Natal down.—Brownish black.

Adult male (type).—Wing 109.6; tail 43.3; exposed culmen 47.4; tarsus 46.1 mm.; middle toe without claw 41.5 mm.⁹³

Adult female.—Wing 95.8–103.1 (99.5); tail 36.6–42.9 (37.1); exposed culmen 36–42 (38.2); tarsus 38.8–44 (41.1); middle toe without claw 37.2–39.6 (38.1 mm.).⁹⁴

Range.—Known only from the type locality.

Type locality.—Santo Tomás, Peninsula de Zapata, Cuba.

Cyanolimnas cerverai BARBOUR and PETERS, Proc. New England Zool. Club, ix, 1927, 95 (orig. descr.).—BARBOUR, Auk, xlv, 1928, 31 in text, pl. 4 (col. fig.; gen. chars.).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 168 (type specimen in Mus. Comp. Zool.).—PETERS, Check-list Birds of World, ii, 1934, 174.—BOND, Birds West Indies, 1936, 90.

Genus PARDIRALLUS Bonaparte

Pardirallus BONAPARTE, Compt. Rend., xliii, Sept, 1856, 599. (Type, by monotypy, *Rallus variegatus* Gmelin=*R. maculatus* Boddaert.)

Limnopardalus CABANIS, Journ. für Orn., 1856 (publ. 1857), 428. (Type, by monotypy, *Rallus variegatus* Gmelin=*R. maculatus* Boddaert.)

Limnopardalis (emendation) GRAY, Hand-list, iii, 1871, 59.—SHARPE, Hand-list, i, 1899, 95.

⁹³ One specimen; measurements by Peters.

⁹⁴ Three specimens; measurements by Peters.

Medium-sized Rallinae (wing about 140 mm.) with stout bill and tarsi, planta tarsi with two lateral rows of transverse scutella, the two rows in contact along the sharp posterior ridge, and with the underparts conspicuously spotted and barred with white and black.

Bill much longer than head, stout, its depth at posterior end of

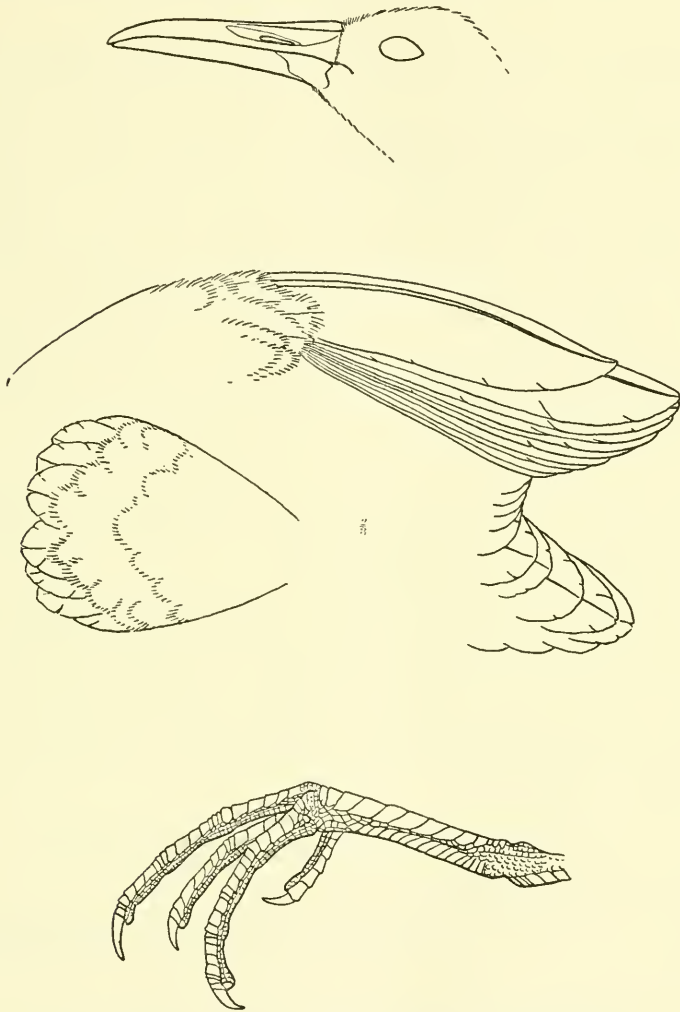


FIGURE 5.—*Pardirallus maculatus maculatus*. Natural size.

nostril equal to more than one-fifth the length of culmen, its width at same point equal to more than half the depth; culmen decidedly longer than tarsus, elevated and expanded basally (where irregularly corrugated and with obtusely angled posterior outline), slightly depressed above anterior portion of nostril, thence gradually but rather strongly decurved to the tip; gonyes more than half as long as mandib-

ular rami, the latter without a distinct (if any) lateral groove, but with a raised, differently colored (reddish) laterobasal plate (deciduous ?); nostril narrowly elliptical (rather narrower posteriorly), parallel with maxillary tomium, its anterior end only about one-third the distance from loral feathering to tip of maxilla; anterior outline of loral feathering forming a nearly straight (faintly convex) vertical line, and on the same vertical line with the convex malar antia; mental antia posterior to posterior end of nostril. Wing moderate, moderately concave beneath, much rounded, the longest primaries exceeding distal secondaries by about one-fourth the length of wing, and projecting but little if any beyond tips of longest proximal secondaries; second, or second and third, primary (from outside) longest, the outermost about equal to sixth; alula falling far short of tips of longest primary coverts. Tail about two-fifths as long as wing, the rectrices moderately broad, moderately firm, projecting beyond both upper and lower coverts. Tarsus stout, shorter than culmen or middle toe without claw, the acrotarsium with a continuous single row of broad transverse scutella, the planta tarsi with a lateral series of smaller transverse scutella, those of opposite sides in contact along the sharp posterior ridge; outer toe with claw falling very slightly short of base of middle claw, the inner toe (without claw) reaching to penultimate articulation of middle toe; hallux shorter than basal phalanx of outer toe but longer than that of middle toe; claws rather short, slightly curved, moderately acute.

Plumage and coloration.—Plumage full, dense, and rather harsh, that of neck and underparts with barbs separated, producing a somewhat hairlike effect, that of the pileum soft and more blended. Upper parts deep brown and black, streaked with white, that of underparts spotted and barred with black and white.

Range.—Tropical South America east of Andes, British Honduras, and Cuba. (Monotypic.)⁹⁵

KEY TO THE SUBSPECIES OF *PARDIRALLUS MACULATUS*

a. Brown portion of plumage mummy brown.

b. Inner remiges and their upper coverts usually with long streaks of white.

Pardirallus maculatus maculatus (extralimital)⁹⁶

⁹⁵ Several other South American species have been referred to *Pardirallus*, but they are so conspicuously different that they constitute the genus *Ortygonax* Heine, as characterized on p. 42.

⁹⁶ *Pardirallus maculatus maculatus.*—*Rallus maculatus* Boddaert, Tabl. Pl. Enl., 1783, 48 (Cayenne; based on *Le Râle tacheté, de Cayenne*, Daubenton, Pl. Enl., pl. 775); Schlegel, Mus. Pays-Bas, Ralli, 1865, 13 (Cayenne); Selater and Salvin, Proc. Zool. Soc. London, 1868, 444, part (monogr.); Pelzeln, Orn. Bras., 1871, 315, footnote, 458 (Cayenne); Durnford, Ibis, 1878, 65 (Rivadavia, Buenos Aires, Argentina); Barrows, Auk, i, 1884, 276 (Concepción, Uruguay); Berlepsch, Journ. für Orn., 1887, 133 (Paraguay); Withington, Ibis, 1888, 471 (Lomas de

bb. Inner remiges and their upper coverts with white spots, not streaks.

Pardirallus maculatus inoptatus (p. 103)

aa. Brown portions of plumage seal brown.

Pardirallus maculatus insolitus (p. 105)

PARDIRALLUS MACULATUS INOPTATUS (Bangs)

CUBAN SPOTTED RAIL

Adult (sexes alike).⁹⁷—Forehead, crown, occiput, and nape chaetura drab, darkest on forehead and washed more or less with dark sepia on the crown and hind portion of the head, the feathers with very fine, short, terminal white shaft streaks; hind neck and anterior interscapulars chaetura black to black, each feather with two white elongated spots, one on the posterolateral corner of each web; posterior interscapulars, scapulars, and inner upper wing coverts dark chaetura black broadly margined with mummy brown and spotted lengthwise with white on the edges of the feathers, the brown color much more extensive on the upper wing coverts than on the scapulars or interscapulars and coming to occupy practically the entire feather in the outer upper wing coverts which also have much smaller and many fewer white spots on them; remiges deep chaetura black to

Zamora, Argentina; descr. nest and eggs); Selater and Hudson, Argentine Orn., ii, 1889, 148, pl. 19; Chapman, Bull. Amer. Mus. Nat. Hist., vi, 1894, 79 (Trinidad); Koenigswald, Journ. für Orn., 1896, 392 (São Paulo, s. Brazil); Goodfellow, Ibis, 1902, 230 (Popayan, Colombia, fresh colors of nude parts).—[*Rallus*] *maculatus* Selater and Salvin, Nom. Av. Neotr., 1873, 139, part.—*A[ramides]* *maculatus* Gray, Gen. Birds, iii, 1846, 594.—*Aramides maculatus* Hartlaub, Syst. Index Azara's Apunt., 1847, 23.—*Aramus* *maculatus* Gray, Hand-list, iii, 1871, 59, No. 10416, part.—*Limnopardalis maculatus* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 28, part (Lomas de Zamora, Buenos Aires; Pernambuco and Rio Amazonas, Brazil; Surinám; Trinidad; Bogotá, Colombia); Ihering, Rev. Mus. Paulista, iv, 1900, 285 (São Paulo, s. Brazil; descr. eggs); Hellmayr, Nov. Zool., xiii, 1906, 52 (Caroni Swamp, Trinidad); Berlepsch, Nov. Zool., xv, 1908, 299 (Cayenne); Hartert and Venturi, Nov. Zool., xvi, 1909, 257 (Barracas al Sud, Argentina; descr. eggs); Bertoni, Fauna Paraguaya, 1913, 37; Cooke, U. S. Dept. Agr. Bull. 128, 1914, 25, part (geogr. range).—[*Limnopardalis*] *maculatus* Sharpe, Hand-list, i, 1899, 95, part (Paraguay; Brazil; Guiana; Colombia; Trinidad); Ihering (H. and R.), Aves Brazil, 1907, 27 (Rio Grande do sul; Pará; Pernambuco).—[*Pardirallus*] *maculatus* Brabourne and Chubb, Birds South America, i, 1912, 22 (Colombia; Trinidad; Guiana; Paraguay; Argentina).—*Pardirallus maculatus* Chubb, Ibis, 1919, 48 (Trajello, nw. Peru; Etén, Peru; crit.).—[*Rallus*] *variegatus* Gmelin, Syst. Nat., i, pt. ii, 1789, 718 (Cayenne; based on Variegated Rail Latham, Synopsis Birds, iii, pt. i, 1785, 327); Latham, Index Orn., ii, 1790, 760 (Cayenne).—*Rallus variegatus* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 565.—[*Pardirallus*] *variegatus* Bonaparte, Compt. Rend., xliii, 1856, 599.—*Rallus nivosus* Swainson, Anim. in Menag., 1837, 361.

⁹⁷No males (at least none marked definitely as such on the label) seen by me, but a long series of both sexes of the nominate race reveals no sexual differences.

fuscous (possibly dependent on fading in the latter color), the elongated inner secondaries margined with mummy brown; lower back and rump feathers dark chaetura drab broadly margined with mummy brown and very sparsely, or not at all, marked with fine small white spots; upper tail coverts like the rump but with many and larger white spots on their edges; rectrices dark chaetura black, slightly margined with mummy brown; lores, circumocular area, cheeks, auriculars, chin, and throat white finely speckled with grayish chaetura drab, very thickly and abundantly speckled on the sides of the head, very sparingly on the chin and throat which are very distinctly whiter; breast feathers chaetura black with broad posterolateral white spots (but not with a continuous white terminal band, the spots not confluent), giving an appearance of longitudinal blackish and white marks almost suggesting striping; feathers of abdomen chaetura black barred very broadly, especially terminally with white, the subterminal black area not reaching the edges of the feather and so forming a broad spot in the white terminal portion of the feather, this black spot approximating a complete transverse bar more in the posterior part of the abdomen; flanks, sides, and thighs dark chaetura black banded regularly with white, the white bars usually narrower than the black ones, widest on the flanks, narrowest on the thighs; under tail coverts white, the longer ones occasionally with slight dusky tips; under wing coverts chaetura drab spotted with white; colors of soft parts unrecorded for this race, but in the nominate race they are as follows: iris dark red; bill yellowish olive, orange near the base; tarsi and toes light greenish yellow (Goodfellow, Ibis, 1902, 230).

Juvenal.—Unknown, but probably similar to that of the nominate race, which is similar to the adult but has all the chaetura black on the underparts replaced by dark hair brown and the white on the underparts very slightly washed with ashy buff, and has the feathers of the top of the head, hind neck, and anterior interscapulars narrowly edged with mummy brown.

Natal down.—Not known.

Adult male (type).—Wing 122, tail 48, exposed culmen 50, tarsus 41 mm.⁹⁸

Adult female.—Wing 116.5–120.5; tail 50.5–51.5; exposed culmen 43.5–45; tarsus 39–39.5; middle toe without claw 36–40 mm.⁹⁸

⁹⁸No males and only two females seen. Four unsexed birds have the following dimensions—wing 109 (very worn), 122.5, 124, 125; tail 45.5, 47.5, 49, 51; exposed culmen 42.5, 47, 48.5, 50; tarsus 39, 40.5, 40.5; middle toe without claw 36, 40.5, 41 mm., respectively. Judging from a long series of the nominate race, it appears that the sexes are fairly alike in size (at least their variations may be matched in both sexes). The dimensions given for the type (male) are taken from the original description by Bangs.

Range.—Resident in fresh-water swamps in western Cuba (Provinces of Habana, Matanzas, and Santa Clara), said to be abundant in the Zapata Swamp, elsewhere scarce. This form, or possibly a distinct race, formerly inhabited Jamaica, where the species is now extinct, and whence no specimens exist in any museum.

Type locality.—Near Jaruco, Province of Habana, Cuba.

Rallus variegatus (not of Vieillot) D'ORBIGNY, La Sagra's Hist. Nat. Cuba, Ois., 1839, 261 (Spanish ed., p. 180).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 308 (Cuba).

Limnopardalis variegatus CABANIS, Journ. für Orn., iv, 1856, 428 (Cuba).—GUNDLACH, Journ. für Orn., xxiii, 1875, 357 (Cuba; habits); Contr. Orn. Cubana, 1876, 190.

[*Limnopardalis*] *variegatus* GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); Rep. Fisico-Nat. Cuba, 1, 1865-66, 361.

Rallus maculatus (not of Boddaert) SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 444, part (monogr.).—CORY, Auk, v, 1888, 52 (Cuba; descr., etc.); Birds West Indies, 1889, 253 (Cuba); Cat. West Indian Birds, 1892, 9, 91, 128 (Cuba).

[*Rallus*] *maculatus* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139, part (Cuba).—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 29 (Cuba).

[*Aramus*] *maculatus* GRAY, Hand-list, iii, 1871, 59, No. 10416, part (Cuba).

Limnopardalis maculatus SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 28, part (Cuba).—GUNDLACH, Orn. Cubana, 1895, 242.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 25, part (Cuba).

Limnopardalis maculatus inoptatus BANGS, Proc. New England Zool. Club, iv, 1913, 90 (near Jaruco, Prov. Habana, Cuba; coll. Mus. Comp. Zool.); Bull. Mus. Comp. Zool., lxx, 1930, 168 (type spec. in Mus. Comp. Zool.)

Pardirallus maculatus inoptatus PETERS, Check-list Birds of World, ii, 1934, 170.

[*Pardirallus*] *m[aculatus] inoptatus* BOND, Birds West Indies, 1936, 89 in text (Cuba).

PARDIRALLUS MACULATUS INSOLITUS (Bangs and Peck)

HONDURANIAN SPOTTED RAIL

Adult (unsexed)¹—Similar to *Pardirallus maculatus inoptatus*, but with the brown parts of the plumage darker, seal brown instead of mummy brown; wing 121, tail 42, exposed culmen 48, tarsus 40, middle toe without claw 35.5 mm.

Range.—Known only from the type locality.

Type locality.—Ycacas Lagoon, British Honduras.

Limnopardalus maculatus insolitus BANGS and PECK, Proc. Biol. Soc. Washington, xxi, 1908, 43 (Ycacas Lagoon, British Honduras; coll. E. A. and O. Bangs); Bull. Mus. Comp. Zool., lxx, 1930, 169 (type specimen in Mus. Comp. Zool.).

Pardirallus maculatus insolitus PETERS, Check-list Birds of World, ii, 1934, 169.

¹ Unique type.

Genus AMAUROLIMNAS Sharpe

Amaurolimnas SHARPE, Bull. Brit. Orn. Club, i, No. 5, 1893, p. xxviii. (Type, by original designation and monotypy, *Rallus concolor* Gosse.)

Medium-sized Rallinae (wing about 130 mm.) with posterior portion of nostril impervious, middle toe (without claw) much shorter than tarsus, mandibular rami with a distinct lateral groove, feathers of alula rounded terminally, and plumage wholly plain rufescent.

Bill about as long as head (or slightly shorter), very compressed, its width at posterior end of nostril equal to about half its depth at same point, the latter equal to more than one-third the length of culmen; culmen distinctly arched (convex) basally, slightly depressed (concave)

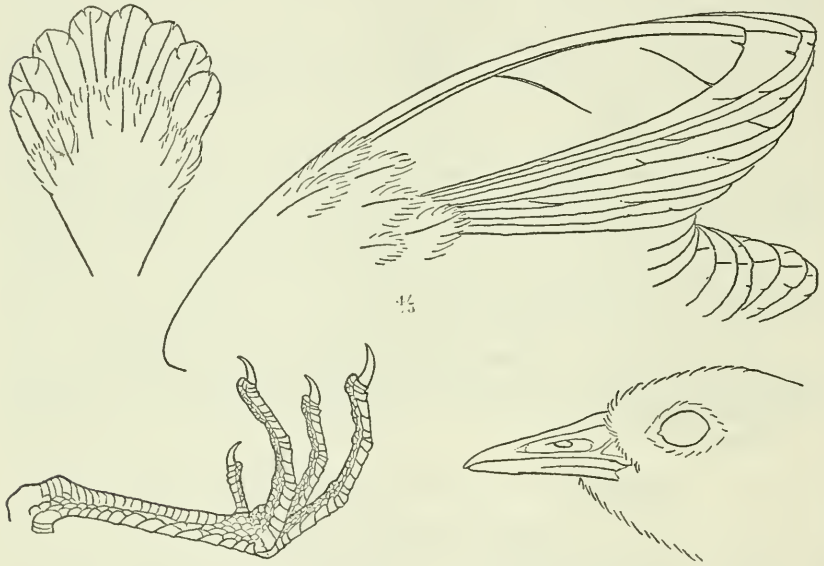


FIGURE 6.—*Amaurolimnas concolor concolor*.

above anterior end of nostril, gradually but strongly decurved terminally; gonys about two-thirds as long as mandibular rami, nearly straight, slightly ascending terminally, its basal angle distinct but scarcely prominent; mandibular rami with a broad and shallow lateral groove; nasal fossa large and well defined, obtusely cuneate, its anterior end decidedly nearer tip of maxilla than to loreal feathering; nostril rather large, longitudinally elliptical, its posterior portion (between one-third and one-half) impervious; laterofrontal antia at upper edge of nasal fossa, receding thence, with a faintly convex outline, to the rictus; malar antia decidedly posterior to laterofrontal antia, the mental antia about on line with posterior end of nostril. Wing rather short, very concave beneath, rounded, the longest primaries exceeding distal secondaries by about one-fourth the length of wing; and much ex-

ceeding the moderately elongated proximal secondaries; third primary (from outside) longest, the second and fourth a little shorter, the outermost about equal to seventh. Tail about two-fifths as long as wing, the rectrices with very loose, semidecomposed webs and decumbent distally. Tarsus much longer than middle toe without claw (longer than middle toe with claw), the acrotarsium with a single continuous row of broad transverse scutella, the acrotarsium planta tarsi with a single row of similar but narrower scutella; outer toe with claw falling decidedly short of base of middle claw, the inner toe, without claw, falling short of penultimate articulation of middle toe; hallux, without claw, shorter than basal phalanx of outer (very much shorter than that of inner) toe; claws short, acute, moderately curved.

Plumage and coloration.—Plumage in general full and rather lax, that of forepart of head rather coarse, semierect on laterofrontal region; primaries very broad; feathers of alula broad, with rounded tips, the longest reaching nearly to tips of longest primary coverts; rectrices rather narrow, soft, loosely webbed, decurved or decumbent distally. Color wholly plain rufescent, darker and duller above.

Range.—Continental Tropical America; Jamaica. (Monotypic.)

KEY TO THE SUBSPECIES OF AMAUROLIMNAS CONCOLOR

a. Upperparts somewhat rufescent olive sepia; underparts pale, the breast rich tawny to light hazel.----- *Amaurolimnas concolor concolor* (p. 108)

aa. Upperparts usually olivaceous raw umber; underparts dark, the breast deep hazel to bright russet.

b. Size larger; wings 127–136 mm.

Amaurolimnas concolor castaneus (extralimital)²

bb. Size smaller, wings 110–125 mm.

Amaurolimnas concolor guatemalensis (p. 109)

² *Amaurolimnas concolor castaneus.*—*Rallus castaneus* Pucheran, Rev. Mag. Zool., 1851, 279 (ex Cuvier mss.; Brazil).—[*Rufirallus*] *castaneus* Bonaparte, Compt. Rend., xliii, 1856, 599.—*Rallina castanea* Schlegel, Mus. Pays-Bas, v. No. 30., livr. 7, 1865, 17, part (Brazil).—*Porzana concolor* Schäfer and Salvin, Proc. Zool. Soc. London, 1868, 452, part (Bahia); Pelzeln, Orn. Bras., 1870, 316, part.—[*Porzana*] *concolor* Pelzeln, Orn. Bras., 1870, 459, part; Selater and Salvin, Nom. Av. Neotr., 1873, 140, part (Brazil).—*Amaurolimnas concolor* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 87, part (Bahia, Brazil); Ihering, Rev. Mus. Paulista, iv, 1900, 286 (descr. eggs); Salvin and Godman, Biol. Centr.-Amer., Aves, iii, 1903, 321, part (Brazil); Cooke, U. S. Dept. Agr. Bull. 128, 1914, 26, part (Brazil); ? Naumburg, Bull. Amer. Mus. Nat. Hist., ix, 1930, 72, part (distr. in Brazil; São Paulo—Iguapé, Ubatuba, Bahia).—[*Amaurolimnas*] *concolor* Sharpe, Hand-list, i, 1899, 201, part (Brazil); Ihering (H. and R.), Aves Brazil, 1907, 39 (São Paulo; Bahia); Brabourne and Chubb, Birds South America, i, 1912, 23 part (Brazil).—*Amaurolimnas concolor guatemalensis* Peters, Check-list Birds of World, ii, 1934, 171, part (São Paulo).

AMAUROLIMNAS CONCOLOR CONCOLOR (Gosse)

JAMAICAN UNIFORM CRAKE

Adult (sexes alike).—Forehead and anterior part of crown, lores, superciliary stripe, cheeks, auriculars, sides of neck, and the upper wing coverts Brussels brown to rufescent Sudan brown; hind crown, occiput, nape, scapulars, interscapulars, back, rump, upper tail coverts, and rectrices rufescent olive sepia, more rufescent on the rump, tail coverts, and rectrices than in the more anterior parts, remiges dull sepia externally edged with Sayal brown; chin and upper throat like the cheeks but paler, more whitish; lower throat, and entire underparts of body rich tawny to hazel; iris “vermillion; beak yellowish-green, blackish above; feet dull purplish-crimson, or pink.” (Gosse.)

Other plumages unknown.

Adult male.—Wing 125, tail 49, exposed culmen 27.5, tarsus 39, middle toe without claw 28 mm.³

Adult female.—Wing 119, tail 47, exposed culmen 29.5, tarsus 41, middle toe without claw 33 mm.³

Range.—Formerly occurred on Jamaica, now extinct. Specimens taken at Basin Spring; near the Black River (Elim Estate); Spanish Town.

Type locality.—Jamaica.

Rallus concolor GOSSE, Birds Jamaica, 1847, 369 (Basin Spring, Jamaica); Illustr. Birds Jamaica, 1849, pl. 102.—ALBRECHT, Journ. für Orn., x, 1862, 206 (Jamaica).—MARCH, Proc. Acad. Nat. Sci. Philadelphia, 1864, 69 (Jamaica).

Rallina concolor REICHENBACH, Handb. Fulicariae, 1851, pl. 322, fig. 2577.

Porzana concolor SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 452, part (crit.; Jamaica).—CORY, Auk, v, 1888, 54 (Jamaica; synonymy; descr.); Birds West Indies, 1889, 255; Cat. Birds West Indies, 1892, 2, 91, 129 (Jamaica).—SCLATER, Rev. List Birds Jamaica, 1910, 19.

[*Porzana*] *concolor* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Jamaica).—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30 (Jamaica).

P[orzana] concolor NEWTON (E. and A.), Handb. Jamaica, 1881, 114.

A[maurolimnas] concolor SHARPE, Bull. Brit. Orn. Club, i, No. 5, 1893, xxviii.

Amaurolimnas concolor SHARPE, Cat. Birds Brit. Mus., xxili, 1894, 87, part (Jamaica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 321, part (Jamaica).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 26, part (Jamaica).—NAUMBURG, Bull. Amer. Mus. Nat. Hist., lx, 1930, 72, part (Jamaica).

[*Amaurolimnas*] *concolor* SHARPE, Hand-list, i, 1899, 101, part (Jamaica).

Amaurolimnas concolor concolor PETERS, Check-list Birds of World, ii, 1934, 171 (formerly Jamaica; now extinct).

³ One specimen of each sex examined. Four unsexed birds have the following dimensions: Wing 116, 118, 122, 125.5; tail 47.5, 48, 49, 51; exposed culmen 25, 25.5, 29; tarsus 40, 42, 44, 44; middle toe without claw 26, 29, 30.5, 31 mm., respectively.

A[maurolimnas] c[oncolor] concolor BOND, Birds West Indies, 1936, 90 in text (Jamaica; possibly extinct).

AMAUROLIMNAS CONCOLOR GUATEMALENSIS (Lawrence)

GUATEMALAN UNIFORM CRAKE

Adult (sexes alike).—Similar to that of the nominate race but more olive above, generally olivaceous raw umber, darker on the average below, the lower throat, breast, and abdomen deep rich hazel to bright russet, and averaging smaller in size.

Juvenal (sexes alike).—Darker, less rufescent than adult; top of head and the interscapulars, back, rump, upper tail coverts dark mummy brown, becoming almost fuscous on the lower back; wings and tail as in adults, the upper wing coverts slightly darker than in adults—cinnamon-brown; loreal superciliary stripe ashy-pale ochraceous-buff; sides of head dusky, grayish wood brown; chin and upper throat like the superciliaries; pectoral area, sides, flanks, thighs, under tail and under wing coverts grayish sepia, paling in the midabdomen to dark hair brown washed with sepia; iris yellow.

Natal down.—Unknown.

Adult male.—Wing 116–125 (119.4); tail 44–52 (47.8); exposed culmen 23.5–26.5 (25.6); tarsus 38.5–44.5 (41); middle toe without claw 27–30.5 (28.7 mm.).⁴

Adult female.—Wing 110–122 (115.5); tail 44.5–47 (45.7); exposed culmen 23–26 (24.7); tarsus 37–43.5 (40.9); middle toe without claw 28–29.5 (28.5 mm.).⁵

Range.—Inhabits fresh-water swamps from British Honduras (Sittee River); Honduras (Omoa); Guatemala; Nicaragua (Chontales; Pena Blanca); Costa Rica (Peralta, El Sance, Alajuela, San Carlos); and Panamá (Chiriqui, Chitra, Almirante, Fruitdale), south through Colombia (Barbacoas; “Bogota”), and British Guiana (Merumé Mountains; Supenaam River; Arawari River) to Ecuador (San Javier; Rio Bobona; Raya-Yaco; Sara-Yaco) and western Peru (near Lima) and to northern and southcentral (?) Brazil (Santarem; São Paulo de Olivencia, Rio Solimões; Rio Tapajós, Boim; Matto Grosso—Engenho do Cap Gama, and Rio Guáporé and to (?) Bolivia.⁶

Type locality.—Guatemala.

Porzana concolor SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 452, part (Honduras; Guatemala).—PELZELN, Orn. Bras., 1870, 316, part.—LAWRENCE, Ibis, 1871, 370 (crit. as to *Corethrura guatemalensis* Lawrence.)—SCLATER,

⁴Ten specimens from British Honduras, Costa Rica, Ecuador, British Guiana, and the Amazon Valley of Brazil.

⁵Six specimens from Nicaragua, Panama, Ecuador, and Brazil.

⁶I have seen no Matto Grosso or Bolivian specimens and therefore cannot be certain as to their subspecific allocation; Amazonian birds are *guatemalensis*; those from eastern and southeastern Brazil (Bahia to São Paulo) are the larger race *castaneus*.

- Ibis, 1873, 373 (Chontales, Nicaragua).—SALVIN, Ibis, 1886, 176 (Merumé Mountains, British Guiana).
- [*Porzana*] *concolor* PELZELN, Orn. Bras., 1870, 459, part.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Guatemala).
- [*Aramides*] *concolor* GRAY, Hand-list, iii, 1871, 61, No. 10435.
- Amaurolimnas concolor* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 87, part (Guatemala; Chontales, Nicaragua; Merumé Mountains, Brit. Guiana).—SCLATER, Bull. Brit. Orn. Club, xv, 1894, xxiii (near Lima, Peru; fresh colors of nude parts); Ibis, 1894, 299 (near Lima; specimen).—HARTERT, Nov. Zool., ix, 1902, 604 (San Javier, nw. Ecuador; fresh colors of unfeathered parts.).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1907, 321, part (Guatemala; Omoa, Honduras; Chontales, Nicaragua; Guiana).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 26, part (Guatemala, Honduras, Nicaragua, Guiana).—CHUBB, Birds British Guiana, i, 1916, 69 (Merumé Mountains; Supenaam River, Arawari River; colors of soft parts).—NAUMBURG, Bull. Amer. Mus. Nat. Hist., ix, 1930, 72, part (distr.; Brazil, Matto Grosso; Engenho do Cap Gama, Rio Guáporé; Ecuador, Colombia, Panama, Nicaragua, Honduras, Guatemala).
- [*Amaurolimnas*] *concolor* SHARPE, Hand-list, i, 1899, 101, part (Guatemala to Guiana; w. Peru).—IHERING (H. and R.), Aves Brazil, 1907, 39, part (Matto Grosso).—BRABOURNE and CHUBB, Birds South America, i, 1912, 23, part Guiana, Peru).
- Rufirallus concolor* BOUCARD, Liste Ois.-récol. Guatemala, 1878, 12 (Guatemala).
- ? *Rallina castanea* SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 17, part (Bolivia; (?) Brazil).
- ? [*Rufirallus*] *boeckii* BONAPARTE, Compt. Rend., xliii, 1856, 599.
- ? [*Aramides*] *boeckii* GRAY, Hand-list, iii, 1871, 61, No. 10438 (Bolivia).
- ? [*Erythrolimnas*] *Boeckii* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320 (Bolivia, 1 specimen).
- Corethrura cayennensis* (not *Rallus cayennensis* Gmelin) MOORE, Proc. Zool. Soc. London, 1859, 64 (Omoa, Honduras; habits).—SCLATER and SALVIN, Ibis, 1859, 230 (Omoa).
- Corethrura Guatemalaensis* LAWRENCE, Proc. Acad. Nat. Sci. Philadelphia, xv, 1863, 106, 107 (Guatemala; coll. G. N. Lawrence).
- Porzana Guatemalaensis* LAWRENCE, Ibis, 1871, 370 (crit.).
- Amaurolimnas concolor guatemalaensis* CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 217 (Barbacoas, sw. Colombia; Guatemala; Nicaragua; Chiriquí, w. Panamá; meas.; crit.); iv, 1926, 177 (northwestern Ecuador).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Almirante, Panamá).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 121 (Guatemala).—PETERS, Check-list Birds of World, ii, 1934, 171, part (Guatemala to Ecuador).—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304 (Guatemala to w. Ecuador; very rare in Panamá—Chiriquí and Almirante).—PINTO, Rev. Mus. Paulista, xxiii, 1938, 544 (Manacapuru, Amazonia).

Genus ARAMIDES Pucheran

- Aramides* PUCHERAN, Rev. Zool., viii, 1845, 277. (Type, as designated by Gray, 1855, *Fulica cayennensis* Gmelin=*F. cajanea* Müller.)
- Arimidis* (misspelling) LANTZ, Trans. Kansas Acad. Sci. for 1896-97 (1899), 219.
- Ortygarchus* CABANIS, in Schomburgk's Reis. British Guiana, iii, 1848 (publ. 1849), 759. (Substitute for *Aramides*, on grounds of purism.)

Very large Ralleae (some species the largest of American Rallinae, wing about 170-225 mm.) with bill longer than head but culmen

much shorter than tarsus, second primary (from outside) shorter than fifth (nearly if not quite equal to fifth in *A. mangle*), sometimes (in *A. cajanea*) shorter than ninth, and with flanks, thighs, and under tail coverts unicolored (usually gray or blackish)⁷ and upperparts plain olive, becoming more or less rufescent on primaries.

Bill longer than head but culmen much shorter than tarsus, nearly straight, variable as to relative depth (but depth of base usually equal to less than one-third the length of culmen)⁸; culmen more or less elevated basally or subbasally, usually faintly depressed medially, gently but decidedly decurved terminally; gonys less than, to considerably more than, one-third as long as mandibular rami; nearly straight, ascending terminally, its basal angle distinct, sometimes prominent; mandibular rami with a more or less distinct shallow lateral groove; nasal fossa large, well defined anteriorly, extending from a little more than half to considerably more than two-thirds the distance from loreal feathering to tip of maxilla; nostril usually narrowly elliptical (rather broadly subovate in *A. mangle* and *A. axillaris*), parallel with maxillary tomium, its anterior end decidedly nearer to loreal antia than to tip of maxilla; loreal antia at or slightly below upper margin of nasal fossa, the anterior line of feathering receding thence downward to rictus and upward to median line of forehead, the usually more or less expanded base of culmen⁹ forming an angular indentation into frontal feathering. Wing relatively large, much rounded, the longest primaries exceeding distal secondaries by less than one-eighth the length of wing to between one-fourth and one-fifth in *A. axillaris* or more than one-fourth in *A. mangle*, usually not extending at all beyond tips of elongated proximal secondaries, but in the two species named projecting considerably beyond them; third to sixth primaries (from outside) longest and subequal, except in *A. axillaris* and *A. mangle*, in which the third and fourth are longest, the fifth and sixth much shorter, the first (outermost) distinctly, to much, shorter than distal secondaries, except in *A. axillaris* and *A. mangle*, in which it is longer than ninth (about equal to eighth in the latter); alula variable in relative development, not reaching to tips of longest primary coverts in *A. cajanea*, and *A. axillaris*, extending about as far in *A. ypecaha*, extending decidedly beyond in *A. saracura*, and falling far short in *A. mangle*. Tail a little more than one-third to slightly more than two-fifths as long as wing, strongly rounded to graduated, the rectrices (12 ?) rather soft to moderately firm, rather broad, with rounded tips, projecting but little beyond lower coverts. Tarsus

⁷ In *A. mangle* the flanks cinnamomeous, the thighs pale buffy grayish.

⁸ Equal to one-third in *A. mangle*, equal to one one-fourth in *A. saracura*.

⁹ The base of the culmen is very little if at all expanded in *A. mangle* and *A. axillaris*.

about one-third as long as wing (*A. axillaris*, *A. mangle*) to about two-fifths as long (other species), both acrotarsium and planta tarsi each with a continuous single series of large transverse scutella; the posterior side of naked portion of tibia also with transverse scutella; outer toe with claw sometimes reaching to base of middle claw, sometimes falling decidedly short; inner toe, without claw, reaching about to penultimate articulation of middle toe; hallux, without claw, about as long as basal phalanx of outer toe or a little shorter; claws rather short and stout, moderately curved and compressed, moderately acute to rather blunt.

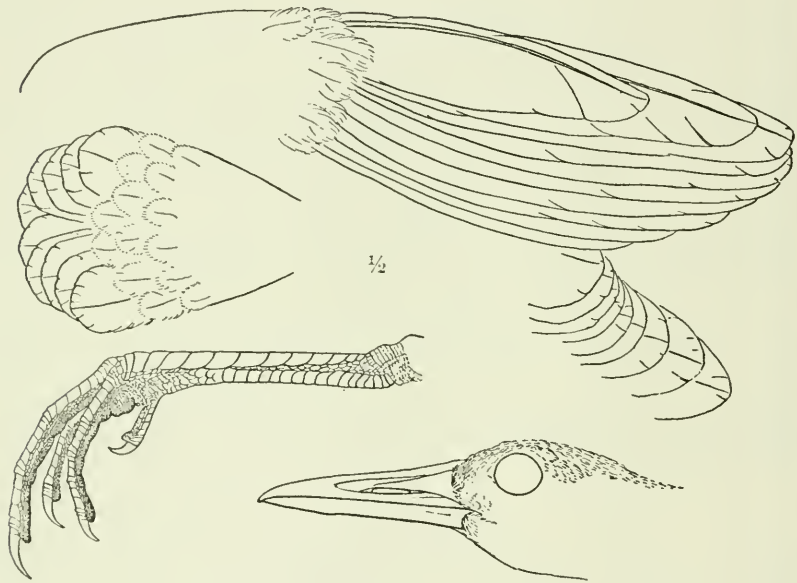


FIGURE 7.—*Aramides cajanea cajanea*.

Plumage and coloration.—Plumage rather dense, shorter and more blended on head and neck, longer and more hairlike on back, scapulars, and under parts; the wing coverts and remiges more distinctly outlined. Plumage plain, without markings except on axillars and under wing coverts, which are barred with black and white or rusty; upper parts mostly olive, passing into blackish on tail and becoming more rufescent (often cinnamon-rufous) on primaries; color of under parts plain cinnamon-rufous, plain slate-grayish, or gray anteriorly and cinnamon or cinnamon-rufous posteriorly, the under tail coverts always blackish.

Range.—Continental Tropical America. (Eight species.)¹⁰

¹⁰ Of the known species the following were not examined in the preparation of the above description of the generic characters: *A. wolff* Berlepsch and Taczanowski, *A. gutturalis* Sharpe, and *A. calopterus* Sclater and Salvin.

KEY TO THE SPECIES AND SUBSPECIES OF ARAMIDES

- a. Under wing coverts black and white, with no brownish.
 - b. Under wing coverts black, broadly tipped, but not otherwise barred with white----- *Aramides calopterus* (extralimital)¹¹
 - bb. Under wing coverts barred black and white-- *Aramides axillaris* (p. 124)
- aa. Under wing coverts brown, with or without white or blackish bars.
 - b. Underparts entirely slate gray, throat white.
 - Aramides saracura* (extralimital)¹²
 - bb. Breast rufescent.
 - c. No gray on the throat.
 - d. Abdomen black----- *Aramides wolfi* (extralimital)¹³
 - dd. Abdomen ashy----- *Aramides mangle* (extralimital)¹⁴

¹¹ *Aramides calopterus*.—*Aramides calopterus* Sclater and Salvin, Proc. Zool. Soc. London, 1878, 439, pl. 28 (Sarayacu, e. Ecuador; coll. Brit. Mus.); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 62 (Sarayacu); Chapman, Bull. Amer. Mus. Nat. Hist., iv, 1926, 136 (Rio Suno and below San José, Ecuador); Peters, Check-list Birds of World, ii, 1934, 176.—[*Aramides*] *calloptera* Sharpe, Hand-list, i, 1899, 98.

¹² *Aramides saracura*.—*Gallinula saracura* Spix, Av. Bras., ii, 1823, 75, pl. 98 (Brazil).—*Aramides saracura* Sclater and Salvin, Proc. Zool. Soc. London, 1868, 449; Reinhardt, Vid. Medd. Kjøbenhavn, 1870, 44; Pelzeln, Orn. Bras., 1871, 316, 458; Taczanowski, Orn. Pérou, iii, 1886, 319; Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 61 (Santa Fe in Minas Geraes, Pelotas in Rio Grande do Sul, and Ypanema, Brazil); Peters, Check-list Birds of World, ii, 1934, 176.—[*Aramides*] *saracura* Gray, Hand-list, iii, 1871, 60, No. 10428; Sclater and Salvin, Nom. Av. Neotr., 1873, 139; Sharpe, Hand-list, i, 1899, 98.—*Rallus nigricans* (not of Vieillot) Bonaparte, Journ. Acad. Nat. Sci. Philadelphia, iv, 1825, 386; Burmeister, Journ. für Orn., 1853, 176 (descr. eggs).—*Rallus melanurus* Bonaparte, Journ. Acad. Nat. Sci. Philadelphia, v, pt. 1, 1825, 139 (no locality mentioned).—*Gallinula plumbea* Tschudi, Fauna Peruana, Aves, 1845-6, 52, 302.—*G[allinula] plumbea* Tschudi, Wiegmann's Archiv. für Nat., x, pt. i, 1844, 313 (Peru).—*Aramides plumbeus* Gray, Gen. Birds, iii, 1846, 594.—*Aramides plumbeus* Hartlaub, Syst. Azara's Apunt., 1847, 23; Burmeister, Syst. Ueb. Thiere Bras., iii, 1856, 383; Schlegel, Mus. Pays-Bas, Ralli, 1865, 15.—*Rallus hydrogallina* "Less"[on] Pucheran, Rev. Mag. Zool., 1851, 569 (crit.; new name for *Gallinula saracura* Spix?).—*Ortygarchus saracura* Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320.

¹³ *Aramides wolfi*.—*Aramides wolfi* Berlepsch and Taczanowski, Proc. Zool. Soc. London, 1883, 576 (Chimbo, w. Ecuador); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 55 (Balzar Mountains, w. Ecuador); Salvadori and Festa, Boll. Mus. Zool. Torino, xv, 1900, 40 (Foress del Rio Peripa, w. Ecuador; crit.).—Chapman, Bull. Amer. Mus. Nat. Hist., iv, 1926, 175 (Mindó, Manglar Alto, Rio de Oro, Naranjo, and La Chonta, Ecuador); Peters, Check-list Birds of World, ii, 1934, 175.—[*Aramides*] *wolfi*, Sharpe, Hand-list, i, 1899, 97; Brabourne and Chubb, Birds South America, i, 1912, 23 (w. Ecuador; w. Colombia).

¹⁴ *Aramides mangle*.—*Gallinula mangle* Spix, Av. Bras., ii, 1825, 74, pl. 97 (coast of Brazil).—*Rallus mangle* Gray, List Birds Brit. Mus., iii, Gallinae, 1844, 115, part.—*Aramides mangle* Burmeister, Syst.-Ueb. Thiere Bras., ii, 1856, 385, footnote; Salvin, Proc. Zool. Soc. London, 1868, 449 (Bahia, Brazil); Pelzeln, Orn. Bras., 1871, 316 (Sapitiba); Allen, Bull. Mus. Comp. Zool., viii, 1876, 82 (Santarem); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 54 (Bahia); Hellmayr, Field Mus. Nat. Hist. Zool. Ser. xii, No. 18, 1929, 481 (restricted type loc., coast

cc. With gray on the throat.

d. Top of head dark chestnut-brown.

Aramides gutturalis (extralimital)¹⁵

dd. Top of head largely, if not wholly, grayish.

e. Vent pearly gray----- *Aramides ypecaha* (extralimital)¹⁶

of Bahia; spec. from Piauhy, Arara, and Amaracao); Peters, Check-list Birds of World, ii, 1934, 174.—[*Aramides*] *mangle* Gray, Hand-list, iii, 1871, 60, No. 10426; Sclater and Salvin, Nom. Av. Neotr., 1873, 139; Sharpe, Hand-list, i, 1899, 97; Brabourne and Chubb, Birds South America, i, 1912, 22 (se. Brazil).—*Aramides chircote* (not *Rallus chircote* Vieillot) Gray, Gen. Birds, iii, 1846, 594, part.—[*Aramides*] *ruficollis* (not *Fulica ruficollis* Gmelin) Bonaparte, Compt. Rend., xliii, 1856, 598, part.—*Aramides ruficollis* Schlegel, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 15.

¹⁵ *Aramides gutturalis*.—(?) [*Fulica*] *ruficollis* Gmelin, Syst. Nat., i, pt. 2, 1789, 700 ("Cayenne"; based on *Black-bellied Gallinule* Latham, Gen. Synops. Birds, iii, pt. 1, 1785, 253).—[*Gallinula*] *ruficollis* Latham, Index Orn. ii, 1790, 767.—*Gallinula ruficollis* Vieillot, Nouv. Dict. Hist. Nat., xiii, 1817, 405.—*Aramides ruficollis* Gray, Gen. Birds, iii, 1846, 504; Sclater and Salvin, Proc. Zool. Soc. London, 1868, 448; Berlepsch and Stolzmann, Proc. Zool. Soc. London, 1893, 399 (Lima, Peru); Peters, Check-list Birds of World, ii, 1934, 175.—[*Aramides*] *ruficollis* Gray, Hand-list, iii, 1871, 60, no. 10429; Sclater and Salvin, Nom. Av. Neotr., 1873, 139.—*Rallus ruficeps* (not *Gallinula ruficeps* Spix) Gray, List Birds Brit. Mus., pt. 3, Grallae, 1844, 115, part (spec. d).—*Aramides gutturalis* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 57, pl. 5 (Lima, Peru; coll. Brit. Mus.).—[*Aramides*] *gutturalis* Sharpe, Hand-list, i, 1899, 97 (Peru); Bradbourne and Chubb, Birds South America, i, 1912, 23 (Peru?).

¹⁶ *Aramides ypecaha*.—*Rallus ypecaha* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 568 (Paraguay; based on *yacaha* Azara, Apunt. Parag., iii, 1805, 210); Gould, in Darwin's Zool. Voy. *Beagle*, Birds, 1841, 133 (Buenos Aires, Argentina); Gray, List Birds Brit. Mus., pt. 3, Grallae, 1844, 115.—*Aramides ypecaha* Gray, Gen. Birds, iii, 1846, 594; Hartlaub, Syst. Index Azara's Apunt., 1847, 23; Sclater and Salvin, Proc. Zool. Soc. London, 1868, 144 (Conchitas, Buenos Aires, Argentina); 448 (monogr.); Pelzeln, Orn. Bras., 1871, 316, footnote, 458; Durnford, Ibis, 1877, 194 (Baradero); White, Proc. Zool. Soc. London, 1883, 433 (La Plata); Barrows, Auk, i, 1884, 276 (Concepción, Uruguay); Berlepsch, Journ. für Orn., 1887, 34 (Rio Pilcomayo, Paraguay); Sclater and Hudson, Argentine Orn., ii, 1889, 150; Kerr, Ibis, 1892, 148 (lower Rio Pilcomayo); Wetmore, U. S. Nat. Mus. Bull. 133, 1926, 126 (Lazcano, Uruguay; Las Palmas, Chaco; Riacho Pilaga, Formosa; Lavalle, Buenos Aires, Argentina; and Puerto Pinasco, Paraguay); Peters, Check-list Birds of World, ii, 1934, 176.—[*Aramides*] *ypecaha* Gray, Hand-list, iii, 1871, 60, No. 10424; Sclater and Salvin, Nom. Av. Neotr., 1873, 139.—*Aramides ipcacha* Hudson, Proc. Zool. Soc. London, 1876, 103 (Argentina; habits).—*Aramides ypacaha* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 60 (Conchitas, Argentina; s. Brazil).—[*Aramides*] *ypacaha* Sharpe, Hand-list, i, 1899, 98.—*C[rex] melanopyga* Lichtenstein, Verz. Doubl., 1823, 79 (Brazil).—*Ortygarchus melampygu* Lichtenstein, Nomencl. Av. Mus. Berol., 1854, 96.—*Gallinula gigas* Spix, Av. Bras., ii, 1825, 75, pl. 99 (interior of Minas Geraës, near district of Contendas, Brazil).—*Aramides gigas* Pucheran, Rev. Zool., viii, 1845, 14; Burmeister, Syst. Ueb. Thiere Bras., iii, 1856, 383 (Minas Geraës; Rio de Janeiro); Reise La Plata-St., ii, 1861, 504; Schlegel, Mus. Pays-Bas, Ralli, 1865, 14.

cc. Vent blackish.

f. With a broad patch of white feathers on abdomen.

g. Larger, culmen of males averaging 72 mm.

Aramides cajanea vanrossemi (p. 116)

gg. Smaller, culmen of males averaging 61 mm.

Aramides cajanea albiventris (p. 117)

ff. With little or no white on abdomen.

g. With a little white on posterior border of brownish upper abdomen.

h. Mantle faintly indicated. *Aramides cajanea mexicana* (p. 115)

hh. Mantle conspicuous.

i. Mantle rufescent, with no olive wash.

Aramides cajanea plumbeicollis (p. 119)

ii. Mantle rufescent mixed with olive.

Aramides cajanea pacifica (p. 118)

gg. With no white on abdomen.

h. Smaller, wing under 170 mm.

Aramides cajanea latens (p. 123)

hh. Larger, wing over 170 mm.

Aramides cajanea cajanea (p. 120)

ARAMIDES CAJANEA MEXICANA Bangs

MEXICAN WOOD-RAIL

Adult (sexes alike).—Similar to that of *Aramides cajanea cajanea* but with a faint indication of tawny-buffy on the mantle, the olive of the upper back, scapulars, and upper wing coverts averaging slightly more grayish, less yellowish olive; occiput more extensively and brighter auburn; breast, sides, and upper abdomen paler—tawny-cinnamon to pale buckthorn brown, and with the posterior abdominal feathers of this color paler—pale cinnamon-buff, the median ones practically white at their tips, producing the effect of a narrow whitish hind margin separating the brown area from the black lower abdomen; remiges slightly duskier and with the dusky tips more extensive, "iris reddish; basal half of bill reddish, terminal half greenish; feet carmine" (Lawrence).

Juvenal female.¹⁷—Similar to adult but with no white on the abdomen, the black of the thighs and lower abdomen replaced by dark mouse gray and the feathers of the lower middle abdomen broadly tipped with tawny-cinnamon; throat streaked or longitudinally spotted with deep auburn as is also the top of the head (the auburn feathers being the remnants of the natal down).

Natal down.—On head and throat deep auburn; body downs not known.

Adult male.—Wing 184–192 (187.5); tail 56.5–58.5 (57.3); exposed culmen 59–74 (63.7); tarsus 75–79.5 (77.1); middle toe without claw 57.5–60.5 (55.8 mm.).¹⁸

¹⁷ No young males seen.

¹⁸ Three specimens from Oaxaca.

Adult female.—Wing 173–175 (173.7); tail 54.5–59 (56.5); exposed culmen 60–63 (62); tarsus 74–79 (76.6); middle toe without claw 57–60.5 (58.8 mm.).¹⁹

Range.—Resident in central and southern Mexico from southern Tamaulipas (Alta Mira and Tampico); south through Veracruz (San Andrea Tuxtla, Playa Vicente, Actopam, Vega de Alatorre, Vega del Casadero, Laguna Verde, Buena Vista, Tlacotalpam); Hidalgo (Orizava); Valley of Mexico; Oaxaca (San Francisco, Huilotepec, Tehuantepec, Guichicovi); Tabasco, and possibly Chiapas. In southern Oaxaca intergradation toward *albiventris* begins to appear.

Type locality.—Buena Vista, Veracruz, Mexico.

Rallus chircote (not of Vieillot) BONAPARTE, Proc. Zool. Soc. London, 1837, 114 (Mexico).

Aramides cayennensis (not *Fulica cayennensis* Gmelin) SCLATER, Proc. Zool. Soc. London, 1857, 206 (San Adrea Tuxtla, Veracruz); 1859, 393 (Oaxaca).

Aramides albiventris LAWRENCE, U. S. Nat. Mus. Bull. 4, 1876, 49 (San Francisco, Tehuantepec, Oaxaca; fresh colors of nude parts).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 447, part (monogr.).—FERRARI-PEREZ, Proc. U. S. Nat. Mus., ix, 1886, 177 (Actopam and Vega de Alatorre, Veracruz).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (Tampico; Playa Vicente, Vega del Casadero and Laguna Verde, Veracruz; and Tehuantepec, Oaxaca).—RICHMOND, Proc. U. S. Nat. Mus., xviii, 1896, 627 (Alta Mira, s. Tamaulipas).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 319, part (Alta Mira and Tampico, Tamaulipas; Valley of Mexico; Tehuantepec and San Francisco, Oaxaca; San Andrea Tuxtla, Actopam, Vega de Alatorre, Vega del Casadero, Playa Vicente, and Laguna Verde, Veracruz).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 25, part (distr.).

[*Aramides*] *albiventris* GRAY, Hand-list, iii, 1871, 60, no. 10430, part (s. Mexico).—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139, part.—SHARPE, Hand-list, i, 1899, 98, part.

Aramides albiventris mexicanus BANGS, Amer. Nat., xli, 1907, 185 (Buena Vista, Veracruz; coll. E. A. and O. Bangs); Bull. Mus. Comp. Zool., lxx, 1930, 168 (type specimen in Mus. Comp. Zool.; crit.).

[*Aramides cayana*] Subsp. β *Aramides albiventris* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (Tampico, Tamaulipas; Playa Vicente, Vega del Casadero, and Laguna Verde, Veracruz; and Tehuantepec, Oaxaca).

[*Aramides*] *mexicanus* DICKEY, Condor, xxxi, 1929, 33 in text (crit.).

Aramides cajanea mexicana PETERS, Check-list Birds of World, ii, 1934, 174.

ARAMIDES CAJANEA VANROSSEMI Dickey

VAN ROSSEM'S WOOD-RAIL

Adults (sexes alike).—Very similar to *Aramides cajanea albiventris*, but larger.

Other plumages unknown.

Adult male.—Wing 189–195; tail 60.5–70; exposed culmen 68–68; tarsus 83–86; middle toe without claw 60–65 mm.²⁰

¹⁹ Three specimens from Oaxaca and Veracruz.

²⁰ Two specimens, including the type.

Adult female.—Wing 190; tail 60; exposed culmen 63; tarsus 84; middle toe without claw 62 mm.²¹

Range.—Known only from the type locality and the adjacent Pacific coast of Guatemala (Chiapam).

Type locality.—Barre de Santiago, Ahuachapan, El Salvador.

Aramides albiventris (not of Lawrence, 1867) SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (Retalhuleu, Guatemala).—LANTZ, Trans. Kansas Acad. Sci., xvi, 1896-97 (1899), 219 (San José, Guatemala).

Aramides albiventris albiventris BANGS, Amer. Nat., xli, 1907, 183, part (Chiapam, Guatemala).

Aramides vanrossemi DICKEY, Condor, xxxi, 1929, 33 (orig. descr.; Barra de Santiago, Ahuachapan, El Salvador).

A[ramides] vanrossemi DICKEY, Condor, xxxi, 1929, 33 in text (crit.).

Aramides albiventris vanrossemi GRISCOM, Bull. Amer. Mus. Nat. Hist. lxiv, 1932, 120 (Ocos, Guatemala).

Aramides cajanea vanrossemi PETERS, Check-list Birds of World, ii, 1934, 174.—VAN ROSSEM, Birds El Salvador, 1938, 159 (El Salvador, fairly common in April and probably resident in mangroves and swamp forests at Barra de Santiago; habits; food; colors of soft parts).

ARAMIDES CAJANEA ALBIVENTRIS Lawrence

WHITE-BELLIED WOOD-RAIL

Adult (sexes alike).—Differing from the nominate race in the same characters as *Aramides cajanea mexicana* but with the posterior edge of the brown upper abdomen broadly white, the white forming a very conspicuous band between the brown anterior to it and the black posterior to it.

Other plumages not seen or recorded.

Adult male.—Wing 182-189 (185.8); tail 60-66 (62.8); exposed culmen 64-65 (64.3); tarsus 79.5-82 (80.5); middle toe without claw 58-64.5 (61.5 mm.).²²

Adult female.—Wing 172-195.5 (183.9); tail 60-66 (62.7); exposed culmen 58.5-64.5 (61.1); tarsus 73-81 (77.4); middle toe without claw 54-59 (55.7 mm.).²³

Range.—Resident from extreme southern Mexico (Campeche—Champoton; and Yucatan—Las Bocas de Silam and Cozumel Island); south through British Honduras (Belize River and Mountain Cow); Guatemala (Petén, Chiapam, Vera Paz, Coban, mouth of Rio Samalá, Choctum, etc.).

Type locality.—British Honduras.

²¹ One specimen.

²² Three specimens from Mexico.

²³ Four specimens from Yucatan and Campeche, Mexico, and Guatemala. Eight unsexed birds from Yucatan and Guatemala show the following size variations: Wing 175-182 (173.3); tail 55-62.5 (57.5); exposed culmen 58.5-67 (52.2); tarsus 73.5-80.5 (76.9); middle toe without claw 52-62 (56.1 mm.).

- Aramides cayennensis* (not *Fulica cayennensis* Gmelin) SCLATER and SALVIN, Ibis, 1859, 230 (Omoa, Honduras).
- Aramides cayensis* MOORE, Proc. Zool. Soc. London, 1859, 64 (Omoa, Honduras; habits).
- Aramides albiventris* LAWRENCE, Proc. Acad. Nat. Sci. Philadelphia, xix, 1867, 234 (British Honduras; coll. G. N. Lawrence).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 447, part (monogr.); 1870 (Honduras).—SALVIN, Ibis, 1874, 327 (Las Bocas de Silam, n. coast Yucatan); 1889, 378 (Cozumel Island, Yucatan); 1890, 89 (Cozumel Island).—BOUCARD, Proc. Zool. Soc. London, 1883, 462 (Yucatan).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (mouth of Rio Samalá, and Choctum, Guatemala; Cozumel Island; British Honduras).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 319, part (Las Bocas de Silam and Cozumel Island, Yucatan; Belize, British Honduras; Choctum, Vera Paz, mouth of Rio Samalá, Guatemala; Omoa and San Pedro, Honduras).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 25, part (geog. range).—MILLER, Bull. Amer. Mus. Nat. Hist., 1, 1924, 408 (ptilosis).
- A[ramides] albiventris* DICKEY, Condor, xxxi, 1929, 33 in text (crit.).
- [*Aramides albiventris* GRAY, Hand-list, iii, 1871, 60, no. 10430, part (Honduras, Guatemala).—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139, part.—SHARPE, Hand-list, i, 1899, 98, part.
- Aramides albiventris albiventris* BANGS, Amer. Nat., xli, March, 1907, 183, part (monogr.).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 120 (eastern Guatemala).—AUSTIN, Bull. Mus. Comp. Zool., lxix, 1929, 371 (Belize River, and Mountain Cow, British Honduras).—CARRIKER and DESCHAUENSEE, Proc. Acad. Nat. Sci. Philadelphia, lxxxviii, 1935, 415 (spec.; Quirigua, Guatemala).
- [*Aramides cayanae*] subsp. β *Aramides albiventris* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (Retalhuleu, mouth of Rio Salama, and Choctum, Guatemala; Cozumel Island; Belize, British Honduras).

ARAMIDES CAJANEA PACIFICA Miller and Griscom

NICARAGUAN WOOD-RAIL

Adult (sexes alike).—Similar to that of *Aramides cajanea plumbeicollis* but with the mantle less richly colored and less distinct from the adjacent back and upper wing coverts—the mantle tawny-buffy citrine, the upper back and the scapulars and the upper wing coverts grayish olive; primaries very slightly darker.²⁴

Other plumages unknown.

Adult male.—Wing 171–186 (178.2); tail 47–58 (54.4); exposed culmen 59–62 (60.6); tarsus 77–85.5 (82.1); middle toe without claw 54–57 (55.7 mm.).²⁵

Adult female.—Wing 166–183 (174.6); tail 45–57 (52.8); exposed culmen 54–60 (57), tarsus 74–81 (78.3), middle toe without claw 51–57 (54.2 mm.).²⁶

²⁴ The supposed character of the narrower black bars on the axillars does not hold; even in the type specimen there is considerable difference between the two sides in this respect.

²⁵ Eight specimens, including the type, from Nicaragua and Honduras.

²⁶ Nine specimens from Nicaragua and Honduras.

Range.—Resident in Honduras (Catacamas, El Boqueron, Lake Ticamaya, Cortes, and Bambu) and Nicaragua (Matagalpa, Lake Managua, Rio Coco, Jalapa, Los Sabalos), from sea level up to 2,000 feet, in swampy, wooded areas.

Type locality.—Tipitapa, Lake Managua, Nicaragua.

Aramides Cayennensis (not *Fulica cayennensis* Gmelin) SCLATER and SALVIN, Proc. Zool. Soc. London, 1867, 280 (Bluefields River, Nicaragua).—RIDGWAY, Proc. U. S. Nat. Mus., x, 1888, 594 (Rio Segovia, Honduras).

Aramides plumbeicollis RICHMOND, Proc. U. S. Nat. Mus., xvi, 1893, 528 (Rio Escondido, Nicaragua; Rio Segovia, Honduras; notes).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 320, part (Rio Segovia, Honduras; Bluefields, Graytown, and Rio Escondido, Nicaragua).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 26, part (geogr. range).

Aramides albiventris Subsp. γ *Aramides plumbeicollis* SHARPE, Cat. Birds. Brit. Mus., xxiii, 1894, 332 (Rio Escondido and Santo Domingo, Chontales, Nicaragua; crit.).

Aramides albiventris plumbeicollis BANGS, Amer. Nat., xli, 1907, 186, part (monograph).

Aramides plumbeicollis pacificus MILLER and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 11 (orig. descr.; Tipitapa, Nicaragua; distr; crit.).

Aramides cajanea pacifica PETERS, Check-list Birds of World, ii, 1934, 175.

ARAMIDES CAJANEA PLUMBEICOLLIS Zeledon

PLUMBEOUS-NECKED WOOD-RAIL

Adult (sexes alike).—Similar to that of the nominate form, but with the occiput brighter and more rufescent-auburn, the mantle distinctly different in coloration from the scapulars, upper wing coverts, and upper back, the mantle Sudan brown, the wing coverts, scapulars, and upper back Saccardo's olive; underparts as in *cajanea*.

Juvenal male.²⁷—Similar to adult but with mantle slightly less extensive, and with the anterior black, mid-abdominal feathers broadly tipped with cinnamon-buff, and the feathers of the lower back and rump and upper tail coverts extensively margined and washed with umber.

Natal down.—Apparently unknown.

Adult male.—Wing 172–186 (178.2); tail 51–59 (56.3); exposed culmen 53.5–63 (59.6); tarsus 74–87 (83.6); middle toe without claw 52–59 (57.8 mm.).²⁸

Adult female.—Wing 168–179 (172); tail 50.5–56 (52.3); exposed culmen 54–60 (55.2); tarsus 69.5–82 (76.4); middle toe without claw 53–64.5 (57 mm.).²⁹

Range.—Resident in swampy, wooded places in central and east central Costa Rica (Bonilla, Cariblanco de Sarapiquí, Carillo, El

²⁷ No young females seen.

²⁸ Five specimens from Costa Rica including the type.

²⁹ Eight specimens from Costa Rica.

Hogar, Guapile, Guayabal, Jimenez, Volcan de Miravalle, and Volcan de Turrialba).

Type locality.—Jimenez, Costa Rica.

Aramides cayennensis (not *Fulica cayennensis* Gmelin).—FRANTZIUS, Journ. für Orn., 1869, 375 (Costa Rica).

Aramides albiventris (not of Lawrence, 1867) LAWRENCE, Ann. Lyc. Nat. Hist. New York, ix, 1868, 143 (Costa Rica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 319, part (Costa Rica).

[*Aramides cayana*.] Subsp. β *Aramides albiventris* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 59, part (Costa Rica).

Aramides plumbeicollis ZELEDÓN, Anal. Mus. Nac. Costa Rica, i, 1887, 131, 138 (*nomen nudum*); ii, 1888, 3 (Jiménez, Costa Rica; coll. U. S. Nat. Mus.).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 33, footnote.—UNDERWOOD, Ibis, 1896, 450 (Volcan de Miravalles, Costa Rica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 320, part (Miravalles, Carrillo, and Jiménez, Costa Rica).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 26, part (geogr. range).

Aramides plumbeicollis DICKEY, Condor, xxxi, 1929, 33, in text (characters; crit.).

[*Aramides plumbeicollis* SHARPE, Hand-list, i, 1899, 98.

Aramides albiventris plumbeicollis BANGS, Amer. Nat., xli, 1907, 186 part (monogr.).—FERRY, Field Mus. Nat. Hist. Publ. 146 (orn. ser., i, No. 6), 1910, 260 (Guayabo, Costa Rica; crit.).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 409 (El Hogar, Guapiles, and Volcan de Turrialba at 2,000 feet, Costa Rica).

Aramides cajanea plumbeicollis PETERS, Check-list Birds of World, ii, 1934, 175.

ARAMIDES CAJANEA CAJANEA (P. L. S. Müller)

GULANA WOOD-RAIL

Adult (sexes alike).—Forehead, crown, and hind neck slate-gray; the occiput similar but much washed with Saccardo's umber; interscapulars, scapulars, upper back, and inner upper wing coverts citrine-drab to Saccardo's olive; the outer lesser and median upper wing coverts similar but extensively tinged with light buckthorn brown; the greater upper primary coverts, alula, and remiges hazel, becoming slightly duskier toward the tips of the primaries and extensively so on the secondaries; lower back Saccardo's umber to sepia; rump, upper tail coverts, rectrices, flanks, middle of lower abdomen, vent, and under tail coverts dull black, the feathers of the rump and the upper tail coverts often with indistinct margins of Saccardo's umber; lores, cheeks, and auriculars pale neutral gray to light neutral gray; chin and upper throat white; sides of neck, the lower throat, and upper breast gull gray to deep gull gray; rest of breast, the upper abdomen, and sides pinkish cinnamon to cinnamon; thighs mouse gray; under wing coverts like the sides, but broadly banded with blackish; iris red; orbital ring red; bill yellow at base, green terminally; tarsi and toes geranium pink.

Juvenal male.—Similar to the adult, but with the occiput almost free of any brownish wash, and with the anterior black midabdominal feathers tipped and margined with grayish cinnamon-buff, the umber edgings on the feathers of the flanks and rump slightly more pronounced; the secondaries washed with olive-brown, and the dusky tips of the primaries more extensive.

Natal down.—Down on top of head, the chin, and throat rusty cinnamon; rest unknown (from a specimen in advanced postnatal molt).

Adult male.—Wing 171.5–201 (187.6); tail 53–80.5 (66.8); exposed culmen 46.5–58 (54.1); tarsus 68–74 (71.4); middle toe without claw 48–55 (51.5 mm.).³⁰

Adult female.—Wing 166.5–189 (177.2); tail 55–68 (61.9); exposed culmen 46.5–56.5 (52.3); tarsus 66.5–75.5 (70.1); middle toe without claw 47.5–58 (50.8 mm.).³¹

Range.—Resident in wooded swamps and small streams in forested areas from northwestern and southeastern Costa Rica (El General; Terraba; Buenos Aires; Talamanca; Santa Ana); and Panamá (Cana, Darien, Almirante Bay; Permé; David; Lion Hill; Laguna de Pita); south through Venezuela (Altigracia, Quiribana de Caicara; San Esteban; Angostura; Puerto Cabello; Encontrados); and Trinidad (Caroni Swamp; Sabana Grande); French, Dutch, and British Guianas (Bartica; Camacusa); Colombia (Rio Frio; Santa Marta; Remedios); Ecuador (Rio Suno); and Brazil (Pará; Santarem; Rio Madeira; Maranhão; Ceará; Novo Triburgo; Rio de Janeiro; Pernambuco; Rio Parahyba; Borba; São Paulo; Rio Grande do Sul; Matto Grosso, etc.); to Peru (lower Rio Ucayali; Amable Maria; La Merced; Moyobamba); Paraguay (Picomayo; Puerto Pinasco; Sapucay); Argentina (San Lorenzo; Oran, Salta; Chaco); and Uruguay (Rio Negro; La Paloma; Paso Alamo; Rio Cebollati).

Type locality.—Cayenne.

Fulica cajanea MÜLLER, Syst. Nat., Suppl., 1776, 119 (Cayenne; based on Pl. Enl., pl. 352; see Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1864, 216).

Aramides cajanea BERLEPSCH and HARTERT, Nov. Zool., ix, 1902, 128 (Quiribana de Caicara and Altigracia, Venezuela; crit.).—HELLMAYR, Abh. Bayer. Akad. Wiss., math.-phys. Kl., xxii, Abt. 3, 1905, 712 (crit.); Nov. Zool., xiii, 1906, 52 (Caroni Swamp and Sabana Grande, Trinidad; crit.); xiv, 1907, 412 (Humaytha, Rio Madeira, Brazil; crit.).—BANGS, Amer. Nat., xli, 1907, 180 (monogr.); Proc. Biol. Soc. Washington, xxii, 1909, 29 (El General, Costa Rica; crit.).—BERLEPSCH, Nov. Zool., xv, 1908, 299 (Cayenne).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 408 (Costa Rica; habits).

³⁰ Twelve specimens from Costa Rica, Panama, Venezuela, Peru, Brazil, and Paraguay.

³¹ Six specimens from Panama and Brazil.

- Aramides cajanea cajanea* STURGIS, Field Book Birds Panama Canal Zone, 1928, 41 (descr.; habits; Panama).—GRISCOM, Bull. Mus. Comp. Zool., lxi, 1929, 154 (Cana, Darien, Panama).—HELLMAYR, Field Mus. Nat. Hist. Zool. Ser., xii, No. 18, 1929, 481 (Maranhão and Ceará, Brazil; crit.).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Almirante Bay region, Panama); Checklist Birds of World, ii, 1934, 175.—DARLINGTON, Bull. Mus. Comp. Zool., lxxi, 1931, 371 (near Río Frio, Magdalena, Colombia; habits).—GRISCOM, Bull. Mus. Comp. Zool., lxxii, 1932, 321 (Permé, Panama); lxxviii, 1935, 304 (common throughout Panama).—BELCHER and SMOOKER, Ibis, 1935, 282 (Trinidad; uncommon; breeds).—ALDRICH, Sci. Publ. Cleveland Mus. Nat. Hist., vii, 1937, 56 (Paracote, Azuera Peninsula, Panama; colors of soft parts).—SASSI, Temminckia, iii, 1938, 307 (Costa Rica, forest of Río Nuevo, Port Jiménez; spec.; crit.).—WETMORE, Proc. U. S. Nat. Mus., lxxxvii, 1939, 190 (n. Venezuela).
- Aramides cajanus* ALLEN, Bull. Amer. Mus. Nat. Hist., xiii, 1900, 125 (Minca, Santa Marta, Colombia).
- Fulica major* BODDAERT, Tabl. Pl. Enl., 1783, 31 (based on *Poule d'eau de cayenne* Daubenton, Pl. Enl., ix, pl. 352).
- Aramides major* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 57, footnote in text.
- [*Fulica*] *cayennensis* GMELIN, Syst. Nat., i, pt. 2, 1789, 700 (Cayenne; based on *Cayenne Gallinule* Latham, Gen. Synopsis Birds, iii, pt. 1, 1785, 252).
- C[roce] cayennensis* LICHTENSTEIN, Verz. Doubl., 1823, 79 (Brazil).
- A[ramides] cayennensis* GRAY, Gen. Birds, iii, 1846, 594.
- Aramides cayennensis* BURMEISTER, Syst. Ueb. Thiere Bras., iii, 1856, 384 (Lagoa Santo, Novo Friburgo, and Río de Janeiro).—SCLATER, Proc. Zool. Soc. London, 1856, 143 (Panama).—SALVIN, Proc. Zool. Soc. London, 1867, 161 (David, Panama); 1886, 176 (Bartica Grove, and Camacusa, Brit. Guiana).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 447 (monogr.), 629 (San Esteban, Venezuela); 1873, 308 (lower Río Ucayali, e. Peru); 1879, 545 (Remedios, Antioquia, Colombia).—FRANZIUS, Journ. für Orn., 1869, 375 (Costa Rica).—PELZELN, Orn. Bras., 1870, 315, 458.—TACZANOWSKI, Proc. Zool. Soc. London., 1874, 558 (Amable-Maria, Peru); Orn. Pérou, iii, 1886, 318.—FORBES, Ibis, 1881, 358 (Pernambuco, Brazil).—BERLEPSCH, Ibis, 1884, 440 (Angostura, Venezuela; crit.); Journ. für Orn., 1887, 35 (Pilcomayo, Paraguay), 125 (Paraguay).—MEYER, Abbild. Vogel-Skeletten, 1885, pl. 74.—BERLEPSCH and IHERING, Zeitschr. Orn., 1885, 180 (Taquara, Río Grande do Sul, s. Brazil; crit.).—RIKER and CHAPMAN, Auk, viii, 1891, 163 (Santarem, lower Amazon).—CHERRIE, Expl. Zool. Merid. Costa Rica, 1893, 55 (Terraba and Buenos Aires, sw. Costa Rica).—ALLEN, Bull. Amer. Mus. Nat. Hist., v, 1893, 150 (Chapada, Matto Grosso, sw. Brazil)—CHAPMAN, Bull. Amer. Mus. Nat. Hist., vi, 1894, 79 (Trinidad; habits; notes).—KOENIGSWALD, Journ. für Orn., 1896, 392 (São Paulo, s. Brazil).
- [*Aramides*] *cayennensis* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.
- Ortygarchus cayennensis* CABANIS, in Schomburgk's Reis. Britisch-Guiana, iii, 1848, 759; Journ. für Orn., 1869, 212 (Costa Rica; crit.).
- [*Ortygarchus*] *cayennensis* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320 (Brazil; Santa Marta, Colombia; Puerto Cabello, Venezuela; Paraguay).
- [*Gallinula*] *cayanensis* LATHAM, Index Orn., ii, 1790, 767.
- Gullinula cayanensis* TEMMINCK, Cat. Syst., 1807, 178.
- †*Aramides*] *cayanea* GRAY, Hand-list, iii, 1871, 60, No. 10425.

- Aramides cayanaea* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 57 (Colombia; Dutch Guiana; British Guiana; Brazil).—IHERING, Rev. Mus. Paulista, iv, 1900, 286 (descr. eggs).—REISER, Denkschr. Akad. Wiss. Wien, math.-nat. Kl., 1910, 95 (Rio Parnahyba, etc., ne. Brazil).—SNETHLAGE, Journ. für Orn., lxxvi, 1928, 554 (breeding seasons in various South American countries).
- Rallus chiricote* VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 551 (Paraguay; based on *Chiricote* Azara, Apunt. Hist. Nat. Páraxos Paragüay, iii. 1805, 214).
- Aramides chiricote* HARTLAUB, Syst. Index Azara's Apunt., 1847, 23.—SALVADORI, Boll. Mus. Zool. Torino, xii, 1897, 34 (San Lorenzo, n. Argentina).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 318 (Talamanca, Santa Ana, and Pacific Slope, Costa Rica; David, Lion Hill, and Laguna de Pita, Panama; Colombia; Amazon Valley; Peru; Brazil).—BRUCH, Rev. Mus. La Plata, xi, 1904, 249 (Orán, Salta, Argentina).—HARTERT and VENTURI, Nov. Zool, xvi, 1909, 257 (Chaco, Argentina; descr. eggs).—CHUBB, Ibis, 1910, 65 (Sapucay, Paraguay; fresh colors of unfeathered parts).
- [*Aramides cayanaea*.] Subsp. a. *Aramides chiricote* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 58, 332.
- Aramides cayanaea chiricote* BANGS, Proc. New England Zool. Club, ii, 1900, 14 (Loma del Leon, Panamá); Auk, xviii, 1901, 358 (Divala, Chiriqui, Panamá).—BERLEPSCH and STOLZMAN, Proc. Zool. Soc. London, 1902, 49 (La Merced, central Peru; fresh colors of unfeathered parts).
- Aramides cajanea chiricote* IHERING, Rev. Mus. Paulista, vi, 1904, 342 (Paraguay).—CHAPMAN, U. S. Nat. Mus. Bull. 117, 1921, 48 (Rio Comerciato, Peru).
- Aramides chiricota* LÉOTAUD, Ois. Trinidad, 1866, 496.
- Rallus maximus* VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 555 (new name for *Fulica cayennensis* Gmelin).
- Aramides maximus* SCHLEGEL, Mus. Pays-Bas, v, no. 30, livr. 7 (Ralli), 14.
- Gallinula ruficeps* SPIX, Av. Bras., ii, 1825, 74, pl. 96 (Rio de Janeiro, Brazil).
- Aramides ruficeps* GRAY, List Grallae Brit. Mus., 1844, 115.
- Aramides ruficollis* (not *Gallinula ruficollis* Latham) PELZELN, Orn. Bras., 1870, 316 (Borba, Brazil).
- Aramides cajanea venezuelensis* CORY, Field Mus. Nat. Hist. Publ. 182, orn. ser., i, 1915, 296 (Encontrados, Venezuela).
- Aramides cajanea peruviana* CORY, Field Mus. Nat. Hist. Publ. 182, orn. ser., i, 1915, 296 (Moyobamba, Peru).
- Aramides cajanea salmoni* CHUBB, Bull. Brit. Orn. Club, xxxviii, 1918, 48 (Remedios, Antioquia, Colombia).
- Aramides cajanea grahami* CHUBB, Ibis, 1919, 53 (Para, Brazil).

ARAMIDES CAJANEA LATENS Bangs and Penard

SAN MIGUEL WOOD-RAIL

Adult (sexes alike).—Similar to that of *Aramides cajanea cajanea* but slightly smaller and paler generally, the chin and throat not pure white, but lightly washed with grayish, the hind crown and occiput more extensively tinged with pale, dull earth brown; the lower throat and sides of neck light neutral gray; breast and sides and anterior abdomen between cinnamon and light sayal brown, less rufous than in the nominate form.

Other plumages not known.

Adult male.—Wing 165–169; tail 59; exposed culmen 52–53; tarsus 67, 67; middle toe without claw 47–48 mm.³²

Adult female.—Wing 163–170; tail 58.5–64; exposed culmen 52, 52; tarsus 66–67.5; middle toe without claw 45 mm.³³

Range.—Resident in, and restricted to, the type locality.

Type locality.—San Miguel Island, Bay of Panama.

Aramides cajanca chiricote (not *Rallus chiricote* Vieillot) THAYER and BANGS, Bull. Mus. Comp. Zool., xlvii, 1905, 145 (San Miguel Island, Bay of Panamá; crit.).

Aramides cajanca latens BANGS and PENARD, Bull. Mus. Comp. Zool., lxii, 1918, 41 (San Miguel Island, Bay of Panamá; coll. Mus. Comp. Zool.)—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 168 (type specimen in Mus. Comp. Zool., crit.).—PETERS, Check-list Birds of World, ii, 1934, 175.—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304 (Pearl Islands).

ARAMIDES AXILLARIS Lawrence

RUFIOUS-NECKED WOOD-RAIL

Adult male.—Forehead, crown, occiput, nape, anterior half or more of hind neck, sides of neck, the lower throat, breast, and sides of upper abdomen reddish auburn to chestnut; lores, cheeks, auriculars, and sides of upper throat similar but slightly paler; posterior part of hind neck and interscapulars slate gray, forming a triangle with the apex forward on the hind neck; upper back and scapulars olive to dark greenish olive; upper wing and innermost secondaries light brownish olive to buffy olive, the outermost coverts tinged with russet; other secondaries dark olive-brown; primaries cinnamon-rufous, darkening to dark olive-brown on the inner webs, especially toward the shaft, the external margin of the inner webs more or less washed with cinnamon-rufous; lower back, rump, and upper tail coverts blackish faintly tinged with fuscous; the tail black; chin and middle of upper throat white; middle of abdomen deep mouse gray darkening to blackish mouse gray posteriorly; flanks, thighs, vent, and under tail coverts blackish with a faint fuscous tinge; under wing coverts fuscous-black banded with white, those along the bend of the wing with the white replaced by cinnamon-rufous; iris hazel; bill grass green, its basal portion yellow; tarsi and toes vermilion to dull salmon-red.

Adult female.—Like the adult male but with the chin and middle upper throat averaging very slightly washed with pale cinnamon.

Juvenal (only one sexed (♀) and several unsexed examples seen, but the sexes probably alike).—Forehead, crown, and occiput dusky olive-brown, becoming more grayish, less brownish, but not paler, on the hind neck; posterior hind neck and interscapulars as in adult but

³² Two specimens.

³³ Two specimens, including the type.

less conspicuously different from the immediately adjacent more anterior parts; back, rump, upper tail and wing coverts, remiges, and rectrices as in adult, but the olive slightly less yellowish; lores, cheeks, auriculars, and sides of upper throat pale slate gray mixed with drab; chin and middle upper throat white tinged with pale cinnamon-buff; lower throat, breast, abdomen to vent, sides, flanks, and thighs mouse gray, the individual feathers often terminally indistinctly washed with tawny-olive, especially on the sides; vent, under tail and wing coverts as in adult.

Natal down.—Not recorded.

Adult male.—Wing 163–174 (169); tail 53–63.0 (58.3); exposed culmen 39.5–46 (43.7); tarsus 52.5–63 (59.5); middle toe without claw 43.5–47.5 (44.7 mm.).³⁴

Adult female.—Wing 145.5–170 (163.6); tail 47–62.5 (57.3); exposed culmen 37.5–46 (42.2); tarsus 50–60.5 (57.6); middle toe without claw 40–47.5 (43.6 mm.).³⁵

Range.—Resident in coastal Mexico from Sinaloa on the west and Yucatan on the east (Mazatlan, Estero Mescales, Castillo, and Rosario River, Sinaloa; San Blas, Tepic; Acapulco, Guerrero; Mujeres Island; Los Bocas de Silam, Yucatan); south through British Honduras (Belize); Nicaragua (Greytown); Costa Rica (Carrillo and Lepanto); and Panama (David, Chiriquí; Lion Hill; Quebrada Nigua); to Colombia (Barranquilla; La Concepcion de Santa Marta; Cartagena; Chirua); and Ecuador (Puna Vieja; Jambeli; La Chonta) on the west; and to Venezuela (Puerto Cabello; mouth of Rio Guarapiche); Trinidad (Caroni; Chaguaramas); and the Guianas (Bartica, British Guiana).

Type locality.—Barranquilla, Colombia.

O[rtygarchus] mangle (not *Gallinula mangle* Spix) CABANIS, in Schomburgk's Reis. Britisch-Guiana, iii, 1848, 760.

(?) *Ortygarchus ruficollis* (not *Fulica ruficollis* Gmelin) (LICHTENSTEIN, Nom. Mus. Berol., 1854, 96 (Guiana; Venezuela).

Aramides ruficollis LÉOTAUD, Ois. Trinidad, 1866, 498 (plumages; common in Trinidad).

(?) *Aramides ruficollis* ? LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1865, 178 (David, Chiriqui, w. Panamá).

(?) *Aramides ruficollis* LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1862, 479 (Lion Hill Panamá; descr.); viii, 1865, 184 (Greytown, Nicaragua).

Aramides axillaris LAWRENCE, Proc. Acad. Nat. Sci. Philadelphia, 1863, 107 (Barranquilla, Colombia; coll. G. N. Lawrence); Mem. Boston Soc. Nat. Hist., ii, 1874, 311 (Mazatlán, Sinaloa; habits).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 449 (Belize, British Honduras; monogr.).—SALVIN, Ibis, 1874, 327 (n. coast Yucatan); 1886, 176 (Brit. Guiana).—BOUCARD, Proc. Zool. Soc. London, 1883, 462 (Yucatan).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 56 (Venezuela).—CHAPMAN, Bull. Amer.

³⁴ Eighteen specimens from Mexico and Colombia.

³⁵ Thirteen specimens from Mexico and Panama.

- Mus. Nat. Hist., vi, 1894, 79 (Trinidad).—BANGS, Proc. Biol. Soc. Washington, xii, 1898, 92 (La Concepción, Santa Marta, Colombia); Amer. Nat., xli, 1907, 178 (monogr).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 318, pl. 77 (Mazatlán; San Blas, Tepic; Las Bocas de Silam, Yucatan; Belize; Venezuela; Trinidad; British Guiana).—HELLMAYR, Nov. Zool., xiii, 1906, 52 (Caroni and Chaguaramas, Trinidad; crit.).—BEEBE, Zoologica, i, 1909, 73 (mouth of Rio Guarapiche, etc., Venezuela; habits; notes).—CARRIKER, Ann. Carnegie Mps., vi, 1910, 408 (Carrillo ? and Lepanto, Costa Rica).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 25 (geog. range).—CHUBB, Birds British Guiana, i, 1916, 67 (Bartica, Brit. Guiana).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., lv, 1926, 176 (Puna Vieja, Jambeli, and La Chonta, Ecuador).—McLELLAN, Proc. California Acad. Sci., ser. 4, xvi, 1927, 11 (near San Blas, Mexico; habits).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 300 (Quebrada Nigra, Panama); Check-list Birds World, ii, 1934, 176.—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304 (Almirante, Panama).—BELCHER and SMOOKER, Ibis, 1935, 283 (Trinidad; breeds; descr. of eggs).
- [*Aramides*] *axillaris* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.—SHARPE, Hand-list, i, 1899, 97.—BRABOURNE and CHUBB, Birds South Amer., i, 1912, 23 (Colombia; Venezuela; Trinidad).
- [*Ortygarchus*] *axillaris* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320 (Guiana; Puerto Cabello, Venezuela).

Genus CREX Bechstein

Crex BECHSTEIN, Orn. Taschenb., ii, 1803, 336. (Type, by monotypy, *C. pratensis* Bechstein=*Rallus crex* Linnaeus.)

Medium-sized Rallinae with bill much shorter than head, gonyes not more than one-fourth as long as culmen and strongly ascending terminally; alula extending for only about half the length of longest primary coverts, and hallux (without claw) not more than two-thirds as long as basal phalanx of inner toe.

Bill much shorter than head, compressed, its depth of base equal to nearly half the length of culmen, its width at same point equal to about two-thirds the depth; culmen elevated basally slightly depressed above nostrils, thence gently but decidedly decurved to tip; gonyes only about one-fourth as long as culmen, strongly ascending terminally, its basal angle rather prominent, through slight but distinct concavity of anterior portion of lower edge of mandibular rami, the latter without lateral groove; nasal fossa large and broad, extending for more than half the distance from loreal feathering to tip of maxilla; nostril small and narrow, acute anteriorly, obliquely longitudinal but parallel with maxillary tomium, its anterior end much nearer to laterofrontal antia than to tip of maxilla; laterofrontal antia at upper edge of nasal fossa, where forming an obtuse forward projection, thence sloping backward to the rictus; malar antia forming a projecting obtuse angle, its apex about on vertical line with that of laterofrontal antia; mental antia nearly on vertical line with anterior end of nostril. Wing rather large, moderately

concave beneath, rather pointed, the second, or second and third primaries (from outside) longest, the outermost equal to or longer than sixth, the longest primaries exceeding distal secondaries by a little more than one-third the length of wing, and projecting slightly beyond tips of elongated proximal secondaries; alula extending not more than half way to tips of longest primary coverts. Tail a little more than one-third as long as wing, strongly rounded or slightly graduated, the rectrices narrow and tapering distally, the longer ones extending decidedly beyond coverts. Tarsus nearly one-third as long as wing, much less than twice as long as culmen, slightly longer than middle toe with claw, the acrotarsium with a single continuous row of broad transverse scutella, the planta tarsi with a single continuous row of similar but narrower scutella; outer toe, with

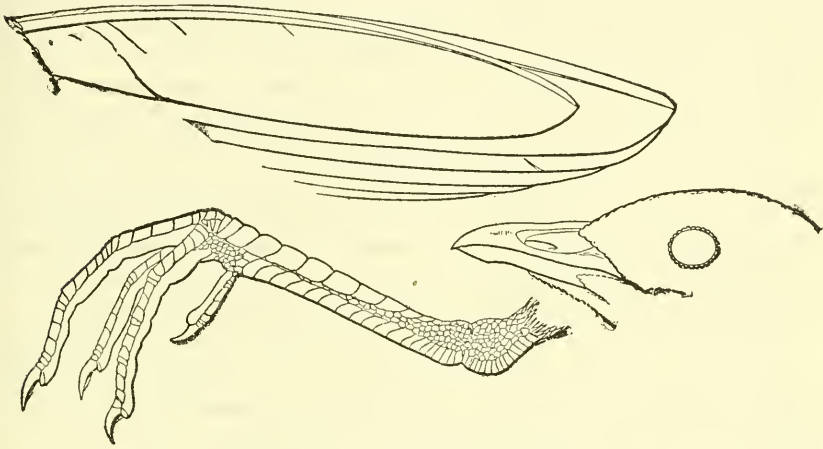


FIGURE 8.—*Crex crex*. Natural size.

claw, falling short of base of middle claw, the inner toe still shorter, the terminal articulation on line with penultimate articulation of middle toe; hallux small, its length, without claw, equal to about two-thirds the length of basal phalanx of inner toe; claws short, slightly curved, rather blunt.

Plumage and coloration.—Plumage rather compact and firm, the contour feathers rather distinctly outlined, except on abdomen; those of head short and more blended (except on pileum), those of the laterofrontal region semierect and bristly, those of lores very short and rather sparse; remiges firm. Upper parts brown and grayish, broadly striped with dark brown, the wings for the most part plain and rufescent; inner parts light grayish anteriorly, faintly barred on chest, etc., whitish posteriorly, distinctly barred with brown; axillars and under wing-coverts plain rufescent.

Range.—Palearctic region, southward to Africa in winter; accidental in northeastern portion of Nearctic region. (Monotypic.)

CREX CREX (Linnaeus)

CORNCRAKE

Adult male, winter plumage.—Feathers of forehead, crown, occiput, nape, hind neck, scapulars, interscapulars, innermost secondaries, back, rump, upper tail coverts, and rectrices fuscous-black, edged with from dusky cinnamon-buff to buffy-avellaneous; upper and under wing coverts dusky orange-cinnamon to tawny sayal brown, the median and greater ones with varying amount of whitish small bars, slightly darker on the upper greater primary coverts; remiges (except the elongated innermost secondaries) snuff brown, darker on the inner webs which are almost bister, the outer web of the outermost primary cartridge buff except at tip which is pale snuff brown; superciliary stripe from base of maxilla over eye to posterolateral corner of nape ashy pale neutral gray; lores, subocular area, lower cheeks and auriculars tawny-olive; sides of neck similar but the feathers with dark sepia to fuscous median stripes; chin and upper throat whitish more or less washed with pale tawny-olive; lower throat and breast buffy tawny-olive washed to a varying degree with ash grayish; middle of abdomen, thighs, and vent buffy whitish; sides and flanks barred sayal brown and buffy white, the brown bars wider than the whitish ones; under tail coverts buffy white somewhat mixed with sayal brown; iris pale brown; bill pale brown darker at the tip, the maxilla more flesh color than the mandible; tarsi and toes pale flesh color.

Adult male, summer plumage.—Similar to the winter plumage but with the superciliary stripe broader, more blue-gray, the lower throat and breast more extensively washed with ashy, and the edges of the feathers of the upperparts averaging more grayish.

Adult female, winter plumage.—Similar to the male winter plumage but with less ashy blue-gray over the eye and none below it.

Adult female, summer plumage.—Similar to the male summer plumage but with less ashy gray on the sides of head and the throat and breast.

Juvenal (sexes alike).—"Like adult winter female but over eye buff-brown without gray, all upper-parts with edges of feathers more buff-brown without gray tinge; throat and breast more yellowish buff-brown and without gray tinge; flanks more rufous and less barred brown; wing coverts sometimes without bars and usually less barred than adult."³⁶

Natal down.—Sooty brownish black, the tips of the dorsal body down buffy brown, the tips of the capital and the ventral body down blacker.³⁶

³⁶ Ex Witherby et al., Practical Handbook British Birds, ii, 1924, p. 828.

Adult male.—Wing 126–138 (132.7); tail 45.5–47 (46.5); exposed culmen 21–23 (22.2); tarsus 36–38 (37); middle toe without claw 33–38 (36 mm.).³⁷

Adult female.—Wing 132–137 (134.3); tail 48–51 (50); exposed culmen 22; tarsus 35.5–38 (36.7); middle toe without claw 32–37 (34.2 mm.).³⁸

Range.—Breeds in the greater part of Europe from Norway, Sweden, Faeroes, to Pyrenees, north Italy, and Macedonia, east to Russia, central Asia (Turkestan), and western Siberia (Lena and Yenisei Rivers).

Winters in Africa, Arabia, and (uncommonly) northern India.

Casual in Madeira, the Canary Islands, Bermuda, Greenland (Godthaab), Baffin Island (near Cape Dorset), Newfoundland (St. Shotts), Nova Scotia (Pictou), Ontario, Maine (Falmouth), Rhode Island (Cranston), Connecticut (Saybrook), New York (Long Island), New Jersey (Salem, Bridgetown, Cape May), Pennsylvania (near Philadelphia), Maryland (Hursley), and Virginia (doubtful).

Accidental in Australia and New Zealand.

Type locality.—Europe; restricted type locality, Sweden.

[*Rallus*] *crex* LINNAEUS, Syst. Nat., ed. 10, i, 1758, 153 (Sweden; based on Fauna Suecica, 162); ed. 12, i, 1766, 261.

Rallus crex BRÜNNICH, Orn. Bor., 1764, 58.—SCOPOLI, Bemerck. ed. Günther, 1770, 124.—SCHAEFFER, Mus. Orn., 1789, 51.—TEMMINCK, Cat. Syst., 1807, 176.—VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 553.—WRIGHT, Ibis, 1864, 145 (Malta).

Rallus rex KLUK, Hist. Nat., ii, 1779, 299.

[*Gallinula*] *crex* LATHAM, Index Orn., ii, 1790, 766.

Gallinula crex TEMMINCK, Man. d'Orn., ed. 2, 1820, 687; v, 1840, 439.—WERNER, Atlas, Gallatores, 1827, pl. 34.—GOULD, Birds Europe, iv, 1837, pl. 341 and text.—YARRELL, Brit. Birds, iii, 1843, 6.—HOLM, Naturh. Tidsk., ser. 2, ii, 1848, 484 (Färöe Islands).—GODMAN, Ibis, 1861, 90 (Norway).

Ortygometra crex LEACH, Syst. Cat. Mamm., etc., Brit. Mus., 1816, 34.—STEPHENS, Shaw's Gen. Zool., xii, pt. i, 1824, 218, pl. 26.—HARCOURT, Proc. Zool. Soc. London, 1851, 146 (Madeira).—REINHARDT (J.), Journ. für Orn., 1854, 425, 441 (Greenland); Ibis, 1861, 11 (Godthaab, Greenland, 1 specimen, 1851).—SUNDEVALL, Svenska Fögl., 1856, pl. 45, fig. 2.—SWINHÖE, Proc. Zool. Soc. London, 1863, 321 (China?).—SALVADORI, Journ. für Orn., 1865, 281 (Sardinia).—DROSTE, Journ. für Orn., 1869, 345 (Färöes).—FRITSCH, Naturg. Vög. Eur., 1870, pl. 32, figs. 2, 6.—BARRATT, Ibis, 1876, 213 (Lydenburg, Transvaal).

[*Ortygometra*] *crex* GRAY, Hand-list, iii, 1871, 62, No. 10450.

³⁷ Three specimens from Scotland, England, and Holland.

³⁸ Three specimens from England, Norway, and Hungary. Witherby et al., (Practical Handbook British Birds, ii, 1924, p. 828) give the following measurements of a more extensive series: Male (15 specimens), wing 135–150, tail 40–50; exposed culmen 20–23; tarsus 34–43; female (number not stated), wing 130–145; exposed culmen 19–23 mm.

Crex crex SHARPE. Layard's Birds South Africa, new ed., 1884, 611; Cat. Birds Brit. Mus., xxiii, 1894, 82, 334.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 217; ed. 3, 1910, p. 105; ed. 4, 1931, 99.—DUTCHER, Auk, iii, 1886, 435 (near Amagansett, Suffolk County, Long Island, 1 specimen, Aug. 1885); v, 1888, 177 (Long Island, Nov. 2, 1880).—NORTH, Rec. Austral. Mus., ii, 1893, 82 (New South Wales).—STONE, Birds Eastern Pennsylvania and New Jersey, 1894, 68 (Salem and Bridgeton, N. J.).—BROCK, Auk, xiii, 1896, 173 (near Portland, Maine, Oct. 14, 1889).—MCKINLEY, Auk, xvi, 1899, 76, in text (Pictou, Nova Scotia, about 1874).—GRANT, Nov. Zool., vii, 1900, 271 (s. Arabia).—HARTERT, Nov. Zool., viii, 1901, 306 (Canary Islands).—HARTERT and GRANT, Nov. Zool., xii, 1905, 95 (near Ponta Delgado, San Miguel, Azores).—KNIGHT, Birds Maine, 1908, 143 (Dyke Marsh, Falmouth, Oct. 4, 1889).—EATON, Birds New York, i, 1910, 282 (4 New York records).—MATHEWS, Birds Australia, i, 1911, 207, pl. (50) facing p. 207.—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 51 (Saybrook, Oct. 20, 1887).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 36, fig. 16, map (range).—BANNERMAN, Ibis, 1920, 119 (Canary Islands, occasional visitor; range).—HARTERT, Vög. pal. Fauna, iii, 1921, 1838 (monogr.).—RALFE, Brit. Birds, xvii, 1923, 20 (Isle of Man, Great Britain).—ROBINSON, Brit. Birds, xvii, 1923, 191 (Scilly Islands).—RAMSAY, Guide to Birds of Europe and North Africa, 1923, 319 (descr.; range; Europe and North Africa).—GRISCOM, Birds New York City Region, 1923, 139 (status in New York City area).—GLEGG, Ibis, 1924, 86 (Macedonia; breeding); 1931, 442 (Camargue, France); L'Oiseau, n. s. ii, 1932, 334 (Camargue and Little Camargue Islands, France).—MUNN, Ibis, 1924, 466 (Minorea; uncommon migrant).—WITHEBBY et al., Pract. Handb. Brit. Birds, ii, 1924, 827 (monogr.).—LYNES, Nov. Zool., xxxi, 1924, 92 (Yebala, Morocco).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 363 (descr.; range; New England—accidental visitor; Falmouth, Maine, Oct. 14, 1889; Cranston, R. I., 1857; Saybrook, Conn., Oct. 20, 1887).—VON JORDANS, Journ. für Orn., lxxiii, 1925, 199 (Balearic Islands; not breeding).—NATHUSIUS, Journ. für Orn., lxxiii, 1925, 544 (north of Magdeburg, Germany).—PEITZMEIER, Journ. für Orn., lxxiii, 1925, 554 (Upper Ems district, Germany).—WEIGOLD, Journ. für Orn., lxxiii, 1925, 581 (banding records, Helgoland).—GROUND, Brit. Birds, xviii, 1925, 236 (North Pembrokeshire, England).—KAYSER, Verh. Orn. Ges. Bay., xvi, 1925, 243 (Sagan distr., Germany).—LANKES, Verh. Orn. Ges. Bay., xvi, 1925, 251 (Bavarian woods).—GENGLER, Verh. Orn. Ges. Bay., xvi, 1925, Sonderheft, 93 (Bavaria); xvii, 1927, 168 (Steiger Forest, Bavaria), 485 (s. Rhone, Germany).—UHL, Verh. Orn. Ges. Bay., xvi, 1925, 313 (Neustadt, Germany); Anz. Orn. Ges. Bay., i, No. 12, 1928, 153 (upper Bavaria).—ALEXANDER, Ibis, 1927, 690 (Tiamicino, Italy).—RIVIERE, Brit. Birds, xviii, 1925, 292 (Norfolk); xx, 1927, 266 (Lynn Well Lightship, Norfolk, Dec. 15); xxv, 1932, 354 (Norfolk).—BROWN, Brit. Birds, xix, 1925, 66 (Cumberland; nest and eggs); xxi, 1927, 116 (Lakeland, Scotland, nest and eggs); xxii, 1928, 157 (Lakeland, Scotland, young); 208 (incubation period).—ROYAL AUSTRALASIAN ORNITHOLOGISTS' UNION, Check-list Birds Australia, 1926, 9 (distr.; Australia—New South Wales, 1 record; New Zealand, 1 record).—HELLMAYR, Verh. Orn. Ges. Bay., xvii, 1926, 104 (near Oberaudorf, Bavaria).—BIANCHI, Journ. für Orn., lxxiv, 1926, 456 (n. Russia).—DE VRIES, Ardea, xv, 1926, 85 in text (Holland).—SPRANGER, Verh. Orn. Ges. Bay., xvii, 1926, 33 (Deggendorf, Germany).—INGRAM, Ibis, 1926, 269 (Ouessant, France).—HELMES, Meddel. Grönland, lviii, 1926, 241 (Angmagsalik, Greenland; habits).—HELNROTH, Vög. Mitteleurop., iii, 1927–1928, 77 (development of young in captivity).—DROST,

- Journ. für Orn., lxxv, 1927, 266 (Helgoland banding records).—POLL, Verh. Orn. Ges. Bay., xvii, 1927, 408 (lower Bavaria).—BOETTICHER, Verh. Orn. Ges. Bay., xvii, 1927, 191 (Bulgaria, status).—PFEIFER, Verh. Orn. Ges. Bay., xvii, 1927, 255 (valley of the Main, Germany).—MOREAU, Ibis, 1928, 248 (Ma'adi, Egypt).—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 122 (eggs).—BROUWER and HAVERSCHMIDT, Ardea, xvii, 1928, 11 (breeding, Holland).—MURPHY and CHAPIN, Amer. Mus. Nov., No. 384, 1929, 7 (Fayal, Azores).—CONGREVE, Ibis, 1929, 490 (Roumania).—ESTIOT, Alauda, i, 1929, 358 (near Paris, France).—ARRIGONI DEGLI ODDI, Orn. Ital., 1929, 785 (descr.; distr.; Italy).—VON BURG and KNOPFLI, in Fatio and Studer, Oiseaux Suisse, xvi, 1930, 3372 (monogr.; Switzerland).—BAKER, Fauna Brit. India, Birds, vi, 1930, 10 (monogr.; India).—WILSON, Brit. Birds, xxiv, 1930, 123 (Bardsey Island; breeding).—TRACY, Brit. Birds, xxiv, 1930, 167 (Westmorland; habits).—SCHIERMANN, Journ. für Orn., lxxviii, 1930, 154 (population density in breeding season).—MÜLLER, Verh. Orn. Ges. Bay., xix, 1930, 85, 572 (Lake Naising Bavaria; habits).—BANNERMAN, Birds Trop. West Africa, ii, 1931, 10 (monogr.; West Africa).—WITHERBY, Brit. Birds, xxiv, 1931, 217; xxv, 1931, 78; xxvi, 1932, 220 (recovery of marked birds).—KOZLOVA, Ibis, 1932, 568 (status in sw. Transbaikalia).—SUTTON, Mem. Carnegie Mus., xii, 1932, 104 (Cape Dorset, Baffin Island, Sept. 24, 1928).—HARRISON, Brit. Birds, xxv, 1932, 219 (Lundy Island, England).—WITHERBY and LEACH, Brit. Birds, xxv, 1932, 268; xxvi, 1933, 361 (recovery of marked birds).—CHAVIGNY and MAYAUD, Alauda, iv, 1932, 432 (Azores Islands).—AHARONI, Journ. für Orn., lxxx, 1932, 424 (Egypt and Asia Minor).—STIDOLPH, Emu, xxxi, 1932, 233 (New Zealand).—MACPHERSON, Brit. Birds, xxvi, 1933, 294 (London, England).—KUMMERLÖWE and NIETHAMMER, Journ. für Orn., lxxxii, 1934, 523 (Asia Minor); lxxxiii, 1935, 71 (Asia Minor).—LUDLOW and KINNEAR, Ibis, 1934, 109 (Chinese Turkestan).—CHEESMAN and SCLATER, Ibis, 1935, 160, 298 (Dangila and Shaiba, Abyssinia).—MEIKLEJOHN, Ibis, 1935, 204 (Capellière, Camargue).—HAMLING, Ibis, 1937, 176 (Lomagundi area, s. Rhodesia).—BATES, Ibis, 1937, 318 (Arabia).—PALUDAN, Journ. für Orn., lxxxvi, 1938, 588, 636 (Zagrosa area, w. Iran; spec. Kermanshah).
- C[rex] crex* RIDGWAY, Man. North Amer. Birds, 1887, 140.
- [*Crex*] *crex* SHARPE, Hand-list, i, 1899, 100.
- Crex crex crex* DES PRUGNES, Rev. Franç. d'Orn., xi, 1927, 56 (Holland; migration).—DE PAILLERETS, Rev. Franç. d'Orn., xi, 1927, 192 (Charente-Inférieure, France).—REBOUSSIN, L'Oiseaux, x, 1929, 350 (Loir-et-Cher, France).
- Crex c[rex] crex* ROCARD, L'Oiseaux, xi, 1930, 357 (Noirmoutier Island, France).—GREEN, Brit. Birds, xxiv, 1931, 300 (Northumberland; call notes).—OLIVIER, L'Oiseaux, n. ser., i, 1931, 661 (central Pyrenees, France).
- Crex pratensis* BECHSTEIN, Gem. Naturg. Deutschl., ii, 1805, 461.—BREHM, Handb. Lieb. Stub. Hausvög., 1832, 357; Journ. für Orn., 1854, 83 (n. e. Africa).—KAUP, Thierr., ii, pt. 1, 1836, 345, fig.—STRICKLAND, Proc. Zool. Soc. London, 1836, 101 (Smyrna).—BONAPARTE, Geogr. and Comp. List, 1838, 53 (Europe).—NAUMANN, Vög. Deutschl., ix, 1838, pl. 236.—MACGILLIVRAY, Man. Brit. Orn., ii, 1842, 113; Hist. Brit. Birds, iv, 1852, 527.—SCHLEGEL, Rev. Crit., 1844, civ; Vog. Nederl., 1854, 256; Dieren Nederl., Vog., 1861, pl. 26, figs. 6-8; Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 25.—JARDINE, Contr. Orn., 1848, 86 (Bermuda, Oct. 25, 1847).—WEDDERBURN, Zoologist, vii, 1849, 2591 (Bermuda).—HURDIS, Jardine's Contr. Orn., 1850, 13 (Bermuda).—STRICKLAND, Proc. Zool. Soc. London, 1850, 221 (Kordofan).—REICHENBACH, Handb., Fulicariae, 1852, pl. 116, figs. 1152-1157.—CASSIN, Proc. Acad. Nat. Sci. Philadelphia, vii, 1855, 265 (Salem, N. J.); in Baird, Rep. Pacific R. R.

Surv., ix, 1858, 751 (eastern coast of United States; Greenland); ed. 1860 (Birds North Amer.), pl. 39, fig. 2.—BAIRD, Cat. North Amer. Birds, 1859, No. 558; Ibis, 1867, 282 (Greenland).—MARTENS, Journ. für Orn., 1859, 219 (Bermuda).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).—POWYS, Ibis, 1860, 349 (Corfu).—HINTZ, Journ. für Orn., 1861, 225 (migrations, etc.).—GOULD, Birds Great Britain, iv, 1863, pl. 87 and text.—NORDMANN, Journ. für Orn., 1864, 372 (Lapland).—TRISTRAM, Proc. Zool. Soc. London, 1864, 452 (Palestine).—GODMAN, Ibis, 1866, 102 (Azores).—DEGLAND and GERBE, Orn. Eur., ii, 1867, 253.—SMITH, Ibis, 1868, 455 (Portugal).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 457 (monogr.).—BROWN, Proc. Boston Soc. Nat. Hist., xii, 1869, 208 (Madeira).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 56 (Phila. ed., p. 45).—ELEVER and BUCKLEY, Ibis, 1870, 333 (Turkey).—SAUNDERS, Ibis, 1871, 224 (s. Spain); ed. Yarrell's Brit. Birds, iii, 1883, 157.—HARTING, Man. Brit. Birds, 1872, 57.—BROOKE, Ibis, 1873, 336 (Sardinia).—HANCOCK, Birds Northumberland and Durham, 1874, 125.—DURNFORD, Ibis, 1874, 397 (North Frisian Island).—COUES, Check-list, 1874, No. 471; ed. 2, 1882, No. 683.—AYRES, Ibis, 1877, 351 (Transvaal).—DRESSER, Birds Europe, vii, 1871-81, 291, pl. 499.—SEEBOHM, Ibis, 1880, 193 (Krasnoyarsk and n. to lat. 59°30', Yenisei Valley, Siberia); 1882, 226 (Astrakhan, breeding near Sarepta), 382 (Archangel, n. Russia).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 577); Nom. North Amer. Birds, 1881, No. 577.—SCULLY, Ibis, 1881, 591 (Gilgit, India; crit.).—SHELLEY, Ibis, 1882, 366 (Palatswie Pan, se. Africa).—PARK, Forest and Stream, xxii, 1884, 44 (New York).—JONES, Forest and Stream, xxii, 1884, 203 (Newfoundland; Bermuda).—REID, U. S. Nat. Mus. Bull. 25, 1884, 248 (Bermuda, 1 specimen, Oct. 25, 1847).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 381.—DIXON, Ibis, 1885, 84, 361 (St. Kilda).—HARTWIG, Journ. für Orn., 1893, 11 (Madeira).—BLAGG, Ibis, 1893, 355 (Shetland Islands).—POPHAM, Ibis, 1897, 101 (Yeniseisk, Siberia); 1898, 512 (Yatsova, Yenisei River, Siberia).—SCLATER, Bull. Brit. Orn. Club, xvi, 1905, 7 (Transvaal, Dec.).—ZERGENYI, Aquila, xxx-xxxii, 1924, 317 in text (Alibunar Swamp, Hungary).—SCHENK, Aquila, xxxvi-xxxvii, 1931, 182 (banding, Hungary, 1928-30).—KLEINER, Aquila, xxxvi-xxxvii, 1931, 117 in text (food).—TICEHURST, Birds in Suffolk, 1932, 460 (Suffolk, England).

Cr[ex] pratensis KEYSERLING and BLASIUS, Wirb. Eur., 1840, lxvii, 204.

[*Cr[ex] pratensis* COUES, Key North Amer. Birds, 1872, 274.

Cr[ex] pratensis COUES, Key North Amer. Birds, ed. 2, 1884, 675.

Crex herbarum BREHM, Vög. Deutschl., 1831, 694 (migrant, central Germany).

Crex alticeps BREHM, Vög. Deutschl., 1831, 694 (spring in central Germany).

Rallus featherstonii BULLER, Essay Orn. New Zealand, 1865, 18 (New Zealand).

Crex pratensis similis ZARUDNY, Bull. Mus. Transcaspien, i, 1918, 15, sep. pag. (Turkestan).

Genus PORZANA Vieillot

Porzana VIEILLOT, Analyse, 1816, 61. (Type, by monotypy, "Marouette Buff[on]" = *Rallus porzana* Linnaeus.)

Porzanoidea MATHEWS, Austr. Av. Rec., i, 1912, 117. (Type, by original designation, *Gallinula immaculata* Swainson.)

Schoenocrex ROBERTS, Ann. Transvaal Mus., viii, 1922, 197. (Type, by original designation, *Porzana pusilla* (Pallas) = *Rallus pusillus* Pallas.)

- Schœnoscœx* BAKER, Fauna Brit. India, ed. 2, Birds, vii, 1930, 476 (*lapsus*).
- Phalaridion* KAUP, Natürl. Syst., 1829, 173, 195. (Type, by monotypy, *Gallinula pusilla*=*Rallus pusillus* Pallas.)
- Phalaridium* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 319 (emendation).
- Mustelirallus* BONAPARTE, Compt. Rend., Paris, xliii, 1856, 599. (Type, by monotypy, *Rallus albicollis* Vieillot.)
- Galeolimnas* HEINE, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320 (new name for *Mustelirallus* on grounds of purism).
- Limnobaenus* SUNDEVALL, Meth. Nat. Av. Disp. Tent., 1872, 130. (Type, by subsequent designation, *L. fuscus*=*Rallus fuscus* Linnaeus.)
- Zapornia* LEACH, Syst. Cat. Spec. Mammals and Birds, etc, 1816, 34. (Type, by original designation, *Z. minuta*=*Rallus parvus* Scopoli.)
- Zapornia* STEPHENS, in cont. of Shaw's Gen. Zool., xii, pt. 1, 1824, 230. (Type, by original designation, *Rallus pusillus* Gmelin.)
- Zaporina* FORSTER, Synop. Cat. Brit. Birds, 1817, 27, 59 (emendation or *lapsus*).
- Rallites* PUCHERAN, Rev. Zool., 1845, 277. (Type, by subsequent designation, *Porzana parva*=*Rallus parvus* Scopoli.)
- Hapalocrex* RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 3. (Type, by original designation, *Rallus flaviventer* Boddaert.)

[This description is based on the typical subgenus *Porzana* only.]

Rather small Rallinae (wing about 110–112 mm.), with bill shorter than head, inner toe (without claw) longer than culmen, longest primaries exceeding distal secondaries by at least one-third the length of wing, outermost primary longer than sixth (from outside), alula falling far short of tips of longest primary coverts, and tail half as long as wing, with rectrices distinct, much longer than upper coverts.

Bill shorter than head, compressed, its width at base equal to more than half its depth at same point, the latter equal to more than half the length of culmen; culmen elevated basally, faintly depressed above anterior end of nostril, thence gently decurved to tip; gonys two-thirds or more as long as mandibular rami, ascending terminally, its basal angle distinct but not prominent; mandibular rami with a broad but shallow lateral groove; nasal fossa rather large, extending for basal half or more of maxilla, well defined; nostril narrowly elliptical, parallel with maxillary tomium, its anterior end much nearer to nearest loreal feathering than to tip of maxilla; anterior outline of feathering forming a straight or very slightly convex vertical line from sides of forehead to rictus, the anterior outline of frontal feathering broken medially by a very short obtusely angled notch formed by base of culmen; malar antia decidedly anterior to laterofrontal antia, the mental antia slightly to decidedly anterior to posterior end of nostril. Wing moderate in size, moderately concave beneath, rather pointed, the second or second and third primaries (from outside) longest, the outermost about equal to sixth; longest primaries

exceeding distal secondaries by about one-third the length of wing, but extending little beyond tips of elongated proximal secondaries. Tail about half as long as wing, much rounded or slightly graduated, the middle rectrices tapering distally and subacuminate at tips, projecting considerably beyond upper and slightly beyond lower coverts. Tarsus a little shorter than middle toe without claw, the acrotarsium with a single row of broad, transverse scutella, the planta tarsi with a single row of similar scutella on each side, the two of opposite sides in alternating or interdigitating contact along or inside of the rounded posterior ridge; outer toe with claw reaching about to base of middle claw, or falling very slightly short, the inner toe, without claw, reaching to or very slightly beyond penultimate articulation of middle toe;

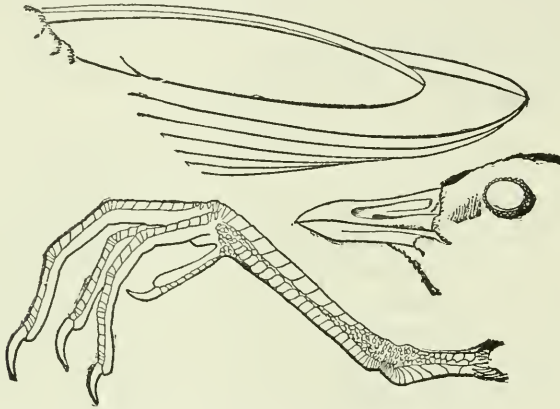


FIGURE 9.—*Porzana carolina*. Natural size.

hallux, without claw, about as long as basal phalanx of outer toe; claws moderate in size, distinctly curved, acute, compressed.

Plumage and coloration.—Plumage rather full and firm, that on head, neck, and anterior underparts blended; primaries firm and rather rigid, the rectrices much softer. Upper parts blackish, olive, or olive-brown, the back and scapulars spotted or striped with black and streaked with white; flanks broadly barred with white and dusky brownish gray or grayish olive, the axillars and under wing coverts also barred with white; under tail coverts (at least the longer ones) plain buff or buffy white.

[The following description is for the subgenus *Hapaloerex* only (ex Ridgway, mss.).]

Very small Rallinae (wing about 68–115 mm.) with longest feather of alula falling short of tips of longest primary coverts; bill nearly as long as head; very long toes (the combined lengths of first two

phalanges of middle toe as long as tarsus), the hallux (without claw) half as long as tarsus; and with a white supraloral stripe and black loral stripe.

Bill nearly as long as head (culmen about three-fourths as long as tarsus, more than one-fourth as long as wing), of nearly uniform depth as far as angle of gonys; culmen not elevated basally, nearly straight as far as anterior end of nostril, thence gradually and slightly decurved to tip; gonys as long as mandibular rami, nearly straight, slightly ascending terminally, its basal angle distinct but not prominent; mandibular rami with a narrow and rather indistinct lateral groove; nasal fossa long but rather narrow, extending nearly halfway from loral antia to tip of maxilla, well-defined; nostril narrowly elliptical, entirely pervious, its anterior end much nearer to loral antia than to tip of maxilla; loral antia forming a distinct obtuse angle at middle of base of nasal fossa, the somewhat widened base of culmen separating those of opposite sides and forming a U-shaped or obtusely V-shaped opening in the frontal feathering; malar antia slightly posterior to loral antia, the mental antia slightly posterior to posterior end of nostril. Wing relatively small, very concave beneath, much rounded; longest primaries exceeding distal secondaries by a little more than one-fourth the length of wing, projecting decidedly beyond tips of elongated proximal secondaries; second, third, and fourth primaries (from outside) longest, the first (outermost) intermediate between eighth and ninth. Tail nearly half as long as wing, much rounded, the rectrices soft, narrow, and tapering, mostly concealed by coverts. Tarsus more than one-third as long as wing, about as long as two first phalanges of middle toe, the acrotarsium with a single series of broad transverse scutella on upper part, the lower half or more with several ill-defined series; outer toe with claw reaching to or slightly beyond base of middle claw, the inner toe, without claw, reaching to slightly beyond subterminal articulation of middle toe; hallux, without claw, about as long as basal phalanx of outer toe, very nearly half as long as tarsus; claws moderate in size, much compressed, moderately curved, acute.

Plumage and coloration.—Plumage of head, neck, and underparts dense and blended; primaries moderately broad, the outermost strongly bowed; elongated proximal secondaries moderately broad, their tips rounded. Upper parts brown (dusky or blackish on pileum) the back, etc., mixed with black and streaked with white; a black loral stripe and above it a white supraloral stripe; underparts mostly white or pale buffy, the sides, flanks, and under tail coverts barred with black.

Range (entire genus).—Cosmopolitan (12 species).

KEY TO THE NORTH AND MIDDLE AMERICAN FORMS OF PORZANA

- a. Wing over 90 mm. in length----- Porzana carolina (p. 137)
 aa. Wing under 75 mm. in length.
- b. Interscapulars brownish with some black or brownish black, but the black not the predominating color.
 c. Smaller, wings 62-63.5 mm.
 d. Loral streak 2 mm. in width. Porzana flaviventer hendersoni (p. 147)
 dd. Black loral streak 1 mm. in width.
- Porzana flaviventer woodi (p. 148)
 cc. Larger, wings 65-71.5 mm.----- Porzana flaviventer gossii (p. 145)
 bb. Interscapulars black with little brownish wash or edgings.
 c. Breast and sides of throat paler—pale warm buff.
- Porzana flaviventer bangsi (extralimital)³⁹
 cc. Breast and sides of throat darker—warm buff to pale antimony yellow.
 Porzana flaviventer flaviventer (extralimital)⁴⁰

³⁹ Porzana flaviventer bangsi.—*Porzana flaviventer bangsi* Darlington, Bull. Mus. Comp. Zool., lxxi, 1931, 372 (Cienaga, Magdalena, Colombia); Peters, Check-list Birds of World, ii, 1934, 185.

⁴⁰ Porzana flaviventer flaviventer (Boddaert).—*Rallus flaviventer* Boddaert, Tabl. Pl. Enl., 1783, 52 (Cayenne; based on *Petit Rôle de Cayenne* Daubenton, Pl. Enl., ix, pl. 847).—*Porzana flaviventer* Schlegel, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 31 (Cayenne); Ihering, Rev. Mus. Paulista, vi, 1904, 342 (Paraguay); Berlepsch, Nov. Zool., xv, 1908, 299 (Oyapoc, Cayenne); Dabbene, Orn. Argent., 1910, 196 (Tigre, Buenos Aires); Bol. Soc. Phys. Buenos Aires, i, 1913, 255 (Tigre); Bertoni, Fauna Parag., 1914, 37; Bangs and Penard, Bull. Mus. Comp. Zool., lxii, 1918, 41 (Paramaribo and Altonaweg, Surinam).—[*Porzana flaviventer* Ihering (H. and R.), Aves Brazil, 1907, 30 (Minas Geraes).—*P[orzana] flaviventer flaviventer* Bangs and Kennard, List Birds Jamaica, 1920, 6, in text (South America; crit.).—*Porzana flaviventer flaviventer* Peters, Check-list Birds of World, ii, 1934, 185.—*Porzana flaviventris* Scater and Salvin, Proc. Zool. Soc. London, 1868, 455, part (South America references and localities); Pelzeln, Orn. Bras., 1870, 459 (se. Brazil); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 110, part (Oyapoc River, Cayenne; Brazil); Chubb, Birds British Guiana, i, 1916, 73; Cooke, U. S. Dept. Agr., Bull. 128, 1914, 31, part (geogr. range); Chapman, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 218 (Cali, nw. Colombia; crit.).—[*Porzana flaviventris* Scater and Salvin, Nom. Av. Neotr., 1873, 140, part; Berlepsch, Journ. für Orn., 1887, 125 (Paraguay); Sharpe, Handlist, i, 1899, 102, part (Guiana; Brazil); Brabourne and Chubb, Birds South America, i, 1912, 24 (Guiana).—*Ortygometra flaviventris* Gray, Gen. Birds, iii, 1846, 593.—*Ortygometra flaviventris* Hartlaub, Syst. Index Azara's Apunt., 1847, 24 (Paraguay).—[*Aramides flaviventer* Gray, Hand-list, iii, 1871, 61, No. 10443.—*Hapalocrex flaviventris* Ridgway, Smiths. Misc. Coll., lxxii, No. 4, 1920, 3, part.—[*Rallus*] *minutus* Gmelin, Syst. Nat., i, pt. 2, 1789, 719 (Cayenne; based on *Petit Rôle de Cayenne* Buffon, Ois., viii, 167; Pl. Enl., pl. 847; *Little Rail* Latham, Synop. Birds, iii, pt. 1, 239).—*Rallus minutus* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 561.—*Ortygometra minuta* Burmeister, Syst. Ueb. Thiére Bras., ii, 1856, 388.—*Crex minuta* Reichenbach, Handb., Fulicariæ, 1851, pl. 322, fig. 2574.—*Corethura minuta* Lichtenstein, Nom. Mus. Berol., 1854, 96.—[*Erythra*] *minuta* Bonaparte, Compt. Rend., xliii, 1856, 600.—*Rallus superciliaris* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 565 (Paraguay; based on *Ypacaha ceja blanca* Azara, Apunt. Hist. Nat. Párxos Paraguay).

PORZANA CAROLINA (Linnaeus)

SORA RAIL

Adult male.—Forehead, lores, anterior malar region to the mid-dorsal and midventral margin of the eye, chin, middle of throat down to breast dull black; narrow superciliaries meeting in a forward projecting V on the anteromedian margin of the crown and broadening above and behind the eye ashy gull gray to light neutral gray; middle of crown black, narrowing posteriorly; sides of crown, occiput, and hind neck olive-brown, the feathers of the hind neck with obscure dusky shaft streaks; interscapulars and scapulars black narrowly margined with white laterally and broadly tipped with buffy olive-brown, the brownish areas also extending laterally between the black centers and the narrow white margins, broadest in the scapulars, less so in the interscapulars; upper wing coverts bright Saccardo's umber, the inner greater ones with small transverse spots of white, edged proximally and distally with blackish, on the outer web; remiges dull, dusky, olive-brown; feathers of the back and rump black broadly edged and tipped with buffy olive-brown, the black centers very broad and conspicuous on the upper back, narrower on the rump; upper tail coverts and rectrices similar but with the blackish centers reduced to a shaft stripe and duller, less deep blackish than in the more anterior feathers; hind cheeks, auriculars, sides of neck, and throat light neutral gray; breast and upper abdomen similar but slightly darker; sides and flanks barred with white and brownish olive to dull sepia, the two colors being separated by fine blackish edges of the brown bars (occasionally these black lines broaden out and take up much of the space usually brownish in color); middle of lower abdomen white washed with light gull gray; thighs and vent like the flanks but the white replaced by, or at least heavily tinged with, buffy brown; under tail coverts white more or less tinged with pale buffy brown; under wing coverts like the flanks and sides but with the brown duller, more dusky, and without the black margins to the bars; bill pale yellow to greenish, dark-tipped; iris red or reddish brown; tarsi and toes yellowish green.

Adult female.—Almost identical with the male, but the interscapulars are generally more spotted with white and the black on the head and throat is usually somewhat more restricted.⁴¹

⁴¹ According to Bent (U. S. Nat. Mus. Bull. 135, 1927, 307) males in spring have the black median throat area broader and more continuous than in autumn. This, however, is due to the fact that these feathers, when fresh, have grayish tips, which, in autumn (freshly plumaged) birds would tend to minimize and to break up the black throat area.

Juvenal (sexes alike).—Similar to adult, but with no black on the forehead and lores, which are olive-brown, and no black on chin and middle of throat, the chin being whitish, the middle of the throat dusky like the breast, the breast, auriculars, sides of neck, and the lower throat extensively washed with buffy olive-brown; the flanks and sides tinged with buffy brown.

Natal down.—Completely covered with thick, glossy, black down, with some stiff, curly, orange feathers on the chin; bill swollen, yellow, basally reddish.

Adult male.—Wing 100–116.5 (107); tail 42–54 (48); exposed culmen 17–24.5 (20); tarsus 28.5–36.5 (32.5); middle toe without claw 31–40.5 (35.5 mm.)⁴²

Adult female.—Wing 98.5–109 (101.5); tail 38–49 (44); exposed culmen 17.5–22 (19.5); tarsus 27–32.5 (30.5); middle toe without claw 28–36 (33.5 mm.)⁴³

Range.—Breeds from British Columbia (southern Cariboo district; Chilliwack; Ashcroft; and Vanderhoof); Mackenzie (Fort Simpson; Fort Rae; Fort Resolution); Manitoba (Chemawawin; Fort Churchill; York Factory); Saskatchewan (Pelican Narrows); Ontario (Severn House; Moose Factory; Bracebridge); Quebec (Montreal; Quebec; Godbout); Prince Edward Island; New Brunswick (Grand Manan), and Nova Scotia, south to northwestern Lower California (San Antonio del Mar); Nevada (Quinn River; Pyramid Lake; Humboldt County); Idaho (Rupert); Utah (Provo); Arizona (Mormon Lake); southern New Mexico (Lake Burford; Apache Canyon; East Gila River); Colorado (Barr; Denver; Blue River; Lay); Kansas (Osawatomie); Missouri (Independence); Illinois (Springfield); Indiana (Bluffton); Ohio (Salem; Lewiston Reservoir); Pennsylvania (Philadelphia; Carlisle; Du Bois); and Maryland.

Winters from California (Gilroy and Marysville); Arizona (Pecks Lake in the upper Verde Valley); southern New Mexico (probably); Texas (Corpus Christi); Louisiana (Hester and Diamond); Mississippi (Biloxi and Bay St. Louis); Alabama; Florida (Royal Palm Hammock; Whitfield; Titusville; Amelia Island); and Bermuda; south through the West Indies: Bahama Islands (Little Abaco; New Providence; Andros; Cay Lobos; Cay Sal; Bird Rock; Watling Island; Great Inagua Island); Cuba; Puerto Rico (Anegada; Cartagena; Guanica Lagoons; Mayaguez); Hispaniola (Trou Caïman;

⁴² Sixty specimens from Massachusetts, New York, District of Columbia, Virginia, Maryland, Florida, Minnesota, North Dakota, Illinois, Indiana, Mississippi, Louisiana, Texas, Arizona, Montana, Utah, California, Washington, Mexico, Mackenzie, Alberta, Panama, and Hispaniola.

⁴³ Twenty-two specimens from Pennsylvania, Virginia, South Carolina, Illinois, Wisconsin, Minnesota, Missouri, North Dakota, Montana, Utah, Arizona, Mexico, Hispaniola, and Grenada.

Étang Miragoane; Laguna Rincón); St. Croix; Dominica; Grenada; St. Bartholomew; Jamaica; Swan Island; St. Martin; St. Barts; St. Kitts; Montserrat; Guadeloupe; Martinique; St. Lucia; St. Vincent; the Grenadines; and Barbados; and south through Mexico (Guajuato; Chapulco, Pueblo; Orizaba, Veracruz; Cacoprieto, Oaxaca; City of Mexico; Mazatlan, Sinaloa; Progreso and Cozumel Island, Yucatan; La Barca, Jalisco; and throughout Lower California); British Honduras (Belize); Guatemala (Dueñas; Vera Paz; Coban; Atitlan); Costa Rica (San José; Laguna de Cartago; San Pedro; Alajuela; Turrucures); Panamá (Lion Hill; Almirante; Volcan de Chiriquí; Changuiniola), to Venezuela (Lake of Valencia and Caracas); Trinidad; Tobago; Colombia (Medellín; Antioquia; Bogotá; near Cienaga, Magdalena); Ecuador (Quito; Cayanded; La Carolina; Santa Lucia; Chone; Yaguarcocha); Peru (Sarayacu and Tumbes); Brazil (Bonito, Pernambuco); and British Guiana (Bar-tica).

Occasional in winter in Montana (Corvallis); Minnesota (Lanesboro); Illinois (Rantoul); Pennsylvania (Kresgeville); New York (Rochester and Flushing); Connecticut (Hartford); and Massachusetts (Salem).

Casual in the Queen Charlotte Islands (Massett); Anticosti Island and St. Joachim, Quebec; Newfoundland Labrador (Sandwich Bay); and Greenland (Sukkertoppen; Avigait; and Umanak).

Accidental in the British Isles: England (Newbury, Berkshire); Wales (Cardiff); Scotland (Tiree Island and Lewis Island, Outer Hebrides).

Type locality.—"In America septentrionali"—Hudson Bay.

[*Rallus*] *carolinus* LINNAEUS, Syst. Nat. ed. 10, i, 1758, 153; ed. 12, i, 1766, 263 (Hudson Bay; based on *Little American Water Hen* Edwards, Nat. Hist. Birds, iii, pl. 144; *Soree* Catesby, Nat. Hist. Carolina, i, pl. 76).—GMELIN, Syst. Nat., i, pt. 2, 1789, 715.

Rallus carolinus TURTON, Syst. Nat., i, 1806, 431.—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 334.—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 403.—LESSON, Traité d'Orn., 1831, 537.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 209.—AUDUBON, Orn. Biogr., iii, 1835, 251, pl. 233; v, 1839, 572.—TOWNSEND, Journ. Acad. Nat. Sci. Philadelphia, viii, 1839, 157 (nw. United States).—D'ORBIGNY, in La Sagra's Hist. Nat. Cuba, Ois., 1839, 262 (Spanish ed., p. 181).—PEABODY, Rep. Orn. Massachusetts, 1839, 374.—HAYMOND, Proc. Acad. Nat. Sci. Philadelphia, viii, 1856, 296 (se. Indiana).—WILLIS, Ann. Rep. Smiths. Inst. for 1858 (1859), 284 (Nova Scotia).—BRYANT, Journ. für Orn., xiv, 1866, 191 (Puerto Rico); Proc. Boston Soc. Nat. Hist., x, 1866, 257 (Puerto Rico).—SUNDEVALL, Öfv. Vet.-Akad. Förh., 1869, 587 (St. Bartholomew), 601 (Puerto Rico).

R[allus] carolinus BONAPARTE, Obs. Nom. Wilson's Amer. Orn., 1826, [192].

[*Gallinula*] *carolina* GMELIN, Syst. Nat., i, pt. 2, 1789, 771.

Ortygometra carolina BONAPARTE, Comp. and Geogr. List, 1838, 53.—GOSSE, Birds Jamaica, 1847, 371.—WOODHOUSE, in Rep. Sitgreaves' Expl. Zuni and

- Colorado Rivers, 1853, 101 (Creek boundary; summer).—KENNICOTT, Trans. Illinois Agr. Assoc., i, 1855, 557 (Illinois).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 307 (Cuba).—REINHARDT, Ibis, 1861, 12 (Sukkertoppen, Greenland, Oct. 3, 1823).—LÉOTAUD, Ois. Trinidad, 1866, 493.
- Ortygometra carolinus* AUDUBON, Synopsis, 1839, 213; Birds Amer., 8vo ed., v, 1842, 145, pl. 306.—JARDINE, Contr. Orn., 1848, 84 (Bermuda, Sept.-Dec.).—HURDIS, Jardine's Contr. Orn., 1853, 11 (Bermuda, Sept.-Apr.).—HENRY, Proc. Acad. Nat. Sci. Philadelphia, vii, 1855, 314 (New Mexico).—PUTNAM, Proc. Essex Inst., i, 1856, 216 (Massachusetts).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).
- [*Ortygometra carolina* REINHARDT, Journ. für Orn., ii, 1854, 219 (Greenland).
Ortygometra carolinensis MARTENS, Journ. für Orn., vii, 1859, 219 (Bermuda).
Porzana carolina BAIRD, Lit. Rec. and Journ. Linn. Assoc. Pennsylvania Coll., Oct. 1845, 255; Rep. U. S. and Mex. Bound. Surv., ii, pt. 2, 1859, 26 (Colorado River, Calif.); Cat. N. Am. Birds, 1859, No. 555.—CABANIS, Journ. für Orn., iv., 1856, 428 (Cuba).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 749.—HENRY, Proc. Acad. Nat. Sci. Philadelphia, xi, 1859, 108 (New Mexico).—SCLATER and SALVIN, Ibis, 1859, 230 (Lake of Dueñas and Vera Paz, Guatemala); Proc. Zool. Soc. London, 1864, 179 (City of Mexico), 372 (Panama); 1868, 450 (monogr.); 1869, 252 (Lake of Valencia, Venezuela); 1879, 545 (Medellín, Antioquia, Colombia).—NEWTON (A. and E.), Ibis, 1859, 260 (St. Croix).—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); x, 1862, 90 (Cuba; crit.); xix, 1871, 294 (Cuba); xxii, 1874, 314 (Puerto Rico); xxiii, 1875, 358 (Cuba); xxvi, 1878, 162, 189 (Puerto Rico); Contr. Orn. Cubana, 1876, 190; Orn. Cubana, 1895, 243.—VERRILL, Proc. Essex Inst., iii, 1862, 153 (Oxford County, Maine).—ALBRECHT, Journ. für Orn., x, 1862, 206 (Jamaica).—BOARDMAN, Proc. Boston Soc. Nat. Hist., ix, 1862, 129 (Calais, Maine).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1862, 479 (Lion Hill, Panamá); viii, 1866, 295 (vicinity New York City); Mem. Boston Soc. Nat. Hist., ii, 1874, 317 (Mazatlán, Sinaloa).—BLAKISTON, Ibis, 1863, 134 (Red River Settlement).—MARCH, Proc. Acad. Nat. Sci. Philadelphia, xvi, 1864, 69 (Jamaica).—NEWTON, Proc. Zool. Soc. London, 1865, 196 (Newbury, England, Oct. 1864).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 28.—DRESSER, Ibis, 1866, 40 (s. Texas).—EYRE, Zoologist, xviii, 1865, 9540 (England).—MCLWRAITH, Proc. Essex Inst., v, 1866, 93 (Hamilton, Ontario).—COUES, Proc. Acad. Nat. Sci. Philadelphia, xviii, 1866, 98 (Fort Whipple, Ariz.); xxiii, 1871, 35 (Fort Macon, N. C.); Check-list, 1874, No. 468; ed. 2, 1882, No. 679; Brds Northwest, 1874, 537; Bull. Nutt. Orn. Club, viii, 1883, 124 (Rochester, N. Y., Dec. 12, 1882).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—SALVIN, Proc. Zool. Soc. London, 1870, 219 (Volcan de Chiriquí, w. Panamá); Ibis, 1889, 378 (Cozumel Island, Yucatan).—MERRIAM, Sixth Ann. Rep. U. S. Geol. Surv. Terr., 1873, 702 (Ogden, Utah, breeding).—BRACE, Proc. Bost. Soc. Nat. Hist., xix, 1877, 241 (Bahamas).—RIDGWAY, Orn. 40th Parallel, 1877, 612 (Nevada); Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, No. 574); Nom. North Amer. Birds, 1881, No. 574; Proc. U. S. Nat. Mus., x, 1888, 578 (Swan Island, Caribbean Sea, Mar. 25); Orn. Illinois, ii, pt. i, 1895, 93.—MERRILL (J. C.), Proc. U. S. Nat. Mus., i, 1878, 165 (Fort Brown; Tex.; breeding?).—RATHBUN (F. R.), Rev. List Birds Central New York, 1879, 35 (breeding).—BREWSTER, Bull. Nutt. Orn. Club, iv, 1879, 46 (deser. downy young); Bull. Mus. Comp. Zool., xli, No. 1, 1902, 56 (La Paz, Lower California, Dec. 15 and Mar. 23; San José del Cabo, Apr. 1-May 17).—DALGLISH, Bull. Nutt. Orn. Club, v, 1880, 211 (1 British

record).—NEHRLING, Bull. Nutt. Orn. Club, vii, 1882, 223 (se. Texas, breeding).—REID, U. S. Nat. Mus. Bull. 25, 1884, 247 (Bermuda, Aug. 24–May 1).—BERLEPSCH and TACZANOWSKI, Proc. Zool. Soc. London, 1884, 313 (Cayandeled, w. Ecuador, Feb.).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 370.—TURNER, Proc. U. S. Nat. Mus., viii, 1885, 248 (Moose Factory, n. Ontario).—WELLS, List Birds Grenada, 1886, 9.—RALPH and BAGG, Trans. Oneida Hist. Soc., iii, 1886, 111 (Oneida County, N. Y., breeding).—SETON, Auk, iii, 1886, 150 (Manitoba, summer resident); xxv, 1908, 70 (Fort Resolution, Mackenzie).—TACZANOWSKI, Orn. Pérou, iii, 1886, 320 (Tumbez, nw. Peru).—AMERICAN ORNITHOLOGISTS' UNION, Check-List, 1886, and ed. 2, 1895, No. 214; ed. 3, 1910, 103; ed. 4, 1931, 97.—STAHL, Ornith., iii, 1887, 452 (Puerto Rico).—WELLS, Proc. U. S. Nat. Mus., ix, 1887, 629 (Grenada, Lesser Antilles).—CORY, Auk, v, 1888, 55 (West Indian localities and references; descr.); Birds West Indies, 1889, 256; Cat. West Indian Birds, 1892, 91; Field Mus. Nat. Hist., Publ. 131, 1909, 383 (Illinois; Wisconsin).—ZELEDÓN, Anal. Mus. Nac. Costa Rica, i, 1887, 131 (Costa Rica).—FIELDEN, Ibis, 1889, 499 (Barbados; habits).—THOMPSON, Proc. U. S. Nat. Mus., xiii, 1890, 494 (Manitoba; common; breeding).—CLARKE, (W. E.), Auk, vii, 1890, 321 (Fort Churchill, Keewatin).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 97.—RHOADS, Proc. Acad. Nat. Sci. Philadelphia, 1895, 473 (Reelfoot Lake, w. Tennessee; breeding?).—BUTLER, Rep. State Geol. Indiana for 1897 (1898), 675 (Starke County, Ind.; breeding?).—GRINNELL (J.), Pasadena Acad. Sci. Publ. 2, 1898, 15 (Los Angeles County, Calif., breeding); Pacific Coast Avif., No. 11, 1915, 47 (breeding in California s. to Escondido, San Diego County).—COOKE, Colorado Agr. Exp. Stat. Bull. 56, 1900, 199 (breeding from Middle Park up Blue River to about 9,000 feet); U. S. Dept. Agr. Bull. 128, 1914, 26, fig. (geogr. range and migration routes).—OSGOOD, North Amer. Fauna, No. 21, 1901, 40 (Massett, Queen Charlotte Islands).—WOODCOCK, Oregon Agr. Exp. Stat. Bull. 68, 1902, 19 (Oregon range).—ALLEN (G. M.), Proc. Manchester Inst. Arts and Sci., iv, 1902, 83 (New Hampshire, local summer resident).—PREBLE, North Amer. Fauna, No. 22, 1902, 92 (Severn House; Fort Churchill; York Factory; Moose Factory); No. 27, 1908, 313 (Great Slave Lake, breeding; localities in Mackenzie, etc.).—KUMLIEN and HOLLISTER, Bull. Wisconsin Nat. Hist. Soc., iii, 1903, 38 (Wisconsin; habits).—BONHOTE, Ibis, 1903, 309 (New Providence and Little Abaco, Bahamas).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 321 (Mazatlán, Sinaloa; Valley of Mexico; Guanajuato; Chapulco, Puebla; Orizaba, Veracruz; Cacoprieto, Oaxaca; Progreso and Cozumel Island, Yucatan; Belize, Brit. Honduras; Vera Paz, Dueñas, and Coban, Guatemala; San José and Laguna de Cartago, Costa Rica; Chiriqui and Lion Hill, Panamá; Colombia; Ecuador; Swan Island; West Indies).—RHOADS and PENNOCK, Auk, xxii, 1905, 199 (Delaware; a few breeding?).—HENNINGER, Wils. Bull., xviii, 1906, 50 (Seneca County, Ohio, June; breeding?).—JONES (L.), Wils. Bull., xviii, 1906, 114 (Cleveland, Ohio, summer); xxi, 1909, 123 (Lorain County, n. Ohio, breeding).—BOWLES, Auk, xxiii, 1906, 141 (Tacoma, Wash., breeding).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 58 (Chicago area, summer resident).—WIDMANN, Birds Missouri, 1907, 59 (common transient, rare breeder); Auk, xxviii, 1911, 311 (Estes Park, Colo., July 9).—TAVERNER and SWALES, Wils. Bull., xix, 1907, 84 (Point Pelee, Ontario, breeding).—SHARP, Condor, ix, 1907, 86, (San Diego County, Calif., breeding).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 207 (Iowa; habits).—WARREN, Condor, x, 1908, 20 (Grand County, nw. Colorado; breeding?).—KNIGHT, Birds Maine, 1908, 141 (rare summer resident).—HENDERSON, Univ.

Colorado Stud. Zool., vi, 1909, 227 (Boulder County, Colo., breeding).—BRAISLIN, Auk, xxvi, 1909, 314 (Seaford, Long Island, Dec. 24, 1908).—SCLATER, Rev. List Birds Jamaica, 1910, 19.—WAYNE, Birds South Carolina, 1910, 37 (spring and fall migrant).—EATON, Birds New York, i, 1910, 276, pl. 26.—CARRIKER, Ann. Carnegie Mus., vi, 1910, 409 (San José, San Pedro, Alajuela, and Turrúcares, Costa Rica).—SAUNDERS, Auk, xxviii, 1911, 34 (Gallatin County, Montana, June).—WILLETT, Pacific Coast Avif., No. 7, 1912, 33 (breeding in Los Angeles and San Diego Counties, Calif.).—BARROWS, Michigan Bird Life, 1912, 155.—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 210 (habits).—TAYLOR, Univ. California Publ. Zool., vii, 1912, 358 (Humboldt County, Nev., breeding).—HARLOW, Auk, xxix, 1912, 469 (Centre County, Pa., breeding); xxxv, 1918, 21 (breeding in Centre, Mifflin, Clearfield, Huntington, and Snyder Counties, Pa., and sparingly in Delaware Valley).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 49.—OGILVIE-GRANT, Bull. Brit. Orn. Club, xxxiii, 1913, 82, in text (Isle of Lewis, Outer Hebrides, Nov. 12, 1913; near Newbury, Berks, England, Oct. 1864; Isle of Tiree, Oct. 25, 1901; near Cardiff, Wales, spring 1888).—BUNKER, Kansas Univ. Sci. Bull. 7, 1913, 143 (Kansas, summer resident).—BETTS, Univ. Colorado Stud. Zool., x, 1913, 188 (Boulder County, Colo., breeding).—HATHAWAY, Auk, xxx, 1913, 550 (Point Judith, Rhode Island, breeding).—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 36 (Puerto Rico, winter visitant).—MOUSLEY, Auk, xxxiii, 1916, 63 (Hatley, Quebec, breeding).—BROOKS (A.), Auk, xxxiv, 1917, 36 (Chilliwack, British Columbia, summer resident).—HOWELL (A. B.), Pacific Coast Avif., No. 12, 1917, 45 (San Clemente Island, Calif., 1 specimen, winter 1908).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxv, 1917, 218 (Bogotá, Colombia).—HARRIS, Trans. Acad. Sci. St. Louis, xxiii, 1919, 245 (Kansas City, Mo., breeding).—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 29 (Cherry County, Nebr., breeding).—CAHN, Wils. Bull., xxxii, 1920, 110 (Itasca County, Minn., breeding).—EVERMANN, Proc. Indiana Acad. Sci. for 1920 (1921), 331 (Vigo County, Ind., breeding).—HARTERT, Vög. pal. Fauna, iii, 1921, 1829 (tax.).—LÖNNBERG and RENDAHL, Arkiv Zool., xiv, 1922, 19 (La Carolina, Ecuador).—JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).—GRINNELL, Proc. California Acad. Sci., ser. 4, xiii, 1923, 58 (Marsh, Death Valley, Calif.).—DAWSON, Birds California (students' ed.), iii, 1923, 1540 (genl.; California).—RAMSAY, Guide to Birds Europe and North Africa, 1923, 318 (descr.; range; European records).—BANCROFT, Condor, xxxii, 1923, 24 (San Ignacio, Lower California).—GRISCOM, Birds New York City Region, 1923, 135 (status N. Y. City region).—MILLER (W. DeW.), Bull. Amer. Mus. Nat. Hist., 1, 1924, 308 (ptilosis).—WITHERBY et al., Pract. Handb. Brit. Birds, ii, 1924, 832 (Brit. records).—NICE (M. M. and L. B.) Birds Oklahoma, 1924, 29 (genl.; Oklahoma).—HOWELL, Birds Alabama, 1924, 89, ed. 2, 1928, 89 (Alabama; habits; distr.).—BENT, Wils. Bull., xxxvi, 1924, 10 (near Galveston, Tex.).—BURLEIGH, Wils. Bull., xxxvi, 1924, 70 (breeds, Centre County, Pa.).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 357, pl. 23 (col. fig.; descr.; habits; etc; New England).—SIMMONS, Birds Austin Region, 1925, 46 (Austin, Tex.; habits, etc.).—WYMAN and BURNELL, Field Book Birds Southwest United States, 1925, 64 (descr.; field characters).—BAILEY, Birds Florida, 1925, 42, pl. 23 (col. fig.; distr.; Florida).—GARDNER, Proc. U. S. Nat. Mus., lxvii, art. 19, 1925, 16 in text (structure of tongue).—LARSON, Wils. Bull., xxxvii, 1925, 25 (status, Sioux Falls, S. Dak.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (status, Fulton County, Ky.).—LINCOLN, Auk, xlii, 1925, 58 (Dawson Slough, N. Dak.).—BLINCOE, Auk, xlii, 1925, 408 (Bardstown, Ky.).—GRISCOM and

CROSBY, Auk, xlii, 1925, 527 (Brownsville, Tex.).—FRIEDMANN, Auk, xlii, 1925, 542 (Lower Rio Grande Valley, Tex.).—NEILSON, Condor, xxvii, 1925, 72 in text (Wheatland, Wyo.).—MICHAEL, Condor, xxvii, 1925, 110 (Yosemite, Calif.).—NAUMBURG, Auk, xliii, 1926, 487 (winter in Venezuela; Perú).—WORTHINGTON and TODD, Wils. Bull., xxxviii, 1926, 210 (Choctawhatchee Bay, Fla.).—FARGO, Wils. Bull., xxxviii, 1926, 147 (Pinellas and Pasco County, Fla.).—GOLDMAN, Condor, xxviii, 1926, 163 (nesting; Marsh Lake, White Mountains, Ariz.).—HOLT and SUTTON, Ann. Carnegie Mus., xvi, 1926, 424 (s. Florida).—TAVERNER, Birds Western Canada, 1926, 126, pl. 15 B. (col. fig.; descr.; distr.; western Canada).—KELSO, Ibis, 1926, 698 (Arrow Lakes, British Columbia; rare breeder).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., lv, 1926, 177 (Ecuador in winter; specimen, Chone, Yaguarcocha; records Santa Luzia, Cayandeled, La Carolina).—BENT and COPELAND, Auk, xlv, 1927, 377 (Pinellas County, Florida).—MALLIARD, Proc. California Acad. Sci., ser. 4, xvi, 1927, 290 (Modoc County, Calif.).—BANCROFT, Condor, xxix, 1927, 194 in text (breeds at San Antonio del Mar, Lower California).—WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 337 (genl.; Puerto Rico).—DANFORTH, Journ. Dept. Agr. Porto Rico, x, 1926, 55 (Cartagena Lagoon, Puerto Rico; winter).—CAHN, Wils. Bull., xxxix, 1927, 26 (summer; Vilas County, Wis.).—LINSDALE and HALL, Wils. Bull., xxxix, 1927, 95 (south of Lawrence, Kans.).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 495 (distr.; habits; Haiti).—BAILEY, Auk, xlv, 1928, 277 (winter; Chenier au Tigre, La.).—WEYDEMAYER, Condor, xxx, 1928, 246 (winter; Fortine, Mont.).—BAILEY, Birds New Mexico, 1928, 242 (genl.; New Mexico).—STURGIS, Field Book Birds Panama Canal Zone, 1928, 42 (descr.; habits).—GRINNELL, Univ. California Publ. Zool., xxxii, 1928, 87 (distr.; Lower California—transient or winter visitant throughout; breeds in northwestern coastal district; specimens from San José del Cabo, La Paz, Santiago, Todos Santos, San Antonio del Mar, Hardy River, Hecheira, San Telmo, San Ramón, near Cerro Prieto, Colorado River, and San Ignacio).—LARSON, Wils. Bull., xl, 1928, 44 (e. McKenzie County, N. Dak.).—PICKENS, Wils. Bull., xl, 1928, 188 (upper South Carolina).—SWARTH, Proc. California Acad. Sci., ser. 4, xviii, 1929, 286 (near Patagonia, Ariz.).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 27 (Washington, D. C.).—LINCOLN, Auk, xlvi, 1929, 228 in text (breeding; Mississippi).—CAHN and HYDE, Wils. Bull., xli, 1929, 36 (eool. distr.; Little Egypt, Ill.).—WILSON, Wils. Bull., xli, 1929, 183 (near Bowling Green, Ky.).—FORTNER and METCALE, Wils. Bull., xli, 1929, 249 (Burt Lake, Mich.).—SNYDER, Trans. Roy. Can. Inst., xvii, 1930, 185 (summer; King Township, Ontario).—BEATTY, Journ. Dept. Agr. Puerto Rico, xiv, 1930, 139 (St. Croix; Krause Lagoon; Two Williams Pond; South Gate Pond; Virgin Islands).—URNER, Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 65 (Union County, N. J.).—JUNG, Auk, xlvii, 1930, 536 (Peace and Athabasca Rivers, Alberta).—KEMSIES, Wils. Bull., xlii, 1930, 203 (Yellowstone Park, Wyo.).—PIERCE, Wils. Bull., xlii, 1930, 262 (Buchanan County, Iowa).—GRINNELL, DIXON, and LINSDALE, Univ. California, Publ. Zool., xxxv, 1930, 215 (distr.; Lassen Peak region, n. California).—DANFORTH, Auk, xlvii, 1930, 45 (St. Martin, Lesser Antilles); Journ. Dept. Agr. Puerto Rico, xv, 1931, 50 (Cartagena Lagoon, Anegada Lagoon; Quánica Lagoon; near Mayaguez, Puerto Rico).—NICE, M. M., Birds Oklahoma, rev. ed., 1931, 85 (genl.; Oklahoma).—[ARTHUR] Birds Louisiana, 1931, 239 (descr.; distr.; Louisiana).—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 57 (descr.; distr.; Arkansas).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Almirante and Changuinola, Panamá).—DARLINGTON, Bull. Mus. Comp. Zool., lxxi, 1931, 372

(swamps near Cienaga, Magdalena, Colombia).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 132 (habits; distr.; Hispaniola; winter visitant; spec. from Laguna Rincón, Trou Caïman, Étang Miragoane; seen at Étang Saumâtre).—BUBLEIGH, Wils. Bull., xliii, 1931, 38 (breeding; State College, Centre County, Pa.).—BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 194 (Cameron Parish, La.).—DU MONT, Auk, xlviii, 1931, 249 (s. of Wall Springs; Floating Island; Florida).—CHRISTY, Auk, xlviii, 1931, 374 (Sandusky Bay, Lake Erie).—ESTEN, Auk, xlviii, 1931, 573 (weight).—STONER, Roosevelt Wild Life Ann., ii, 1932, 446 (Oneida Lake region, N. Y.; habits).—HOWELL, Florida Bird Life, 1932, 206 (genl., Florida).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 122 (distr. Guatemala; winter visitant—Vera Paz, Coban, Dneñas, Amatitlan, Atitlan).—AUSTIN, Mem. Nutt. Orn. Club, vii, 1932, 80 (Newfoundland Labrador; one record, Sandwich Bay).—ROBERTS, Birds Minnesota, i, 1932, 445, pl. 27 (distr.; col. fig.; habits; etc; Minnesota).—HOWARD and MILLER (A. H.), Condor, xxxv, 1933, 16 (bones, Organ Mountains, N. Mex.).—HICKS, Wils. Bull. xlv, 1933, 180 (Ashtabula County, Ohio; scarce; nests with eggs June and July).—HARROLD, Wils. Bull., xlv, 1933, 19 (Saskatchewan).—GRISCOM, Trans. Linn. Soc. New York, iii, 1933, 99 (Dutchess County, N. Y.; common transient spring and fall; few breed).—WILLETT, Pacific Coast Avif., No. 21, 1933, 52 (sw. California, common in marshes in summer, breeds April and May; winters in fair numbers).—MONSON, Wils. Bull., xlvi, 1934, 43 (Cass County, N. Dak., common summer resident).—BROOKS, Wils. Bull., xlvi, 1934, 66 (Cranberry Glades, W. Va., Sept. 27, 1931).—TAVERNER, Birds Canada, 1934, 173 (breeds across Canada, north to southern Mackenzie; descr.).—TAVERNER and SUTTON, Ann. Carnegie Mus., xxiii, 1934, 32 (Churchill, Manitoba—uncommon summer resident; nests).—DUMONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 62 (Iowa, common migrant and summer resident).—MURRAY, Wils. Bull. xlvii, 1935, 65 (Rockbridge County, Va., common transient).—WALKINSHAW, Wils. Bull. xlvii, 1935, 79 in text (incubation period).—MCCREARY and MICKEY, Wils. Bull., xlvii, 1935, 136 (se. Wyoming; May 1–Sept. 19).—YOUNGORTH, Wils. Bull., xlvii, 1935, 217 (breeds, Fort Sisseton, S. Dak.).—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304 (Panama—several records, east to the Canal Zone).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 447 (spec. Brandywine Bay, Tortola; stomach contents); 466 (Tortola, St. Croix); xxi, 1937, 543 (Playa Grande, Vieques Island, Puerto Rico); xxiii, 1939, 54 (Montserrat).—HANNA, Condor, xxxvii, 1935, 81 in text (San Bernardino County, Calif.).—GILMAN, Condor, xxxvii, 1935, 240 (Death Valley, 1 record).—HARGRAVE, Condor, xxxvii, 1935, 285 (several nests near Williams, Ariz.).—SPIKER, Bull. New York State Coll. Forestry, viii, No. 1, 1935, 457 (Finger Lakes, N. Y.; breeds).—BELCHER and SMOOKER, Ibis, 1935, 283 (Trinidad; breeds; deser. eggs).—LINSDALE, Pacific Coast Avif. No. 23, 1936, 50 (Nevada, summer resident; winters in southern part of State; nesting records in northern and eastern parts of State).—BOND, Birds West Indies, 1936, 96 (winters Cuba, Hispaniola, Jamaica, Swan Island, Puerto Rico, St. Croix, St. Martin, St. Barts, St. Kitts, Montserrat, Guadeloupe, Martinique, St. Lucia, St. Vincent, the Grenadines, Grenada, Barbados, and in the Bahamas—Little Abaco, Andros, New Providence, Cay Lobos, Cay Sal, Bird Rock, and Great Inagua).—WEYDEMEYER and MARSH, Condor, xxxviii, 1936, 194 (Lake Bowdoin, Mont.).—HUDSON and SHERMAN, Auk, liii, 1936, 312 (spec., Anderson, S. C., Sept. 27, 1928).—MOUSLEY, Wils. Bull. xlix, 1937, 80 in text (habits, nesting, near Montreal, Canada).—WALKINSHAW, Auk, liv, 1937, 311 in text (Michigan).—WETMORE, Proc. U. S. Nat. Mus., lxxxiv, 1937, 408 (West Virginia).—GRISCOM, Auk, liv, 1937, 193 (specimen,

Omiteme, Guerrero, May 29).—SNYDER, Trans. Roy. Can. Inst., xxii, 1938, 186 (western Rainy River district, Ontario; breeds).—OBERHOLSER, Bird Life Louisiana, 1938, 203 (fairly common winter resident, Aug. 1–May 24, in southern Louisiana; migrant in central and northern Louisiana).—BORELL, Condor, xl, 1938, 181 (Brewster County, Tex., Oct.).—WEBB, Condor, xli, 1939, 36 (Deep Springs Valley, Inyo County, Calif.).—POLAND, Auk, lv, 1938, 128 (Leetown, W. Va., several August records).—BENNETT and HENDRICKSON, Auk, lvi, 1939, 36 (adapt. to environment).—WALKINSHAW, Auk, lvi, 1939, 230 in text (eggs).—LINCOLN, Auk, lvi, 1939, 331 (breeding, Langley Field, Va.).

[*Porzana*] *carolina* GUNDLACH, Rep. Fisico-Nat. Cuba, i, 1865–66, 361.—COUES, Key North Amer. Birds, 1872, 274.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30.—SHARPE, Hand-list, i, 1899, 101.—BRABOURNE and CHUBB, Birds South America, i, 1912, 24 (Colombia; Ecuador; Trinidad).

[*Porzana*] *carolina* RIDGWAY, Ann. Lyc. Nat. Hist., New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 139.—NEWTON (A. and E.), Handb. Jamaica, 1881, 114.—COUES, Key North Amer. Birds, ed. 2, 1884, 673.—ROTHSCHILD, Bull. Brit. Orn. Club, xlvi, 1928, 122 (eggs).

Porzana carolina ? TACZANOWSKI, Proc. Zool. Soc. London, 1877, 748 (Santa Lucia, Peru).

[*Aramides*] *carolina* GRAY, Hand-list, iii, 1871, 60, No. 10431.

Crex carolina FRANTZIUS, Journ. für Orn., 1869, 375 (Costa Rica).—HARTING, Man. Brit. Birds, 1872, 152.

[*Gallinulas*] *carolinus* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320.

[*Rallus*] *porzana* (not of Linnaeus) GMELIN, Syst. Nat., i, pt. 2, 1789, 712, part.

Rallus porzana TURTON, Syst. Nat., i, 1806, 430, part.

[*Gallinula*] *porzana* LATHAM, Index Orn., ii, 1790, 772, part.

Rallus virginianus (not of Linnaeus) WILSON, Amer. Orn., vi, 1812, 27, pl. 48, fig. 1.—STONE, Auk, xlvii, 1930, 560 in text.

Rallus stolidus VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 567 (new name for *Rallus carolinus* Linnaeus).

Rallus olivaceus VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 561 ("Sainte Domingue"; young sora rail).

PORZANA FLAVIVENTER GOSSII (Bonaparte)

JAMAICAN YELLOW-BELLIED RAIL

Adult (sexes alike).—Forehead, crown, occiput, and nape chaetura drab to chaetura black; scapulars, interscapulars, back, and rump Saccardo's umber to snuff brown, the scapulars and interscapulars with white shaft stripes bordered broadly with fuscous-black to black, the feathers of the back and rump with relatively indistinct dusky centers and, occasionally with short white terminal shaft streaks or terminal median spots, the brown more rufescent on the rump, the brown palest on the scapulars—clay color to deep cinnamon-buff; upper wing coverts like the scapulars but with the blackish and the white areas much reduced, the white sometimes in the form of small bars; remiges deep olive-brown; upper tail coverts largely blackish

with a few small, and often incomplete, transverse white bars; recitrices fuscous to fuscous-black edged with snuff brown; a white superciliary line from the nasal antia to the dorsoposterior end of the cheeks, a black line through the eye just beneath it, and a whitish malar stripe just below that running from the mandibular antia to the lower margin of the eye and spreading out ventrally into the white chin and upper throat; cheeks, auriculars, and sides of neck buffy hair brown; lower throat and breast washed with pale warm buff; abdomen, sides, flanks, and thighs white, the sides and flanks, and to a lesser extent, the thighs, barred with chaetura black; under tail coverts white much washed with clay color and barred with blackish like the flanks; under wing coverts white obscurely and sparingly marked with dusky hair brown; "bill olive, legs and feet yellowish" (Scott).

Other plumages unknown.

Adult male.—Wing 63.5–71 (67.6); tail 26.5–33.5 (30.6); exposed culmen 16–18 (17.2); tarsus 20–24 (22.7); middle toe without claw 25.5–31.5 (28.8 mm.).⁴⁴

Adult female.—Wing 65–74 (68.5); tail 27.5–34 (31); exposed culmen 15.5–17.5 (16.3); tarsus 20–24.5 (22.5); middle toe without claw 26.5–30 (28.1 mm.).⁴⁵

Range.—Resident in fresh-water swamps and edges of ponds in Cuba (Lake Ariguanabo; Cienaga; Habana; Minas; Cristobal; Cabanaz; San Francisco de Morales); and Jamaica (Westmoreland; Negril; Spanish Town.)

Type locality.—Jamaica.

Ortygometra minuta (not *Rallus minutus* Gmelin) Gosse, Birds Jamaica, 1847, 372; Illustr. Birds Jamaica, 1849, pl. 104.

Rallus minutus LEMBEYE, Aves Isla Cuba, 1850, 109.

Crex minuta SCLATER and SALVIN, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—ALBRECHT, Journ. für Orn., x, 1862, 206 (Jamaica).

Porzana minuta MARCH, Proc. Acad. Nat. Sci. Philadelphia, 1864, 69 (Jamaica).

O[rtygometra] flaviventris (not *Rallus flaviventer* Boddaert) GRAY, Gen. Birds, iii, 1846, 593, part.

[*Aramides*] *flaviventer* GRAY, Hand-list, iii, 1871, 61, No. 10443, part (Jamaica).

Porzana flaviventris SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 455, part (Jamaica; monogr.)—CORY, Auk, v, 1888, 54 (Cuba; Jamaica; synonymy; descr.); Birds West Indies, 1889, 255; Cat. West Indian Birds, 1892, 9, 91.—SCOTT, Auk, ix, 1892, 11 (Passage Fort, Jamaica; fresh colors of nude parts).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 110, part (Jamaica).—GUNDLACH, Orn. Cubana, 1895, 244.—SCLATER, Rev. List Birds Jamaica, 1910, 19.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 31, part (range; Jamaica; Cuba).—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 36 (Puerto Rico, resident).

⁴⁴ Sixteen specimens from Cuba (9) and Jamaica (7).

⁴⁵ Eleven specimens from Cuba (2) and Jamaica (9).

- [*Porzana*] *flaviventris* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Jamaica).—COBY, List Birds West Indies, 1885, and rev. ed., 1886, 30 (Cuba; Jamaica).—SHARPE, Hand-list, i, 1899, 102, part (Cuba, Jamaica).
P[orzana] flaviventer NEWTON (A. and E.), Handb. Jamaica, 1881, 114.
Hapalocrex flaviventris RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 3, part.
Laterirallus gossii BONAPARTE, Compt. Rend., xliii, 1856, 599.
Crybastes gossii CABANIS, Journ. für Orn., iv, 1856, 428 (Cuba).
[Crybastes] gossei GUNDLACH, Journ. für Orn., ix, 1861, 342 (Cuba); Rep. Fisico-Nat. Cuba, i, 1865-66, 361.
Crybastes gossei GUNDLACH, Journ. für Orn., xxiii, 1875, 358 (Cuba; habits); xxvi, 1878, 162, 189 (Puerto Rico); Contr. Orn. Cubana, 1876, 191.
Laterirallus gossei STAHL, Orn. iii, 1887, 452 (Puerto Rico).
Porzana flaviventer gossii BANGS and KENNARD, List Birds Jamaica, 1920, 6 (common resident; crit.).
Porzana flaviventer gossii BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 55 (Lake Ariguanabo and the Cienega, Cuba; habits; crit.).—PETERS, Check-list Birds of World, ii, 1934, 184 (Cuba and Jamaica).
P[orzana] f[laviventer] gossei BOND, Birds West Indies, 1936, 91, 92 in text (Cuba and Jamaica).

PORZANA FLAVIVENTER HENDERSONI (Bartsch)

HENDERSON'S YELLOW-BELLIED RAIL

Adult (sexes alike).—Similar to *Porzana flaviventer gossii* but slightly smaller.

Other plumages unknown.

Adult male.—Wing 62.5; tail 30; exposed culmen 16; tarsus 21; middle toe without claw 29 mm.⁴⁶

Adult female.—Wing 61-63.5; tail 29; exposed culmen 15-16 mm; tarsus 22.5; middle toe without claw 27 mm.⁴⁶

Range.—Resident in marshes with heavy aquatic growth in Puerto Rico (Laguna de Guánica; Bayamón River) and Hispaniola (Trou Caïman; Fort Liberté).

Type locality.—Trou Caïman, Haiti.

Crybastes gossei GUNDLACH, Journ. für Orn., xxvi, 1878, 162, 189 (Arecibo River, Puerto Rico; specimen); Anal. Soc. Esp. Hist. Nat., vii, 1878, 391 (Arecibo River; not rare).

Laterirallus gossei STAHL, Faun. Puerto Rico, 1883, 63 (Puerto Rico, rare); Orn. iii, 1887, 452 (rare).

Porzana flaviventris WETMORE, U. S. Dept. Agr. Bul. 326, 1916, 36 (Laguna de Guánica; Bayamón River); Bull. Amer. Mus. Nat. Hist., xlvii, 1922, 307 bones from caves near Morovis, Puerto Rico).—DANFORTH, Journ. Dept. Agr. Puerto Rico, x, 1926, 55-56 (Cartagena Lagoon, Puerto Rico).

Porzana flaviventris hendersoni BARTSCH, Proc. Biol. Soc. Washington, xxx, 1917, 131 (Trou Caïman, Haiti; spec., U. S. Nat. Mus.); Smiths. Misc. Coll., lxxviii, No. 12, 1918, fig. 42 (habitat).

⁴⁶One male and two females from Haiti, including the type, examined. An unsexed bird from Puerto Rico has the following measurements: Wing 62; tail 30.5; exposed culmen 16; tarsus 21; middle toe without claw 29 mm.

- Porzana flaviventer hendersoni* WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 338 (Puerto Rico, resident; Laguna de Guánica, Bayamón River, near Aguirre, Cartagena Lagoon).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 495 (Trou Caïman, Haiti).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 133 (habits, etc., Hispaniola; rare; Fort Liberté; Trou Caïman).—DANFORTH, Journ. Dept. Agri. Puerto Rico, xv, 1931, 50 (Cartagena Lagoon; Anegado Lagoon, Puerto Rico).—PETERS, Check-list Birds of World, ii, 1934, 184.—BEATTY, Journ. Agr. Puerto Rico, xv, 1931, 21 (Guánica Lagoon, Puerto Rico).
- P[orzana] f[laviventer] hendersoni* BOND, Birds West Indies, 1936, 92 in text (Hispaniola; Puerto Rico).
- Hapalocrex flaviventris* RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 3.
- ? *Rallus* SALLE, Proc. Zool. Soc. London, 1857, 236 (Dominican Republic).—BRYANT, Proc. Boston Soc. Nat. Hist., xi, 1867, 97 (Dominican Republic).

PORZANA FLAVIVENTER WOODI van Rossem

SALVADORIAN YELLOW-BELLIED RAIL

Adult male.—Similar to that of *Porzana flaviventer hendersoni* but the crown paler; the pectoral region whiter; the median upperpart browner, less blackish, the dorsal white markings narrower and less extensive, and the black loreal streak narrower (1 mm. wide); iris dark red; bill blackish olive; tarsi and toes pale dull yellow.

Other plumages unknown.

Adult male.—Wing 62–65.5; tail 26.7–29; exposed culmen 16–16.5; tarsus 23–24; middle toe without claw 28.5–29 mm.⁴⁷

Range.—Known only from the type locality, Lake Olomega, Department of San Miguel, El Salvador.

Porzana flaviventer woodi VAN ROSSEM, Condor, xxxvi, 1934, 243 (orig. descr.; Lake Olomega, El Salvador; crit.); Birds El Salvador, Field Mus. Nat. Hist. Publ. Zool., xxiii, 1938, 160 (habits, Lake Olomega).

Genus LATERALLUS G. R. Gray

Laterallus "Pr. B." G. R. GRAY, Cat. Gen. Subgen. Birds, 1855, 120. (Type, by monotypy, *Rallus melanophaius* Vieillot, ex Bonaparte, 1854, *nomen nudum*.)

Laterirallus (emendation) BONAPARTE, Compt. Rend., xliii, 1856, 599.

Crybastes CABANIS, Journ. für Orn., 1856 (publ. 1857), 428. (New name for *Laterallus*, on grounds of purism.)

Donacophilus REICHENOW, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320. (New name for *Laterallus*, on grounds of purism.)

Rufirallus BONAPARTE, Compt. Rend., xliii, 1856, 599. (Type, as designated by Selater and Salvin, 1869, *Rallus cayennensis* Gmelin=*R. cayannensis* Boddaert=*R. viridis* Müller.)

Erythrolimnas HEINE, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320. (Substitute for *Rufirallus*, on grounds of purism.)

⁴⁷Two specimens, including the type. Van Rossem's measurements for the type are slightly smaller than mine—wing 60.5; exposed culmen 15.8; tarsus 20.4; middle toe without claw 27 mm.

Cresciscus CABANIS, Journ. für Orn., 1856 (publ. 1857), 428. (Type, by monotypy, *Rallus jamaicensis* Gmelin.)

Cresciscus (emendation) COUES, Check-list North Amer. Birds, ed. 2, 1882, 110.

Oreisciscus (typog. error) BREWER, Proc. Boston Soc. Nat. Hist., xvii, 1875, 447.

Limnocrex RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 3. (Type, by original designation, *Porzana cinereiceps* Lawrence.)

Thryocrex RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 4. (Type, by original designation, *Corethrura rubra* Selater and Salvin.)

Small Ralleae (wings 70–85 mm.) with bill shorter than head, with nasal fossa distinctly defined, the nostrils narrowly elliptical, wholly pervious and parallel with the maxillary tomium.

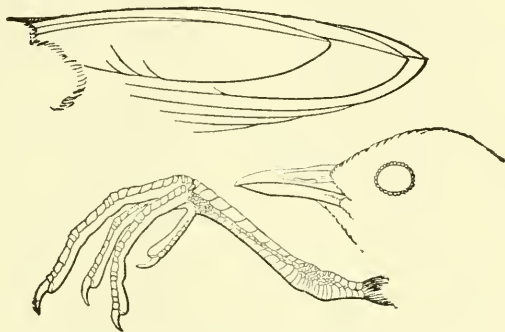


FIGURE 10.—*Laterallus jamaicensis*. Natural size.

Three subgenera in North and Middle America, which may be described individually in detail as follows (ex Ridgway manuscript in which they were considered of generic rank):

1. Subgenus *CRESCISCUS* Cabanis.

Bill much shorter than head (little if any more than half as long), subcuneate in lateral profile, its depth at base equal to a little more than one-third the length of culmen, its width at same point equal to about two-thirds the height; culmen elevated basally, slightly depressed above anterior end of nostril, thence gently decurved and slightly convex to the obtuse tip of maxilla; gonys a little more than half to about two-thirds as long as mandibular rami, nearly straight, slightly ascending terminally; mandibular rami without distinct, if any, lateral groove; nasal fossa rather large sharply defined, extending half way to tip of maxilla or a little more; nostril relatively large, narrowly elliptical, wholly pervious, parallel with maxillary tomium, its anterior end much nearer to edge of loreal feathering than to tip of maxilla; anterior outline of loreal feathering forming a vertical nearly straight or slightly convex line; that of frontal feathering divided medially by a very short and small obtusely angular indentation, formed by base of culmen; malar antia about on line with anterior outline of loreal feathering, the mental antia on line with or slightly

anterior to posterior end of nostril. Wing relatively rather small, moderately concave beneath, much rounded, the longest primaries exceeding distal secondaries by a little less than one-fourth the length of wing and but slightly, if at all, exceeding longest elongated but broad and rounded proximal secondaries; third or second and third primaries (from outside) longest, the first (outermost) about equal to seventh or eighth; two outermost primaries with tips subacuminate; longest feather of alula falling slightly, but decidedly, short of tips of longest primary coverts. Tail between two-fifths and half as long as wing, rounded, the rectrices soft and mostly concealed by coverts. Tarsus as long as middle toe without claw, or a little shorter, the acrotarsium with a single row of broad transverse scutella, the planta tarsi with a similar single row, its posterior side broadly rounded; outer toe with claw falling short of base of middle claw, the inner toe, without claw, reaching to penultimate articulation of middle toe; hallux, without claw, about equal to basal phalanx of outer toe; claw relatively small, moderately curved, compressed, and acute.

Plumage and coloration.—Plumage of head, neck, and underparts dense, soft, and blended; that of posterior underparts longer and more lax. Upperparts dark brown or dusky, more castaneous on hind neck, the back, scapulars, wings, etc., usually more or less speckled or transversely spotted with white; axillars and under wing coverts dusky more or less barred (narrowly) with white; adults with underparts plain slaty, the posterior portions usually more or less barred with white.

Range.—Nearctic and Neotropical regions.

2. Subgenus LIMNOCREX Ridgway.

Bill much more than half as long as head, subcuneate (tapering) in lateral profile, its depth at base of gonys much less than at posterior end of nostril, that at base equal to more than one-third the length of culmen, its width at same point equal to at least two-thirds the depth; culmen distinctly elevated and more or less arched basally, slightly depressed above nostril, thence gradually decurved to tip, gonys nearly as long as mandibular rami, nearly straight, slightly ascending terminally; mandibular rami without distinct, if any, lateral groove, but basal portion of tomium more or less prominent; nasal fossa very distinctly defined, its upper and lower edges converging slightly toward the rounded anterior end, which is about midway between nearest loral feathering and tip of maxilla; nostril narrowly elliptical, wholly pervious, parallel with maxillary tomium, its anterior end decidedly nearer to nearest loral feathering than to tip of maxilla; anterior outline of loral feathering forming a nearly straight or slightly convex line from near upper edge of nasal fossa (at base) to rictus, the rather narrow base of culmen making a very small indenta-

tion in frontal feathering; malar antia decidedly posterior to latero-frontal antia, the mental antia about on line with or slightly posterior to posterior end of nostril. Wing moderate in size, very concave beneath, strongly rounded; third and fourth, or third, fourth, and fifth primaries (from outside) longest, the first (outermost) not longer than ninth, sometimes shortest; longest primaries exceeding distal secondaries by about one-fifth the length of wing, and extending slightly to considerably beyond tips of elongated proximal secondaries; alula greatly developed, its longest feather reaching to beyond tips of longest primary coverts. Tail one-third to more than two-fifths as long as wing, rounded, the rectrices soft, with lax webs, and mostly concealed by the coverts. Tarsus not longer (usually decidedly shorter) than middle toe without claw, one-third to more than two-fifths as long as wing, the acrotarsium with a single series of broad transverse scutella, the planta tarsi with similar transverse scutella on upper portion and numerous smaller roundish or hexagonal scales on lower part; outer toe with claw reaching nearly if not quite to base of middle claw (falling short in *L. vagans* and *L. albigularis*), the inner toe, without claw, reaching to decidedly beyond penultimate articulation of middle toe; hallux, without claw, longer than basal phalanx of outer toe but shorter than that of inner toe; claws small, compressed, moderately curved, acute.

Plumage and coloration.—Plumage of head, neck, back, scapulars, rump, and anterior underparts compact and blended, that of posterior underparts more full, with feathers more distinctly outlined (broadly rounded); primaries broad, the outer ones (especially the first) bowed or incurved; elongated proximal secondaries broadly rounded at tips. Upperparts plain olive-brown, usually becoming more or less rufescent on hind neck; anterior under parts plain rufescent laterally and white medially, or plain gray, the posterior underparts, including sides (but sometimes excluding abdomen) conspicuously barred with white and blackish.

Range.—Honduras to Amazon Valley.

3. Subgenus *THRYOCREX* Ridgway.

Small Ralleae (wing about 81–85 mm.) with bill not conspicuously deeper at base than at gonydeal angle, its width at posterior end of nostril equal to decidedly more than half its depth at same point; malar antia slightly anterior to the broadly rounded loreal antia; longest feather of alula extending beyond tips of longest primary coverts; outermost primary not projecting beyond tips of distal secondaries; tarsus longer than middle toe, without claw, and under parts entirely plain cinnamon-rufous.

Bill a little shorter than head, distinctly tapering (in lateral profile) for distal portion only, its depth at gonydeal angle nearly equal to

that at posterior end of nostril, where its width is equal to about two-thirds its depth at same point; culmen about three-fifths as long as tarsus, slightly elevated basally and faintly depressed above anterior end of nostril, thence gradually and increasingly decurved to tip; gonys decidedly shorter than mandibular rami, nearly straight, strongly ascending terminally, its basal angle distinct; mandibular rami with a very indistinct narrow lateral groove; nasal fossa very distinctly defined, extending about half way from edge of loreal feathering to tip of maxilla; nostril narrowly elliptical, parallel with maxillary tomium; anterior edge of loreal feathering forming a nearly vertical slightly, but distinctly, convex line from side of base of culmen at upper edge of nasal fossa to rictus, the slightly expanded base of culmen forming a broadly angular short indentation in edge of median portion of forehead; malar antia about on line with latero-frontal antia, the mental antia slightly posterior to proximal end of nostril. Wing moderate in size, very concave beneath, much rounded, the longest primaries exceeding distal secondaries by only about one-fifth the length of wing but extending decidedly beyond tips of the slightly elongated proximal secondaries; third and fourth, or third, fourth, and fifth primaries longest, the first (outermost) shortest (about as long as distal secondaries); alula with longest feather extending decidedly beyond tips of longest primary coverts. Tail slightly more than two-fifths as long as wing, strongly rounded, the rectrices soft, with lax webs, not extending beyond tips of lower coverts. Tarsus more than two-fifths as long as wing, the acrotarsium with a single series of about ten broad transverse scutella, the planta tarsi with several transverse scutella near heel joint, otherwise with an irregular arrangement of smaller, more hexagonal scales; middle toe, without claw, a little shorter than tarsus; outer toe with claw reaching to base of middle claw or falling very slightly short, the inner toe, without claw, reaching to penultimate articulation of middle toe; hallux, without claw, about as long as basal phalanx of outer toe; claws relatively small, much compressed, moderately curved, acute.

Plumage and coloration.—Plumage full, dense, and blended, shorter anteriorly, longer and more lax posteriorly; primaries broad, the outer ones, especially the first, bowed or incurved; slightly elongated proximal secondaries soft, very broad, with rounded tips. Pileum and sides of head plain slate color; rest of upperparts deep rufescent on hind neck gradually changing to sepia or bone brown on remiges, the tail darker; underparts plain cinnamon-rufous, paler on abdomen.

Range.—Central America. (Monotypic.)

KEY TO THE NORTH AND MIDDLE AMERICAN FORMS OF *LATERALLUS*

- a. Longest feather of alula falling short of tip of longest upper primary coverts.
 b. Underparts entirely dark slate-gray.
 c. Head paler, the crown deep neutral gray.
 Laterallus spilonotus, adult (p. 160)
 cc. Head darker, the crown dark neutral gray to slate-black.
 d. Middle toe without claw 23 mm. in length.
 Laterallus jamaicensis jamaicensis (p. 159)
 dd. Middle toe without claw shorter, usually not over 21 mm. in length.
 e. Smaller, wing averaging less than 70 mm.
 Laterallus jamaicensis coturniculus (p. 157)
 ce. Larger, wing averaging over 70 mm.
 Laterallus jamaicensis stoddardi (p. 153)
 bb. Underparts largely whitish..... *Laterallus exilis* (p. 162)
 aa. Longest feather of alula extending beyond tip of longest upper primary coverts.
 b. Tarsus shorter than middle toe without claw; under tail coverts barred with black and white.
 c. Top and sides of head grayish.
 Laterallus albigularis cinereiceps (p. 164)
 cc. Top and sides of head dark brown.
 Laterallus albigularis albigularis (p. 166)
 bb. Tarsus as long or longer than middle toe without claw; under tail coverts plain, unbarred.
 c. Upper back not bright rufescent but dark brown washed with rufescent.
 Laterallus ruber tamaulipensis (p. 168)
 cc. Upper back bright rufescent.
 d. Lower back, rump, upper tail and wing coverts rich, deep chestnut.
 Laterallus ruber ruberrimus (p. 170)
 dd. Lower back, rump, upper tail and wing coverts chocolate-brown.
 Laterallus ruber ruber (p. 168)

LATERALLUS JAMAICENSIS STODDARDI (Coale)

EASTERN BLACK RAIL

Adult (sexes alike).—Top of head blackish mouse gray to blackish slate, the occiput the same but washed with sepia; nape, hind neck, and anterior interscapulars warm sepia to bister, the interscapulars with small subterminal white specks; rest of interscapulars, back, rump, upper wing, tail coverts, and scapulars dark fuscous or blackish mummy brown to fuscous-black, usually becoming black on the rump and the upper tail coverts, each feather with four small white specks, two on the outer margin of each web, one terminal, the other about 5 mm. anterior to it; remiges fuscous to dark fuscous, the secondaries with several narrow, small, transverse white spots on each web, the primaries averaging fewer such spots, and chiefly on their terminal portion and largely on the outer web (but not entirely so); rectrices fuscous-black crossed by narrow white transverse spots and more or less tinged with brownish

laterally; the lores, circumocular area, and auriculars like the crown, but slightly paler on the auriculars; chin, throat, side of neck, breast, sides, and upper abdomen uniform deep mouse gray with a slate cast; flanks, lower abdomen, thighs, and under tail coverts darker—blackish mouse gray to slate-black barred with white, the white bars very narrow and spaced about 4 mm. apart; the sides, flanks, and thighs sometimes with a faint fuscous wash, underwing coverts dull dusky fuscous with narrow whitish bar; iris red; bill black; tarsi and toes bright yellowish green.⁴⁸

Juvenal.—Similar to the adult but averaging more blackish, less brownish, above with less brownish on the wings and back and very little on the hind neck, the white spots smaller and averaging fewer; entire bend of wing whitish; a rather indistinct whitish superciliary stripe from the base of the maxilla to the posterodorsal corner of the eye; cheeks malar area, chin, and throat pale ashy white with a buffy-wash (especially on chin and throat); middle of breast and abdomen much mixed with pale buffy ashy white; posterior lower parts less barred with white than in adults.

Natal down.—Dark black with an oily greenish sheen above, the down sparser on the chin than elsewhere.

Adult male.—Wing 70–75.5 (72.5); tail 29–34.5 (32.1); exposed culmen 12–15 (14.1) tarsus 21–23 (22.2); middle toe without claw 21–22 (21.3 mm.).⁴⁹

Adult female.—Wing 73.5–77 (75); tail 30 (30); exposed culmen 13.5–14 (13.7); tarsus 20–24 (22.5); middle toe without claw 21–22 (21.5 mm.).⁵⁰

Range.—Breeds from Kansas (Garden City; Manhattan; Beloit); Iowa (rarely—Linn County); Minnesota (doubtful—Hennepin County); Wisconsin (one record); Illinois (Quincy; Cahmet River; Chicago); possibly southern Manitoba; probably southern Ontario (Dundas) and southern Quebec; Connecticut (Saybrook); Massachusetts (Plymouth; Chatham); south to southern Kansas (Princeton); southern Illinois (Philo); western North Carolina (Statesville; Weaverville); and Florida (Alachua County; St. Johns River; Clearwater; Merritt Island).

Winters from Georgia (Savannah); Florida (Daytona; St. Marks; Key West; the Tortugas Islands); Louisiana (New Orleans); to Guatemala (Dueñas [subspecific identification uncertain, however]).

⁴⁸ Females are said by some writers to be duller generally and somewhat paler on the underparts than males. There is a slight average difference in the underparts, but I have been able to pick out males as pale below as females. Dorsally, I can see no sexual difference.

⁴⁹ Eight specimens from New Jersey, Illinois, and Florida.

⁵⁰ Three specimens from New Jersey and Florida.

Casual in Bermuda (as a migrant) and Colorado (near Denver). Doubtfully recorded from Maine (Scarboro) and Nova Scotia (Halifax).

Type locality.—Hyde Park, South Chicago, Ill.

Rallus jamaicensis (not of Gmelin, 1789) SONNINI, Nouv. Dict. Hist. Nat., xxviii, 1819, 550, part.—AUDUBON, ORN. Biogr., iv, 1838, 359, pl. 349.

R[allus] jamaicensis NELSON, Bull. Essex Inst., viii, 1876, 153 (ne. Illinois, breeding).

Ortygometra jamaicensis AUDUBON, Synopsis, 1839, 214; Birds Amer., 8vo. ed., v, 1842, 157, pl. 308.—JARDINE, Contr. Orn., 1848, 85 (Bermuda, Nov.)—HURDIS, Jardine's Contr. Orn., 1850, 11 (Bermuda, Sept. 5, 1848).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).—? SALVIN, Ibis, 1866, 198 (Dueñas, Guatemala).

[*Ortygometra*] *jamaicensis* MARTENS, Journ. für Orn., 1859, 220 (Bermuda).

Creciscus jamaicensis SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 135, part (Dueñas, Guatemala).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 323, part (Massachusetts; Illinois; Florida; Dueñas, Guatemala).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xxv, 1908, 365; Checklist, ed. 3, 1910, 104, part.—PALMER (T.S.), Auk, xxvi, 1909, 190 (District of Columbia, Sept. 1; Piscataway, Prince Georges County, Md., Sept. 25).—CORY, Field Mus. Nat. Hist., Publ. 131, 1909, 385 (Illinois, Wisconsin).—WAYNE, Birds South Carolina, 1910, 39 (summer resident; breeding habits; descr. nest and eggs; notes).—EATON, Birds New York, i, 1910, 281, pl. 26.—COALE, Auk, xxviii, 1911, 276 (Oconto River, Green Bay, Wis., June 9).—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 215 (habits).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 50.—BUNKER, Kansas Univ. Sci. Bull. 7, 1913, 143 (Kansas, summer resident).—BAYNARD, Auk, xxx, 1913, 243 (Alachua County, Fla., summer resident, breeding).—HARLOW, Auk, xxx, 1913, 269 (near Brigantine, N. J., breeding; descr. nest and eggs); xxxv, 1918, 21 (breeding in east marshes of Ocean, Burlington, and Atlantic Counties, N. J.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 33, fig. 14 (geogr. range and migr. routes).—GRISCOM, Birds New York City Region, 1923, 137, fig. 11 (status, New York City region).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 29 (genl.; Oklahoma).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 361, pl. 23 (fig.; descr.; habits; New England).—TAVERNER, Birds Western Canada, 1926, 126 (descr.; distr.; w. Canada).—LONGSTREET, Auk, xliii, 1926, 379 (Mosquito Inlet, Fla.).—BAILEY, Wils. Bull., xxxix, 1927, 176 (distr.).—PICKENS, Wils. Bull., xl, 1928, 188 (Chester, S. C.).—COOKE (M. T.), Proc. Biol. Soc. Washington, xlii, 1929, 27 (Washington, D. C.).—HICKS, Wils. Bull., xli, 1929, 43 (Bumgardner's Pond, Franklin County, and Alum Creek Swamp, Westerville, Ohio).—LONGSTREET, Auk, xlvii, 1930, 95 (Daytona Beach, Fla.).—LEWIS, Wils. Bull., xlii, 1930, 42 (nw. Oklahoma).—BUTLER, Auk, xlviii, 1931, 439 (Mosquito Inlet, Fla.).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 122 (Guatemala; possibly winter visitant).—TAVERNER, Birds Canada, 1934, 174 (unsubstantiated records from Prairie Provinces, s. Ontario and Quebec; possibly Manitoba).

[*Creciscus*] *jamaicensis* SHARPE, Hand-List, i, 1899, 104, part.

Oreciscus (typog. error) *jamaicensis* BREWER, Proc. Boston Soc. Nat. Hist., xvii, 1875, 447 (Connecticut).

Porzana jamaicensis BAIRD, Amer. Journ. Sci. and Arts, xlvi, 1844, n. p. (Carlisle, Pa.); Lit. Rec. and Journ. Linn. Assoc. Pennsylvania Coll., 1845, 257; Cat.

- North Amer. Birds, 1859, No. 556.—DENNY, Proc. Zool. Soc. London, 1847, 40, part (United States; Mexico).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 749.—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 36, part.—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 455, part (monogr.).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., 33).—SNOW, Birds Kansas, 1873, 11.—COUES, Check List, 1874, No. 470, part; ed. 2, 1882, No. 681; Birds Northwest, 1874, 539, part.—NELSON, Bull. Nutt. Orn. Club, i, 1876, 43 (Calumet Marshes, ne. Illinois, breeding; descr. nest and eggs).—PURDIE, Bull. Nutt. Orn. Club, ii, 1877, 22 (Plymouth, Mass., Aug. 1869; Saybrook, Conn., breeding).—BREWER, Proc. Boston Soc. Nat. Hist. xix, 1878, 307 (Plymouth, Mass.).—RATHBUN (F. R.), Rev. List Birds Central New York, 1879, 35 (Penn Yan, spring 1875; between Havana and Watkins, spring 1872).—GOSS, Bull. Nutt. Orn. Club, v, 1880, 60 (near Beloit, Mitchell County, Kans., June); Auk, iii, 1886, 408 (Neosho Falls, Kans., Mar. 18).—LAWRENCE, Bull. Nutt. Orn. Club, v, 1880, 117 (Jamaica, Long Island, spring).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. Birds North Amer., No. 576); Nom. North Amer. Birds, 1881, No. 576; Orn. Illinois, ii, pt. i, 1895, 96.—NEHRLING, Bull. Nutt. Orn. Club, vii, 1882, 224 (se. Texas, April).—REID, U. S. Nat. Mus. Bull. 25, 1884, 248 (Bermuda, 1847, 1848, and 1851; 3 specimens).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 377.—CLARK (J. N.), Auk, i, 1884, 393 (Saybrook, Conn., breeding; descr. nest and eggs).—BREWSTER, Auk, iii, 1886, 139, in text (Cooke County, Tex.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 216, part.—SCOTT, Auk, vii, 1890, 400 (Key West, Fla., Mar. 11).—STONE, Birds Eastern Pennsylvania and New Jersey, 1894, 67 (records).—COOKE, Colorado Agr. Exp. Stat. Bull. 44, 1898, 158 (near Denver, Colo.).—BUTLER, Rep. State Geol. Indiana for 1897 (1898), 679 (breeding at English Lake, Starke County, and near Greencastle, Ind.).—ALLEN, Auk, xvii, 1900, 1 [-8], pl. 1 (biography).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc., Bull. 3, 1903, 39 (Wisconsin).—WAYNE, Warbler, ser. 2, i, 1905, 33 [-35], pl. [1] (breeding habits in South Carolina); Auk, xxii, 1905, 397 (near Charleston, S. C., breeding).—FLEMING, Auk, xxiii, 1906, 453 (Toronto, Ontario, 1 doubtful record).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 59 (Chicago area, rare summer resident).—WIDMANN, Birds Missouri, 1907, 60 (2 records).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 209 (Iowa, rare summer resident).
- [*Porzana jamaicensis*] COUES, Key North Amer. Birds, 1872, 274.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Guatemala).
- P[*orzana jamaicensis*] RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 140, part.—NELSON, Bull. Essex Inst., viii, 1876, 134 (ne. Illinois, breeding; descr. nest and eggs).—COUES, Key North Amer. Birds, ed. 2, 1884, 674, part.
- [*Porzana jamaicensis*] a. *jamaicensis* COUES, Birds Northwest, 1874, 539, part (synonymy).
- [*Porzana jamaicensis*] a *jamaicensis* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 367, 377; part.
- Crex pygma* (not of Bechstein) BLACKWELL, Edinburgh Journ. Sci., n. s., vi, 1832, 77, 78 (North America).
- Circus jamaicensis jamaicensis* OBERHOLSER, Auk, xli, 1924, 592 (synonymy).—HOWELL, Birds Alabama, 1924, 90, ed. 2, 1928, 90 (Alabama).—BAILEY, Birds Florida, 1925, 43, pl. 23 (fig.; distr.; Florida).
- Circus jamaicensis stoddardi* COALE, Auk, xl, 1923, 89 (Hyde Lake, South Chicago, Ill.).

- Creciscus jamaicensis stoddardi* SUTTON, Auk, xliii, 1926, 233 in text (near Eureka, Ill.).—BRODKORB, Auk, xliii, 1926, 233 in text (Illinois records).—COALE, Auk, xliii, 1926, 368 in text (corr.).—[ARTHUR] Birds Louisiana, 1931, 240 in text (descr.; status; Louisiana).—NICE, Birds Oklahoma, rev. ed., 1931, 85 (genl., Oklahoma).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 98.—ROBERTS, Birds Minnesota, i, 1932, 450 (habits; distr. in Minnesota).—HOWELL, Florida Bird Life, 1932, 208 (genl.; Florida).—DU MONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 63 (Iowa; very rare; 2 recent records both at Sigourney).—JANNER, Wils. Bull, xvi, 1934, 258 (Howard County, Mo., May 1, 1933).—ALLEN, Auk, lli, 1935, 446 (Cape May Point, N. J.; Oct. 5, 1934).—COX, Auk, liv, 1937, 100 (breeding near Windfall, Ind.).—MUSSELMAN, Auk, liv, 1937, 204 (banded 3 birds in Adams County, Ill.).—CARLETON, KRAMER, SEDWITZ, and STEPHENSON, Auk, lv, 1938, 124 (nesting Jones Beach, Long Island, N. Y., June 20, 1937).
- P[orzana] jamaicensis stoddardi* ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 124 (eggs; spec.).
- Laterallus jamaicensis stoddardi* PETERS, Check-list Birds of World, ii, 1934, 189.—OBERHOLSER, Bird Life Louisiana, 1938, 205 (casual winter resident in s. Louisiana, vicinity of New Orleans, Morgan City, and Grande Isle).

LATERALLUS JAMAICENSIS COTURNICULUS (Ridgway)

FARALLON RAIL

Adult (sexes alike).—Like that of *Laterallus jamaicensis stoddardi* but smaller, with a much slenderer bill, the color of the underparts deeper—dark mouse gray to blackish mouse gray with a slate cast; the nape, behind neck, and anterior interscapulars more rufescent-russet mars brown, this color forming a somewhat broader patch on the upperparts than in *stoddardi*; iris Sanford's brown; bill chaetura black; tarsi and toes dark grayish brown.

Juvenal.—Like that of *Laterallus jamaicensis stoddardi* but smaller.

Natal down.—Indistinguishable from that of *Laterallus jamaicensis stoddardi*.

Adult male.—Wing 64–72 (67.7); tail 28–35 (31.1); exposed culmen 13–16 (14.3); tarsus 17.5–23 (20); middle toe without claw 18.5–22 (20.5 mm.).⁵¹

Adult female.—Wing 63–72 (67.9); tail 25–35.5 (30); exposed culmen 12.5–14.5 (13.5); tarsus 17.5–22 (19.3); middle toe without claw 18–21.5 (20 mm.).⁵²

Range.—Breeds in marshes from coastal California (Suisun, Farallon Islands, Martinez, National City, Chula Vista, Santa Cruz, Santa Barbara, San Bernardino, Ballona, Hueneme, Riverside, Orange, San Diego, and Rio Tia Juana) to northwestern Lower California (San Ramon, Sangre de Cristo, San Quentin). Definite egg records only from the San Diego area.

⁵¹ Forty-six specimens from California and Lower California.

⁵² Fifty-nine specimens from California and Lower California.

Casual in Arizona (Tucson), Oregon (Malheur Lake), and Utah (Parley's Park).

Winters chiefly in the northern part of its main breeding area (San Francisco Bay area, Farallon Islands, south to San Diego). Casual in Washington (Tacoma).

Type locality.—Farallon Islands, coast of California.

Porzana jamaicensis, var. *coturniculus* "Baird" RIDGWAY, Amer. Nat., viii, 1874, 111 (Farallon Islands, Calif.; coll. U. S. Nat. Mus.).—GRINNELL, Univ. California Publ. Zool., xxxviii, 1932, 271 (type loc.; crit.).—? HENSHAW, Ann. Lyc. Nat. Hist. New York, xi, 1874, 11 (Parley's Park, Utah).

Porzana jamaicensis . . . var. *coturniculus* COUES, Check-list, 1874, App., p. 137 (no. 470a).

[*Porzana jamaicensis*] b. *coturniculus* COUES, Birds Northwest, 1874, 540.—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 378.

[*Porzana jamaicensis*] 6. *coturniculus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 367.

Porzana jamaicensis coturniculus RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202, 222 (Cat. Birds North Amer., No. 576a); xiii, 1890, 309 [–311] (crit.); Nom. North Amer. Birds, 1881, No. 576a.—COUES, Check-list, ed. 2, 1882, No. 682.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, No. 216a.—BRYANT (W. E.), Proc. California Acad. Sci., ser. 2, i, 1888, 42 (crit.).

P[*orzana*] *jamaicensis coturniculus* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 378, under fig.—RIDGWAY, Man. North Amer. Birds, 1887, 140.—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 124 (specimen).

P[*orzana*] j[*amaicensis*] *coturniculus* COUES, Key North Amer. Birds, ed. 2, 1884, 674.

Porzana coturniculus RIDGWAY, Proc. U. S. Nat. Mus., xiii, 1890, 311, in text (crit.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 2, 1895, no. 216.

P[*orzana*] *coturniculus* RIDGWAY, Man. North Amer. Birds, ed. 2, 1896, 140.

Circus coturniculus SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 137, footnote.—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xxv, 1908, 365; Check-list, ed. 3, 1910, 104.—WILLETT, Pacific Coast Avif., No. 7, 1912, 33 (Hueneme, Ventura County, Calif., Mar.; Ballona, Los Angeles County, May 16; Riverside, Aug. 13; breeding in marshes of San Diego Bay).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 35, fig. 15 (geog. range).—GRINNELL (J.), Pacific Coast Avif., No. 11, 1915, 47 (numerous fall and winter records).—WALL, Condor, xxi, 1919, 238 (San Bernardino, Calif., Aug. 3).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 64 (descr.).—HUEY, Auk, xliii, 1926, 351 (San Ramon, nw. Lower California.)

[*Circus*] *coturniculus* SHARPE, Hand-list, i, 1899, 105.

Circus jamaicensis coturniculus OBERHOLSER, Auk, xxxv, 1918, 63, in text (crit.); xxxvi, 1919, 268.—HUEY, Condor, xxx, 1928, 158 in text (Sangre de Cristo, northern Lower California).—EWAN, Condor, xxx, 1928, 247 (Playa del Rey, Los Angeles County, Calif.).—KIBBE, Condor, xxxi, 1929, 252 (Marin County, Calif.).—GANDER, Condor, xxxii, 1930, 211 (near San Diego, Calif.).—DAWSON, Birds California (students' ed.) iii, 1923, 1549 (genl.; California).—GRINNELL, Univ. California Publ. Zool., xxxii, 1928, 87 (distr. in Lower California).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 98.—WILLETT, Pacific Coast Avif. No. 21, 1933, 53 (sw. Calif.; rare resident in salt marshes).—HANNA, Condor, xxxvii, 1935, 81 (nesting; interior of San Bernardino and Riverside Counties, Calif.).

- C[reciscus] j[amaicensis] coturniculus* TAVERNER, Birds Canada, 1934, 174 in text (may possibly occur on coast of s. British Columbia).
- Porzana jamaicensis* (not *Rallus jamaicensis* Gmelin) MERRIAM, 6th Ann. Rep. U. S. Geol. Surv. Terr., 1873, 715 (Parley's Park, Utah).—BENDIRE, Proc. Boston. Soc. Nat. Hist., 1877, 143 (Malheur Lake, e. Oregon, breeding).—GRINNELL (J.), Pasadena Acad. Sci. Publ. 2, 1898, 15 (Los Angeles County, Calif.; breeding ?).—BROOKS (A.), Auk, xxiii, 1906, 141 (Tacoma, Wash., rare migrant).
- (?) *Porzana jamaicensis* ? (not *Rallus jamaicensis* Gmelin ?) BREWSTER, Bull. Nutt. Orn. Club, viii, 1883, 36 (near Tucson, Ariz., Apr.).
- Laterallus jamaicensis coturniculus* PETERS, Check-list Birds of World, ii, 1934, 189.
- L[aterallus] j[amaicensis] coturniculus* CONOVER, Auk, li, 1934, 365 in text.

LATERALLUS JAMAICENSIS JAMAICENSIS (Gmelin)

JAMAICAN BLACK RAIL

Adult (sexes alike).—Similar to that of *Laterallus jamaicensis stoddardi* but with a longer middle toe (without claw 23 mm. in length), slightly longer and heavier bill; and somewhat duller in coloration, the white markings on the upper parts smaller and fewer.

Other plumages not seen.

Adult male.—Wing 71; tail 29; exposed culmen 16; tarsus 25.5; middle toe without claw 23.5 mm.⁵³

Adult female.—Wing 67.5; tail —; exposed culmen 16.5; tarsus 23.5; middle toe without claw 23.5 mm.⁵³

Range.—Resident (and rare) in marshes in Jamaica, Puerto Rico, and Cuba (1 Cuban record the subspecific identification of which is open to question).

Type locality.—Jamaica.

[*Rallus*] *jamaicensis* GMELIN, Syst. Nat., i. pt. 2, 1789, 718 (Jamaica; based on *Rallus jamaicensis* Brisson, Orn., vi., 1760, App., p. 140; *Rôte Bidi-Bidi* Buffon, Hist. Nat. Ois., viii, 166; *Least Water-hen* Edwards, Gleanings, pl. 278; Brown, Jamaica, 479; Latham, Synopsis Birds, iii, pt. i, 1785, 239)—LATHAM, Index Orn., ii, 1790, 761.

Rallus jamaicensis TURTON, Syst. Nat., i, 1806, 434.—SONNINI, Nouv. Dict. Hist. Nat., xxviii, 1819, 550, part.

Ortygometra jamaicensis STEPHENS, Shaw's Gen. Zool, xii, pt. i, 1824, 221.—BONAPARTE, Geogr. and Comp. List, 1838, 53.—GOSSE, Birds Jamaica, 1847, 375.—BREWSTER, Proc. Boston Soc. Nat. Hist., vii, 1860, 309 (Cuba).

Corchthura jamaicensis LICHTENSTEIN, Nom. Av. Mus. Berol., 1854, 96.

Creciscus jamaicensis CABANIS, Journ. für Orn., 1856, 428 (Cuba).—GUNDLACH, Journ. für Orn., 1875, 360 (Cuba); Contr. Orn. Cubana, 1876, 192; Orn. Cubana, 1895, 245.—STAHL, Fauna Puerto Rico, 1883, 63, 153 (Puerto Rico; specimen); Orn. iii, 1887, 448, 452 (Puerto Rico).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 135, part (Jamaica).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 323, part.—AMERICAN ORNITHOLOGISTS' UNION

⁵³ One specimen of each sex.

- COMMITTEE, Auk, xxv, 1908, 365; Check-list, ed. 3, 1910, 104, part (Jamaica).—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 36 (Puerto Rico).—SCLATER, Rev. List Birds Jamaica, 1910, 20.
- [*Greciscus*] *jamaicensis* GUNDLACH, Journ. für Orn., 1861, 342 (Cuba); Rep. Físico-Nat. Cuba, i, 1865-66, 362.—SHARPE, Hand-list, i, 1899, 104, part.
- Greciscus* [typog. error] GUNDLACH, Journ. für Orn., 1881, 401 (Puerto Rico).
- Porzana jamaicensis* DENNY, Proc. Zool. Soc. London, 1847, 40, part (Jamaica).—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—ALBRECHT, Journ. für Orn., 1862, 206 (Jamaica).—MARCH, Proc. Acad. Nat. Sci. Philadelphia, xvi, 1863, 69 (Jamaica).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 36, part.—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 455, part (monogr.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 216, part.—CORY, Auk, v, 1888, 55 (Cuba; Jamaica; West Indian references; descr.); Birds West Indies, 1889, 256; Cat. West Indian Birds, 1892, 91.
- [*Porzana*] *jamaicensis* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Jamaica).—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30 (Cuba; Jamaica).
- [*Porzana jamaicensis*] a. *jamaicensis* COUES, Birds Northwest, 1874, 539, part (synonymy).
- [*Porzana jamaicensis*] a *jamaicensis* BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 367, 377, part.
- Greciscus jamaicensis jamaicensis* WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 339 (Puerto Rico, rare migrant).—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 124 (spec).
- Laterallus jamaicensis* BOND, Birds West Indies, 1936, 96 (winters in Jamaica, Cuba, and Puerto Rico).
- Laterallus jamaicensis jamaicensis* PETERS, Check-list Birds of World, ii, 1934, 189.
- L[*aterallus*] *jamaicensis jamaicensis* CONOVER, Auk, li, 1934, 365 in text.
- L[*aterallus*] j[*amaicensis*] *jamaicensis* BOND, Birds West Indies, 1936, 96 in text (winters in Cuba, Jamaica, and Puerto Rico).

LATERALLUS SPILONOTUS (Gould)

DARWIN'S RAIL

Adult (sexes alike).—Entire head (back to the hind neck) and entire lower parts neutral gray to deep neutral gray, usually slightly darker on to the top of the head—deep neutral gray to dark neutral gray—and becoming fuscous-black on the flanks, thighs, and under tail coverts, which areas are also faintly and sparsely crossed by very narrow whitish bars; interscapulars, scapulars, and upper back between argus brown and chestnut-brown; lower back, rump, upper tail coverts, and rectrices dark clove brown; upper wing coverts dark clove brown broadly edged with argus brown and varyingly but sparingly spotted with very fine white specks or, in some cases, completed unmarked; lower back also usually with some white specks, but not always; (never present on the back alone—if spots occur on the back they also occur on the wing coverts); remiges clove brown; iris reddish; bill, tarsi, and toes dark brownish.

Juvenal.—"Top of head and lower parts generally sooty brown, darkest on pileum and sides, slightly grayish on face and throat; back of neck and upper back slightly paler brown; lower back, rump, tail (with upper and lower coverts) sooty blackish; outer surface of wings dark brownish, almost black; no white spots on wing, flanks, or belly."⁵⁴

Adult male.—Wing 64–72.5 (66.4); tail 22–27 (24.6); exposed culmen 14.5–17 (15.6); tarsus 21.5–24 (22.7); middle toe without claw 23–25.2 (24.3 mm.).⁵⁵

Adult female.—Wing 61–70.5 (66.3); tail 20–27 (24.5); exposed culmen 13.5–16.2 (14.9); tarsus 20–23.5 (21.9); middle toe without claw 22–25.5 (23.5 mm.).⁵⁶

Range.—Resident in the following islands of the Galapagos Archipelago: Abington, James, Seymour, Indefatigable, Albemarle, and Narborough.

Type locality.—Indefatigable Island, Galapagos Islands.

Zapornia spilonota GOULD, Zool. Voy. *Beagle*, pt. 3, 1841, 132, pl. 49 (James Island, Galapagos Archipelago; coll. Brit. Mus.⁵⁷).

Oryzometra spilonota GRAY, List Birds Brit. Mus., Gallae, 1844, 119.

Porzana spilonota SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 456 (James Island; monogr.); 1870, 323 (Indefatigable Island).—SALVIN, Trans. Zool. Soc. London, ix, pt. 4, 1876, 500 (James and Indefatigable Islands; crit.; habits).—RIDGWAY, Proc. U. S. Nat. Mus., xix, 1897, 618 (Indefatigable and James Islands; synonymy, descr., etc.).—SNODGRASS and HELLER, Proc. Washington Acad. Sci., v, 1904, 256 (James Island).

[*Porzana*] *spilonota* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part.

Creciscus spilonotus SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 137 (Indefatigable and James Islands).—ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 184 (James Island; crit.); ix, 1902, 418 (James Island).—GLEFFORD, Proc. California Acad. Sci., ser. 4, ii, pt. i, 1913, 12 (Indefatigable, Narborough, Abingdon, Albemarle, Seymour (?), and James Islands; crit., habits, etc.), 112 (measurements).—SWARTH, Occ. Pap. California Acad. Sci., xviii, 1931, 52 (crit.; 74 specimens; monogr.).

[*Creciscus*] *spilonotus* SHARPE, Hand-list, i, 1899, 105.

C[reciscus] spilonotus ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 203 (James Island).

Lateralus spilonotus PETERS Check-list Birds of World, ii, 1934, 190.

Porzana galapagoensis SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 113 (Galapagos Islands; coll. Brit. Mus.).—RIDGWAY, Proc. U. S. Nat. Mus., xix, 1897, 619 (synonymy; crit.).

[*Porzana*] *galapagoensis* SHARPE, Hand-list, i, 1899, 101.

⁵⁴ Ex Swarth, Occ. Pap. California Acad. Sci., xviii, 1931, 53; none seen by me.

⁵⁵ Sixteen specimens from Abingdon, James, Indefatigable, and Albemarle Islands. All measurements except toe ex Swarth.

⁵⁶ Twenty-one specimens from Abingdon, James, Indefatigable, and Albemarle Islands; all measurements except toe ex Swarth.

⁵⁷ The type specimen has apparently been lost.

Crecciscus sharpei ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 185 (Indefatigable Island, Galapagos Archipelago; coll. Tring Mus.); ix, 1902, 412 (Indefatigable and Narborough Islands; habits; crit.).—HARTERT, Nov. Zool., xxxiv, 1927, 24 (type spec.; crit.).

O[reciscus] sharpei ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 203 (Indefatigable Island).

[*Crecciscus*] *sharpei* ROTHSCHILD and HARTERT, Nov. Zool., ix, 1902, 418 (Indefatigable Island).

Porzana sharpei SNODGRASS and HELLER, Proc. Washington Acad. Sci., v, 1904, 256 (Indefatigable and Narborough Islands; measurements).

Porzana spilonota sharpei ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 124 (Galapagos Islands, except James Island).

LATERALLUS EXILIS (Temminck)

TEMMINCK'S RAIL

Adult (sexes alike).—Forehead, crown, and cheeks dark neutral gray, paling to neutral gray on the lores and auriculars; occiput, hind neck, and anterior interscapulars bright chestnut; posterior interscapulars, scapulars, upper wing coverts, and upper back raw umber, a varying number of the coverts and even of the outer scapulars crossed by very fine white bars; remiges dull, dark sepia; lower back, rump, and upper tail coverts clove brown; the back and rump feathers narrowly barred with whitish; rectrices dark clove brown; chin and median upper throat dull white, becoming grayish posteriorly and laterally; sides of neck and whole of breast neutral gray, paling on middle of breast to pale neutral gray; middle of abdomen plain white; sides, axillars, flanks, thighs, vent, and under tail coverts barred black and white, the dark and light bars about equally wide (1–1.5 mm.); under wing coverts dirty white indistinctly barred with grayish drab; iris crimson; eyelid clay color; bill chromium green at base, plumbeous on lower mandible, and dusker on upper mandible; tarsi and toes raw umber.

Juvenal female (male not seen, but probably similar).—Like the adult but without the chestnut color on the occiput, hind neck, and anterior interscapulars, which are dark grayish raw umber, with a few deep castaneous feathers here and there, especially among the anterior interscapulars.⁵⁸

Natal down.—Said to be blackish (none seen in connection with the present writing).

⁵⁸ According to Salvin and Godman (Biol.-Centr.-Amer, Aves, iii, 1903, 324) the young is similar to the adult but has most of the upper wing coverts banded with white. The character of the fine white bands on the upper wing coverts is a very variable feature of specimens that cannot be called anything but adults, while in the definitely immature female described above no such bands occur. It would seem, therefore, that Salvin and Godman did not have a young bird when they wrote.

Adult male.—Wing 68–77 (72.4); tail 29.5–37 (33.7); exposed culmen 15–17 (16.1); tarsus 21.5–25 (23.5); middle toe without claw 26–29.3, 27.2 mm.).⁵⁹

Adult female.—Wing 71–73 (72.3); tail 31–34 (32.5); exposed culmen 14–15.5 (14.8); tarsus 22.5–23 (22.8); middle toe without claw 25–25.5 (25.3 mm.).⁶⁰

Range.—Resident in Honduras (Segovia River) and Nicaragua (Escondido River) and in northern South America—Colombia (Guajaro Lagoon, La Peña), Trinidad; and Venezuela (Merida); to British Guiana (Bonsika River, Abary River); Dutch Guiana (Maroni River); French Guiana (Cayenne); to Ecuador (Esmeraldas) and eastern Peru (Nauta and Ucayali River); and northern Brazil (Amazonia; Teffe, Rio Solimões; Rio Negro; Marabitanas; Pará). Not yet recorded between Nicaragua and Colombia.

Type locality.—Cayenne.

Gallinula ruficollis SWAINSON, Anim. in Menag., 1837, 349 (America).

O[rtygometra] cinerea GRAY, Gen. Birds, iii, 1846, 593.

Orytgometra cinerea LÉOTAUD, Ois. Trinidad, 1866, 495 (Trinidad).

Porzana cinerea (not of Schlegel, 1865), SCLATER and SALVIN, Proc. Zool. Soc.

London, 1868, 456; 1873, 308 (Ucayali, Perú).—PELZELN, Orn. Bras., 1871,

317 (Marabitanas, Brazil).—TACZANOWSKI, Orn. Pérou, iii, 1886, 322

(Ucayali).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., vi, 1894, 79 (Trinidad).

[*Porzana*] *cinerea* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140.

[*Aramides*] *cinerea* GRAY, Hand-list, iii, 1871, 61, No. 10447.

Rallus exilis TEMMINCK, Pl. Col., v, 1831, pl. 523 and text.—LESSON, Traité d'Orn., 1831, 538.

[*Laterallus*] *exilis* BONAPARTE, Compt. Rend., xliii, 1856, 599.

Porzana exilis SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 35.—SCLATER and SALVIN, Proc. Zool. Soc. London, 1866, 567 (Rio Ucayali, e. Peru).

Creciscus exilis SHARPE, Cat. Birds Brit. Mus. xxiii, 1894, 138 (Trinidad; Cayenne; Maroni River, Surinam; Nauta, e. Peru).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 323 (crit.; distr.).—BELLEPSCH, Nov. Zool., xv, 1908, 299 (Cayenne).—CHUBB, Birds British Guiana, i, 1916, 76.—SNETHLAGE, Bol. Mus. Goeldi, viii, 1914, 72 (Pará, Brazil).

[*Creciscus*] *exilis* PENARD (F. P. and A. P.), Vogels van Guyana, i, 1908, 209 (Amazonia, the Guianas, and Trinidad).

[*Creciscus*] *exilis* IHERING (H. and R.), Aves Brazil, 1907, 30 (Amazonia; Rio Negro; Pará).—BRABOURNE and CHUBB, Birds South America, i, 1912, 24 (Peru; Amazonia; Guiana; Trinidad).

Creciscus exilis exilis HELLMAYR, Nov. Zool., xiv, 1907, 90 (Teffé, Brazil; crit.).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., iv, 1926, 177 (Esmeraldas, Ecuador, specimen; also refers to another specimen from Manãos, Brazil).—NAUMBURG, Bull. Amer. Mus. Nat. Hist., lx, 1930, 73 (Brazil—Rio Negro, Marabitanas, Teffé, Rio Solimões, Pará; also Guiana, Trinidad; Perú).

Laterallus exilis exilis PETERS, Check-list Birds of World, ii, 1934, 190.—BELCHER and SMOOKER, Ibis, 1935, 284 (Trinidad; breeds; nest and eggs described).

⁵⁹ Seven specimens from Brazil, Nicaragua, and Honduras, including the type of *L. e. vagans* (Ridgway).

⁶⁰ Three specimens from Brazil.

Porzana exilis vagans RIDGWAY, Proc. U. S. Nat. Mus., x, 1888, 595 (Rio Segovia, se. Honduras; U. S. Nat. Mus.).—RICHMOND, Proc. U. S. Nat. Mus., xvi, 1893, 530 (Rio Escondido, e. Nicaragua; crit.).

[*Crecciscus exilis*] Subsp. a. *Crecciscus vagans* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 139.

Crecciscus exilis vagans COOKE, U. S. Dept. Agr. Bull. 128, 1914, 36 (range).

[*Crecciscus*] *vagans* SHARPE, Hand-list, i, 1899, 105.

Laterallus exilis vagans PETERS, Check-list Birds of World, ii, 1934, 190.

LATERALLUS ALBIGULARIS CINEREICEPS (Lawrence)

GRAY-HEADED RAIL

Adult (sexes alike), *dark phase*.—Forehead, crown, occiput, lores, malar region, and cheeks deep neutral gray, the median part of occiput washed with bister; nape, hind neck, and sides of neck and of breast deep hazel to deep chestnut; interscapulars, scapulars, upper wing coverts, and back bister, darkening to clove brown on the lower back, rump, and upper tail coverts; primaries and all but the innermost secondaries dark sepia, the innermost secondaries and the rectrices fuscous-black; chin and anterior middle part of throat whitish, somewhat washed with pale buffy; sides of throat and entire breast and upper abdomen orange-cinnamon darkening laterally to hazel; lower abdomen, flanks, thighs, and under tail coverts narrowly barred black and white, the dark bars broader than the white ones; the under tail coverts sometimes slightly tinged with cinnamon; under wing coverts white, indistinctly spotted or mottled with blackish, most nearly pure white along the bend of the wing and on the under primary coverts; iris carmine, bill dull olive blackish with a triangular spot of apple green at the base; tarsi and toes olive.⁶¹

Adult (sexes alike), *pale phase*.—Similar to the dark phase except that the middle of the throat and breast and abdomen, extending uninterruptedly from the chin to the lower tail coverts, including the thighs, is unmarked white; the sides of the breast paler—light pinkish cinnamon to pinkish cinnamon; and the light bars on the flanks and sides of abdomen almost as wide as the black ones. The type of *leucogastra* is a specimen of this kind.

Juvenal (sexes alike).—Forehead, crown, occiput, and nape bister, each feather indistinctly tipped with clove brown, slightly grayer on the more anterior parts; scapulars, interscapulars, upper wing coverts, and upper back clove brown; lower back, rump, and upper tail coverts fuscous-black; remiges and rectrices as in adult; lores, cheeks, auriculars, and sides of neck smoke gray much mottled with

⁶¹ Some specimens have a few small, narrow, black-bordered white bars on the outer, lesser, and middle upper wing coverts; this seems to be uncorrelated with age, season, or locality. This occurs apparently more frequently in females than in males.

deep mouse gray; chin and middle of throat white, with the lateral and posterior feathers edged with deep mouse gray giving a checkered appearance to these areas; breast dull grayish white laterally darkening to deep mouse gray sometimes sprinkled with dull hazel or cinnamon feathers, (and sometimes practically completely crossed by a band of the same); middle of abdomen white indistinctly barred with blackish posteriorly; sides of abdomen very dark hair brown to grayish fuscous crossed by very narrow bars of dull whitish; thighs smoke gray with very indistinct bars of slightly paler; under tail coverts black with narrow white bars; under wing coverts as in adult; iris dark brown; bill blackish above, pea green below, dusky mesially; tarsi and toes olive-green.

Natal down.—A young bird in an early stage of postnatal molt is black above, with a greenish gloss on the head, and, to a much lesser extent, on the lower back; duller black below, with a grayish wash on the median under surface, particularly on the abdomen. Juvenal feathers just coming out on the abdomen and breast are dull gray broadly tipped with dull black.

Adult male.—Wing 69–76 (73.5); tail 23–33 (26.5); exposed culmen 16.5–19 (18); tarsus, 27.5–32 (29.4); middle toe without claw, 29–35.5 (31.5 mm.).⁶²

Adult female.—Wing 68.5–77 (73.7); tail 22.5–28 (22.4); exposed culmen 15.5–18 (16.6); tarsus 26–31.5 (28.3); middle toe without claw 28–32 (30.1 mm.).⁶³

Range.—Resident from Nicaragua (Rio Escondido; Greytown, Bluefields; Los Sabalós) south through northern and eastern Costa Rico (Bonilla; Caché; Cariblanco de Sarapiquí; Carrillo; Desamparados; Guápiles; Jimenez; Juan Viñas; Pacuare; Pacuarito; Reventazón; Rio Frio; Talamanca); to the Chiriqui Lagoon in western Panama (Almirante, Changuinola, Fruitdale, Guabo).

Type locality.—Talamanca, Costa Rica.

Corethrura albigularis (not of Lawrence, 1862) SCLATER and SALVIN, Proc. Zool. Soc. London, 1864, 372, part.

Porzana albigularis SCLATER and SALVIN, Proc. Zool. Soc. London, 1867, 280 (Bluefields River, e. Nicaragua); 1868, 454, part (Nicaragua; Costa Rica); Exotic Orn., 1868, 109, part.—SALVIN, Ibis, 1872, 313 (Nicaragua).—RIDGWAY, Proc. U. S. Nat. Mus., iv, 1881, 201, part (Costa Rica; Mosquito Coast, Nicaragua).

[*Porzana*] *albigularis* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part (Nicaragua).

[*Aramides*] *albigularis* GRAY, Hand-list, iii, 1871, 61, No. 10442, part.

Creciseus albigularis SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 140, part (Nicaragua).

⁶² Eighteen specimens from Nicaragua, Costa Rica, and Panama, including the type of *leucogastra* Ridgway.

⁶³ Nine specimens from Nicaragua, Costa Rica, and Panama, including the type of *cinereiceps*.

- Porzana cinereiceps* LAWRENCE, Ann. Lyc. Nat. Hist. New York, xi, 1875, 90 (Talamanca, e. Costa Rica; coll. U. S. Nat. Mus.)—RIDGWAY, Proc. U. S. Nat. Mus., i, 1878, 252, in text (Costa Rica); vi, 1884, 409, footnote (diagnosis).—ZELEDÓN, Proc. U. S. Nat. Mus., viii, 1885, 114 (Costa Rica).
- Circus cinereiceps* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 141, footnote, 337 (Rio Escondido, Nicaragua).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 325, part (Greytown, Bluefields, Rio Escondido, and Los Sábalos, e. Nicaragua; Talamanca, Pacuarito, Desamparados, Jimenez, Reventazón, Pacuare, Sipurio, Juan Viñas, Azahar de Cartago, Corillo, and Rio Frio, Costa Rica).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 410 (Juan Viñas, Reventazón, Carillo, Cariblanco de Serapiquí, Caché, Guápiles, and Bonilla, Costa Rica; habits).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 36 (range).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Almirante and vicinity; Changuinola, Guabo, Panama).
- Limnocrex cinereiceps* RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 4.
- Porzana leucogastra* RIDGWAY, Proc. U. S. Nat. Mus., vi, 1884, 408 (Los Sabolós, e. Nicaragua; U. S. Nat. Mus.).
- P[orzana] leucogastra* RIDGWAY, Proc. U. S. Nat. Mus., x, 1888, 111 (diagnosis; range).
- Circus leucogaster* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 140 footnote.
- [*Circus*] *leucogaster* SHARPE, Hand-list, i, 1899, 105.
- Laterallus albigularis cinereiceps* PETERS, Check-list Birds of World, ii, 1934, 190.—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304, (Panamá, Caribbean Slope east of Rio Calovevera; Nicaragua to w. Panamá).

LATERALLUS ALBIGULARIS ALBIGULARIS (Lawrence)

PANAMANIAN WHITE-THROATED RAIL

Adult (sexes alike), *dark phase*.—Similar to the corresponding phase of *Laterallus albigularis cinereiceps*, but with the forehead, crown, and occiput bright sepia to bright Prout's brown; the upperparts of the body more brownish, warm sepia to Prout's brown instead of bister; lores, cheeks, and auriculars Mikado brown to deep russet and hazel; chin purer white; size averaging slightly larger.

Adult (sexes alike), *pale phase*.—Similar to the pale phase of *Laterallus albigularis cinereiceps*, but with the same differences on the head and upper parts as in the dark phase.

Juvenal (sexes alike).—Similar to the corresponding stage in *cinereiceps* but more rufescent above; the upperparts of the body Brusel's brown to raw umber instead of clove brown, the top of the head sepia instead of bister; the sides of head and neck, and the breast and abdomen lightly tinged with pinkish cinnamon.

Natal down.—Not recorded.

Adult male.—Wing, 73–80.5 (76.8); tail 25.5–34 (29.1); exposed culmen 16–19 (18.1); tarsus 27–32 (29.7); middle toe without claw 29–36 (32.3 mm.).⁶⁴

⁶⁴ Sixteen specimens from Panama and Colombia.

Adult female.—Wing 71–79 (74.5); tail 24–33.5 (29.6); exposed culmen 15.5–18.5 (17.1); tarsus 27–30 (28.5); middle toe without claw 28–34 (30.5 mm.).⁶⁵

Range.—Resident from southwestern Costa Rica (Gulf of Nicoya; Nicoya; Las Trojas) on the Pacific side, and Veraguas, Panamá, on the Caribbean, south through eastern Panama (Laguna del Pita; Canal Zone; Lion Hill; Cana, Darien; Permé), and western Colombia (Yumbo, Valle; Remedios; Antioquia; San Antonio; Barbacoas); to western Ecuador (San Javier; Santo Domingo; Esmeraldas; Rio de Oro); and east to Santa Marta, Colombia (Pueblo Viejo; Mamatoco; Fundación; La Concepción; Cienaga; Palomina).

Type locality.—"Atlantic side of the Isthmus of Panama along the line of the Panama Railroad."

Corethrura albigularis LAWRENCE, ANN. LYN. NAT. HIST. NEW YORK, vii, 1862, 302 (Lion Hill, Panamá; coll. G. N. Lawrence).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1864, 372, part (Panamá).

Porzana albigularis SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 454, part (monogr.).—1879, 546 (Remedios, Antioquia, Colombia; descr., nest and eggs); Exotic Orn., 1868, 109, part, pl. 55—LAWRENCE, ANN. LYN. NAT. HIST. NEW YORK, ix, 1868 (publ. 1869), 142, (Gulf of Nicoya, Costa Rica)—RIDGWAY, Proc. U. S. Nat. Mus., iv, 1881, 201, part; vi, 1883, 409, footnote (diagnosis); x, 1887, 111 (diagnosis).—ZELEDÓN, Proc. U. S. Nat. Mus., viii, 1885, 114 (Costa Rica); Anal. Mus. Nac. Costa Rica, i, 1888, 131 (Costa Rica).—RICHMOND, Auk, xii, 1895, 31 (synonymy; crit.).—BANGS, Proc. Biol. Soc. Washington, xii, 1898, 157 (Pueblo Viejo, Santa Marta, Colombia), 172 (Palomina, Santa Marta); Proc. New England Zool. Club, ii, 1900, 14 (Loma del León, Panamá).

[*Porzana*] *albigularis* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140, part.—RIDGWAY, Proc. U. S. Nat. Mus., x, 1888, 111 (diagnosis; range).

[*Aramides*] *albigularis* GRAY, Hand-list, iii, 1871, 61, No. 10442.

Creciscus albigularis SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 140 (Baranca de Nicoya, Costa Rica; Verágua, w. Panamá; Lion Hill, Panamá; Remedios, Colombia; excl. loc. "Nicaragua").—HARTERT, Nov. Zool., ix, 1902, 604 (San Javier, nw. Ecuador; crit.).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 324 (Las Trojas, Costa Rica; Verágua, Lion Hill, and Laguna del Pita, Panamá, Colombia).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 410 (Pacific coast Costa Rica; crit.).—MÉNÉGAUX, Rapports, Dr. Rivet, Mission Serv. Geogr., "Arc Merid. Equat. en Amer. du Sud, Sous le Contr. Sci. de l'Acad. Sci. de France," Zool., ix, 1911, 8 (Santo Domingo, Ecuador).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 36 (range).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 218 (San Antonio and Barbacoas, Colombia; crit.).—TODD and CARRIKER, Ann. Carnegie Mus., xiv, 1922, 179 (La Concepción, Mamatoco, and Fundación, Santa Marta, Colombia).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., lv, 1926, 178 (Esmeraldas and Rio de Oro, Ecuador).—STURGIS, Field Book Birds Panama Canal Zone, 1928, 43 (descr.; Panama Canal Zone).—GRISCOM, Bull. Mus. Comp. Zool., lxxix, 1929, 155 (Cana, Darien, Panama); lxxii, 1932, 321 (Perme,

⁶⁵ Fifteen specimens from Costa Rica, Panama, and Colombia; including the type of *alfari* Ridgway.

- Panama).—DARLINGTON, Bull. Mus. Comp. Zool., lxxi, 1931, 373 (Cienago, Magdalena, Colombia; habits).
- [*Circus*] *albigularis* SHARPE, Hand-list, i, 1899, 105.—BRABOURNE and CHUBB, Birds South America, i, 1912, 25 (w. Colombia; nw. Ecuador).
- Limnocrex albigularis* RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 4.
- Porzana alfari* RIDGWAY, Proc. U. S. Nat. Mus., x, 1887, 111 (Las Trojas, sw. Costa Rica; coll. U. S. Nat. Mus.).—ZELEDÓN, Anal. Mus. Nac. Costa Rica, i, 1888, 131 (Las Trojas).
- Circus alfara* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 141, footnote.
- [*Circus*] *alfari* SHARPE, Hand-list, i, 1899, 105.
- Circus cinereiceps* (not *Porzana cinereiceps* Lawrence ?) SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 325, part (Nicoya and Barranca de Nicoya, w. Costa Rica).
- Laterallus albigularis* MEISE, Journ. für Orn., lxxxii, 1934, 267 in text.
- Laterallus albigularis albigularis* PETERS, Check-list Birds of World, ii, 1934, 190.—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 304 (Panamá, from Canal Zone eastward, to w. Ecuador).
- L[aterallus] m[elanophaeus] albigularis* CONOVER, Auk, li, 1934, 365, in text.

LATERALLUS RUBER TAMAULIPENSIS (Nelson)

TAMAULIPAS RUDDY RAIL

Adult male.⁶⁶—Similar to that of *Laterallus ruber ruber*, but with bill distinctly longer and heavier; color appreciably paler and duller, less rufous, the chestnut on the upperparts restricted to the anterior interscapulars, the rest of the back and all the upper wing coverts dark chocolate brown; below less washed with chestnut, the thighs and vent washed with hair brown and chestnut mixed; under wing coverts with almost no cinnamon edgings.

Wing 76–78.5; tail 31–31.5; exposed culmen 30; tarsus 32.5–34; middle toe without claw 32–33.5 mm.⁶⁷

Other plumages unknown.

Range.—Known only from the marshes near the Tamesi River, southern Tamaulipas.

Type locality.—Alta Mira, Tamaulipas, Mexico.

Circus ruber tamaulipensis NELSON, Proc. Biol. Soc. Washington, xxxix, 1926, 105 (Alta Mira, Tamaulipas, Mexico; orig. descr.).

Laterallus ruber tamaulipensis PETERS, Check-list Birds of World, ii, 1934, 191.

LATERALLUS RUBER RUBER (Selater and Salvin)

GUATEMALAN RUDDY RAIL

Adult (sexes alike).—Forehead, crown, occiput, nape, lores, malar area, cheeks, and auriculars dusky neutral gray to blackish slate; interscapulars, upper back, lesser and outer middle upper wing

⁶⁶ Female unknown, but probably similar.

⁶⁷ Two specimens, including the type.

coverts, and sides of neck bright chestnut; lower back, rump, and upper tail coverts chocolate-brown to clove brown; inner middle and all the greater upper wing coverts bone brown, externally washed or edges with chestnut; scapulars and inner secondaries clove brown with a sepia tinge; outer secondaries and the primaries clove brown with a dull olive-brown gloss; rectrices chaetura drab to fuscous black; entire underparts cinnamon very heavily suffused with deep chestnut on the sides, flanks, thighs, vent, and under tail coverts which are almost as richly colored as the upper back, the breast also but much less heavily washed with chestnut, chin palest, in some specimens light pinkish cinnamon to almost white; under wing coverts dusky clove brown broadly edged with cinnamon; iris reddish brown; bill dull black; tarsi and toes olive-green.

Other plumages unknown.

Adult male.—Wing 73.5–84.5 (78.1); tail 28–36 (31.2); exposed culmen 18–21.5 (20.2); tarsus 30.5–35 (32.6); middle toe without claw 30–35 (31.7 mm.).⁶⁸

Adult females: Wing 70.5–80 (76.3); tail 27–32.5 (30.3); exposed culmen 17.5–21.5 (19.6); tarsus 29–32 (30.8); middle toe without claw 28–32.5 (30.5 mm.).⁶⁹

Range.—Resident in marshy areas in the tropical zone from Yucatan (Xbac ?, Cozumel Island); and Guatemala (Dueñas; Coban; Choctum; Vera Paz; Chama; Laguna del Soto and Laguna Perdida, Petén; Secanquin; Chimoxan; Quirigua; Finca Concepción; Lake Amatitlan); to British Honduras (Belize; Manatee district; Toledo district); and Honduras (Lancetilla and Laguna Tolva).

Type locality.—Vera Paz, Guatemala.

Corethrura rubra SCLATER and SALVIN, Proc. Zool. Soc. London, 1860, 300 (Vera Paz, Guatemala; coll. O. Salvin).—SALVIN and SCLATER, Ibis, 1860, 277 (Dueñas, Guatemala).

Porzana rubra SCLATER and SALVIN, Exotic Orn., 1867, 31, pl. 16; Proc. Zool. Soc. London, 1868, 452 (monogr.).—SALVIN, Ibis, 1889, 378 (Cozumel Island, Yucatan); 1890, 89 (Yucatan).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 31 (range).

[*Porzana*] *rubra* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 139.

[*Aramides*] *rubra* GRAY, Hand-list, iii, 1871, 60, No. 10434.

Rufirallus rubrus BOUCARD, Liste Ois.-récol. Guatemala, 1878, 12 (Vera Paz).

Creciscus ruber SHARPE, Cat. Birds Brit. Mus. xxiii, 1894, 143 (Cozumel Island; British Honduras; Coban, Choctum, Lake of Dueñas, and Vera Paz, Guatemala).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 326 (same localities).—COLE, Bull. Mus. Comp. Zool., 1, 1906, 146 (Xbac ?, Yucatan).—MILLER (W. deW.), Am. Mus. Nov., No. 25, 1921, 2 (Mexico; Guatemala).

[*Creciscus*] *ruber* SHARPE, Hand-list, i, 1899, 105.

⁶⁸ Twelve specimens from Guatemala, Honduras, and British Honduras.

⁶⁹ Six specimens from Guatemala and Honduras.

- [*Erythrolimnas*] *ruber* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320 (Belize, British Honduras).
Thryocera rubra RIDGWAY, Smiths. Misc. Coll., lxxii, No. 4, 1920, 4.
Creciscus ruber ruber NELSON, Proc. Biol. Soc. Washington, xxxix, 1926, 106.—PETERS, Bull. Mus. Comp. Zool., lxxix, 1929, 407 (Lancetilla, Honduras; habits).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxxiv, 1932, 122 (Guatemala; not uncommon on Caribbean side; Chama; Secanquim; Chimoxan; Quiriqua; nest and eggs at Finca Concepcion).
Laterallus ruber ruber PETERS, Check-list Birds of World, ii, 1934, 191.

LATERALLUS RUBER RUBERRIMUS (Miller and Griscom)

NICARAGUAN RUDDY RAIL

Adult (sexes alike).—Similar to that of *Laterallus ruber ruber* but the bright chestnut on the underparts more extensive, covering the entire dorsal side of the body, including the lower back, rump, upper tail and wing coverts; the primaries and rectrices averaging slightly duller and darker; bill shorter and relatively stouter.

Other plumages unknown.

Adult male.—Wing 75; tail 28; exposed culmen 20; tarsus 32; middle toe without claw 32 mm.⁷⁰

Adult female.—Wing 74–77; tail 29.5–35; exposed culmen 17–18; tarsus 29.5–31; middle toe without claw 29.5–32 mm.⁷¹

Range.—Known as yet by specimens from only two localities: Jinotega, Nicaragua, and San Sebastian, El Salvador (seen also at Lake Olomega, and Hacienda Zapotitán, El Salvador).

Type locality.—Jinotega, Nicaragua.

- Creciscus ruberrimus* MILLER (W. DeW.) and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 2 (Jinotega, Nicaragua, 3,000 feet., coll. Amer. Mus. Nat. Hist.).
Creciscus ruber ruberrimus NELSON, Proc. Biol. Soc. Washington, xxxix, 1926, 106.
Laterallus ruber ruberrimus PETERS, Check-list Birds of World, ii, 1934, 191.—VAN ROSSEM, Birds El Salvador, 1938, 161 (El Salvador; resident in fresh water marshes from sea level to 1,500 feet; San Sebastian; Lake Olomega; Hacienda Zapotitán; nest and eggs).

Genus COTURNICOPS Gray

- Coturnicops* BONAPARTE, Ann. Sci. Nat., sér. 4, Zool., i, 1854, 150 (*nomen nudum*).
Coturnicops GRAY, Cat. Gen. and Subgen. Birds, 1855, 120. (Type, by monotypy, *Fulica noveboracensis* Gmelin.)
Ortygops HEINE, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 320. (Substitute for *Coturnicops*, on grounds of purism.)

Small Ralleae (wing about 75–90 mm.), with longest primaries exceeding distal secondaries by much less than one-third the length of

⁷⁰ One specimen from El Salvador.

⁷¹ Two specimens, including the type, from Nicaragua and El Salvador.

wing; alula falling little short of longest primary coverts; bill small, only about half as long as head, and with axillars and under wing coverts immaculate white and middle secondaries mostly white.

Bill relatively small, only about half as long as head (the culmen very little if any more than half as long as tarsus), compressed, its width at laterofrontal antia equal to about two-thirds to three-fourths its depth at same point, the latter equal to a little more than two-fifths (*C. noveboracensis*) to decidedly less than one-third (*C. exquisita*) the length of culmen; culmen elevated basally, more or less depressed above nostril, thence more or less strongly decurved to tip; gonys nearly as long as mandibular rami, nearly straight, strongly ascending terminally, its basal angle very distinct; mandibular rami without a distinct lateral groove; nasal fossa extending about half way from edge of loreal feathering to tip of maxilla, or a little less, well defined; nostril rela-

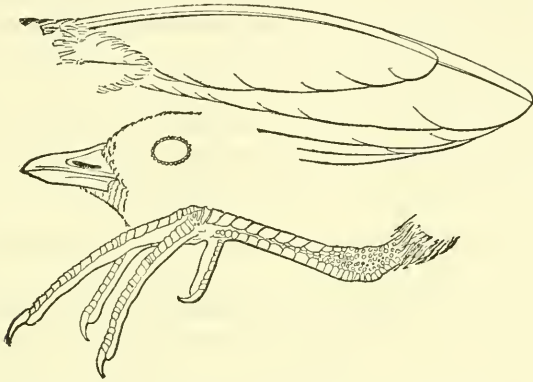


FIGURE 11.—*Coturnicops noveboracensis*. Natural size.

tively large, narrowly elliptical, somewhat oblique (especially in *C. exquisita*), though nearly if not quite parallel to maxillary tomium, its anterior end nearer to laterofrontal antia than to tip of maxilla; anterior edge of loreal feathering forming a straight or faintly convex oblique line, extending downward and backward from laterofrontal antia to rictus, the anterior edge of frontal feathering notched to receive the angular base of culmen; malar antia on line with laterofrontal antia, or very slightly posterior to it, the mental antia on line with posterior end (*C. noveboracensis*) or middle (*C. exquisita*) of nostril. Wing relatively rather small, very concave beneath, much rounded, the longest primaries exceeding distal secondaries by much less than one-third the length of wing, but projecting considerably beyond tips of elongated proximal secondaries; second, or second and third, primaries (from outside) longest, the first (outermost) about equal to fifth (*C. noveboracensis*) or seventh (*C. exquisita*); alula falling decidedly short

of tips of longest primary coverts. Tail about two-fifths as long as wing, the rectrices soft, narrow, and obtusely pointed, mostly hidden by coverts. Tarsus about equal to middle toe without claw, or very slightly shorter, the acrotarsium with a single row of broad, transverse scutella, the planta tarsi with a similar single row, the latter separated from the former (especially on inner side) by a depressed space occupied by smaller irregular scales; outer toe with claw falling decidedly short of base of middle claw, the inner toe, without claw, reaching to or slightly beyond penultimate articulation of middle toe; hallux about as long as basal phalanx of outer toe; claws relatively small, moderately curved, acute, compressed.

Plumage and coloration.—Plumage full, compact, and firm, except remiges and rectrices, which are rather soft, the former very broad and strongly bowed; contour feathers broad. Upper parts glossy brown or brown and buffy broken by broad stripes or spots of black crossed by narrow lines of white; under parts brown or buffy anteriorly and laterally, the abdomen, axillars, and under wing-coverts immaculate white; middle secondaries mostly white.

Range.—Nearctic region and northeastern portion of Palearctic region; southern South America; northeastern and southeastern Africa. Four species; only one in North America.⁷²

KEY TO THE RACES OF COTURNICOPS NOVEBORACENSIS

- a. White transverse marks on upperparts extremely fine (0.3–0.5 mm. wide)
 Coturnicops noveboracensis noveboracensis (p. 172)
- aa. White transverse marks on upperparts wider (about 1–1.5 mm. wide)
 Coturnicops noveboracensis goldmani (p. 179)

COTURNICOPS NOVEBORACENSIS NOVEBORACENSIS (Gmelin)

YELLOW RAIL

Adult (sexes alike), *rufescent phase.*—Forehead, upper lores, and a broad superciliary band extending to the sides of the occiput, and joining with the malar area and sides of the neck of the same color, posterior to the ariculars bright, deep tawny-olive, each feather with a very narrow tip of Saccardo's umber; crown (extending in a forward-projecting V to the midline of the forehead and widening posteriorly), occiput and nape black, each feather either narrowly transversely tipped with white or with this white bar broken into two lateral

⁷²I have not seen *Zapornia notata* Gould, of Uruguay, Patagonia, etc., or *Coturnicops ayresii* Gurney, of southeastern Africa, both of which are referred to *Coturnicops* by Sharpe (in Cat. Birds Brit. Mus., xxiii, 1894, 128, 129) and Peters (Check-list Birds of World, ii, 1934, 193). *C. noveboracensis* and *C. exquisita* are the forms on which the above description is based.

specks of the same; interscapulars, scapulars, back, rump, and upper tail coverts black, each feather narrowly tipped with white and crossed by a narrow white band about 5 mm. anterior to the tip, and broadly laterally edged with bright snuff brown, paling on the scapulars to bright clay color; upper wing coverts dark Saccardo's umber to sepia, transversely incompletely barred with white and tipped with the same; alula olive-brown, the outer webs pale buffy white; primaries grayish sepia to olive-brown; five or six outer secondaries largely pure white, the outermost two usually with their outer webs grayish sepia and only the inner webs white; innermost secondaries and long scapulars like the back but the lateral edgings paler—bright cinnamon-buff; rectrices black crossed by two or three very narrow white bands and narrowly laterally edged with sayal brown; lower part of the lores, circumocular area, cheeks, and auriculars deep tawny-olive mixed with blackish and transversely speckled with white; chin and upper throat light buff; sides of upper throat, entire lower throat and breast pale tawny-olive, each feather, or at least most of them, subterminally marked with white and narrowly tipped with Saccardo's umber to sepia (after these narrow tips wear off, the feathers are white-tipped), giving these areas a somewhat scalloped appearance; middle of abdomen posterior to as far as the vent unmarked white with or without a slight buffy tinge; sides, flanks, and vent dark clove brown to fuscous-black, the feathers crossed by a narrow white subterminal bar and tipped with the same; thighs paler—very dark hair brown barred with white; under tail coverts pinkish sayal brown; axillars and under wing coverts white, the latter, in some cases, with a varying amount of grayish brown; iris yellowish brown to reddish; bill light greenish yellow or orange-yellow, dusky at tip and along the culmen in some cases; tarsi and toes pale greenish or brownish flesh color.

Adult (sexes alike), *pale phase*.—Exactly like the rufescent phase but with all the tawny or brownish parts lighter—the forehead, superciliaries pale grayish cinnamon-buff; lower throat and breast slightly paler still; lateral edges of the feathers of the upper parts grayish cinnamon-buff; sides, flanks, and vent dull bister to light clove brown.

Juvenal (sexes alike), *rufescent phase*.—Similar to the adult of the same phase but with no white marks on the top of the head, hind neck, or upper back (occasionally a very few on the upper back), the dark centers of the feathers of these parts broader, producing a streaked appearance; upper wing coverts and alula slightly paler and slightly more ashy; the margins of the inner secondaries and the long scapulars paler—cinnamon-buff; on the whole the dark centers of the dorsal feathers slightly more brownish, less blackish than in adults; feathers of breast and sides of throat with generally darker transverse marks; the middle of the abdomen more washed with buff, less whitish;

sides, flanks, and vent slightly duller and grayer; under wing coverts more extensively splashed with brownish.

Juvenal (sexes alike), *pale phase*.—Similar to the corresponding stage of the rufescent phase but much paler—the superciliaries, malar area, lower throat, breast, and the broad margins of the feathers of the upperparts from the crown to and including the upper back and the upper wing coverts pinkish buff, the dark centers of the feathers warm sepia to very dark raw umber.⁷³

Natal down.—Black with no or only a very faint greenish gloss on the top of the head and the throat, with a dull brownish cast on the back and especially on the abdomen (in dried skins); bill flesh color; tarsi and toes jet black.

Adult male.—Wing 73–93 (86.7); tail 27.5–38 (33.3); exposed culmen 11.5–15.5 (13.9); tarsus 21–27.5 (23.7); middle toe without claw 21–26 (23.9 mm.).⁷⁴

⁷³ Roberts, *Birds Minnesota*, ii, 1932, p. 550, considers what is here called the juvenal plumage to be the adult and vice versa. The evidence available does not support this, but the matter should not be considered as settled.

⁷⁴ Fifty-nine specimens from Saskatchewan, Hudson Bay, Massachusetts, New York, Pennsylvania, District of Columbia, Virginia, South Carolina, Louisiana, Florida, Arkansas, Alabama, Texas, Illinois, Ohio, Missouri, Indiana, and California. The following more detailed mensural data may be of interest, inasmuch as attempts have been made to divide this form into additional races:

Locality	Number of specimens	Sex	Wing	Tail	Exposed culmen	Tarsus	Middle toe without claw
Illinois.....	13	♂	73-91 (85)	30-35.5 (32.6)	13-15 (14.3)	22-25 (24.1)	23-25 (24)
Massachusetts.....	7	♂	80-92 (84.5)	30.5-37 (33.5)	12-13.5 (13)	21-24.5 (22.7)	21-24.5 (23)
Pennsylvania.....	8	♂	86.5-93 (89.1)	31-38 (34.5)	13-14 (13.4)	22.5-26 (24.7)	23.5-26 (24.9)
California.....	12	♂	79-88.5 (85.7)	29-36 (32.7)	12-15 (13.9)	22.5-25.5 (24.2)	22-26 (24)
Hudson Bay.....	2	♂	84-87	29-34	14-14.5	21-23.5	24-25
District of Columbia and Virginia.....	4	♂	80-87.5 (84)	28-37 (32.7)	11.5-14.5 (13)	22-23.5 (22.9)	21-26 (23.5)
Indiana.....	1	♂	85	32	14	22.5	25
Ohio.....	1	♂	89.5	32	14.5	24	24
Missouri.....	1	♂	88.5	32	15.5	22	24
Arkansas.....	1	♂	85	36	12.5	21.5	24.5
Alabama.....	1	♂	89	37	13.5	-----	-----
Florida.....	1	♂	88.5	35.5	13	24	23.5
Texas.....	1	♂	89.5	34	14	24	24
Louisiana.....	2	♂	80-89.5	27.5-33.5	12.5	22-23	23-24.5
South Carolina.....	2	♂	83.5-87.5	35.5-38.5	12.5-14	22-23	20.5-23
Saskatchewan.....	1	♂	88.5	34	14.5	25	25
New York.....	1	♂	87	34	14.5	24	23.5

Adult female.—Wing 75.5–89 (84.2); tail 28.5–39 (32.4); exposed culmen (13.3); tarsus 20–26 (22.7); middle toe without claw 19.5–27 (22.9 mm.).⁷⁵

Range.—Breeds in fresh-water marshes from Mackenzie (Fort Resolution; Great Slave Lake, Athabasca; Little Buffalo River; and Salt River); Manitoba (York Factory, Hudson Bay); Ontario (Fort Severn); Quebec (Fort George); Maine (Calais); and Nova Scotia (not definitely recorded as breeding); south to Oregon (Aspen Lake, Klamath County); California (Mono County); Alberta (Red Deer and Camrose); Saskatchewan (Fort Qu'Appelle); North Dakota (Devils Lake; Esmond); Wisconsin (Jefferson County and Racine); Illinois (Chicago; Winnebago); Ohio (Circleville and Hamilton); and Massachusetts (Salem; Boston; Plymouth); possibly to New Hampshire (Hampton); Rhode Island (Westerly); Connecticut (New Haven; Milford); District of Columbia; Pennsylvania (Erie); Indiana (Brookville; Bloomington; Vincennes); Missouri (St. Louis; Independence); Kansas (Lawrence); and Colorado (Barr).

Winters from California (Suisun Marshes; Humboldt Bay); Oregon (Scio); Arizona (Sacaton); Louisiana (Belle Isle; New Orleans); Mississippi (Biloxi; Bay St. Louis); Alabama (Barachias; Greensboro); Georgia (Darien); South Carolina (Mount Pleasant; Chester);

⁷⁵ Forty-four specimens from Hudson Bay, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, District of Columbia, Virginia, South Carolina, Alabama, Louisiana, Missouri, Texas, and California:

Locality	Number of specimens	Sex	Wing	Tail	Exposed culmen	Tarsus	Middle toe without claw
Hudson Bay.....	1	♀	80.5	30.5	14	21	23
California.....	8	♀	80–86 (84.1)	30–34.5 (32.2)	12.5–14.5 (13.3)	20.5–23 (21.1)	21–24 (22.5)
Pennsylvania.....	4	♀	79–82 (80.6)	28.5–31 (29.7)	11–14 (12.9)	20–22.5 (21.2)	20.5–22 (21.7)
New York.....	2	♀	75.5–81	29.5–31.5	11–14.5	21–22	21–21.5
Maryland, Virginia, and District of Columbia.....	3	♀	80–84 (82.3)	29–32 (30.3)	12–14.5 (12.8)	21.5–22 (21.8)	22–24 (22.8)
Illinois.....	6	♀	77.5–89 (82.7)	29.5–34.5 (32.6)	12.5–15 (13.4)	20–26 (22.5)	19.5–23 (22.1)
Missouri.....	1	♀	78	33	13	22	23
Louisiana.....	1	♀	80	31.5	14.5	22	22
New Jersey.....	1	♀	88	34.5	13	24	24
Connecticut.....	1	♀	83	33.5	12.5	22.5	22
Massachusetts.....	2	♀	80–87.5	31–34	12.5–14	22–23	22
Texas.....	2	♀	83–86.5	32.5	13–13.5	25	24–24.5
Alabama.....	1	♀	87	39	14	23.5	27
South Carolina.....	11	♀	78–86 (81.6)	30.5–33 (31.8)	11.5–13.5 (12.6)	20.5–23 (22)	21–22.5 (22)

North Carolina (Weaverville; New Bern; Fort Macon); south to Florida (south to Cape Sable); Louisiana (Diamond; Belle Isle); and California (Riverside County). Also reported casually from Maryland (Prince Georges County) and New York (Seaford; Ithaca); also from Bermuda, Cuba (one doubtful record); and from New Brunswick.

Type locality.—New York.

[*Fulica*] *novaboracensis* GMELIN, Syst. Nat., i, pt. 2, 1789, 701 (New York; based on *Yellow-breasted Gallinule* Pennant, Arctic Zool., ii, 1785, 491; Latham, Synopsis Birds, iii, pt. i, 1785, 262).

Fulica novaboracensis TURTON, Syst. Nat., i, 1802, 423.

Gallinula novaboracensis LATHAM, Index Orn., ii, 1790, 771.

Ortygometra novaboracensis STEPHENS, Shaw's Gen. Zool., xii, pt. 1, 1824, 222.—BONAPARTE, Geogr. and Comp. List, 1833, 53.—AUDUBON, Synopsis, 1839, 213; Birds Amer., Svo ed., v, 1842, 152, pl. 307.—LINSLEY, Amer. Journ. Sci. and Arts, xlv, 1843, 268 (Connecticut).—JARDINE, Contr. Orn., 1848, 84 (Bermuda, Oct., 2 specimens).—HURDIS, Jardine's Contr. Orn., 1850, 11 (Bermuda, Oct. 1847, 2 specimens).—PRATTEN, Trans. Illinois Agr. Assoc., i, 1855, 607 (Illinois).—PUTNAM, Proc. Essex Inst., i, 1856, 229 (Essex County, Mass.).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).

Ort[ygometra] novaboracensis MARTENS, Journ. für Orn., vii, 1859, 220 (Bermuda).

Rallus novaboracensis BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 335; Specchio Comp., 1827, 212; Amer. Orn., iv, 1832, 136, pl. 27, fig. 2.—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 402 (descr.; Severn River).—LESSON, Traité d'Orn., 1831, 538.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 215.—AUDUBON, Orn. Biogr., iv, 1838, 251, pl. 329; v, 1839, 574.—PEABODY, Rep. Orn. Massachusetts, 1839, 375.—WILLIS, Ann. Rep. Smiths. Inst. for 1858 (1859), 284 (Nova Scotia).

Coturnicops novaboracensis BONAPARTE, Ann. Sci. Nat., ser. 4, i, No. 2, 1854, 46.—BREWER, Proc. Boston Soc. Nat. Hist., xvii, 1875, 447 (New England).—PREBLE, North Amer. Fauna, No. 27, 1908, 314 (delta of Great Slave Lake, July 17; Athabasca Lake; Little Buffalo River, 50 miles s. of Fort Resolution).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xxv, 1908, 364; Check-list, ed. 3, 1910, 104; ed. 4, 1931, 98.—BRAISLIN, Auk, xxvi, 1909, 214 (Seaford, Long Island, Sept., Dec. 4, and Jan. 10).—CORY, Field Mus. Nat. Hist. Publ. 131, 1909, 384 (Illinois; Wisconsin).—WAYNE, Birds South Carolina, 1910, 38 (winter resident, Oct. 26–Mar. 30).—EATON, Birds New York, i, 1910, 250 pl. 26 (numerous records).—WILLETT, Pacific Coast Avif., No. 7, 1912, 33 (Newport Bay, Orange County, Calif., Dec. 12, 1896).—SWALES, Auk, xxix, 1912, 100 (Wayne County, Mich., Apr. 22, 1911; also Mar. 25, 1908; mouth of Thames River, Lake St. Clair, Ontario, June).—BARROWS, Michigan Bird Life, 1912, 159.—FORBUSH, Game-Birds, Wild-fowl, and Shore-birds, 1912, 213 (habits).—FAY, Auk, xxix, 1912, 237 (West Roxbury, Mass., Oct. 3, 1911; Chatham, Oct. 2, 1911, and Nov. 25, 1911).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 10.—BUNKER, Kansas Univ. Sci. Bull. 7, 1913, 143 (Kansas, summer resident).—HATHAWAY, Auk, xxx, 1913, 550 (Rhode Island records).—MORRIS, Auk, xxx, 1913, 580 (near Springfield, Mass., Aug. 26, 1913).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 31, fig. 13 (geogr. range and migration routes).—LINCOLN, Auk, xxxi, 1914, 256 (Barr, Colo., July 1906).—GRINNELL (J.), Pacific Coast Avif., No. 11, 1915, 47 (numerous

winter records for California).—HOLLISTER, Proc. Biol. Soc. Washington, xxxi, 1918, 93 (Washington, D. C., May 20, 1917).—TAVERNER, Auk, xxxvi, 1919, 265 (Red Deer and Camrose, Alberta, breeding).—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 29 (Pelican Lake, Cherry County, Nebr., June 10; breeding ?).—BRYANT (H. C.), Condor, xxii, 1920, 33 (Quincy, Calif., Apr. 16 and 24, 1889).—DAWSON, Birds California (students' ed.), iii, 1923, 1544 (genl.; California).—GRISCOM, Birds New York City Region, 1923, 137 (status, New York City).—MILLER, Bull. Amer. Mus. Nat. Hist., 1, 1924, 308 (ptilosis).—HOWELL, Birds Alabama, 1924, 90; ed. 2, 1928, 90 (Alabama).—SIMMONS, Birds Austin Region, 1925, 48 (Austin, Tex.; habits; descr.).—BAILEY, Birds Florida, 1925, 43, pl. 23 (fig.; distr.; Florida).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 360, pl. 23 (fig.; descr.; habits.; New England).—BLINCOE, Auk, xlii, 1925, 419 (Bardstown, Ky.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (Fulton County, Ky.).—WILLIAMS, Wils. Bull., xxxviii, 1926, 25 (Red River Valley, ne. North Dakota).—TAVERNER, Birds Western Canada, 1926, 126 (descr.; distr.; western Canada).—SMYTH, Auk, xlv, 1927, 45 (Montgomery County, Va.).—PRILL, Wils. Bull., xl, 1928, 112 (Scio, Oreg.; spec.; new to Oregon list).—HICKS, Wils. Bull., xli, 1929, 43 (Westerville and near Willard, Ohio).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 27 (Washington, D. C.).—URNER, Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 65 (Union County, N. J.).—FLEMING, Auk, xlvii, 1930, 68 (specimen; Ashbridge Marsh, Toronto).—HELMUTH, Auk, xlvii, 1930, 531 (Long Island, N. Y.).—PIERCE, Wils. Bull., xlii, 1930, 262 (Buchanan County, Iowa).—[ARTHUR], Birds Louisiana, 1931, 240 in text (descr.; distr. in Louisiana).—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 57 (descr.; distr.; Arkansas).—BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 194 (Grand Isle, La.).—WOOD, Auk, xlviii, 1931, 617 in text (specimen; Copper Harbor, Mich.).—DUMONT, Wils. Bull., xlv, 1932, 237 (Iowa records).—ROBERTS, Birds Minnesota, i, 1932, 448 (distr.; habits; Minnesota).—HOWELL, Florida Bird Life, 1932, 207 (genl.; Florida).—HICKS, Wils. Bull., xlv, 1933, 181 (Ashtabula County, Ohio, Pymatuning Bog, adult seen July 2; young found dead Aug. 9).—WILLETT, Pacific Coast Avif., No. 21, 1933, 53 (sw. Calif.; rare winter visitor; spec. Newport Bay, near Corona, and Santa Barbara).—VOGT, Auk, i, 1933, 446 (Jones Beach, Long Island, N. Y., 1 found dead Sept. 10, 1932).—TAVERNER, Birds Canada, 1934, 173 (noted in all eastern and Prairie Provinces but not in British Columbia).—TAVERNER and SUTTON, Ann. Carnegie Mus., xxiii, 1934, 33 (Churchill, Manitoba, unsatisfactory record).—WALKINSHAW, Auk, li, 1934, 80 (Battle Creek, Mich.).—BRODKEB, Auk, li, 1934, 101 (one seen at Beach, ne. Illinois, Sept. 13, 1926).—LONG, Auk, li, 1934, 255 (specimen, eastern Kansas—Sedgwick, Douglas, and Greenwood Counties).—BAILEY, Auk, li, 1934, 399 (Chenier au Tigre, La., Dec. 28).—FRANZEN, Auk, li, 1934, 403 (specimen; Waukegan, Ill.).—DUMONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 62 (Iowa; fairly common migrant; occasional in summer; numerous Iowa records given).—LINDALE, Pacific Coast Avif. No. 23, 1936, 51 (Nevada; 5 miles se. of Millett P. O., Nye County, May 19, 1932).—BROOKS, Auk, liii, 1936, 97 (Barbour County, central West Virginia).—PRILL, Wils. Bull., xlix, 1937, 119 (Scio, Oreg., Feb. 1; spec.).—O'REILLY, Wils. Bull., xlix, 1937, 294 in text (near Cleveland, Ohio, Apr. 18, 1937).—WALKINSHAW, Auk, liv, 1937, 310, 311 in text (nesting; Michigan).—MURRAY, Auk, lv, 1938, 124 (Lexington, Va., Sept. 29, 1937; Harrisonburg, Va., Oct. 15, 1936).—DEVITT, Auk, lv, 1938, 284 (s. Ontario).—SMITH, Auk, lv, 1938, 549

- (specimen; Meadowville, Nova Scotia, May 12, 1929).—**OBERHOLSER**, Bird Life Louisiana, 1938, 205 (rare winter resident, Nov. 5 to May 1, in s. Louisiana; transient in rest of State; specimens from Grand Isle, Isle Derniere, Plaquemines Parish, New Orleans, Bayou St. John, Vinton, Sabine Station, Belle Isle, and Chernier au Tigre).—**FULLER**, Auk, lv, 1938, 670 (specimen, Churchill River, Manitoba, July 28, 1937).—**WALKINSHAW**, Auk, lvi, 1939, 227 (Michigan; status, habits, etc.).—**DEVITT**, Auk, lvi, 1939, 238 (breeding, Holland River Marsh, Ontario).
- Cortunicops noveboracensis* PICKENS, Wils. Bull., xl, 1928, 188 (lower Piedmont, Upper South Carolina).
- Coturnicops noveboracensis noveboracensis* PETERS, Check-list Birds of World, ii, 1934, 193.
- Porzana noveboracensis* BAIRD, Amer. Journ. Sci. and Arts, xlvi, 1844 (Carlisle, Pa.); Lit. Rec. and Journ. Linn. Assoc. Pennsylvania Coll., Oct. 1845, 255; Cat. North Amer. Birds, 1859, No. 557.—**CASSIN**, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 750.—**COUPER**, Can. Nat. and Geol., vii, 1862, 320 (Quebec).—**BLAKISTON**, Ibis, 1863, 135 (Brit. N. America).—**DRESSER**, Ibis, 1866, 40 (San Antonio, Tex.).—**SCLATER** and **SALVIN**, Proc. Zool. Soc. London, 1868, 457 (monogr.).—**TURNBULL**, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—**COUES**, Proc. Acad. Nat. Sci. Philadelphia, xxiii, 1871, 35 (Fort Macon, N. C.); Check-list, 1874, No. 469; ed. 2, 1882, No. 680; Birds Northwest, 1874, 539.—**NELSON**, Bull. Nutt. Orn. Club, i, 1876, 43 (ne. Illinois, breeding).—**LANGDON**, Birds Cincinnati, 1877, 16 (rare migrant).—**RATHBUN**, (F. R.), Rev. List Birds Central New York, 1879, 35.—**LINDEN**, Forest and Stream, xiii, 1879, 785 (Clinton, Iowa).—**BREWSTER**, Bull. Nutt. Orn. Club, vi, 1881, 186 (Plymouth, Mass., abundant; Wakefield, Mass.).—**NEHRLING**, Bull. Nutt. Orn. Club, vii, 1882, 224 (se. Texas, migrant).—**REID**, U. S. Nat. Mus. Bull. 25, 1884, 247 (Bermuda, Oct. 1847, 2 specimens).—**BAIRD**, **BREWER**, and **RIDGWAY**, Water Birds North Amer., i, 1884, 375 (syn.; gen.).—**SCOTT** (W. L.), Auk, ii, 1885, 110 (Toronto marshes, Ontario, June 1874).—**LAWRENCE** (N. T.), Auk, ii, 1885, 274 (Far Rockaway, Long Island, Oct.).—**Goss**, Auk, ii, 1885, 385 (near Lawrence, Kans., Apr. 18); iii, 1886, 113 (near Lawrence, Apr., Oct.).—**SETON**, Auk, iii, 1886, 150 w. Manitoba, July 13); xxv, 1908, 70 (Little Buffalo Run, 50 miles s. of Fort Resolution, Mackenzie).—**TOWNSEND** (C. H.), Auk, iii, 1886, 491 (Humboldt Bay, Calif.); Proc. U. S. Nat. Mus., x, 1887, 163, 197, 234 (Humboldt Bay).—**AMERICAN ORNITHOLOGIST'S UNION**, Check-list, 1886, and ed. 2, 1895, No. 215.—**BECKHAM**, Proc. U. S. Nat. Mus., x, 1888, 637, 651 (Bexar County, Tex.).—**SAUNDERS**, Auk, iv, 1887, 247 (Ontario).—**CORY**, Auk, v, 1888, 58 (Cuban references; descr.); Birds West Indies, 1889, 257 (accidental in Cuba); Cat. West Indian Birds, 1892, 91, 137.—**SMITH** and **PALMER**, Auk, v, 1888, 147 (near Washington, D. C., Mar. 28 and Oct. 4).—**DUTCHER**, Auk, v, 1888, 177 (Long Island records); x, 1893, 272 (near Southhampton, Long Island, 1868).—**AVERILL**, Auk, v, 1888, 319 (Gaylordsville, Conn., Mar. 4).—**THOMPSON**, Proc. U. S. Nat. Mus., xiii, 1891, 495 (Winnipeg and Fort George, Manitoba).—**STONE**, Birds Eastern Pennsylvania and New Jersey, 1894, 67 (records).—**SAGE**, Auk, xii, 1895, 311 (Portland, Conn., Sept., Oct. 1894).—**WHITE**, Auk, xiii, 1896, 173 (near Ottawa, Ontario, Oct. 23).—**BUTLER**, Rep. State Geol. Indiana for 1897 (1898), 677 (breeding in n. Indiana?).—**POSSON**, Auk, xvi, 1899, 194 (Orleans County, N. Y., Apr.).—**AMES**, Auk, xviii, 1901, 107 (Toronto, Ontario, Sept. 1).—**PREBLE**, North Amer. Fauna, No. 22, 1902, 93 (York Factory; Fort George; mouth of Severn River; notes, etc.).—**ALLEN** (G. M.), Proc. Manchester Inst. Sci. and Arts, iv, 1902,

- 189 (Hampton, N. H.).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc., Bull. 3, 1903, 39 (Wisconsin; habits).—PEABODY, Warbler, ser. 2, i, 1905, 49[–51], pl. [2] (North Dakota; breeding habits, etc.).—MORRIS, Auk, xxii, 1905, 208 (Springfield, Mass., Sept., Oct.; habits).—WAYNE, Auk, xxii, 1905, 396 (near Charleston, S. C., Feb., Nov.).—WILSON (B. H.), Wils. Bull., xviii, 1906, 2 (Scott County, Iowa, Sept. 20).—JONES (L.), Wils. Bull., xviii, 1906, 114 (Cleveland, Ohio, rare migrant); xxi, 1909, 123 (Lorain County, Ohio).—FLEMING, Auk, xxiii, 1906, 448 (Toronto, Ontario, regular migrant).—MCKETCHUM, Auk, xxiii, 1906, 457 (Dedham, Mass., May 26).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 59 (Chicago area, common summer resident).—WIDMANN, Birds Missouri, 1907, 60 (rare or irregular transient).—ROBERTS, in Wilcox's Hist. Becker County, Minn., 1907, 166 (breeding).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 208 (Iowa, rare summer resident).—KNIGHT, Birds Maine, 1908, 142 (rare summer resident).—BEYER, ALLISON, and KOPMAN, Auk, xxv, 1908, 176 (Louisiana, winter resident).—TAVERNER, Auk, xxv, 1908, 327 (Detroit, Mich., Mar. 25).—JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).
- [*Porzana*] *noveboracensis* LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).—COUES, Key North Amer. Birds, 1872, 274.—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30 (Cuba).
- P[*orzana*] *noveboracensis* RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 140.—NELSON, Bull. Essex Inst., viii, 1876, 134 (ne. Illinois, common summer resident).
- [*Ortygops*] *noveboracensis* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 320.—SHARPE, Hand-list, i, 1899, 104.
- Ortygops noveboracensis* SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 126 (Illinois; Milford, Conn., Oct. 14; Seabrook, N. H., Oct. 15).
- Crex novaeboracensis* SCHLEGEL, Mus. Pays-Bas, v. No. 30, livr. 7, 1865, 26.
- [*Aramides*] *noveboracensis* GRAY, Hand-list, iii, 1871, 61, No. 10448.
- Porzana jamaicensis* ? (not *Rallus jamaicensis* Gmelin) RIDGWAY, Bull. Essex Inst., v, 1873, 173 (Parley's Park, Utah, 7,000 feet).
- P[*orzana*] *jamaicensis* ? RIDGWAY, Bull. Essex Inst., vi, 1874, 34 (Parley's Park, Utah).
- ? *Porzana jamaicensis* RIDGWAY, Orn. 40th Parallel, 1877, 613 (Ruby Valley, Nev., Sept. 5; Parley's Park, Utah, June, July, Aug.).
- Coturnicops noveboracensis richii* BAILEY, Bailey Mus. and Libr. Nat. Hist. Bull. 10, 1935, unpagéd=1, (Canton, Ohio; crit.).
- Coturnicops noveboracensis emersoni* BAILEY, Bailey Mus. and Libr. Nat. Hist. Bull. 10, 1935, unpagéd=2 (Shandon, San Luis Obispo County, Calif.; crit.).

COTURNICOPS NOVEBORACENSIS GOLDMANI (Nelson)

GOLDMAN'S YELLOW RAIL

Adult (?) *male*.⁷⁶—Similar to the juvenal, rufescent phase of *Coturniculus noveboracensis noveboracensis*, but with the white transverse markings much broader (1–1.5 mm. as against 0.3–0.5 mm. in the nominate race) and the brownish edgings of the dorsal feathers slightly richer in color—sudan brown; wing 81; tail 25; exposed culmen 14.5; tarsus 23; middle toe without claw 25 mm. (One specimen—the unique type.)

⁷⁶ Female unknown.

Range.—Known only from the type locality.

Type locality.—Lerma, Mexico.

Porzana goldmani NELSON, Proc. Biol. Soc. Washington, xvii, Oct. 6, 1904, 151 (Lerma, Mexico; coll. U. S. Nat. Mus.).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 21 (geogr. range).

Coturnicops noveboracensis goldmani PETERS, Check-list Birds of World, ii, 1934, 193.

Genus GALLINULA Brisson

Gallinula BRISSON, Orn., i, 1760, 50; vi, 1760, 2 (Type, by tautonymy, [*Gallinula*] *gallinula* Brisson=*Fulica chloropus* Linnaeus).—SCHAEFFER, Mus. Orn., 1789, 58 (Type, *Fulica chloropus* Linnaeus).—LATHAM, Index Orn., ii, 1790, 766 (23 species enumerated).

Hydrogallina LACÉPÈDE, Tabl. Ois., 1799, 19. (Type, by original designation, "Hydro-galline"=*Gallinula* Brisson.)

Stagnicola BREHM, Isis, 1830, 992. (Type, by monotypy, *Fulica chloropus* Linnaeus.)

Galinula HELLER and SNODGRASS, Proc. Washington Acad. Sci., v, 1904, 257 (unintentional emendation).

Large Gallinulae (wing about 153–231 mm.) with the broad frontal shield extending only as far backward as middle of eye, its posterior extremity broadly rounded to nearly truncated; nostril narrowly ovate (almost slitlike) and much nearer to maxillary tomium than to culmen; depth of bill at posterior end of nostril equal to less than half the distance from posterior end of nostril to tip of maxilla; tarsus not longer (sometimes shorter) than outer toe without claw, the inner side of planta tarsi with broken series of small, irregular scutella; toes with a distinct though narrow marginal membrane along each side, and coloration slaty (more or less brownish above), with lateral under tail coverts white and white stripes along outer edge of sides and flanks.

Bill about as long as head or slightly shorter, rather narrow in vertical profile, its depth at posterior end of nostril equal to less than half the distance from posterior end of nostril to tip of maxilla; its width at same point equal to half the depth or a little more; culmen broad and elevated basally, much narrower and more or less depressed above nostrils, thence more or less arched and decurved to tip; gonyes at least two-thirds as long as mandibular rami, nearly straight ascending terminally, its base not prominent; mandibular rami with a more or less distinct lateral groove (formed by prominence of proximal two-thirds of mandibular tomium); nasal fossa well defined anteriorly, extending for at least half the distance from loreal antia to tip of maxilla; nostril very narrowly ovate (almost slitlike), in lower edge of nasal fossa and much nearer to tomium than to culmen, separated from the loreal antia by a space about equal to its length; frontal shield tumid, subquadrate, becoming broader posteriorly, its greatest width less than its length, its posterior outline convex to subtruncate, its

extremity about on line with middle of eyes; anterior outline of loreal feathering with its apex (antia) near base of maxillary tomium, thence receding, in a straight or slightly convex line, to near base of frontal shield; malar antia decidedly anterior to loreal antia, the mental antia on line with or anterior to anterior end of nostril. Wing relatively rather small, moderately concave beneath, rounded, the longest primaries exceeding distal secondaries by a little more than

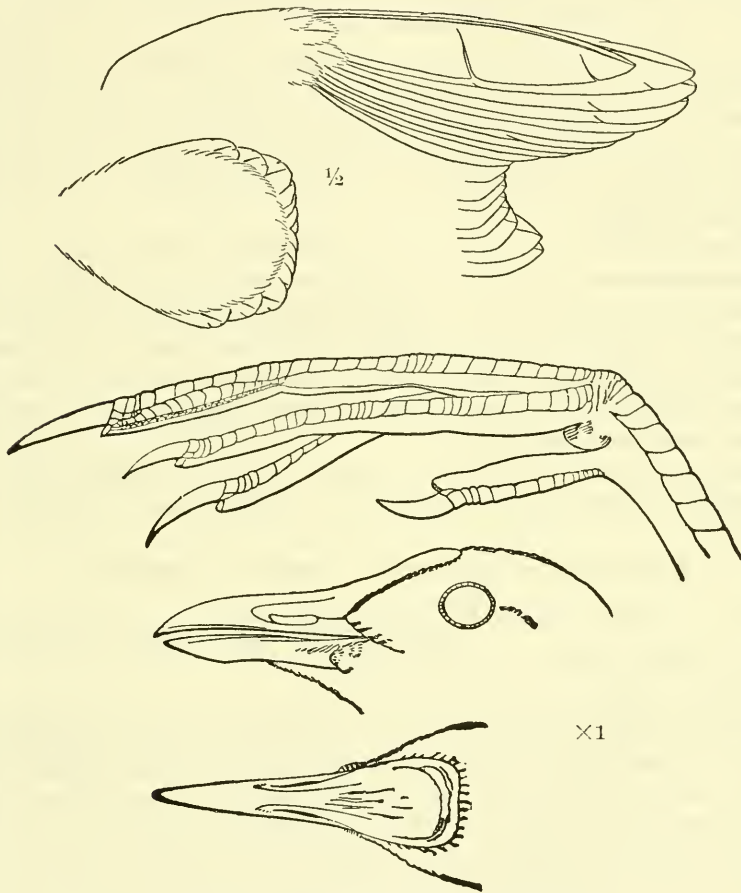


FIGURE 12.—*Gallinula chloropus cachinnans*.

one-third the length of wing, and exceeding the elongated proximal secondaries by about length of culmen; second and third, or second, third, and fourth, primaries (from outside) longest, the first (outermost) equal to seventh, sometimes longer than sixth. Tail about two-fifths as long as wing, strongly rounded, the rectrices (12) firm, broad, broadly rounded at tip, and with compact webs. Tarsus nearly one-third as long as wing, much shorter than middle toe without claw

(not longer, sometimes shorter, than outer toe without claw), the acrotarsium with a continuous single row of broad scutella, the planta tarsi with a single row of similar but smaller scutella on outer side (sometimes broken on lower portion), sometimes separated from those of the acrotarsium by one or two rows of smaller, more hexagonal, mostly longitudinal scales, the hinder portion curved with much smaller hexagonal scales, curved on inner side with scales and scutella of various sizes, the larger sometimes arranged, in part, in longitudinal series; outer toe with claw reaching about to base of middle claw, the inner toe, without claw, extending to beyond penultimate articulation of middle toe; hallux, without claw, about as long as basal phalanx of outer toe; anterior toes with a distinct though narrow lateral membrane on each side; claws relatively long, compressed, moderately curved (that of middle toe less so and sometimes considerably elongated), acute.

Plumage and coloration.—Plumage full and dense, that of head and neck shorter and blended; remiges and rectrices moderately rigid. Adults plain slate color, the upper parts more olivaceous, sometimes decidedly olive-brown; lateral under tail coverts and (in European, African, and American forms) outer webs of outermost feathers of sides and flanks white; bill and frontal shield bright red, the former tipped with green or yellow.

Range.—Palearctic, Indian, African, Nearctic, Neotropical, and Australian regions; Hawaiian Islands. (Two species, one with many races.)

KEY TO THE AMERICAN FORMS OF GALLINULA CHLOROPUS

a. Size, very large, wings over 200 mm.

Gallinula chloropus garmani (extralimital)⁷⁷

aa. Size smaller, wings well under 200 mm.

⁷⁷ *Gallinula chloropus garmani*.—(?) *Fulica galeata* (not *Crex galeata* Lichtenstein ?) Gould, Zool. Voy. *Beagle*, iii (Birds), 1841, 133 (Concepción, Chile); (?) Fraser, Proc. Zool. Soc. London, 1843, 118 (Lakes Quintero and Santa Domingo, Chile).—(?) *G[allinula] galeata* Tschudi, Wiegmann's Archiv für Naturg., x, pt. i, 1844, 313 (Peru).—(?) *Gallinula galeata* Gay, Fauna Chilean, i, 1847, 437; Selater, Proc. Zool. Soc. London, 1867, 337 (Chile); 1886, 402 (Sitana, Tarapaca, Chile); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 177, part (Laguna de Tambo, Peru; Sayaca, Chile); Lane, Ibis, 1897, 300 (Sacaya, Chile, up to 11,000 feet); Berlepsch and Stolzmann, Ornith., xiii, 1906, 131 (Puno, Peru).—*Gallinula garmani* Allen, Bull. Mus. Comp. Zool., iii, 1876, 357 (Lake Titicaca, Peru; coll. Mus. Comp. Zool.); Bul. Amer. Mus. Nat. Hist., ii, 1889, 107; Baird, Brewer, and Ridgway, Water Birds North America, i, 1884, 388.—[*Gallinula*] *garmani* Brabourne and Chubb, Birds South America, i, 1912, 25 (Peru).—*Gallinula chloropus garmani* Bangs, Proc. New England Zool. Club, v, 1915, 98 (diagnosis; measurements; crit.); Hartert, Nov. Zool., xxii, 1917, 270 (crit.); Peters, Check-list Birds of World, ii, 1934, 205.—*Gallinula galeata garmani* Chapman, Bull. U. S. Nat. Mus. 117, 1921, 48 (Calca, se. Peru).

b. Size very small, wings 161 mm. or less in length.

Gallinula chloropus pauxilla (extralimital)⁷⁹

bb. Size larger, wings over 165 mm.

c. Whole back, rump, and most of upper wing coverts extensively suffused with brown (argus brown to raw umber)-----

Gallinula chloropus cachinnans (p. 184)

cc. Back and wings only slightly suffused with brownish.

d. Tarsus longer, over 55 mm.-----*Gallinula chloropus cerceris* (p. 190)

dd. Tarsus shorter, under 55 mm.-----

Gallinula chloropus galeata (extralimital)⁷⁹

⁷⁹*Gallinula chloropus pauxilla*.—(?) *Gallinula galeata* (not *Crex galeata* Lichtenstein ?); Taczanowski, Proc. Zool. Soc. London, 1874, 559 (Chorillos and Junin, Peru); Orn. Pérou, iii, 1886, 327, part. ?; Selater and Salvin, Proc. Zool. Soc. London, 1878, 176 (Laguna de Tambo, w. Peru), 462, part (mongr.), 570 (w. Peru); Salvin, Proc. Zool. Soc. London, 1874, 559 (Chorillos and Junin, Peru); Berlepsch and Stolzmann, Proc. Zool. Soc. London, 1892, 399 (Lima and Callao, w. Peru); 1902, 50 (Ingapira, Peru); Salvadori and Festa, Boll. Mus. Zool. Torino, xv, 1900, 40 (Vinces, w. Ecuador); (?) Chubb, Ibis, 1919, 54 (Eten and Trujillo, nw. Peru; Reque, Lambayeque, Peru; crit.); (?) Lönnberg and Rendahl, Arkiv för Zool., xiv, No. 25, 1922, 19 (La Carolina, near Quito, and Lake San Pablo, prov. Imbabura, 8,000 feet, Ecuador).—*Gallinula chloropus pauxilla* Bangs, Proc. New England Zool. Club, v, 1915, 96 (Guabinas, Rio Cauca, Colombia; coll. Mus. Comp. Zool.); Chapman, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 219 (Cali, Cauca Valley, Colombia; crit.); Hartert, Nov. Zool., xxii, 1917, 269 (crit.); Peters, Check-list Birds of World, ii, 1934, 205.—WETMORE, Proc. U. S. Nat. Mus., lxxxvii, 1939, 190 (n. Venezuela).

⁷⁹*Gallinula chloropus galeata*.—[*Fulica*] *chloropus* Linnaeus, Syst. Nat., ed. 12, i, 1766, 258, part (not of ed. 10, 1758); Gmelin, Syst. Nat., i, pt. 2, 1789, 698, part; [*Gallinula*] *chloropus* Latham, Synop. Birds, Suppl., i, 1787, 293, part; Index Orn., ii, 1790, 770, part.—*C[rex] galeata* Lichtenstein, Säug. and Vög. Mus. Berlin, 1818, 36 (São Paulo, s. Brazil; cites "*Fulica chlor[opus]*" Amer. Merid. Gmel[in]; *Gall[inula] chlor[opus]* Amer. Merid. Lath[am]; Yahania propretadit Azara"); Verz. Doubl., 1823, 80 (São Paulo).—*Gallinula fusca* Vieillot, Nouv. Dict. Hist. Nat., xiii, 1817, 404, part ("America").—*G[allinula] galeata* Cabanis, in Schomburgk's Reis. Britisch-Guiana, iii, 1848, 760.—*Gallinula galeata* Burmeister, Syst. Ueb. Thiére Bras., iii, 1856, 389; Journ. für Orn., 1860, 262 (Paraná, Argentina); Léotaud, Ois. Trinidad, 1866, 503; Euler, Journ. für Orn., 1867, 197 (Brazil; descr. nest and eggs); Pelzeln, Orn. Bras., 1870, 318, 459; Selater and Salvin, Proc. Zool. Soc. London, 1868, 462, part (monogr.); White, Proc. Zool. Soc. London, 1882, 627 (Buenos Aires, Argentina); Barrows, Ank, i, 1884, 277 (Concepción, Uruguay, resident); Salvin, Proc. Zool. Soc. London, 1886, 177 (Brit. Guiana); Berlepsch, Journ. für Orn., 1887, 125 (Paraguay); Nov. Zool., xv, 1908, 300 (Brit. Guiana); Chapman, Bull. Amer. Mus. Nat. Hist., vi, 1894, 78 (Trinidad); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 177, part (Caicarã, Brazil; Trinidad; Lujua Bridge, Argentina); Aplin, Ibis, 1894, 204 (Rio Mongon, Uruguay); Koenigswald, Journ. für Orn., 1896, 393 (São Paulo, Brazil); Salvadori, Boll. Mus. Zool., Torino, xii, 1897, 34 (San Lorenzo, Argentina); Holmberg, Secundo Cent. Argentina, 1898, 571; Ihering, Rev. Mus. Paulista, iii, 1899, 417 (São Paulo); iv, 1900, 164 (Cantogallo, São Paulo); vi, 1904, 343 (Paraguay); (?) Lönnberg, Ibis, 1903, 459 (Tatarendá, Bolivia); Reiser, Denkschr. Akad. Wiss. Wien, math.-nat. Kl., 1910, 96 (Joazeiro, ne. Brazil); Dabbene, Orn. Argentina, 1910, 196 (Tucumán; Ocampo, Chaco;

GALLINULA CHLOROPUS CACHINNANS Bangs

FLORIDA GALLINULE

Adult (sexes alike).—Entire head (except large bare frontal shield), hind neck, sides of neck, and the throat plumbeous-black, paling somewhat posteriorly to blackish plumbeous and to dark neutral gray on the upper back (interscapulars) and on the breast, sides, flanks, and anterior and lateral parts of the abdomen; the posterior interscapulars slightly tinged with oily bronzy greenish as are also the upper wing coverts; inner upper wing coverts, scapulars, back, rump, and upper tail coverts bister to warm sepia and argus brown, this color usually darker and more uniform on the posterior upper parts and more mixed with bronzy dark neutral gray on the wings and back; outer upper wing coverts dark neutral gray; alula and remiges clove brown, the alula with the outer webs externally edged with white; carpal edge of the wing also white; the primaries with a cinereous wash terminally and externally; rectrices plumbeous-black with a faint gloss and very indistinctly and narrowly barred with slightly paler and more brownish bars of blackish plumbeous; middle of abdomen whitish more or less mottled with neutral gray to deep neutral gray (owing to the fact that the white is restricted to the terminal part of the feathers); vent and median under tail coverts black, the lateral under tail coverts white; under wing coverts blackish plumbeous to deep neutral gray, the feathers margined with white; iris dark maroon red with an inner ring of brown; bill and frontal shield deep scarlet vermilion, the tip of bill light green; tarsi and toes pale greenish, the joints and soles bluish, "garter" on tibiae scarlet.

Juvenal (sexes alike).—Top of head, hind neck, and interscapulars dusky olive-brown to grayish mummy brown, the interscapulars slightly washed with bronzy greenish; back, scapulars, rump, upper tail coverts, rectrices, and wings as in adult, except that even the outer upper wing coverts are heavily washed with brownish in the juvenal plumage and the primaries are less tinged with cinereous than in the adult stage; sides of head hair brown, mottled with drab and with a

Paraná; Buenos Aires; Entre Rios); Bertoni, Fauna Paraguaya, 1914, 37; Chubb, Birds British Guiana, i, 1916, 77.—[*Gallinula galeata* Selater and Salvin, Nom. Av. Neotr., 1873, 140, part; Sharpe, Hand-list, i, 1899, 107, part; Brabourne and Chubb, Birds South America, i, 1912, 25; Ihering (H. and R.), Aves Brazil, 1907, 31 (Rio Grande do Sul; São Paulo; Matto Grosso; Rio de Janeiro; Bahia; Minas Geraes).—*Gallinula galeata galeata* Hellmayr, Nov. Zool., xiii, 1906, 53 (Caroni and Caroni Swamp, Trinidad; crit.).—*Gallinula chloropus galeata* Hartert and Venturi, Nov. Zool., xvi, 1909, 258 (Barracas al Sud, Argentina; deser. eggs); Bangs, Proc. New England Zool. Club, v, 1915, 95 (crit.); Hartert, Nov. Zool., xxii, 1917, 269 (cit.); Osgood and Conover, Field Mus. Nat. Hist. Publ. 210, 1922, 40 (Lagunilla and Rio Aurare, Venezuela; crit.); Peters, Check-list Birds of World, ii, 1934, 205.

supraloral band of very light buffy drab; chin and upper throat white mottled sparingly with dusky; sides of neck and all of breast and upper abdomen dusky smoke gray paling to white on the mid abdomen and darkening to hair brown on the sides and flanks; some of the flank feathers with white markings on their outer (lateral) webs; vent, under tail coverts, and under wing coverts as in adult.

Natal down.—Top of head nearly bare, very scantily clothed with black, hairlike down; skin at base of bill bright red; entire body and wings covered with black down, the chin and throat with whitish, curly tips; the down of the back with a faint greenish gloss.

Adult male.—Wing 167–181 (174.5); tail 64–86 (72.2); culmen from frontal shield 38.5–47.5 (43.2); tarsus 49–57 (52.7); middle toe without claw 59–71.5 (67.2 mm.).⁸⁰

Adult female.—Wing, 151.5–174 (164.2); tail 62–71 (66); culmen from frontal shield 36–42.5 (39.9); tarsus 45–51 (48.5); middle toe without claw 58–67 (62.6 mm.).⁸¹

Range.—Breeds in suitable marshy places from California (San Francisco, the San Joaquin-Sacramento Valley as far north as Sutter County, the San Diego district north to Santa Barbara); Nebraska (Omaha, Hackberry Lake); South Dakota (Sioux Falls region); Minnesota (Heron Lake, Minneapolis); Wisconsin (Madison; Milton; Kelley Brook); Michigan (Kalamazoo; Detroit); southern Ontario (Hamilton; Toronto; Picou; Kingston; Ottawa; Point Pelee); Quebec (Montreal); Vermont (St. Albans; Lake Bomasseau); and Massachusetts (Belmont; Provincetown; Truro; Cambridge); south to southern Lower California (San Jose del Cabo); Mexico (Tamaulipas—Matamoras; Tehuantepec, Oaxaca; Mazatlan, Sinaloa; Tepic; Valley of Mexico; Peto and Cozumel Islands, Shkolok, Yucatan); locally through Guatemala (Dueñas; Amatitlan); Honduras (Lake Yohoa); Nicaragua (Metapa; Tipitapa; Greytown; Los Sabalos); and Costa Rica; to Panamá (Changuinola; Almirante); the Gulf States and Florida (throughout); and Bermuda; also resident in the Galapagos Islands (Chatham Island); Albemarle Island).

Winters in the southern part of its range, north to California (Los Angeles); Arizona (Tucson); Texas (Aransas Bay; Port Arthur; Lake Surprise); Louisiana (New Orleans; Vermillion Bay); all of Florida; Georgia, and to South Carolina (Ashepoo River; Cooper River).

Casual in summer and autumn, in Colorado (Colorado Springs); South Dakota (Vermillion, Sioux Falls area); Ontario (Beaumaris); Quebec (Quebec); Maine (Calais; Portland); New Bruns-

⁸⁰ Sixteen specimens from New York, District of Columbia, Florida, Minnesota, Texas, and Mexico.

⁸¹ Ten specimens from Michigan, Illinois, Minnesota, Florida, and Mexico.

wick (Dicks Lake; St. Johns); Nova Scotia (near Kentville; Cornwallis River; Sable Island); and Newfoundland (near St. Johns, and Colinet); in winter in Pennsylvania (Richmond); Massachusetts (Ware; Palmer); and Minnesota (Minneapolis).

Type locality.—Arbuckle Creek, De Soto County, Fla.

Gallinula galeata (not *Crex galeata* Lichtenstein) BONAPARTE, Amer. Orn., iv, 1832, 128; Comp. and Geogr. List, 1838, 53.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 223.—PEABODY, Rep. Orn. Massachusetts, 1839, 375.—YARRELL, Proc. Zool. Soc. London, 1847, 54 (descr. egg).—JARDINE, Contr. Orn., 1848, 79 (Bermuda, resident); 1850, 6 (Bermuda, breeding).—KENNICOTT, Trans. Illustrations Agr. Assoc., i, 1855, 586 (Illinois).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 752 (Pennsylvania, Michigan, California).—BAIRD, Cat. North Amer. Birds, 1859, No. 560; Rep. U. S. and Mex. Bound. Surv., ii, pt. 2, 1859, 26 (San Pedro, Calif.).—MARTENS, Journ. für Orn., vii, 1859, 220 (Bermuda).—TAYLOR, Ibis, 1860, 314 (Lake Yohoa, Honduras).—ALBRECHT, Journ. für Orn., ix, 1861, 56 (Bermuda).—BARNARD, Ann. Rep. Smiths. Inst. for 1860 (1861), 438 (Chester County, Pa.).—TAYLOR, Ibis, 1862, 129 (Florida).—McILLWRAITH, Proc. Essex Inst., v, 1866, 93 (Hamilton, Ontario).—SALVIN, Ibis, 1866, 198 (Guatemala).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1865, 184 (Greytown, Nicaragua); viii, 1866, 295 (vicinity of New York City); U. S. Nat. Mus. Bull. 4, 1876, 50 (Tehuantepec, Oaxaca, Nov.).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1868, 462, part (monogr.).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 43 (Phila. ed., p. 34).—COUES, Birds Northwest, 1874, 540; Check List, ed. 2, 1882, No. 684.—JOUY, Field and Forest, ii, 1877, 180 (District of Columbia).—MERRILL, Proc. U. S. Nat. Mus., i, 1878, 165 (Fort Brown, Tex., breeding).—MEARNS, Bull. Essex Inst., xiii, 1881, 81 (Hudson Highlands, breeding).—RATHBUN (F. R.), Rev. List Birds Central New York, 1879, 35 (breeding).—ROBERTS, Bull. Nutt. Orn. Club, iv, 1879, 158 (near Minneapolis, Minn., breeding; descr. nest and eggs).—BREWSTER, Bull. Nutt. Orn. Club, vi, 1881, 186 (Dicks Lake, New Brunswick, Sept.).—NEHRING, Bull. Nutt. Orn. Club, vii, 1882, 224 (se. Texas, breeding).—REID, U. S. Nat. Mus. Bull. 25, 1884, 248 (Bermuda, resident).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer. i, 1884, 388.—RALPH and BAGG, Trans. Oneida Hist. Soc., iii, 1886, 111 (Oneida County, N. Y., breeding).—GOSS, Auk, iii, 1886, 113 (Gove County and near Lawrence, Kans., breeding; descr. nest and eggs); Birds Kansas, 1891, 143.—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 219; ed. 3, 1910, 105.—MORRIS, Auk, iv, 1887, 72 (Springfield, Mass., 4 specimens, Sept., Oct.).—CHAMBERLAIN, Auk, iv, 1887, 253 (Cornwallis River, Nova Scotia, Sept. 20, 1886).—RICHARDSON, Auk, vi, 1889, 273.—ALLEN, Auk, vi, 1889, 274 (Lake Bomasseau, Vt., breeding).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 177, part (Ainsworth, Ill.; Lake County, Ind.; Quantico, Va.; Hernando and De Soto Counties and Tarpon Springs, Fla.; Brownsville and Aransas Bay, Tex.; Bermuda; Mexico; Guatemala).—BROCK, Auk, xiii, 1896, 255 (Portland, Maine, Sept. 20 and 30, 1894).—RIDGWAY, Proc. U. S. Nat. Mus., xix, 1897, 621 (Albermarle Island, Galapagos; crit.).—ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 286 (Albermarle Island; crit.); ix, 1902, 412 (Albermarle Island; crit.), 418 (several, Galapagos Islands).—BUTLER, Rep. State Geol. Indiana for 1897 (1898), 682 (breeding in Lake, Starke, De Kalb, and Vigo Counties, Ind., and Ottawa County, Ohio).—WORTHINGTON, Auk,

xvi, 1899, 85 (Shelter Island, N. Y., Oct. 18).—BREWSTER, Bull. Mus. Comp. Zool., xli, 1902, 57 (San José del Cabo, Lower California, Sept. 13 to end of Oct.; up to November 15 at Santiago).—SNODGRASS and HELLER, Proc. Washington Acad. Sci., v, 1904, 257 (Albemarle Island; measurements).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 326, part (Mazatlán, Sinaloa; Tepic; Valley of Mexico; Tehuantepec; Shkolak, Peto, and Cozumel Island, Yucatán; Lake Duenas, Guatemala, Lake Yohoa, Honduras; Greytown and Los Sabalos, Nicaragua; Costa Rica).—JONES (L.), Wils. Bull., xviii, 1906, 114 (Cleveland, Ohio, Oct. 4, 1885).—BRAISLIN, Auk, xxiii, 1906, 189-194 (Long Island City, N. Y., breeding; habits).—FLEMING, Auk, xxiii, 1906, 448 (Toronto, Ontario, common summer resident).—SHARP, Condor, ix, 1907, 86 (San Diego, Calif.; breeding).—ABBOTT (C. G.), Auk, xxiv, 1907, 1, in text, pl. 1, fig. 2 (Hackensack Meadows, N. J., breeding abundantly).—WIDMANN, Birds Missouri, 1907, 61 (once common summer resident, now rare).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 61 (common summer resident near Chicago).—TAVERNER and SWALES, Wils. Bull., xix, 1907, 84 (Point Pelee, Ontario, breeding).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 210 (Iowa breeding).—NORTON, Auk, xxv, 1908, 81 (Scarborough, Maine, Oct. 15, 1907).—KNIGHT, Birds Maine, 1908, 145 (Maine records).—WAYNE, Birds South Carolina, 1910, 41 (summer resident).—EATON, Birds New York, i, 1910, 284, pl. 27 (summer resident).—PHILIPP, Auk, xxvii, 1910, 316 (Ellis Lake, N. C., breeding).—BURTCH, Auk, xxviii, 1911, 108 (Branchport, N. Y., breeding; habits).—BARROWS, Michigan Bird Life, 1912, 161.—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 219 (habits).—ALLEN (G. M.), Auk, xxx, 1913, 23 (Essex County, Mass., Sept. 14, 1887, and Oct. 3, 1903).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 51.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 40 fig. 18, map (range).—GIFFORD, Proc. Calif. Acad. Sci., ser. 4, ii, 1913, 16 (Albemarle and Chatham Islands, Galapagos Islands).—GRINNELL, Pacific Coast Avif., No. 11, 1915, 48 (California; common summer resident, wintering southward).—HARRIS, Trans. Acad. Sci. St. Louis, xxiii, 1919, 246 (Kansas City, etc., Missouri, breeding).—ERICHSON, Wils. Bull., xxxiii, 1921, 76 (Chatham County, Ga., breeding; habits).—EVERMANN, Proc. Indiana Acad. Sci. for 1920 (1921), 331 (Vigo County, Ind., breeding).—WOOD (N. A.), Occ. Pap. Mus. Zool. Univ. Michigan, No. 119, 1922, 10 (Berrien County, Mich., summer resident).—PERKINS, Auk, xxxix, 1922, 564 (near Picton, Ontario, breeding; habits).—CAHN, Condor, xxiv, 1922, 175 (Bird Island, Tex.).—DAWSON, Birds California (students' ed.), iii, 1923, 1554 (genl.; California).—JOHNSTON, Birds West Virginia, 1923, 87 (West Virginia).—GRISCOM, Birds New York City Region, 1923, 139 (status, New York City region).—BURLEIGH, Wils. Bull., xxxvi, 1924, 76 (migr.; Centre County, Pa.).—LARSON, Wils. Bull., xxxvii, 1925, 25 (status, Sioux Falls region, S. Dak.).—GRISCOM and CROSBY, Auk, xlii, 1925, 527 (status, Brownsville, Tex.).—FRIEDMANN, Auk, xlii, 1925, 542 (Brownsville, Tex.).—GARDNER, Proc. U. S. Nat. Mus., lxvii, art. 19, 1925, 16 in text, pl. 4 (structure of tongue).—NAUMBURG, Auk, xliii, 1926, 491 part (breeds from Central States to South America).—MOUSLEY, Auk, xlv, 1927, 523 (Cherry River, near Magog; near Little Magog Lake, Quebec).—BALL, Auk, xlv, 1927, 258 (near Washington, D. C.).—BAILEY, Auk, xlv, 1928, 277 (winter; Chenier au Tigre, La.).—URNER, Abstr. Proc. Linn. Soc. New York, Nos. 39 and 40, 1930, 66 (Union County, N. J.).

Gallinula galatea PINDAR, Wils. Bull., xxxvi, 1924, 204 (e. Arkansas).

- [*Gallinula galeata* GRAY, Hand-list, iii, 1871, 66, No. 10500, part.—SHARPE, Hand-list, i, 1899, 107 part.—BURTCH, Auk, xxxix, 1917, 319-321 (Branchport, N. Y.; nesting habits).
- G[*allinula galeata* NELSON, Bull. Essex Inst., viii, 1876, 135 (ne. Illinois, abundant summer resident).—COUES, Key North Amer. Birds, ed. 2, 1884, 675.—RIDGWAY, Man. North Amer. Birds, 1887, 141.—ROTHSCHILD and HARTERT, Nov. Zool., vi, 1899, 203 (Galapagos).
- Gallinula chloropus galeata* RIDGWAY, Bull. Essex Inst., vi, 1874, 171 (Sacramento, Calif.).
- [*Gallinula*] (*chloropus* var. ?) *galeata* COUES, Key North Amer. Birds, 1872, 245, part.
- Gallinula galeata galeata* FORTNER and METCALF, Wils. Bull., xli, 1929, 249 (Burt Lake, Mich.).
- Gallinula* (*chloropus* var. ?) *galeata* COUES, Check List, 1874, No. 472, part.
- Gallinula chloropus* . . . var. *galeata* COUES, Check List, 1874, App., 137, No. 472.
- G[*allinula*] *chloropus* . . . var. *galeata* RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois).
- Gallinula fusca* VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 404, part ("America").
- Gallinula chloropus cachinnans* BANGS, Proc. New England Zool. Club, v, May 17, 1915, 96 (Arbuckle Creek, De Soto County, Fla.; coll. Mus. Comp. Zool.).—HARTERT, Nov. Zool., xxii, 1917, 269 (crit.).—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 29 (Hackberry Lake, Cherry County, Nebr., June 5); U. S. Dept. Agr. Misc. Circ. 13, 1923, 44, fig. 35 (local names; range).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Auk, xl, 1923, 516.—DICKEY and VAN ROSSEM, Condor, xxvi, 1924, 91 (status of Pacific coast specimens; crit.).—HARTERT, Vög. pal. Fauna, iii, 1921, 184 (tax.).—NICE (M. M. and L. B.), Birds Oklahoma, 1924, 29 (genl.; Oklahoma).—HOWELL, Birds Alabama, 1924, 92; ed. 2, 1928, 92 (distr.; habits; Alabama).—BENT, Wils. Bull., xxxvi, 1924, 10 (near Brownsville, Tex.).—DE LAUBENFELS, Wils. Bull., xxxvi, 1924, 165 (Brownsville, Tex.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (status; Fulton County, Ky.).—BAILEY, Birds Florida, 1925, 44, pl. 24 (col. fig.; descr.; Florida).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 64 (descr.; chars.).—SIMMONS, Birds Austin Region, 1925, 49 (Austin, Tex.; habits; descr.; nest and eggs).—FORBUSH, Birds Massachusetts and Other New England States, i, 1925, 366, pl. 24 (col. fig.; descr.; distr. in New England).—FARGO, Wils. Bull., xxxviii, 1926, 147 (Pinellas and Pasco Counties, Fla.).—LAMB, Condor, xxix, 1927, 156 (San José del Cabo, Lower California).—BENT and COPELAND, Auk, xlv, 1927, 377 (common, summer, in Florida).—GRINNELL, Univ. California, Publ. Zool., xxxii, 1928, 88 (distr. in Lower California).—CHRISTY, Auk, xlv, 1928, 287 in text (s. Florida).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 27 (Washington, D. C.).—MURRAY, Auk, xlvi, 1929, 380 in text (migr.; Lexington, Va.).—BALL, Wils. Bull., xli, 1929, 190 in text (Goose Creek, near Otranto, S. C.).—BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 170 (type spec. in Mus. Comp. Zool., crit.).—HELMUTH, Auk, xlvii, 1930, 531 (e. Long Island, N. Y.).—PIERCE, Wils. Bull., xliii, 1930, 262 (Buchanan County, Iowa).—[ARTHUR], Birds Louisiana, 1931, 244 (descr.; distr. in Louisiana).—BAERG, Univ. Arkansas Agr. Exp. Sta. Bull. 258, 1931, 58 (descr.; distr. in Arkansas).—BAILEY and WRIGHT, Wils. Bull., xliiii, 1931, 195 (Avery Island, La.).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 98.—CHRISTY, Auk, xlvi, 1931, 367 (change of status; Sandusky Bay, Lake Erie).—NICE, Birds Oklahoma, rev. ed., 1931, 86 (genl.; Oklahoma).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Changuinola, Panamá;

- crit.).—SWARTH, Occ. Pap. California Acad. Sci., xviii, 1931, 57 (crit.; specimen, Galapagos).—ROBERTS, Birds Minnesota, i, 1932, 451, pl. 28 (distr.; habits; col. fig.; Minnesota).—HOWELL, Florida Bird Life, 1932, 211 (genl.; Florida).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 123 (distr.; Guatemala).—STONER, Roosevelt Wild Life Ann., ii, 1932, 448 (habits, Oneida Lake region, N. Y.).—ELIOT, Auk, xlix, 1932, 101 (Northampton, Mass.).—KALTER, Wils. Bull., xlv, 1932, 38 in text (eating a goldfinch).—WILLETT, Pac. Coast Avif., No. 21, 1933, 54 (sw. California, formerly common summer resident, breeding May and June, less plentiful in winter; now only occasional owing to draining of fresh-water marshes).—WILSON, Wils. Bull., xlv, 1933, 142 (Bowling Green, Ky., May 11 and 21).—GRISCOM, Trans. Linn. Soc. New York, iii, 1933, 100 (Dutchess County, N. Y., local summer resident).—HICKS, Wils. Bull., xlv, 1933, 181 (Ashtabula County, Ohio, irregular summer resident; nest with eggs, June 12).—DU MONT, Univ. Iowa Stud. Nat. Hist., xv, 1934, 64 (Iowa, uncommon migrant, rare summer resident).—NEFF, Condor, xxxvi, 1934, 217 (Sacramento Valley, Calif.; winter resident).—BROOKS, Wils. Bull., xlv, 1934, 256 (Lewis County, W. Va., July 24, 1934).—SPIKER, Bull. New York State Coll. Forestry, viii, No. 1, 1935, 457 (Finger Lakes, N. Y.; breeds).—CARLETON, Auk, lii, 1935, 197 (near Ticonderoga, N. Y.).—GREENE, Auk, lii, 1935, 319 (seen Jan. 7, 1935, Lake Mattamuskeet, N. C.).—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 305 (Panamá—Almirante and Canal Zone).—MURRAY, Wils. Bull., xlvii, 1935, 65 (Rockbridge County, Va., 3 records).—YOUNG WORTH, Wils. Bull., xlvii, 1935, 217 (Fort Sisseton, S. Dak.).—HUDSON and SHERMAN, Auk, liii, 1936, 312 (South Carolina, Apr. 27, 1935).—BELLROSE, Auk, liii, 1936, 348 (nest with eggs and young, near Ottawa, Ill., Aug. 16, 1935).—LINSDALE, Pacific Coast Avif., No. 23, 1936, 51 (Nevada—seen in Colorado River Valley, near southern tip of Clark County, Jan. 27, 1934).—SHOOP, Wils. Bull., xlviii, 1936, 132 in text (Crystal Lake, Okla.).—ENGLISH, Condor, xxxix, 1937, 39 (Soap Lake, near Gilroy, Calif., nest and eggs).—VAN ROSSEM, Birds El Salvador, 1938, 164 (Colima, El Salvador).—OBERHOLSER, Bird Life Louisiana, 1938, 208 (habits, photo; fairly common permanent resident s. Louisiana, uncommon summer resident in rest of State).—WILLIAMS, Auk, lv, 1938, 65 (common in summer, upper Texas coast).—POOLE, Auk, lv, 1938, 516 (weight and wing area).—STONER, Condor, xl, 1938, 185 (Suisun Marshes, Calif., Dec.).—WETMORE, Proc. U. S. Nat. Mus., lxxxvi, 1939, 184 (Reelfoot Lake, Tenn., 2 specimens).—BENNETT and HENBRICKSON, Auk, lvi, 1939, 36 (adapt. to environment).—REIMANN, Auk, lvi, 1939, 331 (winter, Philadelphia).
- Gallinula chloropus cachinnans* HOLT and SUTTON, Ann. Carnegie Mus., xvi, 1926, 424 (habits, s. Florida).—DEBES, Auk, li, 1934, 230 in text (Delaware Marshes below Philadelphia; abundant in summer).
- Gallinula chloropus cachinans* PICKENS, Wils. Bull., xl, 1928, 188 (South Carolina).
- [*Gallinula*] *chloropus* (not *Fulica chloropus* Linnaeus) LATHAM, Synopsis Birds, Suppl., i, 1787, 293, part; Index Orn., ii, 1790, 770, part.—TURTON, Syst. Nat., i, 1806, 421, part.
- Gallinula chloropus* BONAPARTE, Contr. Maclurian Lyc., i, 1827, 27; Ann. Lyc. Nat. Hist. New York, ii, 1827, 336.—AUDUBON, Orn. Biogr., iii, 1835, 330, pl. 244; Synopsis, 1839, 210; Birds Amer., Svo. ed., v, 1842, 132, pl. 344.—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 45, part.—TAVERNER, Birds Canada, 1934, 174 (regularly common in Canada only along lower Great Lakes; one record for s. Manitoba; habits; descr.; etc.).

Crex chloropus LICHTENSTEIN, Preis-Verz. Mex. Vög., 1830, 3; Journ. für Orn., xi, 1863, 59.

Gallinula fusca VIEILLOT, Nouv. Dict. Hist. Nat., xii, 1817, 404, part.

Gallinula chloropus centralis MILLER (W. deW.) and GRISCOM, Amer. Mus. Nov., No. 25, 1921, 3 (12 miles south of Metapa, central Nicaragua; coll. Amer. Mus. Nat. Hist.).

GALLINULA CHLOROPUS CERCERIS Bangs

ANTILLEAN GALLINULE

Adult (sexes alike).—Similar to that of *Gallinula chloropus cachinnans* but with the brown on the upperparts not extending markedly on to the upper wing coverts; and with the tarsus slightly longer.

Young birds appear to be indistinguishable from North American mainland ones.

Adult male.—Wing 166–186 (174); tail 62.3–75.6 (70.8); culmen from frontal shield 46.5–49 (48.2); tarsus 52–61 (58.0); middle toe without claw 66–75 (73.1 mm.).⁸²

Adult female.—Wing 154–183 (166.1); tail 63.6–73.5 (67.2); culmen from the frontal shield 13.5–16 (15.2); tarsus 49–59 (52.9); middle toe without claw 59–73.5 (66.9 mm.).⁸³

Range.—Resident in the West Indies from the Bahamas (New Providence, Watling Island, Great Inagua); and the Greater Antilles—Cuba (Laguna del Sitio); Jamaica; Hispaniola (Étang Saumâtre; Étang Miragoane; Île à Vache; Et Batey, Yasica River; Bonao; near Port-au-Prince; Petit Trou de Nippes; Port-de-Paix, Trou Caïman); Puerto Rico (Aguadilla; Mayaguez; Cabo Rojo Lighthouse; Anegada, Guanica, and Cartagena Lagoons), Vieques; Culebra; and Virgin Gorda; and Grand Cayman; through the Lesser Antilles—St. Vincent; St. Thomas; St. Croix; St. Lucia; Guadeloupe, Anguilla, Montserrat, Barbuda, Barbados, Marie Galante, Carriacou, Dominica, Grenada, Mustique, Jost van Dyke, Tortola, and Antigua; to Tobago and to Swan Island.

Type locality.—Island of St. Lucia.

Fulica chloropus WEST, Beitr. Besch. St. Croix, 1794, 243.—D'ORBIGNY, in La Saga, Hist. Nat. Cuba, Aves, fol. ed., 1839, 184; Svo ed., 268.

Gallinula chloropus RITTEB, Naturh. Reise westind. Insel Hayti, 1836, 157 (Haiti).—WETMORE, Proc. U. S. Nat. Mus., liv, 1918, 520 (bones, St. Croix).—DANFORTH, Wils. Bull., xi, 1928, 179 (Laguna del Sitio, Cuba; breeding).—FISHER and WETMORE, Proc. U. S. Nat. Mus., lxxix, art. 10, 1931, 5 (Grand Cayman Island: Caribbean Sea).

⁸² Fifteen specimens (data for culmen and middle toe based on 8 specimens) from Cuba, Puerto Rico, Hispaniola, Barbuda, Antigua, and Montserrat.

⁸³ Eighteen specimens (data for culmen based on 8 specimens only; that of middle toe on 9 specimens) from Cuba, Puerto Rico, Hispaniola, Jamaica, Grenada, Barbuda, Antigua, Tobago, and Montserrat.

- Hydrogallina chloropus* LEDRU, Voy. Îles Ténériffe, La Trinité, Saint-Thomas, Sainte-Croix, et Porto-Ricco, ii, 1810, 209 (Puerto Rico).
- Gallinula galeata* GOSSE, Birds Jamaica, 1847, 381.—CABANIS, Journ. für Orn., iv, 1856, 428 (Cuba).—THIENEMANN, Journ. für Orn., v, 1857, 156 (Cuba; descr. eggs).—SALLE, Proc. Zool. Soc. London, 1857, 237 (Santo Domingo; habits).—NEWTON (A. and E.), Ibis, 1859, 260 (St. Croix; habits, crit.).—BRYANT, Proc. Boston Soc. Nat. Hist., vii, 1859, 122 (Bahamas); x, 1866, 257 (Puerto Rico); xi, 1867, 97 (Santo Domingo); Journ. für Orn., xiv, 1866, 191 (Puerto Rico).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 307 (Cuba).—CASSIN, Proc. Acad. Nat. Sci. Philadelphia, xii, 1860, 378 (St. Thomas).—ALBRECHT, Journ. für Orn., ix, 1861, 56 (Bahamas); x, 1862, 206 (Jamaica).—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica); 1879, 765 (Montserrat); 1892, 500 (Anguilla); Rev. List Birds Jamaica, 1910, 20.—GUNDLACH, Journ. für Orn., x, 1862, 90 (Cuba, crit.); xxii, 1874, 314 (Puerto Rico); xxiii, 1875, 360 (Cuba; habits); xxvi, 1878, 162, 190 (Puerto Rico); Contr. Orn. Cubana, 1876, 192; Anal. Soc. Esp. Hist. Nat., vii, 1878, 391 (Puerto Rico); Orn. Cubana, 1895, 247.—MARCH, Proc. Acad. Nat. Sci. Philadelphia, xvi, 1864, 69 (Jamaica).—SUNDEVALL, Öfv. Vet.-Akad. Förh., 1869, 601 (Puerto Rico).—BELLO, Zool. Gart. 1871, 350 (Puerto Rico).—LAWRENCE, Proc. U. S. Nat. Mus., i, 1879, 461, 487 (Guadeloupe).—ALLEN (J. A.), Bull. Nutt. Orn. Club, v, 1880, 169 (St. Lucia).—CORY, Birds Bahama Islands, 1880, 177; Bull. Nutt. Orn. Club, vi, 1881, 155 (near Gantier, Haiti); Birds Haiti and San Domingo, 1885, 161; Ibis, 1866, 474 (Marie Galante); Auk, v, 1888, 56 (West Indian localities and references; descr.); Birds West Indies, 1889, 257; Cat. West Indian Birds, 1892, 91, part.—WELLS, Proc. U. S. Nat. Mus., ix, 1887, 629 (Grenada; resident; breeding).—SCOTT, Auk, ix, 1892, 12 (Jamaica, resident, breeding).—TIPPENHAUER, Die Insel Haiti, 1892, 323 (Haiti).—FIELD, Auk, xi, 1894, 122 (Jamaica, breeding).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 177, part (Jamaica; Haiti; Anguilla; St. Croix; Montserrat; Guadeloupe).—BOWDISH, Auk, xix, 1902, 359 (Aguadilla and Mayaguez, Puerto Rico).—NICOLL, Ibis, 1904, 586 (Grand Cayman).—LOWE, Ibis, 1909, 339 (Swan Island, Caribbean Sea; Grand Cayman); 1911, 146 (Grand Cayman, resident).—VERRILL (A. E. and A. H.), Proc. Acad. Nat. Sci. Philadelphia, lxi, 1909, 356 (Santo Domingo).
- [*Gallinula galeata* GUNDLACH, Journ. für Orn., ix, 1861, 344 (Cuba); Rep. Fisco-Nat. Cuba, i, 1865-66, 362.—SCALTER and SALVIN, Nom. Av. Neotr., 1873, 140, part.—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30.—SHARPE, Hand-list, i, 1899, 107, part.—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 40, part.
- Gallinula galeata* DENNY, Proc. Zool. Soc. London, 1847, 40.
- Gallinula galeata galeata* WEYMORE, U. S. Dept. Agr. Bull. 326, 1916, 35 (Puerto Rico; habits; food); Auk, xxxiii, 1916, 411 (Vieques, reported); xxxiv, 1917, 58 (Culebra Island; specimen).—STRUTHERS, Auk, xi, 1923, 472 (Anegado and Cartagena Lagoons, Puerto Rico).
- Gallinula chloropus* subsp. DANFORTH, Auk, xlv, 1928, 482 (summer; near Hodges; near Black River, Jamaica).
- Gallinula chloropus cachinnans* (not of Bangs 1915) BANGS, Bull. Mus. Comp. Zool., ix, 1916, 305 (Grand Cayman; breeding).—TODD, Ann. Carnegie Mus., x, 1916, 203 (Laguna de Santa Rosalia; Isle of Pines, in 1902, but not found later).—NOBLE, Bull. Mus. Comp. Zool., ix, 1916, 366 (Guadeloupe).—PETERS, Bull. Mus. Comp. Zool., lxi, 1917, 402 (El Batey, Yasica River, Hispaniola).—BANGS and KENNARD, List Birds Jamaica, 1920, 6 (common

- resident).—BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 56 (Cuba; breeding; habits).—BEEBE, New York Zool. Soc. Bull., xxx, 1927, 139; Beneath Tropic Seas, 1928, 219 (Étang Saumâtre; Étang Miragoane, Hispaniola).—PETERS, Auk, xlv, 1927, 534 (Anguilla, West Indies).
- Gallinula chloropus cerceris* BANGS, Proc. New England Zool. Club, v, 1915, 98 (Santa Lucia, Lesser Antilles; coll. Mus. Comp. Zool.).—HARTERT, Nov. Zool., xxii, 1917, 270 (crit.).—BOND, Auk, xlix, 1932, 494 (crit.; spec.; St. Lucia).—PETERS, Check-list Birds of World, ii, 1934, 205.
- G[allinula] c[horopus] cerceris* BOND, Birds West Indies, 1936, 93 in text (West Indies).
- Gallinula chloropus (cerceris?)* MOLTONI, Att. Soc. Ital. Scienc. Nat., lxxviii, 1929, 312 (Bonaò, Hispaniola).
- Gallinula galeata cerceris* BANGS, Bull. Mus. Comp. Zool., lxx, 1930, 170 (type spec. in Mus. Comp. Zool.; crit.).
- Gallinula chloropus portoricensis* DANFORTH, Auk, xlii, 1925, 560 (orig. descr.; Cartagena, Anegado, and Guanica Lagoons, Cabo Rojo Lighthouse, Arguadilla, and Mayaguez, Puerto Rico); Journ. Dept. Agr. Puerto Rico, x, 1926, 59-62, fig. 29 (Cartagena Lagoon, Puerto Rico; habits); Auk, xlvi, 1929, 362 (Hispaniola, common); Journ. Dept. Agr. Puerto Rico, 1930, 115 (Virgin Gorda, Virgin Islands); xv, 1931, 51 (various localities, Puerto Rico).—WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 343 (genl.; Puerto Rico); Proc. U. S. Nat. Mus., lxxx, art. 2, 1932, 8, 16 (Île à Vache; Montet near Port-au-Prince; Petit Trou de Nippes, Haiti).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 495 (Port-au-Paix, Trou Caïman, Haiti; nesting).—MOLTONI, Att. Soc. Ital. Sci. Nat., lxxviii, 1929, 311 (Guerra, Hispaniola).—BEATTY, Journ. Dept. Agr. Puerto Rico, xiv, 1930, 139 (St. Croix; Virgin Islands; breeding); xv, 1931, 22 (Guanica Lagoon, Puerto Rico).—WETMORE and SWALES, Bull. U. S. Nat. Mus. 155, 1931, 136 (habits; distr.; etc.; Hispaniola).—DANFORTH, Auk, li, 1934; 358 (Antigua; common; meas.); Journ. Agr. Univ. Puerto Rico, xix, 1935, 447 (Cayo Norte; St. Thomas; Jost van Dyke; Tortola; Beef Island; St. Croix; specimen; meas.), 467 (Vieques Culebra; Cayo Norte; St. Thomas; Jost van Dyke; Tortola; Beef Island; Virgin Gorda; St. Croix), 477 (Barbuda); xxi, 1937, 543 (common Punta Arena, Playa Grande, and Puerto Negro, Vieques Island); xxiii, 1939, 23 (Guadeloupe and Marie Galante; spec.); xxiii, 1939, 54 (Fox's Bay Pond, Montserrat).

Genus PORPHYRULA Blyth

- Porphyryla* BLYTH, Cat. Birds Mus. Asiat. Soc., 1849 (1852), 283, 286. (Type, by monotypy, *Porphyrio chloronotus* Blyth=*P. alleni* Thompson.)
- Porphyriola* (emendation) SUNDEVALL, Av. Meth. Tent., 1872, 131.
- Ionornis* REICHENBACH, Av. Syst., 1852, xxi. (Type, by monotypy, *Fulica martinicensis* Jacquin=*F. martinica* Linnaeus.)
- Jonornis* (emendation) HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 318.
- Glaucestes* REICHENBACH, Av. Syst., 1852, xxi. (Type, by monotypy, *Fulica flavirostris* Gmelin=*F. parva* Boddaert.)
- Hydrionia* "Hartl[aub]" BONAPARTE, Compt. Rend., xliii, Sept. 1856, 599. (Type, by monotypy, *Gallinula porphyrio* "Tenn[inck]" nec Latham=*Porphyrio alleni* Thompson.)
- Hydrornia* (emendation) HARTLAUB, Syst. Orn. Westafrika's, 1857, 243.

Jonocicca SALVADORI, ANN. MUS. CIV. STOR. NAT. GENOVA, ser. 2, iii, 1886, 236.

(Type, by original designation and monotypy, *Porphyrio alleni* Thompson.)

Jonocicca (emendation) SCLATER and SAUNDERS, Ibis, 1887, 358.

Gallinulae with nasal fossa indistinct, the nostril relatively broad and short; tarsus much longer than outer toe without claw; toe without a distinct lateral membrane, except along inner side; inner toe without claw, not reaching beyond subterminal articulation of middle toe; hallux without claw, as long as basal phalanx of middle toe, and coloration (of adults) mainly green, blue, and purplish.

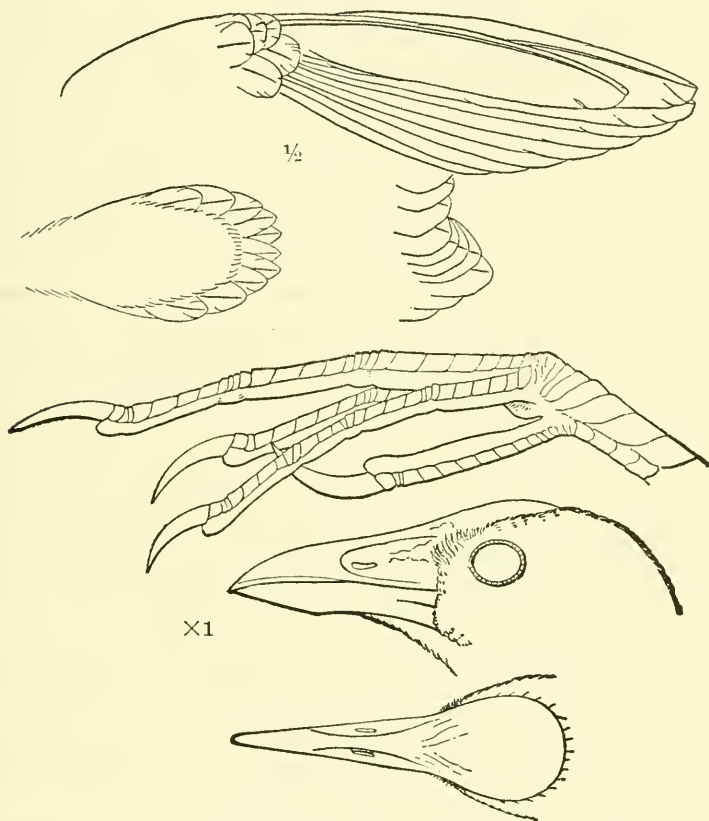


FIGURE 13.—*Porphyryla martinica*.

Bill about as long as head, its depth at base equal to a little less than half the length of culmen (from base of frontal shield), and equal to about one and a half times its width at same point; culmen (from base of frontal shield) nearly straight for basal half though faintly depressed above nostril, gently but distinctly decurved for distal half; gonys a little shorter than mandibular rami, decidedly less than half as long as culmen, nearly if not quite straight, ascending terminally,

its basal angle fairly distinct; frontal shield large and broad (a little longer than wide), extending backward to beyond posterior angle of eye, its posterior outline strongly rounded with more or less tendency to a median obtuse angle, its surface flat or very slightly elevated. Nostril ovate (*P. martinica*) or elliptical (*P. alleni* and *P. parva*), its anterior end much nearer to edge of loreal feathering than to tip of maxilla; nasal fossa small and (especially in *P. parva*) rather indistinct; anterior outline of feathering at lateral base of bill forming a nearly straight but slightly oblique, almost vertical line from lateral base of frontal shield to lower edge of mandibular rami. Wing rather large, moderately concave beneath; second (*P. martinica* and *P. parva*) or third (*P. alleni*) primary (from outside) longest, the first (outermost) equal to fifth (*P. martinica*), sixth (*P. parva*), or seventh (*P. alleni*), the longest primaries exceeding distal secondaries by about one-third (*P. martinica*) to two-fifths (*P. alleni* and *P. parva*) the length of wing, the proximal secondaries falling far short of tips of longest primaries. Tail between two-fifths and one-half as long as wing, graduated, the rectrices becoming narrower terminally but with rounded tips (narrower and subacuminate in *P. alleni*), apparently ten in number, the middle pair extending considerably beyond both upper and lower coverts. Tarsus as long as middle toe without claw (*P. martinica*) or decidedly shorter (*P. alleni* and *P. parva*), the acrotarsium with about 12 or 13 large transverse scutella (in single series), the planta tarsi with a single series of smaller transverse scutella along each side, the two lateral series separated along posterior edge by a narrow space occupied by small, more or less longitudinal scales; lower portion of tibia naked for a considerable distance, covered both anteriorly and posteriorly by large transverse scutella; outer toe, without claw, reaching to about middle of penultimate phalanx of middle toe, the inner toe decidedly shorter, reaching (without claw) to subterminal articulation of middle toe; hallux, without claw, about as long as basal phalanx of outer toe (*P. martinica*) or longer (*P. alleni* and *P. parva*); claws slender, rather long, distinctly curved, that of the hallux nearly as long as its digit; outer edge of middle toe with a very narrow marginal membrane.

Plumage and coloration.—Plumage of head, neck, and underparts dense, blended, that of head shorter, the head completely feathered (except for frontal shield); plumage of upperparts similar but individual feathers rather more distinctly defined, especially the scapulars and wing coverts. Coloration plain dull purplish blue on underparts, head more blackish, upperparts greenish olive becoming more greenish on wings (*P. martinica* and *P. alleni*), or upperparts reddish brown passing into a light bluish green above and whitish beneath (*P. parva*).

Range.—Tropical and subtropical Africa and America (three species).

KEY TO THE SPECIES OF PORPHYRULA

a. Wing more than 130 mm.; underparts in adults dull purplish grayish blue; upper parts olive and greenish; bill red, different in color from frontal shield.

b. Smaller (wing about 140 mm.); tarsus shorter than middle toe without claw; dull purplish blue of underparts not passing into greenish blue on sides of neck, etc.; bill wholly red; legs and feet red (Africa).

Porphyryla alleni (extralimital)⁸⁴

bb. Larger (wing 177–190.5 mm.); tarsus not shorter than middle toe without claw; dull purplish blue of underparts passing into bright greenish blue on sides of neck, etc.; bill red broadly tipped with yellow or light green; legs and feet yellowish (warmer parts of America).

Porphyryla martinica (p. 196)

aa. Wing less than 130 mm.; underparts in adult white; upperparts reddish brown, passing into greenish blue on wing coverts and bluish gray on sides of head, neck, and chest; bill and frontal shield yellow or greenish (eastern South America)----- *Porphyryla parva* (extralimital)⁸⁵

⁸⁴ *Porphyryla alleni* Thompson, Ann. Mag. Nat. Hist., x, 1842, 204 (Idda, Niger River); Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1859, 175 (Camma River, Africa); Shelley, Birds Egypt, 1872, 276; Heuglin, Orn. Nordost-Afrika's, ii, pt. 1, 1873, 1228; Saunders, Bull. Soc. Zool. France, ii, 1877, 189 (s. Spain); Hartlaub, Vög. Madagascars, 1877, 346; Dresser, Birds Europe, vii, 1871–81, 307, pl. 502; Bocage, Orn. Angola, 1881, 485; Milne-Edwards and Grandidier, Hist. Nat. Madagascar, Ois., i, 1882, 593, pl. 245; Sharpe, new ed. Layard's Birds South Africa, 1884, 621.—*Caesarornis alleni* Bonaparte, Compt. Rend., xliii, 1856, 599.—*Porphyrio* (*Caesarornis*) *alleni* Hartlaub, Orn. Westafrika's, 1857, 243.—*Gallinula alleni* Schelegel, Mus. Pays-Bas, Ralli, 1865, 38.—*Hydrornia alleni* Salvadori, Orn. Ital. Ucc., 1871, 233; Giglioli, Icon. Avif. Ital., 1879, fasc. ii (Luca); Avif. Ital., 1886, 353, 1st Resoc., 1869, 550.—*Ionocicca alleni* Salvadori, Elenco, Uccelli Ital., 1887, 236.—*Porphyriola alleni* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 187.—*Porphyrio chloronotus* Blyth, Journ. Asiat. Soc. Bengal, xviii, pt. 2, 1849, 820 (locality unknown).—*Porphyryla chloronotus* Blyth, Cat. Birds Mus. Asiat. Soc., 1849, 283.—*Porphyriola chloronotus* Sundevall, Av. Meth. Tent., 1872, 131.—*Porphyryla chloronotus* Hume, Stray Feath., vii, 1878, 456.—*Gallinula mutabilis* Sundevall, Öfv. Vet.-Akad. Förh., 1850, 132 (Blue Nile).—*Porphyrio madagascariensis* (not *Gallinula madagascariensis* Latham) Reichenbach, Handb., Fulicariae, 1852, pl. cviii, figs. 1004, 1005.—*Gallinula porphyrio* (not of Latham) Hartlaub, Journ. für Orn., 1855, 357, 361.—*Hydrornia porphyrio* Bonaparte, Compt. Rend., xliii, 1856, 599; Hartlaub, Orn. Westafrika's, 1857, 243.—*Porphyrio variegatus* Guirao, Mem. Acad. Sci. Madrid, iv, 1859, 554, pl. 2.

⁸⁵ *Fulica parva* Boddaert, Tabl. Pl. Enl., 1783, 54 (based on *La Favorite de Cayenne* Daubenton, Pl. Enl., ix, pl. 897).—*Porphyrio parva* Gray, Gen. Birds, iii, 1846, 589; Scalter and Salvin, Proc. Zool. Soc. London, 1857, 592 (Rio Amazon); Pelzeln, Orn. Bras., 1871, 318, 459.—[*Porphyrio*] *parvus* Gray, Hand-list iii, 1871, 65, No. 10490; Scalter and Salvin, Nom. Av. Neotr., 1873, 140; Allen, Bull. Essex Inst., viii, 1876, 82 (Santarem, lower Amazon).—*Porphyrio parvus* Kerr, Ibis, 1892, 149 (Rio Pilcomayo).—*Gallinula parva* Schlegel, Mus. Pays-Bas, Ralli, 1865, 39 (Surinam; Cayenne).—*Ionornis parvus* Ridgway, Proc. U. S. Nat. Mus., iv, 1881, 201.—*Ionornis parva* Baird, Brewer, and Ridgway, Water Birds North Amer.,

PORPHYRULA MARTINICA (Linnaeus)

PURPLE GALLINULE

Adult (sexes alike).—Entire head, except the large frontal and antero-coronal area occupied by the frontal shield, and all of underparts except the under tail and wing coverts and the lower abdomen and the thighs, dark slate-violet to dusky dull violet-blue, nape and sides of neck and of breast greenish Delft blue; hind neck, shorter scapulars, and interscapulars bright dusky olive-green, paling almost to leaf green anteriorly; long scapulars, back, rump, upper tail coverts, and rectrices glossy very dark greenish olive; lesser and median outer upper wing coverts greenish Delft blue like the sides of the breast; the inner upper coverts bright dusky olive green, slightly less dusky, more greenish than the interscapulars; greater upper primary coverts greenish Delft blue on their outer webs, dull olive-fuscous on all but the tips of the inner webs, the tips like the outer webs; remiges dull fuscous on the inner webs, greenish Delft blue on the outer webs of the outermost three or four primaries, the others with the outer web bright dusky olive-green like their inner median upper coverts; middle and lower abdomen, and thighs dull blackish violet-gray to almost black; under tail coverts white; larger, under wing coverts greenish Delft blue with pale dull fuscous inner webs; iris clear brown; frontal shield dull blue or bluish white; bill carmine tipped with greenish yellow; tarsi and toes greenish yellow.⁸⁶

i, 1884, 384; Dabbene, Orn. Argentina, 1910, 198.—[*Ionornis*] *parva* Ihering (H. & R.), Aves Brazil, 1907, 32 (Matto Grosso; Rio Amazonas; Minas Geraes; Amazonia).—*Jonornis parvi* Bertoni, Fauna Paraguaya, 1914, 37 (Pilcomayo; Matto Grosso; Minas Geraes).—*Glaucestes parvus* Allen, Bull. Amer. Mus. Nat. Hist., v, 1893, 150 (Chapada, Matto Grosso, w. Brazil).—*Porphyriola parva* Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 191 (Rio Amazon; Aunai, Brit. Guiana). [*Porphyriola*] *parva* Sharpe, Hand-list, i, 1899, 108.—[*Fulica*] *flavirostris* Gmelin, Syst. Nat., i, pt. 2, 1789, 699 (Cayenne; based on *Favorite de Cayenne* Buffon, Ois., viii, 207; *Favorite Gallinule* Latham, Synop. Birds, iii, pt. i, 256).—[*Gallinula*] *flavirostris* Latham, Index Orn., ii, 1790, 169.—*Porphyrio flavirostris* Vieillot, Nouv. Dict. Hist. Nat., xxviii, 1819, 29; Stephens, Shaw's Gen. Zool. xii, pt. i, 1824, 250; Gray, List Birds Brit. Mus., Grallae, 1844, 122.—*Glaucestes flavirostris* Reichenbach, Av. Syst., 1852, xxi.—[*Ionornis*] *flavirostris* Brabourne and Chubb, Birds South America, i, 1912, 261 (Guiana; Amazonia; int. Brazil).—*Ionornis flavirostris* Chubb, Birds Brit. Guiana, i, 1916, 79; Bangs and Penard, Bull. Mus. Comp. Zool., lxii, 1918, 42 (Paramaribo, Surinam).—*Jonornis flavirostris* Dabbene, Bol. Soc. Phys. Buenos Aires, i, 1913, 256 (Fortin Page, lower Rio Pilcomayo, Argentina; Matto Grosso, Brazil).—*Porphyrio cayana* Lesson, Traité d'Orn., 1831, 533 (new name for *Fulica flavirostris* Gmelin).—*Porphyrio simplex* Gould, Zool. Voy. Beagle, Birds, 1841, 133 (Ascension Island).—*Porphyrula martinica* (not *Fulica martinica* Linnaeus) Bonaparte, Compt. Rend., xliii, 1856, 599.

⁸⁶ Winter birds are said to have the bill, tarsi, and toes a little darker and duller than breeding specimens.

Juvenal (sexes alike).—Frontal shield smaller than in adult leaving more of the top of the head to be feathered; crown and occiput sepia to bister; hind neck similar but washed with oily olive-green; interscapulars, scapulars, and upper back oily brownish olive; wings as in adult but the upper coverts narrowly tipped with pale cream-buff; lower back dusky olive-brown; rump, upper tail coverts, and rectrices Prout's brown to mummy brown, the coverts tipped with olivaceous mummy brown, the rectrices externally washed with the same, sides of head tawny-olive to Saccardo's umber, a rather indistinct loreal band tawny-olive; sides of neck tawny-olive; throat, breast, sides, flanks, and thighs ashy, pale avellaneous becoming less ashy, more pale buffy brown on the sides and flanks and thighs; middle and lower abdomen white slightly washed with buffy; under tail coverts white; bill with no red, otherwise unfeathered parts colored as in adult.

Natal down.—Uniform glossy black; the forehead, crown, orbital area, fore part of cheeks, and chin, ornamented by fine hairlike filaments of silvery white, densest on forehead, and also sparsely covering the occiput; a few similar filaments on hinder part of secondary coverts; basal half of bill light yellowish brown (in dried skin), crossed anteriorly by an irregular, narrow, black bar; terminal portion jet black with a porcelain-white spot near the tip (not extending to the edge, however), and slight indication of a vague spot immediately beneath it, on subterminal portion of lower mandible; tarsi and toes dull light brownish; depth of bill at base greater than length of upper mandible from the nostril.⁸⁷

Adult male.—Wing 168–184 (176.2); tail 60–78 (69.7); culmen from nostril 16–19 (17.5); culmen including frontal shield 45–52 (48.7); tarsus 56–64 (60.8); middle toe without claw 54.5–64 (61.2 mm.).⁸⁸

Adult female.—Wing 161–184 (170.8); tail 60–78 (68.2); culmen from nostril 15–19 (16.8); culmen including frontal shield 41–49.5 (45.2); tarsus 52–65 (59.3); middle toe without claw 51–61 (57.8 mm.).⁸⁹

Range.—Breeds in fresh-water marshes from Texas (Harris and Orange Counties); Louisiana (Cameron Parish, Avery Island,

⁸⁷ Readily distinguished from the corresponding stage of *Gallinula chloropus cachinnans* by the much deeper and differently marked bill, much smaller and less elongated nostril, densely feathered head (almost nude in downy young of *Gallinula* except on sides of crown to above eyes and on occiput), and absence of whitish filaments on lower throat.

⁸⁸ Nineteen specimens from Louisiana, Florida, Mexico, Panama, Cuba, and Brazil.

⁸⁹ Twenty-seven specimens from Florida, Alabama, Mexico, Costa Rica, Honduras, Panama, Cuba, Hispaniola, and Brazil.

Houma); Mississippi (Natchez); southern Alabama (Chuckvee Bay, Baldwin County); Florida (throughout peninsular Florida, west to Leon County); Georgia (Okefenokee Swamp and probably Savannah); and South Carolina (Yemasee, Frogmore, and probably Charleston); south through the West Indies—Bahamas (breeding?); Cuba and Isle of Pines (La Casalina); Puerto Rico (formerly common, now rare; Arecibo, Lugillo, Guaimini River, Anegado and Cartagena Lagoons); Jamaica; Hispaniola (both Haiti and the Dominican Republic); Grenada; the Grenadines; Barbados; St. Vincent; St. Lucia; Dominica; Guadeloupe; to Carriacou; Tobago; and Trinidad; and through Mexico and Central America (definitely recorded from Mexico; Guatemala; Honduras; El Salvador; Costa Rica; Panama) to South America as far south as Ecuador (La Carolina; Chone; chiefly tropical zone, but also recorded from the tableland); Peru; Brazil (whole of Brazil south to Matto Grosso—Caicara, Cachoeira, Carandasinho, Urucum; and Rio Grande do Sul); Paraguay (Sapucay); and northern half of Argentina (San Vicente, Chaco; Barracas al Sud, Santiago del Estero; and Province of Buenos Aires).

Winters throughout all but the northernmost portion of the breeding range (occurs north to Brownsville, Tex., and Tallahassee and Royal Palm Hammock, Fla.).

Casual in Bermuda; North Carolina; Virginia; Maryland; Pennsylvania; New Jersey; New York; Connecticut; Rhode Island; Massachusetts; New Hampshire; Maine; New Brunswick; Nova Scotia; Quebec; Missouri; Illinois; Indiana; Michigan; Wisconsin; Kansas; Arizona; Colorado; and Utah. Accidental in Tristan da Cunha.

Type locality.—Martinique, West Indies.

- [*Fulica martinica* LINNAEUS, Syst. Nat., ed. 12, i, 1766, 259 (Martinique; "edit Oryzam, Pisa, Ponem, D. Jacquin").
- [*Gallinula martinica* LATHAM, Index Orn., ii, 1790, 769.—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City).
- Gallinula martinica* TEMMINCK, Cat., Syst. 1807, 172.—BONAPARTE, Contr. Macclurian Lyc., i, 1827, 27; Ann. Lyc. Nat. Hist. New York, ii, 1827, 336; Geogr. and Comp. List, 1838, 53.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 221.—AUDUBON, Orn. Biogr., iv, 1838, 37, pl. 305; Synopsis, 1839, 210; Birds Amer., 8vo ed., v, 1842, 128, pl. 303.—PEABODY, Rep. Orn. Massachusetts, 1839, 375 (accidental).—DENNY, Proc. Zool. Soc. London, 1847, 40 (West Indies).—HURDIS, Jardine's Contr. Orn., 1850, 36 (Bermuda, Apr., 1849, several).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 753.—BAIRD, Cat. North Amer. Birds, 1859, No. 561.—BRYANT, Proc. Boston Soc. Nat. Hist., vii, 1859, 122 (Bahamas); x, 1866, 257 (Puerto Rico); Journ. für Orn., xiv, 1866, 191 (Puerto Rico).—MARTENS, Journ. für Orn., vii, 1859, 220 (Bermuda).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1861, 302 (Panama); viii, 1866, 295 (vicinity of New York City).—MARCH, Proc. Acad.

- Nat. Sci. Philadelphia, xvi, 1864, 69 (Jamaica).—SCLATER, Proc. Zool. Soc. London, 1864, 179 (near City of Mexico).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7 (Ralli), 1865, 38.—DRESSER, Ibis, 1866, 40 (s. Texas).—COUES, Proc. Boston Soc. Nat. Hist., xii, 1868, 124 (South Carolina).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 56 (Phila. ed., p. 45).—BOARDMAN, Amer. Nat., iii, 1869, 498.
- G[allinula] martinica* BONAPARTE, Obs. Wilson's Amer. Orn., 1826, [193].—RIDGWAY, Ann. Lyc. Nat. Hist. New York, x, 1874, 387 (Illinois).
- Gall[inula] martinica* ALBRECHT, Journ. für Orn., ix, 1861, 56 (Bahamas).
- Gallinula (Fulica) martinica* THIENEMANN, Journ. für Orn., v, 1857, 156 (Cuba; descr. eggs).
- G[rex] martinica* LICHTENSTEIN, Verz. Doubl., 1823, 79 (Brazil).
- Porphyrio martinica* D'ORBIGNY, in La Sagra's Hist. Nat. Cuba, Aves, 1839, 182 (French ed., Svo, p. 265).—GOSSE, Birds Jamaica, 1847, 377.—BURMEISTER, Syst. Ueb. Thiere Bras., iii, 1856, 392.—CABANIS, Journ. für Orn., 1856, 429 (Cuba); 1874, 231 (Brazil).—MOORE, Proc. Zool. Soc. London, 1859, 64 (Lake Petén, Guatemala).—SCLATER and SALVIN, Ibis, 1859, 230 (Guatemala); Proc. Zool. Soc. London, 1864, 372 (Panamá).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 307 (Cuba); xvii, 1875, 447 (New England).—GUNDLACH, Journ. für Orn., 1862, 90 (crit.).—TAYLOR, Ibis, 1864, 96 (Trinidad); 171 (Puerto Rico).—FRANTZIUS, Journ. für Orn., 1869, 375 (Costa Rica).—FINSCH, Proc. Zool. Soc. London, 1870, 589 (Trinidad; crit.).—WYATT, Ibis, 1871, 383 (Lake Paturia, Colombia).—COUES, Check-list, 1874, No. 473.—LAWRENCE, Mem. Boston Soc. Nat. Hist., ii, 1874, 312 (Rio de Coahuayana, Coima).—WHITMAN, Amer. Nat., ix, 1875, 573 (Massachusetts).—LANGDON, Birds Cincinnati, 1877, 16 (mouth of Big Miami, Mar. 3, 1877; Jones Station, May 1, 1877; Madisonville, April, May, 3 specimens).—WHEATON, Bull. Nutt. Orn. Club, ii, 1877, 83 (Circleville, Ohio, May 10, 1877).—ALLEN, Bull. Nutt. Orn. Club, iii, 1878, 149 (St. Louis, Mo., Apr. 18, 1877).—PURDIE, Bull. Nutt. Orn. Club, v, 1880, 242 (Boothbay, Maine, Sept. 1877).—BREWSTER, Bull. Nutt. Orn. Club, vi, 1881, 186 (St. Johns, New Brunswick, Apr. 6, 1881).—CORY, Bull. Nutt. Orn. Club, vi, 1881, 155 (Haiti; specimens).
- [Porphyrio] martinica* GUNDLACH, Journ. für Orn., ix, 1861, 344 (Cuba).—COUES, Key North Amer. Birds, 1872, 275.
- P[orphyrio] martinica* CABANIS, in Schomburgk's Reis. Britisch-Guiana, iii, 1848, 761.—NELSON, Bull. Essex Inst., viii, 1876, 135 (near Chicago, Ill., May 1866; Racine, Wis.)
- Porphyrio martinicus* STEPHENS, Shaw's Gen. Zool., xii, pt. i, 1824, 252 (Cayenne; United States).—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—ALBRECHT, Journ. für Orn., 1862, 206 (Jamaica).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1864, 372 (Panama); 1867, 592 (Mexiana Island); 1868, 459 (monogr.; crit.); 1879, 546 (Medellín, Colombia).—LÉOTAUD, Ois. Trinidad, 1866, 501.—SALVIN, Ibis, 1870, 115 (Costa Rica); 1886, 177 (Brit. Guiana).—PELZELN, Orn. Bras., 1870, 317, 450.—SAMPEN, Proc. Zool. Soc. London, 1872, 653 (Santa Lucia; habits).—LAWRENCE, Proc. U. S. Nat. Mus., i, 1878, 197 (St. Vincent); i, 1879, 487 (Dominica; St. Vincent).—ALLEN, Bull. Nutt. Orn. Club, v, 1880, 169 (Santa Lucia).—BERLEPSCH, Journ. für Orn., 1884, 320 (Lake Paturia, Colombia).—TRISTRAM, Cat. Coll. Birds H. B. Tristram, 1889, 267 (Dominican Republic; specimen).—KOENIGSWALD, Journ. für Orn., 1896, 393 (São Paulo, Brazil).—BRITISH ORNITHOLOGISTS' UNION, List Brit. Birds, ed. 2, 1915, 352 (British records doubtful).

- P[orphyrio] martinicus* MAXIMILIAN, Journ. für Orn., vii, 1859, 94 (s. United States to Brazil).
- [*Porphyrio*] *martinicus* SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140.
- Ionornis martinica* MERRILL (J. C.), Proc. U. S. Nat. Mus., i, 1878, 165 (Fort Brown, Tex., breeding).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 11, 202 (Cat. North Amer. Birds, No. 578); Nom. North Amer. Birds, 1881, No. 578.—CHAMBERLAIN, Bull. Nutt. Orn. Club, vii, 1882, 105 (Georgetown, New Brunswick, Sept. 1880).—JENCKS, Bull. Nutt. Orn. Club, vii, 1882, 124 (Westerly, R. I.; no date).—COUES, Check List, ed. 2, 1882, No. 685.—BAIRD, BREWER, and RIDGWAY, Water Birds, North Amer., i, 1884, 384.—CORY, Birds Haiti and San Domingo, 1885, 162; Auk, iv, 1888, 57 (West Indian localities and references); x, 1893, 220 (Tobago); Birds West Indies, 1889, 258; Cat. West Indian Birds, 1892, 91; Field Mus. Nat. Hist. Publ. 131, 1909, 386 (near Chicago, Ill., May 1866; near Coal City, Grundy County, Ill., April 24, 1900; Janesville, Milwaukee, and Racine, Wis.).—BUTLER, Brookville Soc. Nat. Hist. Bull. 2, 1886, 15 (near Brookville, Franklin County, Ind., spring 1880); Auk, xiv, 1897, 200 (Sandusky, Ohio, Apr. 28, 1896); Rep. State Geol. Indiana for 1897 (1898), 681 (near Brookville, spring 1880; Decatur County, May 1883; Wayne County, 2 specimens).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 218; ed. 4, 1931, 99.—WELLS, Proc. U. S. Nat. Mus., ix, 1887, 629 (Grenada, resident).—COOKE, U. S. Dept. Agr. Div. Econ. Orn. Bull. 2, 1888, 88.—BROWN (H), Auk, v, 1888, 109 (near Tucson, Ariz. Oct. 1887).—WAYNE, Auk, v, 1888, 109 (Yemassee, S. C.; habits; descr. nest and eggs); Birds South Carolina, 1910, 40 (summer resident; habits, descr. nest and eggs).—FEILDEN, Ibis, 1889, 499 (Barbados).—RIVES, Cat. Birds Virginia, 1890, 53 (several occurrences).—SCOTT, Auk, ix, 1892, 12 (Jamaica, resident).—BOUCARD and BERLEPSCH, The Humming Bird, ii, 1892, 41 (Porto Real, Brazil).—ATTWATER, Auk, ix, 1892, 232 (San Antonio, Tex., rare migrant).—ALLEN, Bull. Amer. Mus. Nat. Hist., v, 1893, 150 (Cachoeira, Brazil).—DUTCHER, Auk, x, 1893, 272 (near Flatlands, Long Island, no date; "formerly very plentiful").—LANTZ, Auk, x, 1893, 300 (Manhattan, Kans., Apr. 14, 1893).—STONE, Birds, Eastern Pennsylvania and New Jersey, 1894, 68 (several records).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., vi, 1894, 79 (Trinidad).—TUTTLE, Auk, xii, 1895, 191 (Erie County, Ohio, Sept. 2, 1894).—PIERS, Auk, xv, 1893, 195 (Devils Island, Halifax Harbor, Nova Scotia, Jan. 16, 1896; Chezzetcook, Halifax County, Jan. 1896; near Halifax, Jan. 30, 1870, and Apr. 1889).—HENNINGER, Auk, xvi, 1899, 75 (Scioto River near Waverly, Ohio, Nov. 16, 1898).—FARLEY, Auk, xviii, 1901, 190 (Boxford, Mass., June 1897); xxii, 1905, 409 (Sandwich, Mass., Apr. 1902).—DEANE, Auk, xix, 1902, 77 (Grundy County, Ill., Apr. 24, 1900; xxvi, 1909, 305 (Willington, Will County, Ill., Apr. 26, 1900).—ALLEN (G. M.), Proc. Manchester Inst. Arts and Sci., iv, 1902, 190 (Rye and Willard's Pond, near Dover, N. H.); Auk, xxv, 1908, 234 (Seconnet, R. I., June 8, 1900).—KUMLEIN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 39 (Wisconsin).—TAVERNER, Auk, xxii, 1905, 89 (Guelph, Wellington County, Ontario, no date).—THAYER and BANGS, Bull. Mus. Comp. Zool., xlvi, 1905, 94 (Gorgona Island, Colombia).—BANGS and ZAPPEY, Amer. Nat., xxxix, 1905, 192 (Isle of Pines, Cuba; crit.; measurements).—HOWE, Auk, xxii, 1905, 319 (Randolph, Mass., May 24, 1904).—FLEMING, Auk, xxiii, 1906, 448 (Rouge River, Ontario, Apr. 18, 1892).—WOODRUFF, Chicago Acad. Sci. Bull. 6, 1907, 60 (Lake View, Chicago, May 1886).—WIDMANN, Birds Missouri, 1907, 61 (2 records).—ANDERSON, Proc. Davenport Acad. Sci., xi, 1907, 209 (Iowa, 2 records).—HELLMAYR, Nov. Zool., xv, 1908, 100 (Fazenda

Esperanca, Brazil).—KNIGHT, Birds Maine, 1908, 114 (4 records).—JONES (L.), Wils. Bull., xxi, 1909, 123 (Sandusky Bay, Ohio, Apr. 28, 1896; shore Lake Erie, Ohio, Sept. 2, 1894).—HARTERT and VENTURI, Nov. Zool., xvi, 1909, 529 (San Vicente, Chaco, Argentina, breeding; descr. eggs).—VERRILL (A. E. and A. H.), Proc. Acad. Nat. Sci. Philadelphia, lxi, 1909, 356 (San Lorenzo and Sánchez, Santo Domingo).—DABBENE, Orn. Argentina, 1910, 198 (Chaco; Santiago del Estero; Buenos Aires).—EATON, Birds New York, i, 1910, 283, pl. 27 (rare).—CHUBB, Birds British Guiana, i, 1916, 78 (habits).—TODD, Ann. Carnegie Mus., x, 1916, 203 (Pasadita, Isle of Pines; crit.).—PETERS, Bull. Mus. Comp. Zool., lxi, 1917, 402 (Monte Cristi; El Batey; Hispaniola).—BANGS and KENNARD, List Birds Jamaica, 1920, 6 (rare; no definite recent records).—LÖNNBERG and RENDAHL, Arkiv Zool., xiv, No. 25, 1922, 20 (La Carolina, near Quito, Ecuador, Feb., Mar.).—MCATEE, U. S. Dept. Agr. Misc. Circ. 13, 1923, 44 (local names; range).—DELACOUR, Ibis, 1923, 139 (Guarico and Apure, Venezuela).—SOPER, Auk, xxxviii, 1923, 495 (near Guelph, Ontario, 1894).—JOHNSTON, Birds West Virginia, 1923, 87 (Distr.; West Virginia).—MILLER (W. DeW.), Bull. Amer. Mus. Nat. Hist., i, 1924, 309 (ptilosis).—HALLINAN, Auk, xli, 1924, 308 (Las Guacas, Panama; food).—ARIBALZAGA, El Hornero, iii, 1924, 262 (common names; Argentina).—SUGDEN, Condor, xxvii, 1925, 210 (Haynes Lake, Utah).—GARDNER, Proc. U. S. Nat. Mus., lxxvii, art. 19, 1925, 16 in text, pl. 8 (structure of tongue).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., iv, 1926, 179 (distr., Ecuador—chiefly tropical zone, but recorded from the tableland; 7 specimens from Chone).—GRISCOM, Amer. Mus. Nov., No. 235, 1926, 7 (Eastern Quintana Roo, Yucatan).—BAILEY, Wils. Bull., xxxix, 1927, 176 (distr.).—EIFRIG, Auk, xlv, 1927, 432 (specimen, Bellwood, near Chicago).—PEREYRA, El Hornero, iv, 1927, 23 (Province of Buenos Aires, Argentina).—BAILEY (A. M.), Auk, xlv, 1927, 560 (habits; Avery Island).—YOUNG, Ibis, 1928, 764 (coasts of British Guiana; habits; colors of unfeathered parts).—STURGIS, Field Book Birds Panama Canal Zone, 1928, 43 (descr.; habits; Canal Zone).—HELLMAYR, Field Mus. Nat. Hist. Zool. Ser., xii, No. 18, 1929, 484 (Lake Parnagua, Piahy, Brazil).—BAKER, Auk, xlvii, 1930, 271 (common west of Montego Bay, Jamaica).—NAUMBURG, Bull. Amer. Mus. Nat. Hist., lx, 1930, 74 (distr. Matto Grosso, Brazil—Caicara, Cachoeira, Carandasinho, Urucúm; and Rio Grande do Sul; colors of unfeathered parts).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 301 (Changuinola, Banana River, Siaxola, Elena, and Crícamola, Panama).—STONE, Auk, xlix, 1932, 348 in text (Cape May County, N. J.).—CRAMER, Auk, xlix, 1932, 348 in text (Harrisburg, Pa.).—HOWELL (A. H.), Florida Bird Life, 1932, 209 (genl.; Florida).—MILLER (A. H.), Condor, xxxiv, 1932, 11 (habits; nesting; Lake Olomega, El Salvador).—GRISCOM, Bull. Mus. Comp. Zool., lxxii, 1932, 321 (Permé, Panama); Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 123 (distr., Guatemala).—SAUNDERS, Auk, l, 1933, 99 (Fairfield, Conn., May 5, 1932; Stratford, Conn., May 28, 1926).—LONG, Auk, l, 1933, 450 (Clearwater, Sedgwick County, e. Kansas, June 17, 1933).—VOGT, Auk, li, 1934, 518 (Jones Beach, Long Island, N. Y., June 21, 1934).—STONE, Auk, li, 1934, 518 (Cold Spring, Cape May County, N. J., May 28, 1934).—WORTH, Auk, li, 1934, 519 (Tlincum Township, Pa., 1 found dead, June 15, 1934).—TAVERNER, Birds Canada, 1934, 174 (casual records for eastern provinces and s. Ontario).—GRISWOLD, Auk, lii, 1935, 80 (South Windsor, Conn., Oct. 9–June 5).—WETMORE, Auk, lii, 1935, 329 in text (bones—pre-Columbian site, Venezuela).—MCLHENNY, Auk, liii, 1936, 327 (predatory habits, Louisiana).—WETMORE, Journ. Agr. Univ. Puerto Rico, xxi, 1937, 8 (bones from prehistoric sites, St. Croix).—SMITH, Auk, lv, 1938,

549 (Canard, Nova Scotia, found dead May 1927).—WETMORE, Auk, lv, 1938, 54 (bones; Puerto Rico).—WILLIAMS, Auk, lv, 1938, 65 (common, Galveston Bay, Tex., in summer).—BELLROSE and HUTCHENS, Auk, lv, 1938, 274 (Urbana, Ill.).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xxiii, 1939, 23 (extremely rare on Guadeloupe—Le Moule, Grande Terre—1 record).—HAMPE, SEIBERT, and KOLB, Auk, lvi, 1939, 475 (specimen, Patuxent Marsh, Md., Oct. 12, 1938).

I[onornis] martinica COUES, Key North Amer. Birds, ed. 2, 1884, 676.

[Ionoris] martinica CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30.—IHERING (H. and R.), Aves Brazil, 1907, 32 (Rio de Janeiro; São Paulo; Matto Grosso; Rio Negro; Bahia; Pernambuco; Rio Amazonas).—BARBOURNE and CHUBB, Birds South America, i, 1912, 26 (Colombia; Amazonia; Guiana; Brazil; Paraguay).

Ionornis martinica BERLEPSCH, Journ. für Orn., 1887, 125 (Paraguay); xxxvii, 1889, 320 (Tarapoto, ne. Peru).—GUNDLACH, Orn. Cubana, 1895, 246.—TIPPENHAUER, Die Insel Haiti, 1892, 323 (Haiti).—DABBENE, Bol. Soc. Phys. Buenos Aires, i, 1913, 256 (San Vicente, Chaco, and Barracas al Sur, Buenos Aires, Argentina).—BERTONI, Fauna Paraguaya, 1914, 37 (upper Rio Paraná).

Ionornis martinicus AMERICAN ORNITHOLOGISTS' UNION, Check-list, ed. 3, 1910, 105.—LACEY, Auk, xxviii, 1911, 205 (Kerrville, Tex., May 20, 1909).—BARROWS, Michigan Bird Life, 1912, 161 (3 or 4 records).—FORBUSH, Game-birds, Wild-fowl, and Shore-birds, 1912, 217 (Massachusetts records).—SAGE, BISHOP, and BLISS, Birds Connecticut, 1913, 51 (4 records).—BUNKER, Kansas Univ. Sci. Bull. 7, 1913, 143 (Douglas County, Kans., Apr. 26, 1896, and Apr. 18, 1909).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 37, fig. 17 (range).—WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 36 (Puerto Rico, now rare).—NOBLE, Bull. Mus. Comp. Zool., ix, 1916, 366 (Guadeloupe).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxvi, 1919, 220 (Rio Atrato, etc., Colombia).—BANGS and PENARD, Bull. Mus. Comp. Zool., lxii, 1918, 42 (Paramaribo, Surinám).—STONE (H. F.), Auk, xxxvii, 1920, 130 (Currituck Sound, N. C., Nov. 12, 1919).—OSGOOD and CONOVER, Field Mus. Nat. Hist., Publ. 210, 1922, 41 (Lagunilla, Venezuela, breeding; habits).—TODD, Ann. Carnegie Mus., xiv, 1922, 179 (Mamatoco, Fundación, and Trojas de Cataca, Santa Marta, Colombia, breeding; descr. nest).—WILSON (G.), Auk, xxxix, 1922, 235 (Bowling Green, Ky., Apr. 1916); Wils. Bull., xxxv, 1923, 131 (Calloway County, Ky., rare summer resident).—BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 56 (Cuba, breeding; habits).—FIGGINS, Auk, xl, 1923, 673 (Black Bayou, La., breeding).—GRISCOM, Birds New York City Region, 1923, 139 (status, New York City region).—HOWELL (A. H.), Birds Alabama, 1924, 91; ed. 2, 1928, 91 (distr.; habits; Alabama).—BENT, Wils. Bull., xxxvi, 1924, 10 (Puerta Tank, near Aransas Pass, se. Texas).—DE LAUBENFELS, Wils. Bull., xxxvi, 1924, 165 (Brownsville, Tex.).—FORBUSH, Birds Massachusetts and other New England States, i, 1925, 364, pl. 24 (fig.; descr.; habits; New England).—BAILEY (H. H.), Birds Florida, 1925, 43, pl. 24 (col. fig.; distr.; Florida).—SIMMONS, Birds Austin Region, 1925, 48 (Austin, Tex., region; habits; descr.; etc.).—BLINCOE, Auk, xlii, 1925, 419 (Bardstown, Ky.).—GRISCOM and CROSBY, Auk, xlii, 1925, 527 (status, Brownsville, Tex.).—FRIEDMANN, Auk, xlii, 1925, 542 (Lower Rio Grand Valley, Tex.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (status, Fulton County, Ky.).—NAUMBURG, Auk, xliii, 1926, 491 (breeds; Texas and South Carolina to Ecuador and Paraguay).—HOLT and SUTTON, Ann. Carnegie Mus., xvi, 1926, 424 (habits, s. Florida).—MOUNTS, Wils. Bull., xxxix, 1927, 37 in text (adult carrying young).—BENT and

COPELAND, Auk, xlv, 1927, 377 (near Zephyr Hills, arm of Lake Apopka, Fla.).—WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 342 (genl., Puerto Rico; formerly common resident, now getting rare; Arecibo, Luquillo, Guaimini River, Anegado and Cartagena Lagoons; nests in April, May, Sept., and Oct.).—CHRISTY, Auk, xlv, 1928, 287, in text (Lake Okeechobee, Fla.).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 495 (distr.; habits; Haiti).—DANFORTH, Auk, xlvi, 1929, 362 (Vasquez, Laguna del Salodillo, Hispaniola).—HICKS, Wils. Bull., xli, 1929, 43 (Alum Creek Swamp, Ohio).—GROSS and VAN TYNE, Auk, xlvi, 1929, 431 (life hist.; Barro Colorado Island, Panama).—WETMORE, Auk, xlvi, 1930, 486 (Rabié paintings; Hispaniola).—DANFORTH, Journ. Dept. Agr. Puerto Rico, x, 1926, 56, 59 (Cartagena Lagoon); xv, 1931, 50 (Cartagena Lagoon; Mayaguez, and Guanica Lagoon, Puerto Rico).—BAILEY and WRIGHT, Wils. Bull., xliii, 1931, 194 (Cameron Parish, Chenier au Tigre, and Avery Island, La.; habits).—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 58 (descr.; status in Arkansas).—DARLINGTON, Bull. Mus. Comp. Zool., lxxi, 1931, 374 (swamps at Cienaga, Magdalena, Colombia).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 134 (habits; distr.; Hispaniola).—NICE, Birds Oklahoma, rev. ed., 1931, 85 (Oklahoma).—DU MONT, Auk, xlvi, 1931, 249 (Floating Island, Holmes Pond, Fla.).—WETMORE, Proc. U. S. Nat. Mus., lxxx, art. 2, 1932, 16 (near Baradères, Haiti).—DANFORTH, Journ. Agric. Univ. Puerto Rico, xix, 1935, 425 (Bayano, Pinar del Rio, and Paso Real, Cuba).

[*Jonornis*] *martinicus* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 318 (Guiana; Brazil; North America).

Ionorinis martinicus [ARTHUR], Birds Louisiana, 1931, 241 (descr.; status; Louisiana).

Icnornis martinicus HARRIS, Trans. Acad. Sci. St. Louis, xxiii, 1919, 246 (Kansas City, Mo., Dec. 30, 1915).

Iornis martinicus MOLTONI, Att. Soc. Ital. Scienz. Nat., lxviii, 1929, 311 (Haina, Hispaniola; specimens).

[*Porphyryla*] *martinica* GUNDLACH, Rep. Físico-Nat. Cuba, i, 1865-66, 362.

Porphyryla martinica BONAPARTE, Compt. Rend., xliii, 1856, 599.—GUNDLACH, Journ. für Orn., xxii, 1874, 314 (Puerto Rico); xxiii, 1875, 361 (Cuba; habits); xxvi, 1878, 162 (Puerto Rico); Contr. Orn. Cubana, 1876, 193.—WHITMAN, Forest and Stream, iv, 1875, 167 (Henrys Pond, Mass., Apr. 12, 1875).—PETERS, Check-list Birds of World, ii, 1934, 206.—BELCHER and SMOOKER, Ibis, 1935, 285 (breeds in Trinidad, June to Dec.).—PINTO, Rev. Mus. Paulista, xix, 1935, 75 (Bahia, Brazil).—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 305 (Panamá—locally throughout).—W[HITTELL], Emu, xxxv, 1935, 189 in text (Tristan da Cunha).—DEIGNAN, Auk, liii, 1936, 188 (specimen, La Ceiba, Honduras; colors of soft parts).—BOND, Birds West Indies, 1936, 92 (descr., Greater Antilles—Cuba, Isle of Pines, Jamaica, Puerto Rico; Lesser Antilles—Grenada, the Grenadines, Barbadoes, St. Vincent, St. Lucia, Dominica, and Guadeloupe; also S. United States, Central America, and South America).—VAN ROSSEM, Birds El Salvador, 1938, 162 (Lake Olomega, El Salvador, nesting; colors of soft parts and of downy chick).—OBERHOLSER, Bird Life Louisiana, 1938, 206 (summer resident throughout Louisiana, common in south, uncommon in north, breeds Apr. to July).

Porphyriola martinica SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 189.—IHERING, Rev. Mus. Paulista, iii, 1899, 419 (São Paulo, Brazil); iv, 1900, 164 (Cantogallo, São Paulo), 287 (descr. eggs); vi, 1904, 343 (Paraguay).—BONHOTE,

- Ibis, 1903, 309 (Andros Island, Bahamas).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 327 (Matamoros and Tampico, Tamaulipas; Valley of Mexico; Rio de Coahuylne, Colima, Oaxaca, Cozumel Island, Yucatan; lagoon near Peten and Vera Paz, Guatemala; Ruatan Island, Honduras; Pacaca, San Mateo, Santa Clara, n. slope Volcan de Barba, and Laguna de Cartago, Costa Rica; Lion Hill and Laguna de Pita, Panama; Colombia; Guiana; Amazon Valley; Ecuador; Brazil; West Indies).—HELLMAYR, Nov. Zool., xiii, 1906, 53 (Caroni, Trinidad).—BERLEPSCH, Nov. Zool., xv, 1908, 300 (Cayenne).—MÉNÉGAUX, Rev. Franç. d'Orn., No. 2, 1909, 31 (Figuabas, e. Cuba; fresh colors unfeathered parts).—CHUBB, Ibis, 1910, 66 (Sapucay, Paraguay).—SCLATER, Rev. List Birds Jamaica, 1910, 20.—REISER, Denkschr. Akad. Wiss. Wien, math.-nat. Kl., 1910, 96 (near Joazeiro, etc., ne. Brazil).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 411 (Costa Rica; habits).—SNETHLAGE, Journ. für Orn., lxxvi, 1928, 554, 573, 682 (breeding habits and seasons; several South American countries).—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 123 (eggs).—CIFERRI, Segundo Informe Anual Est. Nac. Agron. Moca, 1927, 6 (Hispaniola; listed).
- [*Porphyriola martinica* SHARPE, Hand-list, i, 1899, 108.
- Hydrogallina Martinica* LEDRU, Voy. Îles Ténériffe, La Trinité, Saint-Thomas, Sainte-Croix et Porto Ricco, 1810, ii, 209 (Puerto Rico).
- Crex martinica* LICHTENSTEIN, Verz. Doubl., 1823, 79.
- Fulica martinicensis* JACQUIN, Beytr. Gesch. Vög., 1784, 12, pl. 3.—TURTON, Syst. Nat., i, 1806, 423.
- [*Fulica martinicensis* GMELIN, Syst. Nat., i, pt. ii, 1789, 700.
- Gallinula martinicensis* MAXIMILIAN, Beitr. Naturg. Bras., iv, 1833, 812 (Rio Itatype, Brazil).—EULER, Journ. für Orn., xxv, 1867, 197 (Brazil).—RITTER, Naturh. Reise westind. Insel Hayti, 1836, 157 (Haiti; specimens).
- Ionornis martinicensis* REICHENBACH, Syst. Av., 1853, p. xxi.
- Fulica flavirostris* GMELIN, Syst. Nat., i, 1788, 699.
- [*Fulica porphyrio* LINNAEUS, Syst. Nat., ed. 10, i, 1758, 152, part (Jamaica); ed. 12, i, 1766, 258, part.
- Gallinula porphyrio* WILSON, Amer. Orn., ix, 1814, 67, pl. 73, fig. 2.
- G[*allinula porphyrio* BONAPARTE, Obs. Wilson's Amer. Orn., 1826, [193].
- Porphyrio cyaneicollis* VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 28 (Paraguay; based on *Yahaná garganta celeste* Azara, Apunt. Hist. Nat. Páraxos Paragüaya, 1802, 253).
- Porphyrio tavoua* VIEILLOT, Nouv. Dict. Hist. Nat., xxviii, 1819, 30 (new name for *Fulica martinica* Linnaeus); Gal. Ois., ii, 1825, 170, 267.
- [*Porphyrio americanus* SWAINSON, Classif. Birds, ii, 1837, 337 (ex Wilson).
- (?) *Porphyrio amethystinus* HOLMBERG, Secundo Cen. Argent., 1898, 571.
- ? *Rallus jamaicensis* DESCOURTILZ, Voy. Nat., ii, 1809, 66 (Hispaniola; identity not certain).—RITTER, Naturh. Reise westind. Insel Hayti, 1836, 157 (identity not certain; Hispaniola).

Genus FULICA Linnaeus

- Fulica* LINNAEUS, Syst. Nat., ed. 10, i, 1758, 152. (Type, as designated by Gray, 1840, *F. atra* Linnaeus.)
- Fulcia* (typogr. error) EYBOUX and SOULEYET, Voy. *Bonite*, i, 1841, 102.
- Tulcia* (typogr. error) PHILIPPI and LANDBECK, Anal. Univ. Chile, xix, 1861, 507.
- Phalaria* REICHENBACH, Av. Syst. Nat., 1852, xxi. (Type, by original designation, *Fulica gigas* Eydoux and Souleyet.)

- Lysca* REICHENBACH, Av. Syst. Nat., 1852, xxi. (Type, by original designation, *Fulica ardesiaca* Tschudi.)
- Lupha* REICHENBACH, Av. Syst. Nat., 1852, xxi. (Type, by original designation, *Fulica cristata* Linnaeus.)
- Lophophalaris* HEINE, in Heine and Reichenow, Nom. Mus. Hein. Orn., 1890, 317. (New name for *Lupha* on grounds of purism.)
- Licornis* BONAPARTE, Ann. Sci. Nat., ser. 4, Zool. i, 1854, 150. (*Nomen nudum!*)
- Lycornis* BONAPARTE, Compt. Rend. xliii, 1856, 600. (Type, by original designation, *Fulica cornuta* Bonaparte.)

Fulicinae with lateral membrane of toes conspicuously developed, the segments strongly convex; frontal shield with surface plane (but more or less rounded or convex in both longitudinal and transverse sections), and claws obviously though slightly curved.

Bill about as long as or slightly shorter than head, moderately compressed, its width at posterior end of nostril equal to about two-thirds its depth at same point, the latter equal to decidedly less than half the length of commissure; gonys very decidedly shorter than mandibular rami, straight or very slightly convex, rather strongly ascending terminally, its basal angle distinct; culmen nearly straight (sometimes faintly concave or depressed) for basal half (approximately), gently but very distinctly decurved distally, rounded, or at least not distinctly ridged; frontal shield (in adults) extending backward as far as middle of eye (sometimes as far as posterior angle of eye), more or less tumid (sometimes much swollen and strongly convex both longitudinally and transversely), longer than broad (sometimes only slightly so, however), its posterior extremity either convex or contracted into an obtuse angle, its surface either smooth or slightly corrugated; nasal fossa extending for at least half the length of maxilla (from loreal feathering), usually decidedly more; nostril nearly midway between loreal feathering and tip of maxilla, in lower-anterior portion of nasal fossa, longitudinal (nearly on line with axis of maxilla, but slightly lower posteriorly), very narrowly, almost linear (pointed posteriorly). Wing relatively short, very concave beneath; longest primaries exceeding distal secondaries by one-third the length of wing, or more; the second, or second and third primaries longest, the first (outermost) shorter than fifth. Tail a little more than one-fourth as long as wing, rounded, the rectrices broad and moderately firm, 12-14 in number. Tarsus less than one-third as long as wing, about as long as inner toe, without claw (or shorter), moderately compressed, the acrotarsium with a continuous row of very regular, broad scutella, the planta tarsi sharply ridged, with a single series of regular transverse scutella (smaller than those on acrotarsium) on outer side, separated from those in front by a row of longitudinal small scales, the inner side with several series of small hexagonal or nearly quadrate (partly longi-

tudinal) scales; upper surface of toes with a continuous series of regular transverse scutella; lateral membranes of toes very broad, the segments conspicuously convex, their lateral lobes with transverse scutella similar to those on top of toes; claw of outer toe sometimes reaching to base of middle claw, but usually falling short of the

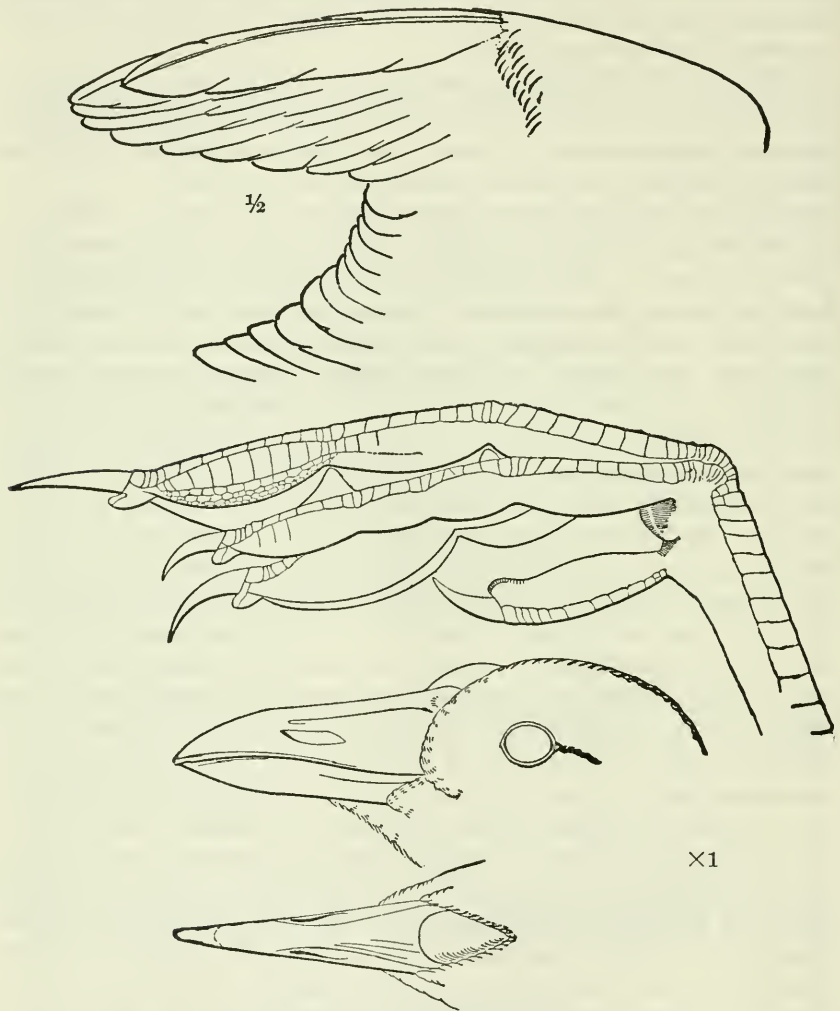


FIGURE 14.—*Fulica americana*.

latter; inner toe decidedly shorter than outer; hallux (without claw) about as long as basal phalanx of outer toe; claws moderate in size, very slightly curved, especially that of middle toe.

Plumage and coloration.—Plumage of head and neck short, dense, and very soft, the head completely feathered, except where occupied by frontal shield; plumage of body, etc., full, dense, and rather coarse;

primaries rigid. Color of adults plain slate-color, becoming darker (blackish) on head and neck, the under tail coverts, secondaries, or edge of wing (sometimes all) partly white.

Range.—Nearly cosmopolitan. (Many species.)

Remarks.—Several South American coots have usually been referred to *Fulica* but appear to be subgenerically distinct and have not been used in the above description. Thus, *Fulica ardesiaca* Tschudi, *F. armillata* Vieillot, and *F. rufifrons* Philippi and Landbeck agree with one another and differ from all the species of *Fulica* proper in having the lateral membranes of the toes very narrow, with the segments very slightly if at all convex, indeed almost bridging the gap between the coots and gallinules; while *F. gigantea* Eydoux and Souleyet, though agreeing with typical *Fulica* in the broad and conspicuously scalloped lateral membranes to the toes differs strikingly in the more elongated and perfectly straight claws and in form of the frontal shield, which on each side is elevated into a thick vertical ridge. *F. cornuta* Bonaparte has also not been used, but this may also be subgenerically distinct, having a large hornlike projection or caruncle on the shield.

KEY TO THE NORTH AND MIDDLE AMERICAN FORMS OF FULICA

- a.* Frontal shield whitish (pale brownish in dried skins), like the bill, much wrinkled..... *Fulica caribaea* (p. 222)
- aa.* Frontal shield dark chestnut to reddish brown; not wrinkled.
- b.* Under tail coverts white.
- c.* Frontal shield smaller, not over 13 mm. in length.
Fulica americana americana (p. 213)
- cc.* Frontal shield larger, over 14 mm. in length.
- d.* Bill relatively heavier, 16–18 mm. deep at base.
Fulica americana grenadensis (p. 221)
- dd.* Bill relatively slenderer, less than 15 mm. deep at base.
Fulica americana columbiana (extralimital)⁹⁰
- bb.* Under tail coverts dark slate like rest of underparts.
Fulica atra atra (p. 207)

FULICA ATRA ATRA Linnaeus

EUROPEAN COOT

Adult (sexes alike).—Head and neck wholly black, the crown and occiput with a slight sheen, the upper throat and chin with a deep fuscous-brownish wash; a short grayish-white line under the eye; rest of upperparts very dark slate to slate-black, with a faint brownish or olive-brownish wash on the scapulars, interscapulars, back, and upper

⁹⁰ *Fulica americana columbiana*.—*Fulica americana columbiana* Chapman, Bull. Amer. Mus. Nat. Hist., xxxiii, 1914, 170 (Lake Herrera, north of Bogotá, Colombia; coll. Amer. Mus. Nat. Hist.); xxxvi, 1917, 220 (Lake Herrera and La Olanda, centr. Colombia); Peters, Check List Birds of World, ii, 1934, 212.

tail coverts; upper wing coverts like the scapulars and interscapulars, the inner greater and median ones washed with a brownish sheen; primaries dull clove brownish, secondaries somewhat pale and more grayish in tone, the outer ones with considerable whitish terminally, the bend of the wing and entire edge of wing with a narrow white line formed by the white outer webs of the external coverts; rectrices very dark slate black; rest of underparts slate, paler than chin and upper throat, and with a faint grayish brown wash (in fresh plumage the feathers with narrow whitish margins); under tail coverts blackish; bill white with a rosy tinge; frontal shield white; tarsi and toes greenish, tibia orange, toes bluish gray, the joints slate; iris red to red-brown.

Immature (sexes alike).—Like the adults but averaging more brownish above and below, and often with scattered white feathers on chin, throat, and neck.

Juvenal (sexes alike).—Forehead, crown, and occiput dull grayish fuscous, the feathers with grayish-white tips, which give the area a somewhat speckled appearance; lores, chin, throat, sides of neck, and the entire breast white, the feathers with dusky bases, which sometimes show through; cheeks and auriculars whitish speckled with grayish and grayish fuscous; upperparts from nape to wing and tail dull fuscous with a varying amount of grayish wash; lower breast and abdomen grayish fuscous, the feathers with whitish or whitish gray tips and edges, becoming browner and darker on the flanks, vent, and under tail coverts, remiges and rectrices as in the adult.

Natal down.—Black, the tips of the down on the head and neck orange, on the upper back and wings shining yellowish white; the underparts, especially the breast, with a silvery sheen; forehead with scarlet granulose papillae; the coronal down so thin that the pale flesh-colored skin of the crown and the purplish-blue supraorbital skin show through clearly; iris brown; tarsi and toes slate-black.

Adult male.—Wing 185–208 (197.9); tail 49–62.5 (52.0); culmen from nostril 15–18.5 (16.9); culmen from frontal shield 32–36.5 (33.6); tarsus 52–64 (58.3); middle toe without claw 70–82 (77.2 mm.).⁹¹

Adult female.—Wing 189–217 (197.1); tail 45–59 (51.7); culmen from nostril 15–16 (15.4); culmen from frontal shield 30–33 (31.6); tarsus 46–61 (53.4); middle toe without claw 66.5–81 (73.4 mm.).⁹²

Range.—Breeds in Europe and Asia from latitude 70° N. in Norway and 57° N. in the Ural Mountains south to the Mediterranean,

⁹¹ Seven specimens from Sweden, Norway, England, Hungary, Italy, China, and Japan.

⁹² Seven specimens from Austria, Italy, Syria, China, India, and the Philippines.

Asia Minor, northern Persia, India, China, Japan, and Sakhalin; also breeds in Iceland and the Azores.

Winters throughout all but the northern part of its breeding range, and south to northwest Africa, to the Blue Nile, and to Java and Celebes; occasional in Greenland, the Farøe Islands, Madeira, and the Canary Islands; accidental in North America (Labrador coast-Tang-naivik Island, Anaktalak Bay; Separation Point, Sandwich Bay; and Newfoundland—Exploits Harbor).

Type locality.—Sweden.

- [*Fulica*] *atra* LINNÆUS, Syst. Nat., ed. 10, i, 1758, 152 (Europe); ed. 12, i, 1766, 257.—BRÜNNICH, Orn. Bor., 1764, 58 (Norway; Cimbria).—LATHAM, Synopsis Birds, Suppl., i, 1787, 294; Index Orn., ii, 1790, 777, part.—GMELIN, Syst. Nat., i, pt. 2, 1789, 702.—GRAY, Hand-list, iii, 1871, 67, No. 10513.—SHARPE, Handlist, i, 1899, 109.
- Fulica atra* TEMMINCK, Cat. Syst., 1807, 180; Man. d'Orn., ed. 2, 1820, 706.—VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 48, part.—STEPHENS, Shaw's Gen. Zool., xii, pt. i, 1824, 234, pl. 29, part.—GOULD, Birds Europe, iv, 1837, pl. 338 and text; Birds Great Britain, iv, 1862, pl. 84 and text.—NAUMANN, Nat. Vög. Deutschlands, ix, 1838, 635, pl. 241.—MAGILLIVRAY, Man. Brit. Orn., ii, 1842, 118; Hist. Brit. Birds, 1852, 560.—SCHLEGEL, Rev. Crit., 1844, p. cii; Vog. Nederl., 1854, pl. 257; Dieren Nederl., Vog., 1861, pl. 26, fig. 1; Mus. Pays-Bas, v, No. 30, livr. 7, 1865, 60, part.—HOLM, Naturh. Tidsskr., ser. 2, ii, 1848, 514 (Farøe Islands).—DEGLAND and GERBE, Orn. Europ., ii, 1867, 268.—DROSTE, Journ. für Orn., xvii, 1869, 345 (Farøe Islands).—SWINHOE, Proc. Zool. Soc. London, 1871, 415 (China; Formosa).—HARTING, Handb. Brit. Birds, 1872, 58.—TACZANOWSKI, Journ. für Orn., xxi, 1873 (e. Siberia).—BROOKE, Ibis, 1873, 336 (Sardinia).—RAMSAY, Ibis, 1877, 472 (Tonghoo, Burma).—REINHARDT, Vid. Medd. Nat. For., 1877-78, p. ii (Greenland).—BLAKISTON and PREYER, Ibis, 1878, 225 (north of Tokio, Japan).—DRESSER, Birds Europe, vii, pt. 73, 1871-81, 327, pl. 504, fig. 2.—SCULLY, Ibis, 1881, 590 (Gilgit, India).—SWINHOE, Ibis, 1882, 122 (Kandehar and Quetta, s. Afghanistan).—SEEBOHM, Ibis, 1882, 226 (Astrackhan), 382 (Archangel, n. Russia).—COUES, Check List, ed. 2, 1882, 136 (no. 885).—SAUNDERS, ed. Yarrell's Hist. Brit. Birds, iii, 1883, 171.—BAIRD, BREWER, AND RIDGWAY, Water Birds North Amer., i, 1884, 398.—MARSHALL, Ibis, 1884, 424 (Chamba, nw. Himalayas).—AMERICAN ORNITHOLOGISTS' UNION, Check List, 1886, and ed. 2, 1895, No. 220; ed. 3, 1910, 106.—GIGLIOLI and SALVADORI, Proc. Zool. Soc. London, 1887, 588 (Possietti Bay, e. Siberia; crit.).—KOENIG, Journ. für Orn., xxxviii, 1890, 424 (Canary Islands); xli, 1893, 88 (Tunis).—HARTWIG, Journ. für Orn., xli, 1893, ii (Madeira).—BLAGG, Ibis, 1893, 355 (Shetland Islands).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 210.—POPHAM, Ibis, 1898, 572 (Krasnoyarsk, Yenisei River, Siberia).—SLATER, Man. Birds Iceland, 1901, 81 (occasional visitor).—HARTERT, Nov. Zool., viii, 1901, 306 (Canary Islands).—POGGE, Journ. für Orn., l, 1902, 384 (ne. China).—WALTON, Ibis, 1903, 33 (Pekin, China).—BANGS, Proc. New England Zool. Club, iii, 1903, 95 (Liu Kiu Islands).—JESSE, Ibis, 1903, 158 (Lucknow, India; habits).—HARTERT AND GRANT, Nov. Zool., xii, 1905, 95 (San Miguel, Azores).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 43 (range).—BRITISH ORNITHOLOGISTS' UNION, List Brit. Birds, ed. 2, 1915, 306.—MCATEE, U. S. Dept. Agr. Misc. Circ. 13, 1923, 45 (local names; range).—GRESCHIK, Aquila,

xxviii, 1921, 55, 56, in text (Hungary).—SZOMJAS, *Aquila*, xxviii, 1922, 183 in text (Hungary).—BARTHOS, *Aquila*, xxviii, 1922, 215 in text (Little Baaton, Hungary).—BELA v. SZEÖTS, *Aquila*, xxix, 1923, 140 (Tavarna region, Hungary).—SCHENK, *Aquila*, xxix, 1923, 60, in table (banding, Hungary); xxx-xxxii, 1924, 149 in table (banding in Hungary); xxxii-xxxiii, 1926, 34 table (records, Hungary); xxxiv-xxxv, 1929, 31 in table (banding in Hungary 1926-27); xxxvi-xxxvii, 1931, 182, 191 (banding in Hungary).—SMIED, *Brit. Birds*, xvii, 1923, 112 (egg in nest of little grebe).—MUNN, *Ibis*, 1924, 466 (Minorca, resident).—NEUBAUR, *Journ. für Orn.*, lxxii, 1924, 205 in text (Rhein Province, Germany).—VON JORDAN, *Journ. für Orn.*, lxxii, 1924, 529 (Mallorca).—ZERGENYI, *Aquila*, xxx-xxxii, 1924, 295, 317 in text (Alibunar Swamp, Hungary).—BODNAR, *Aquila*, xxx-xxxii, 1924, 139 in table (migration in Hungary).—GLEGG, *Brit. Birds*, xvii, 1924, 209 (Staines, Middlesex, England).—LOVASSY, *Aquila*, xxx-xxxii, 1924, 329 (Balaton Lake, Austria).—ROBINSON, *Brit. Birds*, xviii, 1924, 25 (Morecambe Bay, Lancashire, England).—TICEHURST and CHEESMAN, *Ibis*, 1925, 29 (Hufuf, Arabia, Dec. 15).—PEITZMEIER, *Journ. für Orn.*, lxxiii, 1925, 554 (Upper Ems district, Germany).—VON JORDANS, *Journ. für Orn.*, lxxiii, 1925, 196 (breeds in Balearic Islands).—ZEDLITZ, *Journ. für Orn.*, lxxiii, 1925, 405 (distr.; Sweden).—THIENEMANN, *Journ. für Orn.*, lxxiv, 1926, 96 (banding records, Rossitten, Germany).—CASEMIR, *Journ. für Orn.*, lxxiv, 1926, 124 (East Prussia).—BROUWER, *Ardea*, xv, 1926, 39 (breeds in Holland).—KIRALY, *Aquila*, xxxii-xxxiii, 1926, 259 in text (Hungary).—WITHEBY, *Brit. Birds*, xx, 1926, 73 (age).—HEINROTH, *Vög. Mitteleuropas*, iii, 1927-1928, 84 (growth of young in captivity).—ROTHSCHILD, *Bull. Brit. Orn. Club*, xlvi, 1928, 123 (eggs).—CHABOT, *Rev. Franç. d'Orn.*, xii, 1928, 19 in text (migr.; Somme, France).—NEUBAUR, *Verh. Orn. Ges. Bay.*, xviii, 1928, 303 (Rhône Valley, Germany).—BROUWER and HAVERSCHMIDT, *Ardea*, xvii, 1928, 11 (breeding in Holland).—TAVERNER, *Auk*, xlvi, 1929, 227 in text (Exploits Harbor, Newfoundland).—ESTIOT, *Alauda*, i, 1929, 359 (near Paris, France).—TICEHURST and WHISTLER, *Ibis*, 1929, 688 (Scutari Lake, Yugoslavia).—STEINBACHER, *Journ. für Orn.*, lxxvii, 1929, 481, 483 in text (winter Müggel Lake, Germany).—BROUWER and HAVERSCHMIDT, *Ardea*, xviii, 1929, 67 in text (winter; Holland).—HAVERSCHMIDT, *Ardea*, xviii, 1929, 28 (migr., Holland in 1928).—LOVASSY, *Aquila*, xxxiv-xxxv, 1929, 413 (Hungary); 456 (speared bird).—WHISTLER, *Ibis*, 1930, 274 (Rawal Pindi distr., nw. India).—STEINBACHER, *Journ. für Orn.*, lxxviii, 1930, 53 (devel. of frontal papillae).—VON BURG and KNOPFLI, in *Fatio and Studer's Oiseaux Suisse*, xvi, 1930, 3407 (monogr.; Switzerland).—BROUWER, *Ardea*, xix, 1930, 25 (migr.; Holland).—PONCY, *Alauda*, ii, 1930, 402 (Haute-Savoie, France).—KLEINER, *Aquila*, xxxvi-xxxvii, 1931, 117 in text (mollusks eaten by coots).—NICHOLSON-SMITH, *Brit. Birds*, xxv, 1931, 59 (Cheshire; appropriating nest of grebe).—STEINMETZ, *Journ. für Orn.*, lxxix, 1931, 553 in text (habits; Obedska Bara, Yugoslavia).—ERHARDT, *Verh. Orn. Ges. Bay.*, xix, 1931, 379 (near Naples and Sicily).—STEINMETZ, *Journ. für Orn.*, lxxx, 1932, 124 in text (embryology, late stages).—AHARONI, *Journ. für Orn.*, lxxx, 1932, 424 (Egypt and Asia Minor).—ORTOW, *Beitr. Fortpfl. Vög.*, viii, 1932, 119 (nesting habits).—TICEHURST and WHISTLER, *Ibis*, 1932, 92 (Albania).—CHAVIGNY and MAYAUD, *Alauda*, iv, 1932, 141, 142 (Azores Islands).—HARRISON, *Ibis*, 1933, 609 (Lake Mandra, Bulgaria); 1937, 624 (Aladja Giol., Bulgaria).—COLLINGS, *Ibis*, 1936, 35 (food habits).—TAVERNER, *Birds Canada*, 1934, 175 (records for Labrador coast and Newfoundland; none that is strictly Canadian).—

BOXBERGER, Journ. für Orn., lxxxii, 1934, 208 in text (Malaga, Spain).—MEISE, Journ. für Orn., lxxxii, 1934, 259 in text (eggs), 265 (plumage).—PALUDAN, Journ. für Orn., lxxxvi, 1938, 588 in text (w. Iran).—RUPPELL and SCHIFFERLI, Journ. für Orn., lxxxvii, 1939, 224 (winter habits and distr.).

F[ulica] atra FABER, Prodr. Isländ. Orn. Gesch. Vögel Islands, 1822, 63 (Iceland).—KEYSERLING and BLASIUS, Wirb. Europa's, 1840, lxviii, 205.—COUES, Key North Amer. Birds, ed. 2, 1884, 677.—RIDGWAY, Man. North Amer. Birds, 1887, 141.—MURRAY, Brit. Birds, xxv, 1931, 7 (North Sea).

Fulica atra atra HARTERT et al., Handlist Brit. Birds, 1912, 214.—BANNERMAN, Ibis, 1920, 122, 522 (Canary Islands, winter visitant; range).—HARTERT, Vög. pal. Fauna, iii, 1921, 1851 (monogr.).—RAMSAY, Guide Birds Europe and N. Africa, 1923, 321 (descr.; range; Europe and North Africa).—TICEHURST, Ibis, 1924, 507 (Sind, winter; habits and capture).—WITHERBY et al., Pract. Handb. Brit. Birds, ii, 1924, 847 (monogr.).—VAN OORDT, Ardea, xiii, 1924, 68 (on Loch Leven; on Threipmuir Reservoir and near River Spey, Scotland).—DELACOUR and JABOUILLE, Ibis, 1925, 226 (Hailang, Annam and Tonkin).—WEIGOLD, Journ. für Orn., lxxiii, 1925, 581 (banding records; Helgoland).—GENGLER, Verh. Orn. Ges. Bay., xvi, 1925, Sonderheft, 94 (Bavaria).—HELMS, Meddel. Grønland, lviii, 1926, 241 (Angmagsalik, Greenland; habits, etc.).—BIANCHI, Journ. für Orn., lxxiv, 1926, 456 (distr.; n. Russia).—SPRANGER, Verh. Orn. Ges. Bay., xvii, 1926, 34 (Degendorf, Germany).—STARING, Ardea, xiv, 1925, 93 (s. Wales).—MOREAU, Ibis, 1927, 223 (Baharia Oasis, Egypt).—LUDLOW, Ibis, 1927, 656 (Gyantse, Tibet).—BANNERMAN, Ibis, suppl. number, 1927, 201 (Tunisia).—LAUBMANN, Verh. Orn. Ges. Bay., xvii, 1927, 373 (Ionian Islands).—LANKIS, Verh. Orn. Ges. Bay., xvii, 1927, 209 (near Blenheim, Germany).—GENGLER, Verh. Orn. Ges. Bay., xvii, 1927, 169 (Steiger Forest, Bavaria); 485 (s. Rhone, Germany).—DE PAILLERETS, Rev. Franç. d'Orn., xi, 1927, 194 (Charente—Inférieure, France).—DES PRUGNES, Rev. Franç. d'Orn., xi, 1927, 57 (status; migr.; Holland).—BOETTICHER, Verh. Orn. Ges. Bay., xvii, 1927, 191 (Bulgaria).—LUDLOW, Ibis, 1928, 220 (Kalo Tso and Hram Tso, Tibet).—HOFFMANN, Verh. Orn. Ges. Bay., xviii, 1928, 107 (Switzerland).—VAN OORDT, Ardea, xvii, 1928, 49 (Mediterranean).—AUSTIN, Auk, xlvi, 1929, 208 in text (Separation Point, Sandwich Bay, Labrador).—ARIGONI DEGLI ODDI, Orn. Ital., 1929, 793 (descr.; distr. in Italy).—MACPHERSON, Brit. Birds, xxii, 1929, 244 (London; few pairs nesting).—HARPER, Auk, xlvi, 1929, 341 (Camargue, France).—CONGREVE, Ibis, 1929, 491 (Retyezát Mountain, Rumania).—BOETTICHER, Anz. Orn. Ges. Bay., ii, 1929, 44 (Coburg, Bavaria).—REBOUSSIN, L'Oiseaux, x, 1929, 351 (Loir-et-Cher, France).—RILEY, Proc. U. S. Nat. Mus., lxxvii, art. 15, 1930, 9 (Ningshia Lanchow, central China).—MÜLLER, Verh. Orn. Ges. Bay., xix, 1930, 95 (Lake Maising, Bavaria; habits).—MURPHY, Ibis, 1931, 573 (Azores; nest and eggs).—GLEGG, Ibis, 1931, 443 (Camargue, France; breeds).—AMERICAN ORNITHOLOGISTS' UNION COMMITTEE, Check-list North Amer. Birds, ed. 4, 1931, 100 (distr.; accid. in Greenland).—DELACOUR and JABOUILLE, Oiseaux l'Indochine Franç., i, 1931, 227 (status in Indochina).—AUSTIN, Mem. Nutt. Orn. Club, vii, 1932, 80 (Newfoundland Labrador—Tangnaivik, Island in Amaktalak Bay, and Separation Point in Sandwich Bay).—TICEHURST, Birds Suffolk, 1932, 465 (status, etc.; Suffolk, England).—KOZLOVA, Ibis, 1932, 567 (sw. Transbaikalia and n. Mongolia; breeds).—CALDWELL and CALDWELL, South China Birds, 1932, 286 (s. China; habits, etc.).—LA TOUCHE, Handb. Birds Eastern China, ii, 1932, 288 (distr., habits, etc.; China).—

- GLEGG, L'Oiseaux, ii, 1932, 334 (Camargue and Little Camargue Islands, France).—JOURDAIN, Auk, 1, 1933, 203 (breeds in Iceland).—LUDLOW and KINNEAR, Ibis, 1934, 110 (Chinese Turkestan).—MEINERTZHAGEN, Ibis, 1935, 150 (Lake of Antioch, Syria).—KUMMERLÖWE and NIETHAMER, Journ. für Orn., lxxxii, 1934, 523 (Asia Minor).—SCHÄFER, Journ. für Orn., lxxxvi, 1938, Sonderheft, 104 (e. Tibet, Szechwan).—PALUDAN, Journ. für Orn., lxxxvi, 1938, 587, 636 (Bahm-i-Shur, w. Iran).—STRESEMANN, MEISE, and SCHÖNWETTER, Journ. für Orn., lxxxvi, 1938, 208 (Kan-tschou, China).
- Fulica a[tra] atra* GLEGG, Ibis, 1924, 86 (Macedonia; breeds locally).—MEINERTZHAGEN, Ibis, 1924, 91 (Azraq, Syrian Desert).—GASCHOTT, Verh. Orn. Ges. Bay., xvi, 1924, 35 in text (Speyer on Rhine, Germany).—KAYSER, Verh. Orn. Ges. Bay., xvi, 1925, 243 (Sagan distr., Germany).—UHL, Verh. Orn. Ges. Bay., xvi, 1925, 313 (Neustadt, Germany).—HILDEBRANDT, Orn. Monatsb., xxxiv, 1926, 35 in text (ecology).—SCHNABEL, Verh. Orn. Ges. Bay., xvii, 1926, 70 (Bavaria, breeds).—ALEXANDER, Ibis, 1927, 690 (Latium, Italy).—DROST, Journ. für Orn., lxxv, 1927, 266 (Helgoland banding records).—POLL, Verh. Orn. Ges. Bay., xvii, 1927, 409 (lower Bavaria).—PFEIFFER, Verh. Orn. Ges. Bay., xvii, 1927, 255 (valley of the Main, Germany).—UHL, Anz. Orn. Ges. Bay., i, 1928, 153 (upper Bavaria).—HOLDER and WAGSTAFFE, Brit. Birds, xxiii, 1929, 56 (Ribble Estuary, s. Lancashire, England).—WITHERBY, Brit. Birds, xxiii, 1929, 23 (Separation Point, Anatalak Bay, Labrador, and Exploits Harbor, Newfoundland).—SCHIERMANN, Journ. für Orn., lxxviii, 1930, 154 (population density in breeding season).—STEGMANN, Journ. für Orn., lxxviii, 1930, 446 (Amurland).—WÜST, Anz. Orn. Ges. Bay., ii, 1930, 107 (Ampermoos, Bavaria).—ROCARD, L'Oiseaux, xi, 1930, 356 (Noirmoutier Island, France).—BOYD, Brit. Birds, xxiv, 1931, 260 (attacking great-crested grebe's nest).—STEGMANN, Journ. für Orn., lxxix, 1931, 214 (distr., Siberian-Manchurian borderlands).—VAN DOBBEN and MAKKINK, Ardea, xx, 1931, 38 (migr., autumn 1930; Holland).—WITHERBY, Brit. Birds, xxv, 1932, 331 (recovery of marked bird).—WITHERBY and LEACH, Brit. Birds, xxv, 1932, 268, 360 (recovery of marked birds).—HAWKINS, Brit. Birds, xxv, 1932, 272 (Somerset; pugnacious nature).—HARRISON, Brit. Birds, xxv, 1932, 219 (Lundy Island, England).—PETERS, Orn. Monatsb., xl, 1932, 138 (habits; Hamburg, Germany); xli, 1933, 14 (intestinal parasites).—GROEBBELS, MOEBERT, and ZIMMERMANN, Verh. Orn. Ges. Bay., xix, 1932, 545 (breeding habits; Hamburg, Germany).—WITHERBY, Brit. Birds, xxvi, 1933, 351 (recovery of marked birds).—RITHEKE, Orn. Monatsb., xlii, 1934, 152 (nesting habits).—KUMMERLÖWE and NIETHAMER, Journ. für Orn., lxxxii, 1934, 525 (Asia Minor).
- [*Fulica*] *aterrima* LINNAEUS, Syst. Nat., ed. 12, i, 1766, 258 ("Habitat in Europe maritima").—LATHAM, Synop. Birds, Suppl., i, 1787, 294.
- Fulica aterrima* VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 50.
- Fulica fuliginosa* SCOPOLI, Annus I Hist.-Nat., 1769, 104 ("In Museum Turrianum").
- Fulica albiventris* SCOPOLI, Annus I Hist.-Nat., 1769, 105.
- Fulica leucoryx* SPARRMAN, Mus. Carls., 1786, pl. 12 (Sweden; albinistic wing).
- Fulica Actiops* SPARRMAN, Mus. Carls., 1786, pl. 13 (no locality; prob. young bird).
- Fulica fusca* KLUK, Hist. Nat., ii, 1779, 52.
- Fulica atrata* PALLAS, Zoogr. Rosso-Asiat., ii, 1827, 158 ("In Rossiae et Sibiriae aquis frequentissima").
- Fulica pullata* PALLAS, Zoogr. Rosso-Asiat., ii, 1827, 159.
- Fulica lugubris* S. MÜLLER, Verh. Nat. Ges. Land-en Volkenk., 1847, 454 (Java).

- Fulica platyuros* BREHM, Vögel Deutschl., 1831, 711 (female with 16 rectrices).
Fulica atra japonica TEMMINCK AND SCHLEGEL, Siebold's Fauna Japonica, Aves, 1849, 120, pl. 77 (Japan).
Fulica stenoleuca PACKELHOFF, Orn. Monatsb., 1914, 288 (Germany).
Fulica atra communis, maculati-pennis, megapus A. E. BREHM, Verz. Samml., 1866, 12 (nomina nuda!).

FULICA AMERICANA AMERICANA Gmelin

AMERICAN COOT

Adult (sexes alike), *in summer*.—Entire head and neck dark slate-black to black with a slight gloss that shows very faint dark bluish or greenish reflections at times; entire upperparts of body and the upper wing coverts slate, sometimes with a faint olive-brownish wash on the lower back; bend of the wing with some white; inner secondaries like the back, outer secondaries and primaries dull clove brownish with a slate cast, the outer secondaries broadly tipped with white; the outer web of the outermost primary partly white; rectrices dark slate-black; entire underparts (other than neck) ashy neutral gray washed with slate, especially on the breast, sides, and flanks; the tips of the feathers of the lower breast and of the mid-abdomen whitish; under tail coverts white; under wing coverts ashy slate; frontal shield larger than in winter birds, dark reddish brown or chestnut, bill white or pale horn, banded subterminally with maroon or dark reddish brown; iris red to reddish brown; tarsi and toes greenish, claws black.

Adult (sexes alike), *in winter*.—Similar to the above, but with the frontal shield smaller, the back more extensively washed with dull olive brown; the under parts paler, the whitish tips to the feathers being broader.

Juvenal (sexes alike).—Entire top and sides of head, hind neck, and entire upper parts of body varying from pale ashy olive-brown to chaetura drab, the feathers of the lower back and rump tipped with wood brown; wings as in adult; rectrices slightly paler than in adult and washed with brownish; entire under parts much lighter than in adult—pale olive-buff with ashy light neutral gray bases to the feathers showing through as an undertone; sides of head, neck, and body, the flanks and vent washed with ashy pale olive-brown; under tail coverts white as in adult; frontal shield very small; color of unfeathered areas as in adult, except that bill lacks the subterminal band.

Natal down (sexes alike).—Forehead, lores, and chin with short, stiff, curly, hairlike down varying from flame scarlet to orange-chrome; crown largely bare but with two median lines of short blackish down and laterally supraorbitally bordered with a broader line of longer but similarly black down, these meeting across the

occiput; entire upperparts of body with black, glossy, long, coarse down mixed with long hairlike filaments, which vary from orange-chrome on the hind neck and wings to light orange-yellow on the back; underparts with softer, dense, furlike down, very dark gray in color, some of it posterolaterally tipped with whitish, the throat down longer and coarser and its long terminal parts light orange-yellow in color; bill red, tipped with black; tarsi and toes greenish.

Adult male.—Wing 174–202 (190.3); tail 44.5–61 (51.4); culmen from nostril 13–16 (14.2); culmen from frontal shield 30–34 (31.8); including frontal shield 41–54 (46.1); tarsus 51–61.5 (56.0); middle toe without claw 66.5–81 (73.2 mm.).⁹³

Adult female.—Wing 171–192 (179.3); tail 41–55 (49.0); culmen from nostril 13–16 (14.2); culmen from frontal shield 30–34 (31.8); including frontal shield 33.5–51 (42.3); tarsus 44–58.5 (53.0); middle toe without claw 63–75 (64.1 mm.).⁹⁴

Range.—Breeds from British Columbia (Quesnal; Kamloops; and Okanagan); Mackenzie (Fort Simpson; Hay River; Fort Resolution; and Fort Smith); Saskatchewan (Prince Albert; Cumberland House); Manitoba (Moose Lake; Chemawawin); Minnesota (White Earth; Leech Lake; Millelacs Lake); Wisconsin (La Crosse; Kelley Brook; Green Bay); Michigan (Lansing; Saginaw; Rochester); Ontario (Sudbury; Beaumaris); Quebec (Montreal; Quebec) and New Brunswick; south to Lower California (Comondú; San Pedro Martir Mountains); Mexico proper (Michoacán—Lake Patzcuaro; Jalisco—Guadalajara; Tepic); Guatemala (Lake Atitlan); western Panama (Chiriqui Lagoon); central Texas (Decatur; Giddings; San Antonio); eastern Arkansas (Big Lake); western Tennessee (Reelfoot Lake); western Kentucky (Hickman); and North Carolina (Pamlico Sound); and less commonly, Florida (Monticello); Merritt Island; Orange Lake; Alachua County; Lake Hicpochee); formerly in South Carolina (near Charleston).

Winters from British Columbia (Okanagan; Sumas); Idaho (Deer Flat Bird Reservation); Nevada (Carson); Arizona (Salt River Bird Reservation; near Whipple; Tuscon); Colorado (Barr); Texas (Mason; San Angelo; San Antonio); southern Illinois (Mount Carmel); western Kentucky (Hickman); and Maryland (Millers Island); south to Lower California (San Jose del Cabo; La Paz); Mexico proper (Sinaloa—Escuinapa; Jalisco—Ocotlan; Valley of Mexico—

⁹³ Thirty-one specimens from Rhode Island, Indiana, Illinois, Maryland, Florida, Alabama, Bahamas, Nebraska, Oklahoma, Wisconsin, North Dakota, Montana, Nevada, Arizona, California, Oregon, and Mexico.

⁹⁴ 26 specimens from Alberta, Michigan, Virginia, Maryland, North Dakota, Colorado, Florida, Arizona, New Mexico, Utah, Mexico, and Nicaragua.

Ixtacaleo); Guatemala (Lake Atitlan; Lake of Dueñas; Lake Petén; San Lucas); Honduras (Lake Yojoa); Nicaragua (Escondido River); Costa Rica (Juan Vinas; Las Corcovas); and western Panamá (Veraguas; and Chiriqui Lagoon); the Gulf States; Florida; and the Bahama Islands (Abaco; New Providence; Rum Cay; Great Inagua). Occasional in winter north to Labrador (Table Bay), New York, Rhode Island, Connecticut, Massachusetts, Indiana, and Puerto Rico.

Type locality.—North America.

- [*Fulica*] *americana* GMELIN, Syst. Nat., i, pt. 2, 1789, 704 (North America; based on *Cinereous Coot* Latham, Synopsis Birds, iii, pt. 1, 1785, 279).—LATHAM, Index Orn., ii, 1790, 779.—GRAY, Hand-list, iii, 1871, 67, no. 10515.—COUES, Key North Amer. Birds, 1872, 275.—SCLATER and SLAVIN, Nom. Av. Neotr., 1873, 140, part.—CORY, List Birds West Indies, 1885, and rev. ed., 1886, 30, part (Bahamas).—SHARPE, Hand-list, i, 1899, 110, part.
- Fulica americana* VIELLOT, Nouv. Dict. Hist. Nat., xlii, 1817, 50.—STEPHENS, Shaw's Gen. Zool., xii, pt. 1, 1824, 238.—BONAPARTE, Obs. Wilson's Amer. Orn., 1826, [200]; Contr. Maclurian Lye., i, 1827, 28; Ann. Lye. Nat. Hist. New York, ii, 1827, 338; Comp. and Geogr. List, 1838, 53.—SWAINSON and RICHARDSON, Fauna Bor.-Amer., ii, 1831, 404.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 229.—TOWNSEND, Journ. Acad. Nat. Sci. Philadelphia, 1839, 157 (nw. United States).—VIGORS, Zool. Voy. Blossom, 1839, 29 (listed; no locality).—AUDUBON, Orn. Biogr., iii, 1835, 291, pl. 239; v, 1839, 568; Synopsis, 1839, 212; Birds Amer., 8vo ed., v, 1842, 138, pl. 305.—PEABODY, Rep. Orn. Massachusetts, 1839, 375.—LIEB, Proc. Acad. Nat. Sci. Philadelphia, i, 1841, 124 (descr. nest and eggs).—JARDINE, Contr. Orn., 1848, 84 (Bermuda in winter).—HURDIS, Jardine's Contr. Orn., 1850, 11 (Bermuda, Nov., Dec., May).—HARTLAUB, Journ. für Orn., 1853, extra Heft, 87 (monogr.); 1855, 99 (descr.; crit.).—THOMPSON, Nat. Hist. Vermont, 1853, 107.—WAILLES, Geol. Rep. Mississippi, 1854, 322 (Mississippi).—KENNICOTT, Trans. Illinois Agri. Assoc., i, 1855, 586 (Illinois).—SCLATER, Proc. Zool. Soc. London, 1857, 206 (Jalapa, Veracruz); 1859, 369 (Jalapa); 1864, 179 (City of Mexico).—CABANIS, Journ. für Orn., 1856, 429 (Cuba).—BREWER, Proc. Boston Soc. Nat. Hist., vii, 1860, 307 (Cuba).—CASSIN, in Baird, Rep. Pacific R. R. Surv., ix, 1858, 751; Proc. Acad. Nat. Sci. Philadelphia, xvi, 1862, 322 (California).—BAIRD, Rep. U. S. and Mex. Bound. Surv., ii, pt. 2, 1859, 26 (Espia, Sonora; San Pascual, Lower California); Cat. North Amer. Birds, 1859, no. 559; Proc. Acad. Nat. Sci. Philadelphia, 1859, 306 (Cape San Lucas, Lower California).—MOORE, Proc. Zool. Soc. London, 1859, 64 (Chilomo, Honduras).—HENRY, Proc. Acad. Nat. Sci. Philadelphia, vii, 1855, 314 (New Mexico); xi, 1859, 108 (New Mexico).—BRYANT, Proc. Boston Soc. Nat. Hist., vii, 1859, 122 (Bahamas).—XANTUS, Proc. Acad. Nat. Sci. Philadelphia, xi, 1859, 192 (Fort Tejon, Calif.).—MARTENS, Journ. für Orn., 1859, 220 (Bermuda).—SCLATER and SALVIN, Ibis, 1859, 230 (Guatemala); Proc. Zool. Soc. London, 1868, 468 (monogr.).—WILLIS, Ann. Rep. Smiths. Inst. for 1858 (1859), 284 (Nova Scotia).—BLAND, Ann. Rep. Smiths. Inst. for 1858 (1859), 287 (Bermuda).—SALVIN and SCLATER, Ibis, 1860, 45 (Dueñas, Guatemala, breeding).—REINHARDT, Ibis, 1861, 12 (Christianshaab and Godthaab, Greenland, 1854, 3 specimens).—ALBRECHT, Journ. für Orn., 1861, 56 (Bahamas).—BLAKISTON, Ibis, 1862, 9 (Saskatchewan); 1863, 135 (breeding, Saskatch-

ewan).—GUNDLACH, Journ. für Orn., 1862, 90 (Cuba; crit.); 1875, 363 (Cuba, habits); Rep. Físico-Nat. Cuba, i, 1866, 363; Contr. Orn. Cubana, 1876, 194; Orn. Cubana, 1875, 249.—TAYLOR, Ibis, 1862, 129 (Florida).—VERRILL, Proc. Essex Inst., iii, 1862, 158 (Oxford County, Maine).—FELNER, Ann. Rep. Smiths. Inst. for 1864 (1865), 428 (Fort Crook, ne. California).—DRESSER, Ibis, 1866, 40 (s. Texas).—MCILWRAITH, Proc. Essex Inst., v, 1866, 93 (Hamilton, Ontario).—COUES, Proc. Acad. Nat. Sci. Philadelphia, xviii, 1866, 98 (Fort Whipple, Ariz.); xx, 1868, 84 (Arizona); Ibis, 1866, 26 (Colorado River, Ariz.); Check-list, 1874, No. 474, ed. 2, 1882, No. 685; Birds Northwest, 1874, 541; Bull. U. S. Geol. and Geogr. Surv. Terr., iv, 1878, 647 (Pembina, N. Dak., breeding; Frenchmans Creek, etc., Mont., breeding; descr. nest and eggs).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, viii, 1866, 295 (vicinity New York City); ix, 1868, 143 (San Antonio, Costa Rica); U. S. Nat. Mus. Bull. 4, 1876, 50 (San Mateo, Oaxaca).—BROWN, Ibis, 1868, 425 (Vancouver Island).—TURNBULL, Birds Eastern Pennsylvania and New Jersey, 1869, 42 (Phila. ed., p. 33).—DALL and BANNISTER, Trans. Chicago Acad. Sci., i, 1869, 293 (Fort Yukon, Alaska).—FRANZIUS, Journ. für Orn., 1869, 375 (Costa Rica).—SALVIN, Proc. Zool. Soc. London, 1870, 219 (Laguna del Castillo, Veragua, w. Panamá).—HARTING, Proc. Zool. Soc. London, 1871, 111, 117 (Jacobshavn and off Disco Island, Greenland).—HENSHAW, Ann. Lyc. Nat. Hist. New York, xi, 1874, 11 (Utah).—MERRILL (J. C.), Proc. U. S. Nat. Mus., i, 1878, 165 (Fort Brown, Tex., breeding).—CORX, Birds Bahama Islands, 1880, 178; Field Mus. Nat. Hist., Publ. 131, 1909, 387 (Illinois; Wisconsin).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 202 (Cat. North Amer. Birds, no. 580); Nom. North Amer. Birds, 1881, No. 580.—REID, U. S. Nat. Mus. Bull. 25, 1884, 250 (Bermuda, regular and autumnal visitor; also, May 28, 1847, and Apr. 27, 1875).—BAIRD, BREWER, and RIDGWAY, Water Birds North Amer., i, 1884, 393.—TURNER, Proc. U. S. Nat. Mus., viii, 1885, 248 (Naiu, Ungava, 1 specimen).—AMERICAN ORNITHOLOGISTS' UNION, Check-list, 1886, and ed. 2, 1895, No. 221; ed., 3, 1910, 106.—SETON, Auk, iii, 1886, 151 (Manitoba, summer resident).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 221, part (North American localities; Mazatlan and Presidio de Mazatlan, Sinaloa; Tamesé, near Tampico, Tamaulipas; Puebla; Jomata, Veracruz; Cozumel Island; Coban, Lake of Dueñas and Lake Petén, Guatemala; Calobre Laguna de Castillo, Veragua).—BEYER, Proc. Louisiana Soc. Nat. for 1897-99 (1900), 94 (Louisiana; abundant winter resident up to May; breeding?).—MAILLIARD, Condor, iii, 1901, 121 (San Benito County, Calif., breeding).—WOODCOCK, Oregon Agr. Exp. Stat. Bull. 68, 1902, 19 (Oregon range).—BREWSTER, Bull. Mus. Comp. Zool., xli, 1902, 57 (San José del Cabo, Sept. 10-Nov. 13; Sanitago, Nov.; San Pedro Martir Mountains, 8,200 feet, breeding).—ALLEN (G. M.), Proc. Manchester Inst. Arts and Sci., iv, 1902, 84 (New Hampshire; rare autumn migrant).—PREBLE, North Amer. Fauna, No. 22, 1902, 93 (mouth of Red River, Manitoba, abundant June 15; lakes north of Winnipeg); No. 27, 1908, 315 (Chipewyan, Alberta, May 23; Sturgeon River, Alberta, May 13; Slave River, near Fort Smith, June 15; Hays River, Great Slave Lake).—KUMLIEN and HOLLISTER, Wisconsin Nat. Hist. Soc. Bull. 3, 1903, 40 (Wisconsin; habits).—BONHOTE, Ibis, 1903, 309 (New Providence Island, Bahamas, resident; habits).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 329 (Pachica and Cachuta, Sonora; Matamoros, Tamese, and Tampico, Tamaulipas; Mazatlán, Sinaloa; Colima; Guanajuato; Guadalajara, Jalisco; Valley of Mexico; Laguna de Chapules, Puebla; Laguna del Rosário, Tlaxcala; Jonetál and Jalapa, Veracruz; Lake Patzcuaro, Micho-

acán; Tehuantepec, Oaxaca; Cozumel Island; Lake Peten, Lake Dueñas, and Cobán, Guatemala; Chilomo, Honduras; Rio Escondido, Nicaragua; San Antonio, and between Cartago and San José, Costa Rica; Laguna de Castillo and Calobre, Veragua).—WOODRUFF, *Chicago Acad. Sci. Bull.* 6, 1907, 61 (Chicago area, common summer resident).—WIDMANN, *Birds Missouri*, 1907, 62 (summer resident and abundant transient).—TAVERNER and SWALES, *Wils. Bull.*, No. 60, 1907, 84 (Point Pelee, Ontario, breeding?).—SHARP, *Condor*, ix, 1907, 86 (San Diego County, Calif., breeding).—BECK, *Condor*, ix, 1907, 110, in text (Clipperton Island, Galapagos, Nov.).—ANDERSON, *Proc. Davenport Acad. Sci.*, xi, 1907, 210 (Iowa; habits).—KNIGHT, *Birds Maine*, 1908, 146 (migrant).—MILLER (R. F.), *Auk*, xxv, 1908, 219 (Philadelphia County, Pa., breeding).—WAYNE, *Birds South Carolina*, 1910, 42 (winter resident).—EATON, *Birds New York*, i, 1910, 286, pl. 27 (common migrant, rare breeder).—CARRIKER, *Ann. Carnegie Mus.*, vi, 1910, 412 (Juan Viñas, San Juan, Las Concovas, Laguna de Ochomogo, and mouth of Rio Matina, Costa Rica).—HOWELL (A. H.), *Biol. Surv. Bull.* 38, 1911, 28 (Arkansas; breeding locally).—BARROWS, *Michigan Bird Life*, 1912, 163.—FOREUSH, *Game-birds, Wild-fowl, and Shore-birds*, 1912, 221 (habits).—SAGE, BISHOP, and BLISS, *Birds Connecticut*, 1913, 52.—GIFFORD, *Proc. California Acad. Sci.*, ser. 4, ii, pt. 1, 1913, 80, in text (Clipperton Island, Galapagos, 2 specimens, Aug. 10, 1905).—COOKE, *U. S. Dept. Agr. Bull.* 128, 1914, 43, fig. 19 (range).—GRINNELL (J.), *Pacific Coast Avif.*, No. 11, 1915, 48 (resident throughout California).—TODD, *Ann. Carnegie Mus.*, x, 1916, 203 (Isle of Pines, *vide* Gundlach).—HOLLISTER, *Auk*, xxxvi, 1919, 102 (breeding habits).—CAHN, *Wils. Bull.*, xxxiii, 1921, 171 (Lake Caddo, ne. Texas, breeding).—EVERMANN, *Proc. Indiana Acad. Sci. for 1920 (1921)*, 331 (Vigo County, Ind., breeding).—MCATEE, *U. S. Dept. Agr. Misc. Circ.* 13, 1923, 46, fig. 36 (local names; range).—VAN ROSSEM, *Condor*, xxv, 1923, 110, fig. 34 (descr. abnormally colored eggs from Buena Vista Lake, Calif.).—BARBOUR, *Mem. Nutt. Orn. Club*, vi, 1923, 57 (Cuba, in spring and autumn).—WILLETT, *Condor*, xxiii, 1921, 158 (Stikine Flats, Alaska).—CAHN, *Condor*, xxiv, 1922, 175 (Big Bird Island, Tex.).—JACKSON, *Condor*, xxiv, 1922, 25 (Roosevelt Lake, Ariz.).—DAWSON, *Birds California (students' ed.)*, iii, 1923, 1557 (California).—DICKEY and VAN ROSSEM, *Condor*, xxv, 1923, 126 (Santa Cruz Island).—GRINNELL, *Proc. California Acad. Sci.*, ser. 4, xiii, 1923, 58 (Furnace Creek Ranch, Death Valley, Calif.).—GRISCOM, *Birds New York City Region*, 1923, 141 (New York City).—JOHNSTON, *Birds West Virginia*, 1923, 87 (West Virginia).—WILLETT, *Condor*, xxv, 1923, 105 (Craig, Alaska).—BECK, *Auk*, xli, 1924, 291 in text (Pennsylvania German common names).—BENT, *Wils. Bull.*, xxxvi, 1924, 10 (se. Texas).—BURELIGH, *Wils. Bull.*, xxxvi, 1924, 76 (migr.; Centre County, Pa.).—DE LAUBENFELS, *Wils. Bull.*, xxxvi, 1924, 165 (Brownsville, Tex.).—GABRIELSON and JEWETT, *Auk*, xli, 1924, 297 (Mandan, N. Dak.).—GRINNELL and STORER, *Animal Life Yosemite*, 1924, 261 (descr.; distr.; habits; Yosemite, Calif.).—HOWELL, *Birds Alabama*, 1924, 93; ed. 2, 1928, 93 (distr.; habits; Alabama).—LEOPOLD, *Condor*, xxvi, 1924, 226 in text (caught by turtle).—MILLER, *Bull. Amer. Mus. Nat. Hist.*, 1, 1924, 309 (ptilosis).—NICE (M. M. and L. B.), *Birds Oklahoma*, 1924, 30 (genl.; Oklahoma).—PINDAR, *Wils. Bull.*, xxxvi, 1924, 204 (e. Arkansas).—SWARTH, *Condor*, xxvi, 1924, 185 (autumn migr.; San Francisco Mountain, Ariz.).—BAILEY, *Birds Florida*, 1925, 44, pl. 24 (fig.; distr.; Florida).—BLINCOE, *Auk*, xlii, 1925, 408 (Bardstown, Ky.).—FORBUSH, *Birds Massachusetts and Other New England States*, i, 1925, 369, pl. 24 (fig.; descr.; distr.; habits; New England).—FRIEDMANN, *Auk*, xlii, 1925, 542

(Lower Rio Grande Valley, Tex.).—GARDNER, Proc. U. S. Nat. Mus., lxxvii, art. 19, 1925, 16 in text, pl. 7 (structure of tongue).—GRISCOM and CROSBY, Auk, xlii, 1925, 527 (status, Brownsville, Tex.).—LARSON, Wils. Bull., xxxvii, 1925, 25 (Sioux Falls region, S. Dak.).—LINCOLN, Auk, xlii, 1925, 58 (North Dakota).—MICHAEL, Condor, xxvii, 1925, 110 (Merced River, Yosemite, Calif.).—PINDAR, Wils. Bull., xxxvii, 1925, 82 (status, Fulton County, Ky.).—WYMAN and BURNELL, Field Book Birds Southwestern United States, 1925, 64 (descr.).—FARGO, Wils. Bull., xxxviii, 1926, 147 (Pinellas and Pasco Counties, Fla.).—GOLDMAN, Condor, xxviii, 1926, 164 (nesting, Marsh Lake, White Mountains, Ariz.).—HOLT and SUTTON, Ann. Carnegie Mus., xvi, 1926, 424 (s. Florida).—HUEY, Auk, xliii, 1926, 351 (Laguna Hanson; La Grulla; San Ramon; El Rosario; nw. Lower California).—KELSON, Ibis, 1926, 698 (Arrow Lake, British Columbia; resident).—NAUMBURG, Auk, xliiii, 1926, 487 (winter; Colombia).—TAVERNER, Birds Western Canada, 1926, 127, pl. 16A (fig.; descr.; habits; western Canada).—WILLIAMS, Wils. Bull., xxxviii, 1926, 25 (Red River Valley, ne. North Dakota).—WORTHINGTON and TODD, Wils. Bull., xxxviii, 1926, 210 (Choctawhatchee Bay, Fla.).—BAILEY, Wils. Bull., xxxix, 1927, 176 (distr.).—BENT and COPELAND, Auk, xliv, 1927, 378 (Zephyr Hills, Lake Apopka, Kissimmee River, Fla.).—CAHN, Wils. Bull., xxxix, 1927, 26 (summer, Vilas County, Wis.).—EDDY, Wils. Bull., xxxix, 1927, 227 (Lake Decatur, Ill.).—LAMB, Condor, xxix, 1927, 156 (breeding Todos Santos and San Jose del Cabo, Lower California).—LINSDALE, Auk, xlv, 1927, 52 (Pratt, sw. Kansas).—LINSDALE and HALL, Wils. Bull., xxxix, 1927, 95 (Lake View, Douglas County, Kans.).—MAILLIARD, Proc. California Acad. Sci., ser. 4, xvi, 1927, 290 (Modoc County, Calif.).—MOUSLEY, Auk, xlv, 1927, 523 (Cherry River, near Magog, Quebec, Canada).—TANNER, Condor, xxix, 1927, 197 (Virgin River Valley, Utah).—WETMORE, N. Y. Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 348 (Puerto Rico—hypothetical only).—WILLETT, Condor, xxix, 1927, 59 (Craig, Alaska).—ALFORD, Ibis, 1928, 196 (Vancouver Island, British Columbia).—BAILEY (A. M.), Auk, xlv, 1928, 277 (winter; Chenier au Tigre, La.).—BAILEY (F. M.), Birds New Mexico, 1928, 243 (genl.; New Mexico).—CHRISTY, Auk, xlv, 1928, 287 in text (s. Florida).—GARDNER, Condor, xxx, 1928, 128 in text (eaten by horned owls).—HUEY, Condor, xxx, 1928, 158 in text (Laguna Hanson, n. Lower California).—LARSON, Wils. Bull., xl, 1928, 44 (e. McKenzie County, N. Dak.).—PICKENS, Wils. Bull., xl, 1928, 188 (Upper and Lower Piedmont, S. C.).—SCHÖNWETTER, Beitr. Fortpfl. Vög., iv, 1928, 90 (eggs).—SKINNER, Wils. Bull., xl, 1928, 142 in text (Yellowstone Park, Wyo.).—AUSTIN, Auk, xlvi, 1929, 209 (two records from Labrador).—BURLEIGH, Auk, xlvi, 1929, 507 (Lake Washington; swamp s. of Tacoma, Wash.; nests).—COOKE, Proc. Biol. Soc. Washington, xlii, 1929, 27 (Washington, D. C.).—HENDEE, Condor, xxxi, 1929, 25 (Moffat County, Colo.).—MEADOWS, Condor, xxxi, 1929, 129 (Santa Catalina Island).—SWARTH, Proc. California Acad. Sci., ser. 4, xviii, 1929, 287 (Ashburn Ranch, Sonoita Valley, Calif.).—WILSON, Wils. Bull., xli, 1929, 183 (lake near Bowling Green, Ky.).—FITZPATRICK, Wils. Bull., xlii, 1930, 124 (ne. Colorado).—JUNG, Auk, xlvi, 1930, 536 (Peace and Athabasca Rivers, Alberta).—KEMSIES, Wils. Bull., xlii, 1930, 203 (Yellowstone Park, Wyo.).—LEWIS, Wils. Bull., xlii, 1930, 42 (nw. Oklahoma).—PIERCE, Wils. Bull., xlii, 1930, 262 (status, Buchanan County, Iowa).—URNER, Abstr. Linn. Soc. New York, Nos. 39 and 40, 1930, 66 (Union County, N. J.).—VAN HYNING, Auk, xlvi, 1930, 561, in text (breeding, Lake Griffin, Fla.).—[ARTHUR], Birds Louisiana, 1931, 248 (descr.; status; Louisiana).—BAILEY and

WRIGHT, Wils. Bull., xliii, 1931, 195 (winters in s. Louisiana).—CHRISTY, Auk, xlviii, 1931, 367 (Sandusky Bay, Lake Erie).—ESTEN, Auk, xlviii, 1931, 573 (weight).—GABRIELSON, Condor, xxxii, 1931, 111 (Little Butte Creek, Oreg.).—HUNT, Auk, xlviii, 1931, 236 (Arkansas River, Ark.).—PRILL, Wils. Bull., xliii, 1931, 149 in text (migr.; Oregon).—GRISCOM, Bull. Amer. Mus. Nat. Hist. lxiv, 1932, 123 (distr.; Guatemala).—HAND, Condor, xxxiv, 1932, 24 (Fish Lake, Idaho).—MILLER, Condor, xxxiv, 1932, 139 (remains ex Indian dwellings in Arizona).—HOWARD and MILLER, Condor, xxxv, 1933, 16 (bones from New Mexico cave).—STEVENSON and FITCH, Condor, xxxv, 1933, 167 (Butte Creek, sv. Oregon, Dec. 18).—COMPTON, Condor, xxxvi, 1934, 41 (Pleistocene of Hemphill County, Texas).—GILMAN, Condor, xxxvii, 1935, 240 (Death Valley, many records).—TAVERNER, Birds Canada, 1934, 175 (nesting in Canada across continent north to Mackenzie and through Cariboo District in British Columbia).—DEBES, Auk, li, 1934, 230 (breeding Delaware Marshes below Philadelphia).—BELCHER and SMOOKER, Ibis, 1935, 285 in text (Grenada).—BOND, Birds West Indies, 1936, 24 (descr.; apparently breeds in Cuba, Isle of Pines, Jamaica, Grand Cayman, Hispaniola, and Bahamas (Rum Cay, Abaco, Providence); also recorded from St. Croix and the Grenadines (Isle Rhonde); ranges widely through North America south to Nicaragua).—HOWARD, Condor, xxxviii, 1936, 35 (bones, Rancho La Brea).—WALLACE, Auk, liii, 1936, 227 (w. North Carolina; not uncommon late in October and early in November).—ARNOLD, Condor, xxxix, 1937, 32 (Coalinga Area, Calif.).—WALKINSHAW, Auk, liv, 1937, 311 in text (Michigan).—WEBB, Condor, xli, 1939, 36 (Deep Springs Valley, Inyo County, Calif.).—HARGRAVE, Condor, xli, 1939, 208 (bones from Indian site, Wupatk's Pueblo, Ariz.).—COTTAM and WILLIAMS, Wils. Bull., li, 1939, 154 in text (young coots eaten by great blue herons).

F[ulica] americana MAXIMILIAN, Journ. für Orn., 1859, 94 (descr., etc.).—RIDGWAY, Ann. Lyc. Nat. Hist., New York, x, 1874, 387 (Illinois); Man. North Amer. Birds, 1887, 142.—COUES, Key North Amer. Birds, ed. 2, 1884, 676.—ROTHSCHILD, Bull. Brit. Orn. Club, xlviii, 1928, 123 (eggs).

[Fulica] americana GUNDLACH, Journ. für Orn., 1861, 344 (Cuba); Rep. Fisico-Nat. Cuba, i, 1865, 363.

F[ulica] a[mericana] americana CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxiii, 1914, 170, in text.

Fulica americana americana RILEY, Proc. Biol. Soc. Washington, xxix, 1916, 103 in text.—MCATEE, U. S. Dept. Agr. Bull. 294, 1920, 29 (Cherry, Brown, and Garden Counties, Nebr., breeding).—SIMMONS, Birds Austin Region, 1925, 52 (Austin, Tex.; habits; descr.).—MCLELLAN, Proc. California Acad. Sci., ser. 4, xvi, 1927, ii (Maria Madre, Mexico; plumages).—GRINNELL, Univ. California Publ. Zool. xxxii, 1928, 88 (distr.; Lower California).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928 (1929), 495 (distr.; habits; Haiti).—GRINNELL and HUNT, Condor, xxxi, 1929, 67 (Morro Bay, Calif.).—PETERS, Bull. Mus. Comp. Zool., lxxix, 1929, 131 (Great Corn Island, Nicaragua; crit.).—BANCROFT, Condor, xxxii, 1930, 24 (breeding San Ignacio, Lower California).—CAHN, Wils. Bull., xlii, 1930, 215 (Little Egypt, Ill.).—GRINNELL, DIXON, and LINDALE, Univ. California Publ. Zool., xxxv, 1930, 215 (distr.; Lassen Peak region, n. California).—AMERICAN ORNITHOLOGISTS' UNION, Check-list North Amer. Birds, ed. 4, 1931, 100.—BAERG, Univ. Arkansas Agr. Exp. Stat. Bull. 258, 1931, 58 (descr.; distr.; food; Arkansas).—NICE, Birds Oklahoma, rev. ed., 1931, 86 (genl.; Oklahoma).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 302 (Almirante; Changuinola; Panama).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 138 (habits; distr.; etc.; Hispani-

- ola).—AUSTIN, Mem. Nutt. Orn. Club, vii, 1932, 81 (Newfoundland Labrador).—HOWELL, Florida Bird Life, 1932, 212 (genl.; Florida).—ROBERTS, Birds Minnesota, i, 1932, 454 (fig., distr., habits, Minnesota).—STONER, Roosevelt Wild Life Ann., ii, 1932, 453 (habits on Oneida Lake, N. Y.).—HARROLD, Wils. Bull., xlv, 1933, 19 (Saskatchewan).—GRISCOM, Trans. Linn. Soc. New York, iii, 1933, 100 (Dutchess County, N. Y., rare spring and common fall transient).—WILLETT, Pacific Coast Avif., No. 21, 1933, 54 (sw. California, abundant winter, less common summer; breeds Apr. 15–June 15).—HARGRAVE, Condor, xxxv, 1933, 76 (abundant, Stoneman Lake, Ashurst Lake, Long Lake, n. Arizona, in October).—PHILLIPS, Condor, xxxv, 1933, 228 (one seen near Baboquivari Mountains, Ariz.).—ANDERSON, Condor, xxxvi, 1934, 84 (breeding Tucson region, Ariz.).—EDWARDS, Auk, i, 1933, 369 (Gulf Shores, Ala., Oct. 8, 1932).—MONSON, Wils. Bull., xlv, 1934, 43 (Cass County, N. Dak., occ. migrant, 1 nesting record).—DU MONT, Iowa Stud. Nat. Hist., xv, 1934, 64 (Iowa; very common migrant, fairly common breeder in nw. part of State).—MCCRERY and MICKEY, Wils. Bull., xlvii, 1935, 136 (se. Wyoming, Mar. 25–Nov. 30).—YOUNGORTH, Wils. Bull., xlvii, 1935, 218 (common summer resident, Fort Sisseton, S. Dak.).—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 305 (Panamá—Veraguas and Chiriqui Lagoon).—DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 448 (St. Croix, specimen; meas.), 467 (St. Croix).—STEVENSON, Auk, 52, 1935, 463 (East Lake, Ala., July 5).—HUEY, Wils. Bull., xlviii, 1936, 123 (White Mountains, Ariz., nesting).—HENDRICKSON, Wils. Bull., xlviii, 1936, 216 in text (nests and young in Iowa; habits).—LINSDALE, Pacific Coast Avif., No. 23, 1936, 51 (Nevada; summer resident and transient; present in nearly every pool of water, small or large).—WEYDEMEYER and MARSH, Condor, xxxviii, 1936, 194 (Lake Bowdoin, Mont.).—VAN ROSSEM, Pacific Coast Avif., No. 24, 1936 (Indian Springs, Charleston Mountains, Nev.; July to Feb.).—GROSS, Auk, liv, 1937, 23 (Mecatina Island, Quebec, Dec. 20, 1935).—WILLIAMS, Auk, lv, 1938, 65 (upper Texas coast; common winter, occasional in summer).—POLAND, Auk, lv, 1938, 128 (Leetown, W. Va.).—HANDLAN, Auk, lv, 1938, 130 (Lake Lynn, W. Va.).—DANFORTH, Auk, lv, 1938, 528 (specimen, Cartagena Lagoon, Puerto Rico; known also from Hispaniola and St. Croix).—ROWLEY, Condor, xl, 1938, 88 in text (Buena Vista Lake, Kern County, Calif.).—VAN ROSSEM, Birds El Salvador, 1938, 164 (El Salvador—Lake Olomega, Lake Ilopango, Lake Channico; winter visitant).—FRILEY, BENNETT, and HENDRICKSON, Wils. Bull., i, 1938, 82 in text (Iowa, habits, nests, eggs, status).—DEADERICK, Wils. Bull., i, 1938, 263 (Hot Springs National Park, Ark.; abundant transient, common winter resident).—OBERHOLSER, Bird Life Louisiana, 1938, 211 (permanent resident throughout, abundant in winter; local in summer; habits; many locality records).—BENNETT and HENDRICKSON, Auk, lvi, 1939, 36 (adapt. to environment).—WETMORE, Proc. U. S. Nat. Mus., lxxxvi, 1939, 184 (Reelfoot Lake, Tenn., Apr. 26 and May 7; Oct. 6–21); lxxxviii, 1940, 535 (Ohio River, near Burlington, Ky.).—JONES, U. S. Dept. Int., Bur. Biol. Surv., Wildlife Res. Bull. 2, 1940, 1–52 (col. fig.; food habits; distr.).
- Fulica a[mericana] americana* HICKS, Wils. Bull., xlv, 1933, 181 (Ashtabula County, Ohio, irreg. summer resident, nest and 11 eggs, July 3).—MURRAY, Wils. Bull., xlvii, 1935, 66 (Rockbridge County, Va., fairly common migrant).—BARTSCH, BALL, ROSENZWEIG, and SALMAN, Auk, liv, 1937, 517 (red blood corpuscles).—POOLE, Auk, lv, 1938, 516 (weight and wing area).
- Fulica atra* (not of Linnaeus) WILSON, Amer. Orn., ix, 1814, 61, pl. 73, fig. 1.—VIELLOR, Nouv. Dict. Hist. Nat., xii, 1817, 48, part (Greenland; North America).—STEPHENS, Shaw's Gen. Zool., xii, pt. 1, 1824, 234, part (North America).—LICHTENSTEIN, Preis-Verz. Mex. Vög., 1830, 3; Journ. für Orn., xi,

- 1863, 59 (Mexico).—(?) D'ORBIGNY, in La Sagra's Hist. Nat. Cuba, Ois., 1839, 271 (Spanish ed., p. 186).
- Fulica wilsoni* STEPHENS, Shaw's Gen. Zool., xii, pt. 1, 1824, 236 (Delaware River, Pa.; cites *Fulica americana* Sabine, Franklin's Journ., 1823, App., 670; *Common Coot* Wilson, Amer. Orn., ix, 1814, i, pl. lxxiii, fig. 1).
- (?) *Fulica leucopygia* WAGLER, Isis, 1831, 518 (locality not mentioned, but supposed new species described in a paper on Mexican mammals and birds).
- Fulica caribæa* (not of Ridgway) BARBOUR, Mem. Nutt. Orn. Club, vi, 1923, 87 in text (Cuba; resident).
- Fulica caribaca* DANFORTH, Wils. Bull., xl, 1928, 179 (Laguna del Sitio, Cuba; nesting).
- Colymbus parvus* SHUFELDT, Bull. Amer. Mus. Nat. Hist., xxxii, 1913, 136, pl. 39, figs. 474-476 incl., part (Pleistocene: Fossil Lake, Oregon; humeri, metatarsus; *fide* Wetmore, Proc. California Acad. Sci., ser. 4, xxiii, 1937, 199).

FULICA AMERICANA GRENADENSIS Riley

GRENADA COOT

Adult (sexes alike).—Similar to summer adults of the nominate race, but with the bill heavier and more wrinkled longitudinally, the frontal shield more swollen. (Doubtfully distinct from *F. a. americana*.)

Other plumages not recorded.

Adult male.—Wing 185; tail 46; culmen with frontal shield, 48; depth of bill at base 18 mm.⁹⁵

Adult female.—Wing 184, 184.5; tail 47, 47.5; culmen with frontal shield 46, 50.5; depth of bill at base 16, 17.5; tarsus 56; middle toe without claw 72 mm.⁹⁶

Range.—Resident in Grenada; the Grenadines, Jamaica (Long Pond, near Hodges, Pedro Ponds); and St. Croix (South Gate Pond).

Type locality.—Isle de Rhonde, Grenada, British West Indies.

Fulica americana (not of Gmelin) GOSSE, Birds Jamaica, 1847, 384.—SCLATER, Proc. Zool. Soc. London, 1861, 81 (Jamaica).—ALBRECHT, Journ. für. Orn., 1862, 206 (Jamaica).—MARCH, Proc. Acad. Nat. Sci., Philadelphia, 1864, 64 (Jamaica).—WELLS, Proc. U. S. Nat. Mus., ix, 1887, 629 (Grenada, resident, breeding).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 221 (Jamaica and Grenada).—SCOTT, Auk, ix, 1892, 12 (Jamaica; resident, breeding).—FIELD, Auk, xi, 1894, 122 (Jamaica; breeding).—SCLATER, Rev. List Birds Jamaica, 1910, 20.

Fulica americana grenadensis RILEY, Proc. Biol. Soc. Washington, xxix, 1916, 103 (Isle de Rhonde, Grenada; coll. U. S. Nat. Mus.).—DANFORTH, Auk, xlv, 1928, 482 (summer; Long Pond, near Hodges, Pedro Ponds, Jamaica).—BEATTY, Journ. Dept. Agr. Puerto Rico, xiv, 1930, 140 (St. Croix; South Gate Pond, Virgin Islands; breeds).—PETERS, Check-list Birds of World, ii, 1934, 212.

F[ulica] a[mericana] grenadensis DANFORTH, Journ. Agr. Univ. Puerto Rico, xix, 1935, 448 in text (Jamaica).

Fulica caribæa (not of Ridgway) BANGS and KENNARD, List Birds Jamaica, 1920, 6 (resident; less abundant than formerly).

⁹⁵ Ex Danforth, Auk, xlv, 1928, 482 (1 specimen from Jamaica).

⁹⁶ Two specimens, including the type, ex Danforth, Auk, xlv, 1928, 482, and Riley, Proc. Biol. Soc. Washington, xxix, 1916, 103.

FULICA CARIBAEA Ridgway

CARIBBEAN COOT

Adult (sexes alike).—Similar to the adult of *Fulica americana americana*, but with the frontal shield whitish (pale brownish in dried skins) like the bill, oval or elliptical, much wrinkled (17–22 mm. long, 8.5–13 mm. wide in the breeding season), the bill slightly slenderer, and the outer web of the outermost primary almost wholly white, more so than in *F. a. americana*. The same seasonal variation in the underparts (white tips to the feathers in autumn and winter birds) occurs in both species.

Other plumages similar to corresponding stages of *Fulica americana americana*.

Adult male.—Wing 173–191 (184.9); tail 42–56 (49.1); culmen from nostril 14.5–17 (15.6); culmen with frontal shield 47–57.5 (53.9); tarsus 54–62.4 (58.9); middle toe without claw 76–84 (78.7 mm.).⁹⁷

Adult female.—Wing 165–185 (174.7); tail 42.5–51.5 (47.2); culmen from nostril 13–15 (14.4); culmen with frontal shield 43–51 (47.3); tarsus 48–58 (53.1); middle toe without claw 68–78 (73.5 mm.).⁹⁸

Range.—Resident in the West Indies from Hispaniola (Gantier; Étang Miragoane; Pont de l'Estère; El Batey; Laguna del Salodillo; Haina; Artibonite; Gonaïves; Guerra; Rio Yasica; near Monte Cristi; Laguna Cabral; Port-de-Paix; Trou Caïman; Trou des Roseaux); Puerto Rico (Guanica, Cartagena, and Anegado Lagoons; Guayabal; Camuy; Rio Arcibo; Cosmo Springs Reservoir); Culebra Island; and St. Croix; to St. John; St. Barts; St. Kitts; Montserrat; Martinique; St. Lucia; Antigua; Sombrero; Barbuda; Anguilla; Guadeloupe; St. Vincent; Barbados; and the Grenadines (Mustique; Mayreau; Union Island; Canouan; Carriacou, Grenada), and, somewhat uncertainly, to Trinidad and Venezuela (Lagunilla).⁹⁹

Type locality.—St. John, Virgin Islands.

Fulica americana (not of Gmelin) NEWTON (A. and E.), *Ibis*, 1859, 260 (St. Croix).—GUNDLACH, *Journ. für Orn.*, 1874, 314 (Puerto Rico); 1878, 162, 190 (Puerto Rico).—LAWRENCE, *Ann. Lyc. Nat. Hist. New York*, viii, 1864, 100 (Sombrero).—LÉOTAUD, *Ois. Trinidad*, 1866, 594.—LISTER, *Ibis*, 1880, 44 (St. Vincent).—CORY, *Bull. Nutt. Orn. Club*, 1881, 155 (Haiti); *Birds Haiti and San Domingo*, 1885, 163–164 (Gantier); *Cat. West Indian Birds*, 1892, 91 (Hispaniola).—STAHL, *Ornis*, iii, 1887, 452 (Puerto Rico).—FELDEN, *Ibis*, 1889, 499 (Barbados; habits).—CHAPMAN, *Bull. Amer. Mus. Nat. Hist.*, vi, 1894, 78 (Trinidad).—CHERRIE, *Field Mus. Nat. Hist. Orn. Ser.*, i, 1896, 25

⁹⁷ Eleven specimens including the types of *caribaea* and *major*, from St. Johns, Hispaniola, Puerto Rico, Barbuda, and Guadeloupe.

⁹⁸ Eight specimens from St. Johns, Hispaniola, Puerto Rico, Barbuda, and Antigua.

⁹⁹ The records from the Grenadines other than Carriacou are doubtful, as no specimens have been collected to substantiate sight records of "white seal coots."

- (Dominican Republic).—TIPPENHAUER, Die Insel Haiti, 1892, 323.—VERRILL (A. E. and A. H.), Proc. Acad. Nat. Sci. Philadelphia, lxi, 1909, 356 (Santo Domingo).
- (?) [*Fulica americana* CORY, List Birds West Indies, 1885, 30, part (Antilles).—SHARPE, Hand-list, i, 1899, 110, part (Antilles).—BRABOURNE and CHUBB, Birds South America, i, 1912, 26 (Trinidad).
- (?) *Fulica americana americana* WETMORE, U. S. Dept. Agr. Bull. 326, 1916, 34 (Puerto Rico, resident; food, etc.).
- Fulica a[mericana] americana* BEEBE, New York Zool. Soc. Bull., xxx, 1927, 139; Beneath Tropic Seas, 1928, 219 (Étang Miragoane, Hispaniola).
- (?) *Fulica atra* (not of Linnaeus) D'ORBIGNY, in La Sagra, Hist. Nat. Cuba, Ois., 1839, 271 (Spanish ed., p. 186).
- Fulica mexicana* DESCOURTILZ, Voy. Nat., ii, 1809, 66 (Pont de l'Estère, Haiti).—RITTER, Naturh. Reise westind. Insel Hayti, 1836, 157 (Haiti).
- Fulica caribaea* RIDGWAY, Proc. U. S. Nat. Mus., vii, 1884, 358 (Guadeloupe and St. John, Lesser Antilles; coll. U. S. Nat. Mus.).—CORY, Auk, v, 1888, 58 (Guadeloupe; St. John; descr.); viii, 1891, 46 (Anguilla Antigua); Birds West Indies, 1889, 259 (Guadeloupe; St. John); Cat. West Indian Birds, 1892, 9, 91 (Puerto Rico; St. John; Antigua; Guadeloupe).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 224.—RILEY, Smiths. Misc. Coll., xlvii, 1904, 279 (Barbuda; Antigua; measurements).—? CLARK (A. H.), Proc. Boston Soc. Nat. Hist., xxxii, 1905, 247 (Mustique, Mayreau, Union Island, Canonan, Carriacou, Isle Ronde, and Grenada).—WETMORE, Auk, xxxiv, 1917, 57 (Culebra; breeding?).—BELCHER and SMOOKER, Ibis, 1935, 285 (Trinidad; breeds).
- F[ulica] caribaea* RIDGWAY, Man. North Amer. Birds, 1887, 142.
- [*Fulica caribaea* CORY, List Birds West Indies, rev. ed., 1886, 30 ("Antilles").—SHARPE, Hand-list, i, 1899, 110.
- Fulica caribaea* COOKE, U. S. Dept. Agr. Bull. 128, 1914, 47 (range).—PETERS, Bull. Mus. Comp. Zool., lxi, 1917, 403 (El Batey, Hispaniola).—BANGS and KENNARD, List Birds Jamaica, 1920, 6 (resident; much less abundant than formerly).—OSGOOD and CONOVER, Field Mus. Nat. Hist. Publ. 210, 1922, 41 (Lagunilla, Venezuela; crit.).—PETERS, Auk, xlv, 1927, 534 (Anguilla, West Indies).—WETMORE, New York Acad. Sci., Sci. Surv. Porto Rico, etc., ix, pt. 3, 1927, 346 (genl.; Puerto Rico—Guanica, Cartagena, Anegado, Guayabal, Camuy, Rio Arecibo; St. Croix; Culebra Island; St. John; syn.; meas.; crit.); Auk, xlv, 1928, 370 (Carriacou, West Indies).—DANFORTH, Auk, xlvi, 1929, 363 (Laguna del Salodillo, Haina, Étang Miragoane, Artibonite, Gonaïves, Hispaniola).—MOLTONI, Att. Soc. Scienc. Nat., lxviii, 1929, 312 (Guerra, Hispaniola).—BOND, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1929, 495 (distr. in Haiti; habits); Auk, xlvii, 1930, 270 (St. Croix, Virgin Islands).—WETMORE and SWALES, U. S. Nat. Mus. Bull. 155, 1931, 139 (habits and distr. in Hispaniola—El Batey, Rio Yasia, near Monte Cristi, Laguna Cabral near Rincón, Laguna del Salodillo, Haina, Port-de-Paix, Trou Caïman, Trou des Roseaux, near Gantier, Pont de l'Estère, Étang Miragoane, lower Artibonite River, near Gonaïves).—DANFORTH, Journ. Dept. Agr. Puerto Rico, xv, 1931, 22, 51 (Cartagena, Anegado, and Guanica Lagoons, Guayabal Reservoir and Cosmo Springs Reservoir, Puerto Rico); Auk, li, 1934, 358 (many seen Deed Sands Bay and Gunthorpe's, Antigua); Journ. Dept. Agr. Univ. Puerto Rico, xix, 1935, 441, 448 (St. Croix; specimen; meas.; Jost van Dyke, 1 seen); 467 (Culebra, St. John, Jost van Dyke, Beef Island, St. Croix); 477 (migrants, Barbuda); xxi, 1937, 543 (Playe Grande, Vieques Island); xxiii, 1938, 23 (Guadeloupe); xxiii, 1939, 54 (9 spec. from Montserrat).—PETERS, Check-List Birds of

World, ii, 1934, 212.—BOND, Birds West Indies, 1936, 95 (Hispaniola, Puerto Rico, Culebra, St. Croix, St. John, Anguilla, St. Barts?, St. Kitts, Montserrat, Barbuda, Antigua, Guadeloupe, Martinique, St. Lucia?, St. Vincent?, Barbados?, the Grenadines and Grenada, apparently no definite records for Cuba, Jamaica, and Bahamas); Auk, lvi, 1939, 194 (Montserrat, Dec. 31, 1929; specimen).

Fulica caribaea major DANFORTH, Auk, xlii, 1925, 561 (Cartagena Lagoon, Puerto Rico); Journ. Dept. Agr. Puerto Rico, x, 1926, 62-65, figs. 30-31 (Cartagena Lagoon; habits).

Suborder HELIORNITHES: Finfoots or Sun-grebes

=Heliornithoideæ STEJNEGER, Stand. Nat. Hist., iv, 1885, 68, in text.

>Fulicariæ FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1235 (includes Ralli).

>Geranomorphæ SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 139 (includes Ralli and Aramidæ).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 314 (includes Ralli and Grues).

><Ralliformes SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (Ralli+"Podicæ," that is, Podicidæ=Heliornithidæ, part).—SHUFELDT, Anat. Rec., ix, 1915, 606 (Ralli+Heliornithes+Aramidæ).

>Ralliformes SHUFELDT, Anat. Rec., ix, 1915, 606 (Ralli+Heliornithes+Aramidæ).

>Ralloideæ SHUFELDT, Anat. Rec., ix, 1915, 606 (Ralli+Heliornithes+Aramidæ).

<Heliornithiformes SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (excludes Heliornithidæ, part, that is, genus *Podica*).

<Heliornithes SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (excludes Heliornithidæ, part).

=Heliornithoidea SHUFELDT, Anat. Rec., ix, 1915, 606, 750 (superfamily of suborder Fulicariæ, supersuborder Ralliformes).

=Heliornithes WETMORE and MILLER, Auk, xliii, 1926, 343.—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 213.

Small or medium-sized aquatic Gruiformes with raillike bill; conspicuously lobed or scalloped and partially webbed toes; deep plantar tendons of types II or X; accessory semitendinosus muscle absent; mostly to completely feathered tibia; neck rather long, and slender through shortness of the soft feathering, and tail much more than half as long as wing, much rounded, with 18 or more rigid rectrices.

Palate schizognathous; nares schizorhinal, pervious; basipterygoid processes, occipital foramina, and temporal fossae absent; cervical vertebrae, 15-17; dorsal vertebrae heterocoelous; complete ribs (reaching sternum) 6; sternum elongated, its keel low, the metasternum 2-notched; spina externa well-developed (at least in *Podica*); episternal process not perforated to receive feet of coracoids; clavicles with anterior and posterior interclavicular processes, the latter firmly attached to keel of sternum; ischia broader and directed more downward than in the Ralli, the pubes ankylosed, at least at one point, with

ischia; biceps slip specialized (as in Alcidae), ending freely on patagial membrane; relations of biceps cruris peculiar¹; thigh-muscle formula ABX+ (the ambiens, femorocaudal, accessory femorocaudal, and semitendinosus muscles present, the accessory semitendinosus muscle absent); deep plantar tendons of types II or X, remarkable in that both tendons split into three branches for the three digits before they unite, the slip to the hallux being previously given off from the flexor hallucis; tensor patagialis brevis a single individual tendon possessing not more than an indication of a patagial fan (in *Heliornis* only); extensor secundariorum present, the aneoneus anchored to the humerus; caeca present, long; liver with right lobe larger than the left; gall bladder present (in *Heliornis*—absent in *Podica*?); syrinx typically tracheobronchial.

Pterylosis essentially ralline; neck almost continuously feathered, with only a short ventral apterion; dorsal pteryla strong between scapulae, forked, the posterior portion of the tracts scarcely joining the anterior ones, and fused or coalesced for some distance in front of oil gland, the latter tufted; aftershaft absent; wing eutaxic (quintocubital); rectrices 18 or more; plumage in general close-set and ducklike.

Nidification of *Heliornis* unknown, but young said to be gymnopaedic.²

"The sun-grebes are a small group of tropical water birds whose relationships are uncertain. Most authorities place them near the Rallidae; but Dr. Stejneger and the late Professor Forbes, for want of a better place, align them close to the Colymbidae, which they resemble in some of their habits and in their lobed or scalloped toes. They have little resemblance, however, to either of these groups, their general make-up, especially the slender, closely feathered neck and fan-shaped, rigid tail being more suggestive of the Anhingidae, which the Heliornithidae further resemble in some of their habits, especially that of perching upon dead trees or snags overhanging streams or partially submerged therein. This resemblance, however, does not indicate near relationship." (R. R.)

Family HELIORNITHIDAE: Finfoots or Sun-grebes

=Heliornithidae BONAPARTE, *CONSP. GEN. AV.*, ii, 1857 [1855], 181.—FÜRBRINGER, *Unters. Morph. Syst. Vög.*, 1888, 1236.—GADOW, in *Bronn's Thier Reichs, Vög.* ii, 1891, 191, 300; *Classif. Vertebr.*, 1898, 35.—WETMORE, *Proc. U. S. Nat. Mus.*,

¹ Biceps very large, with three separate insertions on the leg: (1) The ordinary insertion through a perfectly normal sling; (2) just anterior to this tendon a branch is given off which is inserted independently on to the leg farther down; and (3) an extensive insertion on to the fascia covering the calf of the leg. (Only 1 and 3 of these insertions present in *Heliornis*, however.)

² Maximilian, Prinz zu Wied, *Beitr. Nat. Bras*, iv, 1833, 287. Some of the Old World forms, however, have downy young, so this statement may prove false.

lxxvi, art. 24, 1930, 4; Smiths, Misc. Coll. lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 213.

=Heliornithidæ SCLATER and SALVIN, Nom. Av. Neotr., 1873, viii, 140.—SHARPE, Cat. Birds Brit. Mus., xxxiii, 1894, xii, 229; Hand-list, i, 1899, 111.—BEDDARD, Struct. and Classif. Birds, 1898, 327, in text.—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 330.—KNOWLTON, Birds of World, 1909, 348.

<Heliornithidæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (*Heliornis* only).

<Podicæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 70 (genus *Podica*).

This being the only family in the suborder Heliornithes, the characters are the same as those of the latter, as given on the pages immediately preceding.

KEY TO THE GENERA OF HELIORNITHIDÆ

- a. Much smaller (total length about 300 mm.); feet relatively small and weak, tarsus less than one-fifth as long as wing, decidedly shorter than the relatively small and slender bill, the latter not longer than head; anterior toes extensively webbed, web between middle and outer toe extending for entire length of first two phalanges of former; rectrices with shafts slender and rigid only toward base; feet banded with black and yellowish (American Tropics) ----- *Heliornis* (p. 226)
- aa. Much larger (total length 400 to nearly 600 mm.); feet large and stout, tarsus more than one-fifth as long as wing, about as long as the large and stout bill, the latter longer than head; anterior toes slightly webbed, web between outer and middle toes falling short of distal end of first phalanx of latter; rectrices with shafts strong and rigid throughout; feet unicolorous (tropical Africa and Asia).
- b. Tail less than three-fourths as long as wing, rectrices broad, with slenderer shafts, their edges not upturned; mesorhinium a narrowly compressed ridge (as in *Heliornis*); second and third primaries (from outside) longest, the outermost equal to or slightly longer than sixth (as in *Heliornis*).
Heliopais (extralimital)³
- bb. Tail more than three-fourths as long as wing, rectrices very narrow, with heavy, very rigid shafts and upturned edges; mesorhinium broad and flattened; fourth and fifth primaries (from outside) longest.
Podica (extralimital)⁴

Genus HELIORNIS Bonnaterre

Heliornis BONNATERRE, Tabl. Encycl. Méth., i, 1791, lxxxiv, 64. (Type, by monotypy, *H. fulicarius* Bonnaterre=*Colymbus fulica* Boddaert.)

Podoa ILLIGER, Prodr. Orn., 1811, 267. (Type, *Plotus swinamensis* Gmelin=*Colymbus fulica* Boddaert.)

³ *Heliopais* Sharpe, Bull. Brit. Orn. Club, i, 1893, p. xxxvii; Ibis, 1893, 439 (type, by original designation. *Podica personata* Gray). (Cambodia, etc., to Malacca and Sumatra; monotypic.)

⁴ *Podica* Lesson, Traité d'Orn., 1831, 596 (type, by monotypy, *Heliornis senegalensis* Vieillot).—*Rhigetur*a Wagler, Isis, 1832, 1229 (type, by monotypy, *Heliornis senegalensis* Vieillot).—*Podoa* ("ex[Il]liger" but not of Illiger, 1811) Bonaparte, Consp. Gen. Av., ii, 1857 [1855], 182.

Podia (emendation) SWAINSON, *Classif. Birds*, ii, 1837, 192.

Plotoides BROOKES, *Mus. Brookesianum*, 1830, 109. (Type, *Plotus surinamensis* Gmelin=*Colymbus fulica* Boddaert.)

Small *Heliornithidae* (length about 300 mm.) with feet relatively small and weak (the tarsus less than one-fifth as long as wing, decidedly shorter than the relatively small slender bill, the latter not longer than head); anterior toes extensively webbed, the web between middle and outer toes extending for entire length of first two phalanges of the former; rectrices broad, soft terminally, and toes banded with black and yellow.

Bill about as long as head, decidedly longer than tarsus, its depth at posterior end of nostril equal to a little less than one-fourth the

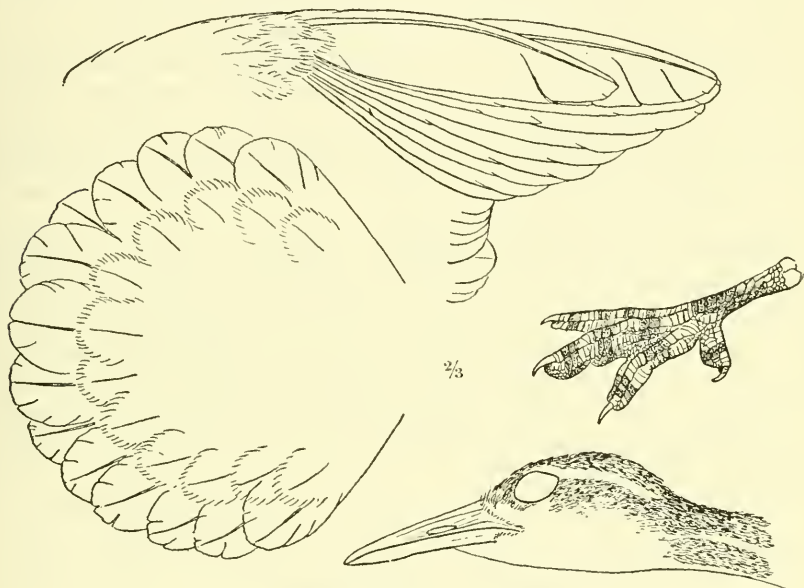


FIGURE 15.—*Heliornis fulica*.

length of exposed culmen and nearly twice its width at same point; culmen nearly straight for basal half or more, thence gently de-curved to tip; maxillary tomium gently convex for basal half, faintly concave for distal half, very faintly notched subterminally; gonys straight, slightly ascending, about half as long as mandibular rami, the mandible acute at tip; nostril longitudinally elliptical, pervious, its anterior end about midway between rictus and tip of maxilla, its posterior end separated from loreal feathering by a space nearly equal in length to depth of bill at posterior end of nostril; latero-frontal feathering forming a distinct angle on each side of culmen, thence extending in a straight or faintly convex line downward and backward to rictus; malar antia very slightly posterior to latero-

frontal antia, the mental antia far anterior to both (about on line with or slightly anterior to posterior end of nostril). Wing rather small, distinctly concave beneath, rounded at tip, the second, third, and fourth primaries (from outside) longest, the first (outermost) not longer (sometimes shorter) than sixth, the distal primaries, especially the outermost, relatively broad and rather strongly bowed, the longest exceeding distal secondaries by less than half the length of wing. Tail nearly two-thirds as long as wing, very strongly rounded (the lateral rectrices not more than half as long as middle pair), consisting of 14 broad, moderately firm, rectrices with broadly rounded tips; tail coverts greatly developed, the lower ones extending nearly to tip of tail. Tarsus shorter than exposed culmen, much shorter than middle toe (without claw), compressed; outer toe slightly shorter than middle toe, the inner toe decidedly shorter; but reaching to beyond last articulation of middle toe; hallux about as long as basal phalanx of outer toe, decidedly shorter than that of inner toe; anterior toes with a broad, distinctly scutellate lateral membrane and united for more than half their length by a web, the hallux with a broad lobe or membrane on inner side; claws small but strongly curved and very sharp.

Plumage and coloration.—Plumage ducklike (dense and firm), that of the head and neck short, dense, and soft; head completely feathered. Upperparts plain olive, the tail darker, narrowly tipped with white; underparts white, shading into light olive-brownish laterally and posteriorly; pileum, hindneck, broad auricular stripe and broad stripe on sides of neck black, relieved by a white supra-auricular stripe and another on sides of neck, the throat and fore-neck also white.

Nidification.—Unknown (young said to be gymnopaedic!).

Range.—Continental tropical America. (Monotypic.)

HELIORNIS FULICA (Boddaert)

SUN-GREBE

Adult (sexes alike).—Narrow frontal area pale, warm fuscous with a violaceous tinge; crown, occiput, hind neck, and a broad post-ocular stripe, which is separated from the top of the head by a conspicuous white superciliary stripe and which merges posteriorly with the hind neck, black with a rather bright greenish-blue sheen; also a broad stripe of the same on the sides of the neck posterior to the caudal end of white superciliaries but separated from the black of the hind neck by a white stripe beginning just behind the auriculars; scapulars, interscapulars, lesser and median upper wing coverts, back, rump, and upper tail coverts dark brownish olive, the rump and upper tail coverts much tinged with buffy-olive; greater upper

wing coverts olive-brown indistinctly crossed by extremely faint, narrow bars of slightly darker; remiges fairly pale but dull mummy brown with only a slight olivaceous wash to practically fuscous; rectrices fuscous to dark fuscous tipped with white; lores white, the part immediately adjacent to the anterior margin of the eye like the narrow frontal area; subocular space, chin, upper throat, and lower neck white; a narrow black stripe from the angle of the mouth connecting with a narrow anteroventral extension of the black postocular band occurs in some specimens and is totally absent in others, regardless of sex, season, or locality; cheeks and auriculars varying from white lightly and sparsely washed or flecked with ochraceous-buff to pinkish cinnamon to practically solid pinkish cinnamon; extreme lower end of throat with an indistinct ring of dusky where the two lateral black stripes tend to merge, the feathers there being blackish basally and white terminally; upper breast white suffused with very pale Saccardo's umber; lower breast and abdomen white; sides and flanks pale brownish olive, the under tail coverts dull, and somewhat grayish, fuscous, the feathers edged with hair brown to pale brownish olive, the tips slightly whitish; under wing coverts dull ashy fuscous tipped with lighter; iris dark brown; upper mandible (maxilla) red to reddish sepia, "with a slight black mark on the culmen and behind the nostrils,"⁵ the lower mandible yellowish white, more yellowish basally; tarsi yellow to yellowish white; toes yellow, the middle one with three black cross bars, the inner one with two, the outer one with four, and the hind toe with one.

*Juvenal*⁶.—Like the adult, but with the rump and upper tail coverts slightly more tawny and with the forehead more extensively brownish, this color extending posteriorly over the anterior ends of the white superciliaries.

Natal down.—Not known.

Adult male.—Wing 134–145 (138.8); tail 82–93 (87); exposed culmen 29.5–31 (30.4); tarsus 21–24 (22.8); middle toe without claw 29–32.5 (31.2 mm.).⁷

Adult female.—Wing 132.5–146 (137.9); tail 79–88 (82.8); exposed culmen 25–32.5 (29.3); tarsus 21–27 (24); middle toe without claw 27–32 (29.8 mm.).⁸

Range.—Resident, and apparently nowhere very abundant, along stagnant streams and rivers bordered by forest, from southern Vera-

⁵ Cat. Birds Brit. Mus., xxiii, 1894, 234.

⁶ It is not known whether this is a true plumage phase, but it seems to be one. There is, however, the possibility that it is purely a matter of individual variation.

⁷ Four specimens from Costa Rica and Nicaragua.

⁸ Eleven specimens from British Honduras, Nicaragua, Costa Rica, Panama, and Brazil.

cruz (Rio Coatzacoalcos); British Honduras (Belize and vicinity; Rio Makal); Guatemala (Santa Ana Mixtan; Los Amates; Chiapam; Puerto Barrios); Nicaragua (Los Sabalos; Rio San Juan; Rio Escondido); Honduras (Ceiba; San Pedro); Costa Rica (Rio Frio; Bonilla; mouth of Rio Matina); and Panama (Lion Hill; Canal Zone; Rio Trinidad; Changuinola Lake; Rio Changuinola; Almirante; Chagres River; Lake Gatun); south through Venezuela (and Trinidad); Colombia (Ocaña; Medellín; Barbacoas); Ecuador (Sarayaquí; Rio Peripa); Dutch, French, and British Guiana (Yuruani River; Merumé Mountains; Ituribisi River; Supenaam River; Abary River; Curubung; Grote Creek; Cartoonie River); throughout all Brazil (too many localities to list, south to São Paulo (Iguape) in the southeast, and to Matto Grosso in the southwestern part of the country); northeastern Argentina (Iguazú; Misiones); Paraguay (Upper Paraná River); Bolivia (lower Rio Beni) and to eastern Peru (Upper Rio Ucayali; Pebas; and Chyavetas).

Type locality.—Cayenne.

Colymbus fulica BODDAERT, Tabl. Pl. Enl., 1783, 54 (Cayenne; based on *Le Grebifoulque, de Cayenne* Daubenton, Pl. Enl., ix, pl. 893).

H[eliornis] fulica GRAY, Gen. Birds, iii, 1844, 634.

Helicornis fulica SCLATER and SALVIN, Ibis, 1859, 234 (Santa Ana Mixtan, Guatemala); Proc. Zool. Soc. London, 1864, 373 (Panama); 1866, 200 (upper Rio Ucayali, e. Peru); 1867, 754 (Chyavetas, Peru), 979 (Pebas, e. Peru); 1868, 469 (monogr.); 1873, 309 (upper Rio Ucayali, Chyavetas, and Pebas, e. Peru); 1879, 546 (Antioquia, Colombia).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1862, 302 (Lion Hill, Panamá).—LÉOTAUD, Ois. Trinidad, 1866, 531.—SCHLEGEL, Mus. Pays-Bas, vi, No. 33 (Urinatores), 1867, 48.—PELZELN, Orn. Bras., 1870, 318, 459 (Rio Araguaya, Rio Grande, Rio Curicuriare, Matto Grosso, and Forte do Rio Branco, Brazil).—WYATT, Ibis, 1871, 384 (Ocaña, Colombia).—RIDGWAY, Proc. U. S. Nat. Mus., iii, 1880, 237 ("accidental in middle United States!").—BERLEPSCH, Journ. für Orn., 1884, 320 (Ocaña, Colombia); 1887, 125 (Paraguay); Nov. Zool., xv, 1908, 300 (Cayenne).—ZELEDÓN, Proc. U. S. Nat. Mus., viii, 1885, 114 (Costa Rica); Anal. Mus. Nac. Costa Rica, i, 1887, 131 (Costa Rica).—SALVIN, Ibis, 1886, 177 (Merumé Mountains and Yuruani River, 2,700 feet, British Guiana).—TACZANOWSKI, Orn. Pérou, iii, 1886, 490.—ALLEN, Bull. Amer. Mus. Nat. Hist., ii, 1889, 107 (lower Rio Beni, Bolivia; habits).—RIKER and CHAPMAN, Auk, viii, 1891, 163 (Santarem, lower Amazon).—RICHMOND, Proc. U. S. Nat. Mus., xvi, 1893, 530 (Rio Frio, Costa Rica; Rio San Juan and Rio Escondido, Nicaragua; habits).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., vi, 1894, 78 (Trinidad).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 233 (Rio Makal and Belize, British Honduras; Santa Ana Mixtan and Chiapam, Guatemala; Costa Rica; Lion Hill, Panamá; Medellín, Colombia; Cayenne; Sarayaquí, e. Ecuador; Pebas, e. Peru; Matto Grosso, Brazil).—LANTZ, Trans. Kansas Acad. Sci. for 1896-97 (1899), 219 (Puerto Barrios, Guatemala Los Sabalos, Nicaragua).—SALVADORI and FESTA, Boll. Mus. Zool., Torino, xv, 1900, 41 (Rio Peripa, w. Ecuador).—BANGS, Bull. Mus. Comp. Zool., xxxix, 1903, 142 (Ceiba, Hondu-

ras).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 331 (Rio Coatzacoalcos, Veracruz; Belize and Rio Makal, British Honduras; Santa Ana Mixtan and Chiapan, Guatemala; San Pedro, Honduras; Rio San Juan and Rio Escondido, Nicaragua; Rio Frio, Costa Rica; Lion Hill, Panama; etc.).—GOELDI, Ibis, 1903, 500 (Rio Capim, ne. Brazil).—IHERING, Rev. Mus. Paulista, vi, 1904, 343 (Paraguay), 361 (Iguape, São Paulo; Rio Juruá, Amazonas), 451 (Rio Juruá).—DEARBORN, Field Mus. Nat. Hist. Publ. 125 1907, 76 (Los Amates, Guatemala).—HELLMAYR, Nov. Zool., xv, 1908, 100 (Rio Araguaya, Brazil); xvii, 1910, 422 (Santa Isabel, Rio Preto, Brazil).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 412 (Bonilla and mouth of Rio Matina, Costa Rica; habits).—DABBENE, Bol. Soc. Phys. Buenos Aires, i, 1913, 243, 256 (Misiones and Iguazú, Argentina).—BERTONI, Fauna Paraguaya, 1914, 37 (upper Rio Paraná).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 47 (geogr. range).—CHUBB, Birds British Guiana, i, 1916, 80 (habits).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 220 (Barba-coas, Colombia); iv, 1926, 180 (Honduras to Brazil and Ecuador).—STONE, Proc. Acad. Nat. Sci. Philadelphia, lxxx, 1928, 152 (Pará, Brazil).—YOUNG, Ibis, 1928, 765 (coast of British Guiana).—STURGIS, Field Book Birds Panama Canal Zone, 1928, 45 (Canal Zone, Panama; descr.).—NAUMBURG, Bull. Amer. Mus. Nat. Hist., ix, 1930, 74 (Matto Grosso, Brazil; distr.; crit.).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 302 (Changuinola, River and Changuinola Canal, Panamá); Check-list Birds of World, ii, 1934, 214.—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 124 (very local in Central America; Guatemala); Bull. Mus. Comp. Zool., lxxviii, 1935, 305 (Panamá—Almirante, Chagres River, Lake Gatun).—STONE and ROBERTS, Proc. Acad. Nat. Sci. Philadelphia, lxxxvi, 1934, 375 (seen, Descalvados on Rio Paraguay, and at Corumbá, Brazil).—STRESEMANN, Orn. Monatsb., xliii, 1935, 58 in text (habits).—BELCHER and SMOOKER, Ibis, 1935, 286 (Trinidad, extremely rare).—TECHNAU, Journ. für Orn., lxxxiv, 1936, 534 (nasal glands).—PINTO, Rev. Mus. Paulista, xix, 1935, 77 (Bahia, Brazil); xxiii, 1938, 545 (Rio Manacapuru, Amazonia).

[*Heliornis*] *fulica* GRAY, Hand-list, iii, 1871, 69, No. 10525.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 140.—SHARPE, Hand-list, i, 1899, 111.—IHERING (H. and R.), Aves Brazil, 1907, 33 (Matto Grosso; Rio Branco; Bahia).—BRABOURNE and CHUBB, Birds South America, i, 1912, 27 (s. Brazil; Perú; Ecuador; Colombia; Venezuela; Guiana).

[*Plotus*] *surinamensis* GMELIN, Syst. Nat., i, pt. ii, 1789, 581 (Surinam; based on *Grèbe-folque* Buffon, Ois., viii, 248; Pl. Enl., pl. 893; *Oiseau de Soleil* Fermin, Surin., ii, 192; *Surinam Tern* Brown, Illustr., 90, pl. 39; *Surinam Darter* Latham, Synopsis, iii, pt. 2, 626).

Podiceps surinamensis TEMMINCK, Cat. Syst., 1807, 180.

Podooa surinamensis ILLIGER, Prodr. Orn., 1811, 267.—STEPHENS, Shaw's Gen. Zool., xiii, pt. i, 1826, 22.—BURMEISTER, Syst. Ueb. Thiere Bras., iii, 1856, 391.

P[odooa] surinamensis MAXIMILIAN, Beitr. Naturg. Bras., iv, 1832, 823.—CABANIS, in Schomburgk's Reis. Britisch-Guiana, iii, 1848, 765.

Podooa surinamensis LICHTENSTEIN, Nom. Mus. Berol., 1854, 104.

Heliornis surinamensis VIEILLOT, Nouv. Dict. Hist. Nat., xiii, 1817, 278.—LESSON, Traité d'Orn., 1831, 596 (Cayenne; Trinidad).—BONAPARTE, Ann. Lyc. Nat. Hist. New York, ii, 1827, 413; Geogr. and Comp. List, 1838, 60.—NUTTALL, Man. Orn. United States and Canada, Water Birds, 1834, 510.—GRAY, List Birds Brit. Mus., Gallæ, 1844, 124.—REICHENBACH, Handb. Spec. Orn., 1852, p. xxii.

- H[eliornis] surinamensis* JARDINE, ed. Wilson's Amer. Orn., iii, 1832, 204 ("accidental summer visitant in the middle States"!)—BONAPARTE, Consp. Gen. Av., ii, 1857 [1855], 181.
- H[eliornis] fulcarius* BONNATERRE, Enc. Méth., i, 1790, 65 (Surinam; Guiana).—REICHENBACH, Handb., Fulicariae, 1850, pl. 114, figs. 1139, 1140.—BONAPARTE, Consp. Gen. Av., ii, 1857 [1855], 181.
- Helionis fulicaria* REICHENBACH, Handb. Spec. Orn., 1852, p. xxii.

Suborder EURYPYGAE: Sun-bitterns

- <Eurypygoideæ STEJNEGER, Stand. Nat. Hist., iv, 1885, 115, in text (Eurypygidæ+Rhinochetidae+Mesitidae).—SHUFELDT, Anat. Rec., ix, 1915, 70 (same families included).
- <Eurypygæ FÜRBRINGER, Unters. Morph. Syst. Vög., 1888, 1566 (Eurypygidæ+Rhinochetidae+Apatornithidae).
- =Eurypygæ SHARPE, Rev. Rec. Att. Classif. Birds, 1891, 74 (Eurypygidæ only); Hand-list, i, 1899, xvii, 181.
- =Eurypygæ WETMORE and MILLER, Auk, xliii, 1926, 343.—WETMORE, Proc. U. S. Nat. Mus., lxxvi, art. 24, 1930, 4; Smiths. Misc. Coll., lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, Check-list Birds of World, ii, 1934, 214.

Very thin-necked, fan-tailed, semiariboreal Gruiformes with 12 rectrices, 18 cervical vertebrae, cervical pterylosis without lateral apteria, and with one pair (uropygial) of powder-down patches.

Palate schizognathous, nares schizorhinal, pervious; no occipital foramina, supraorbital depressions, nor basipterygoid processes: metasternum 2-notched; furcula well developed, U-shaped; clavicles well developed; spina externa sterni well developed; spina interna absent; caeca well developed, moderately long; femorocaudal, accessory femorocaudal, semitendinosus, and accessory semitendinosus muscles all present; biceps slip present; oil gland present, nude; deep plantar tendons of Type I; thigh muscle formula ABXY+; primaries 10; secondaries aquincubital; aftershaft present (but small); nidification arboreal; egg spotted; young ptilopaedic, nidicolous.

The sun-bitterns constitute a single family peculiar to continental tropical America, where they are represented by a single genus (*Eurypyga*) containing one species with three subspecies, one inhabiting Central America and trans-Andean northern South America, as far as Ecuador, one ranging over cis-Andean tropical South America, as far as Bolivia and central Brazil, and the last restricted to south-central Peru.

They inhabit the banks of the larger streams, and their habits appear to be very little known.⁹

⁹ For an account of the nesting of *E. helias* in the London Zoological Gardens, see Bartlett, Proc. Zool. Soc. London, 1866, 76-78, pl. 9.

Family EURYPYGIDAE: Sun-bitterns

- =Euripygidae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1855], 144.
 =Euripyginae BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1855], 144.
 =Eurypygidae SCLATER and SALVIN, *Nom. Av. Neotr.*, 1873, viii, 141.—RIDGWAY, *Bull. U. S. Geol. Surv. Terr.*, iv, 1878, 221, 222 (characters).—STEJNEGER, *Stand. Nat. Hist.*, 1885, 116 in text.—SHARPE, *Cat. Birds Brit. Mus.*, xxiii, 1894, xii, 240; *Hand-list*, i, 1899, xvii, 181.—BEDDARD, *Struct. and Classif. Birds*, 1898, 377.—SALVIN and GODMAN, *Biol. Centr.-Amer.*, *Aves*, iii, 1903, 334.—KNOWLTON, *Birds of World*, 1909, 49, 347.
 =Eurypygidae FÜRRINGER, *Unters. Morph. Syst. Vög.*, 1888, 1196.—GADOW, in *Bronn's Thier Reichs Vög.*, ii, 1891, 190, 300; *Classif. Vertebr.*, 1898, 35.—WETMORE, *Proc. U. S. Nat. Mus.*, lxxvi, art. 24, 1930, 4; *Smiths. Misc. Coll.*, lxxxix, No. 13, 1934, 6; xcix, No. 7, 1940, 6.—PETERS, *Check-list Birds of World*, ii, 1934, 214.

This being the only family in the suborder Eurypygae, the characters are the same as those of the latter, as given in the pages immediately preceding.

Genus EURYPYGA Illiger

- Eurypyga* ILLIGER, *Prodr. Orn.*, 1811, 257. (Type, by monotypy, *Ardea helias* Pallas.)
Euripyga (emendation) BONAPARTE, *Consp. Gen. Av.*, ii, 1857 [1855], 144.
Euripygia (emendation) DES MURS, in *Chenu, Encycl. Hist. Nat. Ois.*, vi, 1854, 243.
Eurypiga (emendation) DUMONT, *Dict. Sci. Nat.*, xix, 1821, 474.
Eurypigia (emendation) DES MURS, in *Chenu, Encycl. Hist. Nat. Ois.*, vi, 1854, 223.
Eurypygia (emendation) SWAINSON, *Classif. Birds*, ii, 1837, 359.
 (?) *Helias* RAFINESQUE, *Analyse*, 1815, 71. (*Nomen nudum.*)
Helias VIEILLOT, *Analyse*, 1816, 56. (Type, by monotypy, "Caurale, Buff[on]" = *Ardea helias* Pallas.)
 ? *Ornelias* RAFINESQUE, *Analyse*, 1815, 219. (New name for *Helias* Rafinesque.)

The genus *Eurypyga* being the only representative of the family, its characters are, of course, the same as those given under family Eurypygidae. In addition, however, the following may be mentioned:

Rather small, semi-arboreal wading birds with rather long and very thin neck, large wings and tail (the latter fan-shaped) and plumage handsomely variegated with gray, brown, chestnut, buff, black, and white, in the form of mottlings, bars, and bands, the variegation especially conspicuous on primaries and rectrices.

Bill as long as or longer than head, compressed, straight, slightly contracted, vertically, for basal half but with upper and lower outlines parallel and straight, the terminal half of culmen moderately but decidedly convex, the gonyes faintly convex except, sometimes, terminally, and more or less prominent basally; tip of maxilla slightly uncinatè, with a distinct subterminal notch; nasal fossae long and relatively broad, extending for two-thirds, or more, the

length of maxilla, sometimes nearly to its tip; nostril narrowly linear, longitudinal, posteriorly in contact with loreal feathering, overhung by a thin but rather broad membraneous operculum; loreal antia decidedly

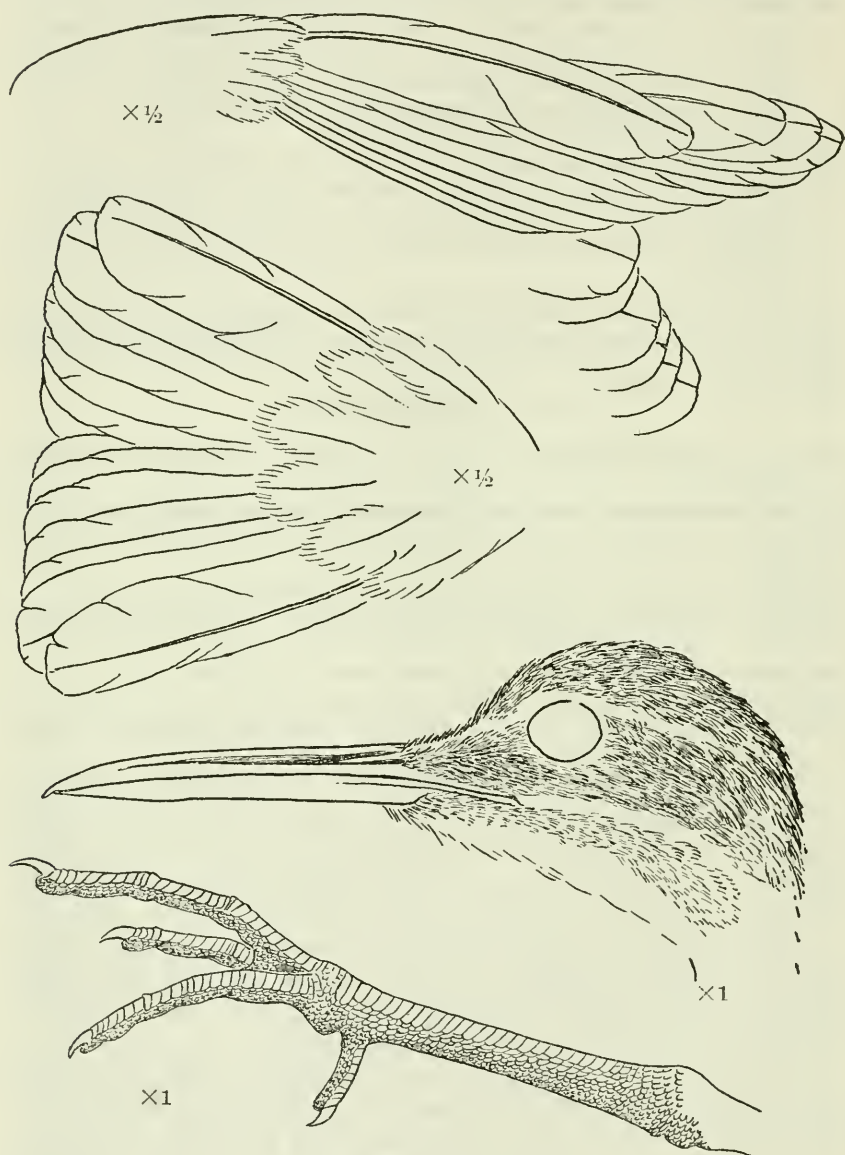


FIGURE 16.—*Eurypyga helias*.

anterior to malar antia but more or less posterior to mental antia; a narrow naked space on lower eyelid and, in *E. helias*, the postocular region more or less naked. Wing relatively large and broad, the

primaries decidedly longer than longest secondaries by about one-fourth the length of wing, or slightly more; fourth (from outside) primary longest, the first (outermost) intermediate between seventh and eighth or eighth and ninth. Tail a little less than three-fourths as long as wing, truncated or very slightly rounded, the rectrices (12-14) very broad, with broadly rounded tips. Tarsus about as long as exposed culmen, or slightly shorter, less than one-fourth as long as wing, slender, the acrotarsium transversely scutellate, the planta tarsi reticulated or covered with small hexagonal scales; tibia bare for more than half the length of tarsus, non-scutellate (booted); middle toe, without claw, about three-fourths as long as tarsus (sometimes very slightly less, sometimes decidedly more); outer toe (without claw) extending to beyond subterminal articulation of middle toe, the inner toe decidedly shorter falling short of that point; hallux slightly elevated, narrow, compressed, shorter than basal phalanx of inner toe; claws short, rather stout, moderately curved, that of middle toe not pectinated; a distinct web between basal phalanges of middle and outer toes, but none between middle and inner toes.

Plumage and coloration.—Plumage full and soft (bitternlike) except on neck, where very short; head fully feathered except a narrow space on lower eyelids and, in the postocular region, where partly naked or but sparsely feathered; remiges and rectrices very broad; no crest. Head blackish with two lateral stripes (one superciliary) of white and whole chin and throat white; back and scapulars broadly barred with black; smaller wing coverts olive-brown and grayish spotted with white (on proximal lesser coverts) and indistinctly or brokenly barred with the same (on larger coverts); primaries with broad areas of chestnut and black, otherwise light olive barred or vermiculated with buff, their terminal portion vermiculated or mottled with light and dark gray and tipped with dusky; tail irregularly barred or coarsely vermiculated with dark gray and grayish white and crossed by two black bands each preceded by a narrow, more broken one of chestnut. Monotypic.

KEY TO THE SUBSPECIES OF EURYPYGA HELIAS

- a. Black bands on upperparts, especially interscapulars and upper back, much wider than interspaces; interspaces buffy.

Eurypyga helias helias (extralimital)¹⁰

¹⁰*Ardea helias* Pallas, Neue Nord. Beitr., ii, 1781, 48, pl. 3 (Surinam); Goudot, Mag. Zool., 1843, text to pls. 37, 38.—[*Ardea*] *helias* Gmelin, Syst. Nat. i, pt. 2, 1789, 640.—[*Scolopax*] *helias* Latham, Index Orn., ii, 1790, 725.—*Rallus helias* Temminck, Cat. Syst., 1807, 176.—*Eurypyga helias* Illiger, Prodr. Orn., 1811, 257; Reichenbach, Handb., Fulicariae, 1851, pl. 124, figs. 1219, 1220; Des Murs, in Castelnau's Exped. Amérique du Sud, Ois., 1855, 90; Taylor, Ibis, 1864, 95 (Rio Orinico); Schlegel, Mus. Pays-Bas, v, No. 30, livr. 7, Ralli, 1865, 73

- aa. Black bands on upperparts, especially interscapulars and upper back, narrower than interspaces; interspaces gray, not buffy.
- b. Upper tail coverts black crossed by exceedingly narrow white transverse lines----- *Eurypyga helias major* (p. 236)
- bb. White cross bars on upper tail coverts wider, half or more as wide as black interspaces----- *Eurypyga helias meridionalis* (extralimital)¹¹

EURYPYGA HELIAS MAJOR Hartlaub

GREATER SUN-BITTERN

Adult (sexes alike).—Forehead, crown, occiput, lores, cheeks, and auriculars sooty black with, in some lights, a very faint fuscous-bronze sheen; a narrow line from just behind the nostril extending back over the eye and to the posterolateral angle of the occiput cinnamon to tawny-olive in its anterior part and pure white speckled with black from the anterior end of the eye backward; hind neck anteriorly whitish closely vermiculated with sooty black, posteriorly

(Cayenne); Pelzeln Orn. Bras., 1871, 300 (Goyabeira; Engenho do Pari; Villa Maria; Caçera; Engenho do Gama; Matto Grosso; Villa de Manaos; Cajutuba; Brazil); Berlepsch, Ibis, 1884, 440 (Angostura, Venezuela); Journ. für Orn., 1889, 320 (Yurimaguas, Bolivia); Salvin, Ibis, 1886, 177 (Bartica Grove and Camacusa, British Guiana); Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 240 (Demerara, Bartica Grove, and Camacusa, British Guiana; Cayenne Engenho do Gama, Brazil); Ihering, Rev. Mus. Paulista, iv, 1900, 289 (descr. eggs); Hellmayr, Nov. Zool., xv, 1908, 100 (Rio Araguaya, Brazil); Chubb, Birds British Guiana, i, 1916, 142 (habits); Cherrie, Brooklyn Inst. Sci. Bull. 2, 1916, 368 (Rio Orinoco, Venezuela).—*Eurypyga helias* Stephens, Shaw's Gen. Zool., xiv, pt. i, 1826, 323 (Guiana); Bangs and Penard, Bull. Mus. Comp. Zool., lxii, 1918, 42 (Paramaribo, Surinam); Chubb, Ibis, 1919, 269 (San Ernesto, 1,000 m., and Charuplaya, 1,300 m., Bolivia); Delacour, Ibis, 1923, 140 (Guarico and Apure, Venezuela; habits).—*[Eurypyga] helias* Sclater and Salvin, Nom. Av. Neotr., 1873, 141.—*Eurypyga helias* Cabanis, in Schomburgk's Reis. Britisch Guiana, iii, 1848, 752.—*[Eurypyga] helias* Bonaparte, Consp. Gen. Av., ii, 1857, 144.—*Eurypiga helias* Ihering, Rev. Mus. Paulista, iv, 1904, 451 (Rio Juruá, São Paulo, Brazil).—*Scolopax solaris* Boddaert, Tabl. Pl. Enl., 1783, 48 (based on *La Courál* Daubenton, Pl. Enl., ix, pl. 782).—*[Eurypyga] solaris* Gray, Hand-list, iii, 1871, 26, No. 10096.—*Helias phalenoides* Vieillot, Nouv. Dict. Hist. Nat., v, 1816, 423 (new name for *Ardea helias* Pallas); Lesson, Traité d'Orn., 1831, 570.—*Eurypyga phalenoides* Goudot, Mag. Zool., 1843, pl. 38 (egg).—*Eurypyga helias helias* Peters, Check-list Birds of World, ii, 1934, 216.

¹¹ *Eurypyga helias* (not *Ardea helias* Pallas) Sclater and Salvin, Proc. Zool. Soc. London, 1866, 199 (upper Rio Ucayali, e. Peru); 1867, 979 (Pebas, e. Peru); 1873, 308 (Rio Javari, Cashiboya, and Pebas, e. Peru); Taczanowski, Orn. Pérou, iii, 1886, 388; Sharpe, Cat. Birds Brit. Mus., xxiii, 1894, 240, part (Pebas, e. Peru).—*Eurypyga major meridionalis* Berlepsch and Stolzmann, Proc. Zool. Soc. London, 1902 (publ. Oct.), 50 (La Mercéd, Chanchamayo, e. Peru; coll. Branicki Mus.); Ornis, xiii, 1906, 125 (Huaynapato, e. Peru); Chapman, U. S. Nat. Mus. Bull. 117, 1921, 51 (Rio Cosireni and Inca Mine, se. Peru).—*Eurypyga meridionalis* CHUBB, Ibis, 1919, 270 (Orayci, Rio Linimbare, centr. Peru, 1,000 m.).—*Eurypyga helias meridionalis* PETERS, Check-list Birds of World, ii, 1934, 215.

dull snuff-brown vermiculated with sooty black; the anterior interscapulars and lower sides of neck, and of the breast similar but more rufescent-tawny snuff-brown to cinnamonaceous and with the black vermiculations a little more widely spaced; rest of interscapulars and scapulars neutral gray heavily washed with brownish olive, the interscapulars with more brownish than the scapulars, and broadly barred with sooty black, each feather crossed by three or four such black bands, which are not so broad as the interspaces; each black band with a narrow pale margin on its proximal side, the gray interspaces indistinctly marbled or irregularly vermiculated with deep neutral gray; lesser and median upper wing coverts deep neutral gray with an ashy cast, and incompletely barred with irregular bands of minute white spots, the lesser coverts near the bend of the wing considerably washed with olive-brown; a number of both the lesser and the median coverts with large, somewhat oval white spots at their tips; the median coverts crossed by a concealed blackish band on their basal part; alula ashy deep neutral gray, largely black toward the base; terminally edged with white; greater upper primary coverts dark olive-buff abundantly speckled, edged, and tipped with chamois, the pale specks often assuming the form of incomplete, transverse bars, the outermost of these coverts washed with deep neutral gray terminally; the greater secondary coverts deep neutral gray, the outer ones much tinged with olive-buff and abundantly flecked and irregularly vermiculated with whitish; two outermost primaries blackish basally, then crossed by a white band, which is much mottled with neutral gray on the inner web and distally bordered with the same on both webs; following this is a broad blackish band (30-40 mm.) containing within it a very large spot of Sanford's brown (on the second primary this spot occupies most of the band); distal to this is another white band (15-20 mm.) mottled with neutral gray, then another blackish band, then a large Sanford's brown spot, even larger than the more basal; this, in turn, is distally edged with a broad black band, followed by an equally broad white one with the usual mottling, and finally a broad tip of deep neutral gray mixed with blackish and narrowly tipped with pale grayish; the third primary like the second, but with a slight olive tinge on the gray just proximal to the second rufescent area; fourth and fifth primaries dark olive-buff mottled with chamois to primrose yellow for the basal half, then bright Sanford's brown for about 50 mm., then broadly banded with black, then pale neutral gray mottled with white, and tipped with dull sooty black; sixth primary like the fifth, but the inner web with a broad Sanford's brown area distally broadly edged with black in the middle of the olive-buff and primrose yellow basal area; remaining primaries Sanford's brown for their basal

third or more on both webs, this followed by a broad black band, then chamois to primrose yellow mottled with olive-buff, then broadly neutral gray mottled with white and tipped with ashy black; outer secondaries with no chestnut or black, but the outer ones chamois and primrose yellow mottled with olive-buff for their basal three-quarters, and terminally neutral gray mottled with white and with slate-gray, the extent of the olive-yellow area decreasing rapidly from the outermost to the inner secondaries, which are almost all grayish and which have two or three blackish bands on their terminal third and are tipped with blackish, very narrowly edged with white; back, rump, and upper tail coverts black narrowly barred with white, the white marks very much narrower than the black interspaces, the black becoming slightly ashy on the upper tail coverts; rectrices like the upper tail coverts but crossed by two broad black bands, each of which contains a narrower band of bright Sanford's brown in the more proximal third of the whole band; chin and upper throat white; a white line from the bill along the lower edge of the black lores, cheeks, and auriculars; a dusky snuff-brown malar stripe vermiculated with blackish extends about as far back as do the white superciliaries; lower middle of throat pale tawny snuff brown; sides of lower throat and breast tawny snuff brown finely barred or vermiculated with dull fuscous-black, the brown becoming paler on the lower breast and the sides; sides, flanks, under wing coverts, and axillars chamois to pale tawny-buff coarsely vermiculated with olivaceous fuscous-black, thighs similar but with few vermiculations and slightly paler; abdomen white becoming cartridge buff on the lower portion; under tail coverts cartridge buff to pale warm buff, terminally vermiculated with black; "iris red; eyelids yellow, edged brownish; inside of mouth bright orange; extreme tip of maxilla orange-yellow, edges of commissure bright orange, rest black, becoming brown at base; mandible bright orange; feet and toes bright orange, front of tarsi and upper surface of toes brown-orange, claws yellow."¹²

Juvenal.—Not known, but, judged by analogy with the nominate race, the juvenal plumage is probably identical with the adult stage.

Natal down.—Not known.

Adult male.—Wing 208–240 (223.8); tail 145–168 (159.0); exposed culmen 61–66.5 (63.9); tarsus 53–58 (55.3); middle toe without claw 40–46 (43.4 mm.).¹³

¹² Deignan, *Auk*, liii, 1936, 188.

¹³ Five specimens from Honduras, Costa Rica, Panamá, and Colombia.

Adult female.—Wing 206–232 (219); tail 143–168 (154.7); exposed culmen 60 (60); tarsus 55–60 (57.7); middle toe without claw 43–45 (43.7 mm.).¹⁴

Range.—Resident in the rain forest in the vicinity of streams from Guatemala (Vera Paz; Santo Tomás; mountains southeast of Cobán; chiefly in the Caribbean slope); Honduras (La Ceiba); Costa Rica (Angostura; Valza; Machuca; Aguacate Mountains; Pozo Azul de Pirrís; Monte Redondo; Carrillo; Tenorio; Cariblanco de Sarapiquí; El Hogar; Gualpes); and Panamá (Gatun; Bayano River; Santa Fe de Veragua; Cordillera de Tolé; Cordillera del Chucu; Volcan de Chiriquí; Lion Hill; Cricamola; Guabo; Permé); western Colombia (Nichi; Antioquia; “Bogota”; La Salaquí; Chocó; not recorded from Santa Marta) and western Ecuador (Yauayacu; Rio Blanco; Rio Suno; below San José; Santo Domingo; Rio Chimbo near Puente de Chimbo; Pallatanga).

Recorded from northwestern Venezuela (Puerto Cabello, but sub-specific identification requires checking).

Type locality.—Colombia.

Eurypyga major HARTLAUB, Journ. für Orn., i, 1853, 37 (Colombia).—SCLATER and SALVIN, Proc. Zool. Soc. London, 1864, 371 (Panamá); 1879, 546 (Nichi, Antioquia, Colombia).—SCHLEGEL, Mus. Pays-Bas, v, No. 30, livr. 7 (Ralli), 1865, 74.—SCLATER, Ibis, 1866, 205 (Guatemala).—SALVIN, Proc. Zool. Soc. London, 1867, 161 (Santa Fe and Cordillera de Tolé, Veragua, w. Panamá); 1870, 218 (Cordillera del Chucu and Volcan de Chiriquí, w. Panamá).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, ix, 1869, 142 (Angostura, Costa Rica).—FRANTZIUS, Journ. für Orn., 1869, 377 (Costa Rica).—ZELEDÓN, Proc. U. S. Nat. Mus., viii, 1885, 113 (Costa Rica).—SHARPE, Cat. Birds Brit. Mus., xxiii, 1894, 242 (Vera Paz and mountains se. of Cobán, Guatemala; Valza, Costa Rica; Cordillera de Tolé, Cordillera del Chucu, Santa Fe de Veragua, and Volcan de Chiriquí, w. Panamá; Nichi and Bogotá, Colombia; Yauayacu and Rio Blanco, Ecuador).—LANTZ, Trans. Kansas Acad. Sci. for 1896–97 (1899), 219 (Santo Tomás, Guatemala).—GOODFELLOW, Ibis, 1902, 230 (Santo Domingo, w. Ecuador).—SALVIN and GODMAN, Biol. Centr.-Amer., Aves, iii, 1903, 334 (Vera Paz and mountains se. of Cobán, Guatemala; Angostura, Machuca, Aguacate Mountains, Valza, Pozo Azul de Pirrís, and Monte Redondo, Costa Rica; Santa Fe, Cordillera del Chucu, Cordillera de Tolé, and s. slope Volcan de Chiriquí, w. Panama; Colombia; Ecuador).—CARRIKER, Ann. Carnegie Mus., vi, 1910, 425 (Carrillo, Tenorio, Cariblanco de Sarapiquí, El Hogar, and Guápiles, Costa Rica; habits).—COOKE, U. S. Dept. Agr. Bull. 128, 1914, 47 (range).—CHAPMAN, Bull. Amer. Mus. Nat. Hist., xxxvi, 1917, 226 (La Salaquí, Chocó, Colombia).—STURGIS, Field Book Birds Panama Canal Zone, 1928, 76 (descr.; habits, Panama).

E[urypyga] major HARTLAUB, Syst. Verz. Mus. Bremen, 1844, 108 (Colombia).—GRAY, Gen. Birds, iii, 1849, 554.

[Eurypyga] major GRAY, Hand-list, iii, 1871, 26, No. 10097.—SCLATER and SALVIN, Nom. Av. Neotr., 1873, 141.—SHARPE, Hand-list, i, 1899, 181.

¹⁴ Three specimens from Honduras and Panamá.

- E[uripyga] major* BONAPARTE, Consp., Gen. Av., ii, 1887 [1855], 144 (Colombia).
- Euripyga major* LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1862, 478 (Lion Hill, Panama; crit.).
- Eurypyga mayor* ZELEDÓN, Anal. Mus. Nac. Costa Rica, i, 1888, 131 (Poza Azul de Pirris, Monte del Aguacate, and Monte Redondo, Costa Rica).
- [*Eurypyga*] *maior* HEINE and REICHENOW, Nom. Mus. Hein. Orn., 1890, 315 (Puerto Cabello, Venezuela) (?).
- Eurypyga major major* CHAPMAN, Bull. Amer. Mus. Nat. Hist., iv, 1926, 203 (Rio Suno; below San José; Río Chimbo near Puente de Chimbo, Ecuador).—PETERS, Bull. Mus. Comp. Zool., lxxi, 1931, 303 (Cricamola; Guabo; Panamá).—GRISCOM, Bull. Amer. Mus. Nat. Hist., lxiv, 1932, 137 (Guatemala—in rain forest of Caribbean slope); Bull. Mus. Comp. Zool., lxxii, 1932, 321 (Permé, Panamá).
- Eurypyga helias major* PETERS, Check-list Birds of World, ii, 1934, 215.—GRISCOM, Bull. Mus. Comp. Zool., lxxviii, 1935, 305 (Panama—scattered records from tropical rain forest areas).—DEIGNAN, Auk, liii, 1936, 186, 188 (Honduras, 5 miles from La Ceiba; 2 specimens; colors of soft parts).
- Eurypyga helias* (not *Ardea helias* Pallas) SCLATER and SALVIN, Ibis, 1859, 227 (Guatemala; crit.).—SCALTER, Proc. Zool. Soc. London, 1860, 73 (Pallatanga, w. Ecuador).—LAWRENCE, Ann. Lyc. Nat. Hist. New York, vii, 1862, 301 (Lion Hill, Panamá).—BERLEPSCH and TACZANOWSKI, Proc. Zool. Soc. London, 1885, 119 (Pallatanga).

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