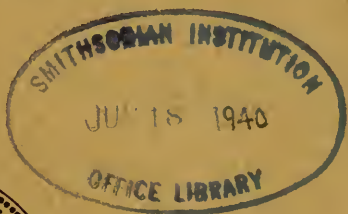


SMITHSONIAN MISCELLANEOUS COLLECTIONS
VOLUME 99, NUMBER 4

A CHECK-LIST OF THE FOSSIL BIRDS
OF NORTH AMERICA

BY
ALEXANDER WETMORE
Assistant Secretary, Smithsonian Institution



(PUBLICATION 3587)

CITY OF WASHINGTON
PUBLISHED BY THE SMITHSONIAN INSTITUTION
JUNE 18, 1940

SMITHSONIAN MISCELLANEOUS COLLECTIONS
VOLUME 99, NUMBER 4

A CHECK-LIST OF THE FOSSIL BIRDS
OF NORTH AMERICA

BY
ALEXANDER WETMORE
Assistant Secretary, Smithsonian Institution



(PUBLICATION 3587)

CITY OF WASHINGTON
PUBLISHED BY THE SMITHSONIAN INSTITUTION
JUNE 18, 1940

The Lord Baltimore Press
BALTIMORE, MD., U. S. A.

A CHECK-LIST OF THE FOSSIL BIRDS OF NORTH AMERICA

BY ALEXANDER WETMORE

Assistant Secretary, Smithsonian Institution

Since publication of the last complete list of the fossil birds of North America, which appeared in the Fourth Edition of the Check-list of North American Birds of the American Ornithologists' Union in October 1931, there have been many changes and additions, both in species found only in fossil state and in modern forms recorded from Pleistocene and (rarely) earlier deposits. This information is widely scattered so that it seems pertinent now to gather it together and to present the entire list again for the use of all who may be interested.

The material that follows is complete so far as records have come to attention to January 1940.

In preparing this paper every species included has been checked carefully against the original records, and data pertaining to geologic distribution have been revised. As in the fourth edition of the A. O. U. Check-list, all modern forms for which there are fossil records have been included. In addition there have been added certain species, such as *Geococcyx conklingi*, that, although from deposits that are possibly Recent in age, are known only from bones, and so do not find a proper place in the list of modern birds. There are also included records of Recent age for such species as *Spizaëtus willetti* and *Coragyps occidentalis* that extend from the Pleistocene into the Recent but that are known only from skeletal remains.

The modern species that occur in the fossil record are distinguished from those not known in living form by the common name and by a suitable phrase in the range. Most of these are listed under specific names without regard to subspecies, since it is not usually practicable to identify geographic races from bones. It is doubtful procedure ordinarily to assume that Pleistocene subspecies were the same as those living in the same region today, and such assumption is made only where there is reasonable certainty of the identification. We know of many extensions of range in the prehistoric period among species of birds, and it is reasonable to suppose that the same has been true among subspecies. It should be remembered therefore

that the specific name in wide-ranging species in which several subspecific forms are now recognized is used in an inclusive sense, and that in records of *Corvus corax*, for example, there is no intention to imply that the Old World raven has been found in North America. In some cases there is no doubt that two or more subspecies are covered by the fossil record, as with *Bonasa umbellus* whose bones have been found in fossil deposits in Maryland and California.

The list as here published includes records of 165 forms that are still living, and of 184 species recorded only in the extinct state. There are 12 additional forms in a hypothetical list, the status of which is uncertain and which are not included in the tabulation just given.

In checking details for this manuscript and in reading proof I have had the kind assistance of Dr. Hildegard Howard, Dr. Loye Miller, and Dr. Alden H. Miller, to whom my sincere thanks are due for this friendly assistance.

Class AVES. BIRDS

Subclass NEORNITHES. TRUE BIRDS

Superorder ODONTOGNATHAE. NEW WORLD TOOTHED BIRDS

Order HESPERORNITHIFORMES. HESPERORNITHES

Family HESPERORNITHIDAE. HESPERORNITHES

Genus HESPERORNIS Marsh

Hesperornis MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 360. Type, by monotypy, *Hesperornis regalis* MARSH.

Hesperornis crassipes (MARSH)

Lestornis crassipes MARSH, Amer. Journ. Sci., ser. 3, vol. 11, 1876, p. 509.

Upper Cretaceous (Niobrara): Western Kansas.

Hesperornis montana SHUFELDT

Hesperornis montana SHUFELDT, Auk, vol. 32, No. 3, July 1915, p. 293, pl. 18, figs. 4, 6, 8, 10, 12.

Upper Cretaceous (Claggett formation): 1 mile above mouth of Dog Creek, Fergus County, Montana.

Hesperornis regalis MARSH

Hesperornis regalis MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 357.

Upper Cretaceous (Niobrara): Smoky Hill River, 20 miles east of Wallace,¹ and Two Mile Creek, Smoky Hill River, Logan County, Kansas.

Genus CONIORNIS Marsh²

Coniornis MARSH, Amer. Journ. Sci., ser. 3, vol. 45, 1893, p. 82. Type, by monotypy, *Coniornis altus* MARSH.

Coniornis altus MARSH

Coniornis altus MARSH, Amer. Journ. Sci., ser. 3, vol. 45, 1893, p. 82, text fig.

Upper Cretaceous (Judith River): Dog Creek, Montana.

¹ Type locality.

² Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 16, 75, considers this a synonym of *Hesperornis*.

Genus **HARGERIA** Lucas

Hargeria LUCAS, Proc. U. S. Nat. Mus., vol. 26, Feb. 4, 1903, p. 552. Type, by orig. design., *Hesperornis gracilis* MARSH.

Hargeria gracilis (MARSH)

Hesperornis gracilis MARSH, Amer. Journ. Sci., ser. 3, vol. 11, 1876, p. 510.

Upper Cretaceous (Niobrara): Near Smoky Hill River, western Kansas.

Family **BAPTORNITHIDAE**.³ **BAPTORNITHES**Genus **BAPTORNIS** Marsh

Baptornis MARSH, Amer. Journ. Sci., ser. 3, vol. 14, 1877, p. 86. Type, by monotypy, *Baptornis advenus* MARSH.

Baptornis advenus MARSH

Baptornis advenus MARSH, Amer. Journ. Sci., ser. 3, vol. 14, 1877, p. 86.

Upper Cretaceous (Niobrara): Wallace County,⁴ and Butte Creek, Logan County, Kansas.

Order **ICHTHYORNITHIFORMES**. **ICHTHYORNITHES**Family **ICHTHYORNITHIDAE**. **ICHTHYORNITHES**Genus **ICHTHYORNIS** Marsh

Ichthyornis MARSH, Amer. Journ. Sci., ser. 3, vol. 4, November 1872, p. 344. Type, by monotypy, *Ichthyornis dispar* MARSH.

Ichthyornis agilis (MARSH)

Graculavus agilis MARSH, Amer. Journ. Sci., ser. 3, vol. 5, 1873, p. 230.

Upper Cretaceous (Niobrara): Butte Creek, western Kansas.

Ichthyornis anceps (MARSH)

Graculavus anceps MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 364.

Upper Cretaceous (Niobrara): North Fork Smoky Hill River, about 12 miles east of Wallace, Kansas.

Ichthyornis dispar MARSH

Ichthyornis dispar MARSH, Amer. Journ. Sci., ser. 3, vol. 4, 1872, p. 344.

Upper Cretaceous (Niobrara): Near Solomon River, Kansas.

³ Lambrecht, Handb. Palaeorn., 1933, pp. 258-260, unites this with the Enaliornithidae, on what seem insufficient grounds. As suggested by Lucas, Proc. U. S. Nat. Mus., vol. 26, 1903, p. 555, *Baptornis* probably belongs in a distinct order.

⁴ Type locality.

Ichthyornis lentus (MARSH)

Graculavus lentus MARSH, Amer. Journ. Sci., ser. 3, vol. 14, 1877, p. 253.

Upper Cretaceous: Near "Fort McKinney," Texas.

Ichthyornis tener MARSH

Ichthyornis tener MARSH, Odontornithes, 1880, pp. 151, 198, pl. 30, fig. 8.

Upper Cretaceous (Niobrara): Wallace County, Kansas.

Ichthyornis validus MARSH

Ichthyornis validus MARSH, Odontornithes, 1880, pp. 147, 153, 198, pl. 30, figs. 11-14.

Upper Cretaceous (Niobrara): Near Solomon River, Kansas.

Ichthyornis victor MARSH

Ichthyornis victor MARSH, Amer. Journ. Sci., ser. 3, vol. 11, 1876, p. 511.

Upper Cretaceous (Niobrara): Wallace County⁵ and Hackberry Creek, near Smoky Hill River, Gove County, Kansas.

Family APATORNITHIDAE. APATORNITHES

Genus APATORNIS Marsh

Apatornis MARSH, Amer. Journ. Sci., ser. 3, vol. 5, Jan. 21, 1873, p. 162.

Type, by monotypy, *Ichthyornis celer* MARSH.

Apatornis celer (MARSH)

Ichthyornis celer MARSH, Amer. Journ. Sci., ser. 3, vol. 5, 1873, p. 74.

Upper Cretaceous (Niobrara): Butte Creek, near Smoky Hill River, Kansas.

Superorder PALAEOGNATHAE. STRUTHIOUS BIRDS AND ALLIES

Order CAENAGNATHIFORMES. CAENAGNATHUS

Family CAENAGNATHIDAE. CAENAGNATHUS

Genus CAENAGNATHUS Sternberg

Caenagnathus STERNBERG, Journ. Pal., vol. 14, January 1940, p. 81. Type, by orig. design., *Caenagnathus collinsi* STERNBERG.

Caenagnathus collinsi STERNBERG⁶

Caenagnathus collinsi STERNBERG, Journ. Pal., vol. 14, January 1940, p. 81, figs. 1-6.

Upper Cretaceous (Pale beds, Belly River series): Quarry No. 112, Steeveville map area, near mouth of Sand Creek, Alberta, Canada.

⁵ Type locality.

⁶ This interesting species, known from a nearly complete mandible, is listed in the above superorder tentatively. It is not absolutely certain that it is avian.

Superorder NEOGNATHAE. TYPICAL BIRDS

Order GAVIIFORMES. LOONS

Family GAVIIDAE. LOONS

Subfamily GAVIINAE

Genus **GAVIA** Forster

Gavia J. R. FORSTER, Enchirid. Hist. Nat., 1788, p. 38. Type, by subs. design., *Colymbus immer* GUNNERUS = *C. immer* BRÜNNICH (Allen, 1907).

Gavia concinna WETMORE

Gavia concinna WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 25, figs. 1-4.

Lower Pliocene (Etchegoin beds): Sweetwater Canyon, 5½ miles east of King City, Monterey County, California.

Subfamily GAVIELLINAE. GAVIELLA

Genus **GAVIELLA** Wetmore

Gaviella WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 28. Type, by orig. design., *Gavia pusilla* SHUFELDT.

Gaviella pusilla (SHUFELDT)

Gavia pusilla SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 70, pl. 13, fig. 106.

Probably from Oligocene (White River beds): near Lusk, Wyoming.⁷

Order COLYMBIFORMES. GREBES

Family COLYMBIDAE. GREBES

Genus **COLYMBUS** Linnaeus

Colymbus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 135. Type, by subs. design., *Colymbus cristatus* LINNAEUS (Baird, Brewer, and Ridgway, 1884).

Subgenus **COLYMBUS** Linnaeus**Colymbus grisegena** BODDAERT. Holboell's Grebe

Colymbus grisegena BODDAERT, Table Pl. Enl., 1783, p. 55.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

⁷ See Wetmore, A., Journ. Morph., vol. 66, Jan. 2, 1940, p. 30.

Subgenus **DYTES** Kaup

Dytes KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 41. Type, by subs. design., *Colymbus auritus* LINNAEUS (Gray, 1842).

Colymbus auritus LINNAEUS. **Horned Grebe**

Colymbus auritus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 135.

Modern form reported from Pleistocene: Cavern deposits of Tennessee; Seminole Field, Pinellas County, and Itchtucknee River, Florida; Fossil Lake, Oregon.

Colymbus nigricollis (BREHM). **Eared Grebe**

Podiceps nigricollis C. L. BREHM, Handb. Naturg. Vögel Deutschl., 1831, p. 963.

Modern form reported from Middle Pliocene (Edson beds): Sherman County, Kansas; and from Pleistocene: Fossil Lake, Oregon.

Colymbus oligoceanus SHUFELDT

Colymbus oligoceanus SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 54.

? Oligocene (John Day): Lower Willow Creek, Oregon.

Colymbus parvus SHUFELDT

Colymbus parvus SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 6, July 9, 1913, p. 136, pl. 39, fig. 477.

Pliocene: Kern County, California; Pleistocene: Fossil Lake, Oregon.⁸

Genus **AECHMOPHORUS** Coues

Aechmophorus COUES, Proc. Acad. Nat. Sci. Philadelphia, vol. 14, No. 5, April-May (Aug. 1), 1862, p. 229. Type, by orig. design., *Podiceps occidentalis* LAWRENCE.

Aechmophorus occidentalis (LAWRENCE). **Western Grebe**

Podiceps occidentalis LAWRENCE, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, pp. liv, 892, 894.

Modern form reported from Pleistocene: Fossil Lake, Oregon; San Francisco Bay region (Rodeo); Upper San Pedro, near San Pedro, Playa del Rey, and Manix,⁹ east of Barstow, California.

Aechmophorus lucasi MILLER

Aechmophorus lucasi L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 4, Feb. 4, 1911, p. 83, figs. 1-3.

Pleistocene: Fossil Lake, Oregon.

⁸ Type locality.

⁹ Possibly upper Pliocene according to Compton, L. V., Condor, 1934, p. 167.

Genus **PODILYMBUS** Lesson

Podilymbus LESSON, *Traité d'Orn.*, livr. 8, June 11, 1831, p. 595. Type, by monotypy, *Podiceps carolinensis* LATHAM = *Colymbus podiceps* LINNAEUS.

Podilymbus podiceps (LINNAEUS). Pied-billed Grebe

Colymbus Podiceps LINNAEUS, *Syst. Nat.*, 10th ed., vol. 1, 1758, p. 136.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Itchtucknee River, Florida; Fossil Lake, Oregon;¹⁰ Rancho La Brea, Los Angeles, and McKittrick, California.

Order PROCELLARIIFORMES. ALBATROSSES, SHEARWATERS,
PETRELS, AND ALLIES

Family DIOMEDEIDAE. ALBATROSSES

Genus **DIOMEDEA** Linnaeus

Diomedea LINNAEUS, *Syst. Nat.*, 10th ed., vol. 1, 1758, p. 132. Type, by subs. design., *Diomedea exulans* LINNAEUS (GRAY, 1840).

Diomedea albatrus PALLAS. Short-tailed Albatross

Diomedea albatrus PALLAS, *Spic. Zool.*, vol. 1, fasc. 5, 1769, p. 28.

Modern form reported from Pleistocene (Upper San Pedro): near Playa del Rey, California.

Family PROCELLARIIDAE. SHEARWATERS, FULMARS, AND
PETRELSGenus **PUFFINUS** Brisson¹¹

Puffinus BRISSON, *Orn.*, 1760, vol. 1, p. 56; vol. 6, p. 130. Type, by tautonymy, *Puffinus* BRISSON = *Procellaria puffinus* BRÜNNICH.

Subgenus **PUFFINUS** Brisson**Puffinus griseus** (GMELIN). Sooty Shearwater

Procellaria grisea GMELIN, *Syst. Nat.*, vol. 1, pt. 2, 1789, p. 564.

Modern form reported from Pleistocene (Upper San Pedro): Near San Pedro, and Playa del Rey, California.

¹⁰ *Podilymbus magnus* SHUFELDT, *Bull. Amer. Mus. Nat. Hist.*, vol. 32, art. 6, July 9, 1913, p. 136, pl. 38, figs. 439-440, 449, has been identified as *P. podiceps* by Wetmore, *California Acad. Sci.*, vol. 23, Dec. 30, 1937, pp. 198-199.

¹¹ *Puffinus parvus* SHUFELDT, *Ibis*, October 1916, p. 632, from Recent deposits in the bone caves of Bermuda is considered a synonym of *Puffinus lherminieri*.

Puffinus mcgalli SHUFELDT, *Ibis*, October 1916, p. 630, from Recent deposits in the bone caves of Bermuda seemingly is *Puffinus puffinus*.

Puffinus puffinus (BRÜNNICH). **Manx Shearwater**

Procellaria Puffinus BRÜNNICH, Orn. Borealis, 1764, p. 29.

Modern form reported from Pleistocene: Melbourne, Florida.

Puffinus opisthomelas COUES. **Black-vented Shearwater**

Puffinus opisthomelas COUES, Proc. Acad. Nat. Sci. Philadelphia, vol. 16, No. 2, March-April (June 30), 1864, p. 139.

Modern form reported from Pleistocene (Upper San Pedro): San Pedro, and Playa del Rey, California.

Puffinus inceptor WETMORE

Puffinus inceptor WETMORE, Proc. California Acad. Sci., ser. 4, vol. 19, No. 8, July 15, 1930, p. 86, figs. 1-3.

Miocene (Temblor): Sharktooth Hill, about 7 miles northeast of Bakersfield, California.

Puffinus diatomicus MILLER

Puffinus diatomicus L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 111, pls. 1, 2, 7a.

Upper Middle Miocene (Temblor, *Turritella ocoyana* zone): Lompoc,^{11a} and San Pedro Breakwater, San Pedro, California.

Subgenus ARDENNA Reichenbach

Ardenna REICHENBACH, Avium Syst. Nat., 1852 (1853), p. iv. Type, by monotypy, *Procellaria major* FABER = *P. gravis* O'REILLY.

Puffinus conradi MARSH

Puffinus conradi MARSH, Amer. Journ. Sci., ser. 2, vol. 49, 1870, p. 212.

Miocene (Calvert formation): Maryland.

Genus FULMAREUS Stephens

Fulmarus "LEACH," STEPHENS, in SHAW, Gen. Zool., vol. 13, pt. 1, Feb. 18, 1826, p. 233. Type by subs. design., *Procellaria glacialis* LINNAEUS (Gray, 1855).

Fulmarus glacialis (LINNAEUS). **Fulmar**

Procellaria glacialis LINNAEUS, Fauna Suecica, 2d ed., 1761, p. 51.

Modern form reported from Pleistocene (Upper San Pedro): San Pedro, California.

^{11a} Type locality.

Order PELECANIFORMES. TROPIC-BIRDS, PELICANS, FRIGATE-
BIRDS AND ALLIES

Suborder PELECANI. PELICANS, BOOBIES, CORMORANTS, AND
SNAKE-BIRDS

Superfamily PELECANOIDEA. PELICANS AND ALLIES

Family PELECANIDAE. PELICANS

Genus PELECANUS Linnaeus

Pelecanus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 132. Type, by subs.
design., *Pelecanus onocrotalus* LINNAEUS (Gray, 1840).

Subgenus CYRTOPELICANUS Reichenbach

Cyrtopelicanus REICHENBACH, Avium Syst. Nat., 1852 (1853), p. vii. Type,
by orig. design., *Pelecanus trachyrhynchus* LATHAM = *P. erythrorhynchus*
GMELIN.

Pelecanus erythrorhynchus GMELIN. White Pelican

Pelecanus erythrorhynchus GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 571.

Modern form reported from Pleistocene: Fossil Lake, Oregon;
Manix,¹² east of Barstow, San Bernardino County, California;
? Pleistocene: Rattlesnake Hill, Fallon, Nevada.

Pelecanus halieus WETMORE

Pelecanus halieus WETMORE, Smithsonian Misc. Coll., vol. 87, No. 20, Dec.
27, 1933, p. 3, figs. 1-2.

Upper Pliocene (Hagerman Lake beds): Near Hagerman, Idaho.

Family CYPHORNITHIDAE. CYPHORNITHES

Genus CYPHORNIS Cope

Cyphornis COPE, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 9, sign. 58,
May 31, 1894, p. 449. Type, by monotypy, *Cyphornis magnus* COPE.

Cyphornis magnus COPE

Cyphornis magnus COPE, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 9,
sig. 58, May 31, 1894, p. 451.

Miocene?: Carmanah Point, Vancouver Island.

¹² Possibly upper Pliocene according to Compton, L. V., Condor, 1934, p. 167.

Genus PALAEOCHENÖIDES Shufeldt

Palaeochenoides SHUFELDT, Geol. Mag., n. s., 4, vol. 3, August 1916, p. 347.

Type, by monotypy, *Palaeochenoides mioceanus* SHUFELDT.

Palaeochenoides mioceanus SHUFELDT

Palaeochenoides mioceanus SHUFELDT, Geol. Mag., n. s., 4, vol. 3, August 1916, p. 347, pl. 15.

Miocene: Near source of Stono River, South Carolina.

Superfamily SULOIDEA. BOOBIES, CORMORANTS, AND ALLIES

Family SULIDAE. BOOBIES AND GANNETS

Genus SULA Brisson

Sula BRISSON, Orn., 1760, vol. 1, p. 60; vol. 6, p. 494. Type, by tautonymy, *Sula* BRISSON = *Pelecanus piscator* LINNAEUS.

Subgenus SULA Brisson

Sula stocktoni MILLER

Sula stocktoni L. H. MILLER, Publ. Univ. California at Los Angeles Biol. Sci., vol. 1, No. 5, Mar. 12, 1935, p. 75, fig. 2.

Upper Middle Miocene (Temblor phase of Monterey): Near Lomita, California.

Sula willetti MILLER

Sula willetti L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 112, pls. 3, 8, fig. 1.

Miocene (Temblor, *Turritella ocoyana* zone): Lompoc, California.

Subgenus MICROSULA Wetmore

Microsula WETMORE, Proc. U. S. Nat. Mus., vol. 85, Jan. 14, 1938, p. 25. Type, by orig. design., *Sula (Microsula) avita* WETMORE.

Sula avita WETMORE

Sula avita WETMORE, Proc. U. S. Nat. Mus., vol. 85, Jan. 14, 1938, p. 22, figs. 2-3.

Miocene (Calvert formation): Chesapeake Bay near Plumpoint, Maryland.

Genus MIOSULA Miller

Miosula L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 114. Type, by monotypy, *Miosula media* MILLER.

Miosula media MILLER

Miosula media L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 114, pl. 5.

Miocene (Temblor, *Turritella ocoyana* zone): Lompoc, California.

Genus **MORIS** Leach

Moris LEACH, Syst. Cat. Spec. Indig. Mamm. and Birds Brit. Mus., 1816, (after Aug.), p. 35. Type, by monotypy, *Moris bassana* LEACH = *Pelecanus bassanus* LINNAEUS.

Moris loxostyla (COPE)¹³

Sula loxostyla COPE, Trans. Amer. Phil. Soc., n. s., vol. 14, December 1870, p. 236, fig. 53.

Miocene: Calvert County, Maryland; New Jersey.

Moris vagabundus WETMORE

Moris vagabundus WETMORE, Proc. California Acad. Sci., ser. 4, vol. 19, No. 8, July 15, 1930, p. 89, fig. 4.

Miocene (Temblor): Sharktooth Hill,¹⁴ about 7 miles northeast, and west branch of Granite Creek 11 miles north, of Bakersfield, California.

Moris lompocana (MILLER)

Sula lompocana L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 114, pls. 4, 7b, 9.

Miocene (Temblor, *Turritella ocoyana* zone): Lompoc, California.

Moris reyana HOWARD

Moris reyana HOWARD, Condor, vol. 38, September 15, 1936, p. 213, fig. 37. Pleistocene (Upper San Pedro): Near Playa del Rey, California.

Family PHALACROCORACIDAE. CORMORANTS

Genus **GRACULAVUS** Marsh¹⁵

Graculavus MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 363. Type, by subs. design., *Graculavus velox* MARSH (Hay, 1902).

Graculavus pumilus MARSH

Graculavus pumilus MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 364.

Eocene (Hornerstown): Hornerstown, New Jersey.

Graculavus velox MARSH

Graculavus velox MARSH, Amer. Journ. Sci., ser. 3, vol. 3, 1872, p. 363.

Eocene (Hornerstown): Hornerstown, New Jersey.

¹³ *Sula atlantica* SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 62, pl. 15, fig. 123, from the Miocene of New Jersey, is considered a synonym of *M. loxostyla* (cf. WETMORE, Auk, 1926, p. 465).

¹⁴ Type locality.

¹⁵ *Limosavis* SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 19, proposed as a new genus for *Graculavus velox* MARSH, is a synonym of *Graculavus* MARSH.

Genus **PHALACROCORAX** Brisson¹⁶

Phalacrocorax BRISSON, Orn., 1760, vol. 1, p. 60; vol. 6, p. 511. Type, by tautonymy, *Phalacrocorax* BRISSON = *Pelecanus carbo* LINNAEUS.

Phalacrocorax auritus (LESSON). Double-crested Cormorant

Carbo auritus LESSON, Traité d'Orn., livr. 8, June 11, 1831, p. 605.

Modern form reported from Upper Pliocene (Hagerman Lake beds): Near Hagerman, Idaho; Pleistocene: Melbourne (Stratum 2), Sarasota, Seminole Field, Pinellas County, Itchtucknee River and Vero, Florida; Santa Monica, California; ? Pleistocene: Rattlesnake Hill, Fallon, Nevada.

Phalacrocorax femoralis MILLER

Phalacrocorax femoralis L. H. MILLER, Condor, vol. 31, No. 4, July 15, 1929, p. 167, figs. 58-59.

Late Miocene or early Pliocene (Modelo formation): Calabasas, California.

Phalacrocorax idahensis (MARSH)

Graculus idahensis MARSH, Amer. Journ. Sci., ser. 2, vol. 49, 1870, p. 216.

Pliocene: Castle Creek, Owyhee County, and near Hagerman (upper Pliocene of Hagerman lake beds), Idaho.

Phalacrocorax macropus (COPE)

Graculus macropus COPE, Bull. Geol. and Geogr. Surv. Terr., vol. 4, No. 2, 1878, p. 386.

Lower Miocene (base of Arikaree): North side of Cottonwood Creek, southeastern Montana; ¹⁷ Pleistocene: Fossil Lake, Oregon.

Phalacrocorax marinavis SHUFELDT

Phalacrocorax marinavis SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 56, pl. 14, figs. 114, 116-118, 122.

? Oligocene (John Day): Willow Creek, Oregon.

Phalacrocorax mediterraneus SHUFELDT

Phalacrocorax mediterraneus SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 58, pl. 15, fig. 138.

Middle Oligocene (White River): Gerry's Ranch, Northern Colorado.

¹⁶ Further study is required before the fossil cormorants listed here can be assigned to subgenera.

¹⁷ Shufeldt, Auk, 1915, pp. 485-488, has identified material from the Miocene of Montana as of this species. The type locality is in the Pleistocene.

Phalacrocorax rogersi HOWARD

Phalacrocorax rogersi HOWARD, Condor, vol. 34, No. 3, May 16, 1932, p. 118, fig. 19.

Pliocene: Veronica Springs Stone Quarry, near Santa Barbara, California.

Family ANHINGIDAE. SNAKE-BIRDS

Genus ANHINGA Brisson

Anhinga BRISSON, Orn., 1760, vol. 1, p. 60; vol. 6, p. 476. Type, by monotypy,
Anhinga BRISSON = *Plotus anhinga* LINNAEUS.

Anhinga anhinga (LINNAEUS). Water-turkey

Plotus Anhinga LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 218.

Modern form reported from Pleistocene: Melbourne (Stratum 2), Florida.

Order CICONIIFORMES. HERONS, STORKS, AND ALLIES

Suborder ARDEAE. HERONS, BITTERNES, AND ALLIES

Family ARDEIDAE. HERONS AND BITTERNES

Subfamily ARDEINAE. HERONS AND EGRETS

Genus ARDEA Linnaeus¹⁸

Ardea LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 141. Type, by subs.
design., *Ardea cinerea* LINNAEUS (Gray, 1840).

Ardea herodias LINNAEUS. Great Blue Heron

Ardea Herodias LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 143.

Modern form reported from Pleistocene: Vero (Stratum 3), Melbourne, Itchtucknee River, Bradenton and Seminole Field, Pinellas County, Florida; Fossil Lake, Oregon; Rancho La Brea, Los Angeles, and McKittrick, California.

Ardea paloccidentalis SHUFELDT

Ardea paloccidentalis SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 820.

Pleistocene: Fossil Lake, Oregon.

¹⁸ *Ardea sellardsi* SHUFELDT, Journ. Geol., January-February (January) 1917, p. 19, described from Vero (Stratum 3), Florida, proves to be based on the tibiotarsus of *Mcleagris gallopavo*. See Wetmore, Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, p. 32.

Genus CASMERODIUS Gloger

Casmerodius GLOGER, Hand- und Hilfsbuch Naturg., 1842 (pp. 1-450, 1841), p. 412. Type, by subs. design., *Ardea egretta* GMELIN (Salvadori, 1882).

***Casmerodius albus* (GMELIN). American Egret**

Ardea egretta GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 629.

Modern form reported from Pleistocene: Melbourne, Seminole Field, Pinellas County, and Venice, Florida; Rancho La Brea, Los Angeles, California.

Genus EGRETТА Forster

Egretta T. FORSTER, Syn. Cat. Brit. Birds, 1817, p. 59. Type, by monotypy, *Ardea garzetta* LINNAEUS.

***Egretta thula* (MOLINA). Snowy Egret**

Ardea Thula MOLINA, Sagg. Stor. Nat. Chili, 1782, p. 235.

Modern form reported from Pleistocene: Bradenton, Florida.

Genus HYDRANASSA Baird

Hydranassa BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, p. 660. Type, by orig. design., *Ardea ludoviciana* WILSON = *Egretta ruficollis* GOSSE.

***Hydranassa tricolor* (MÜLLER). Louisiana Heron**

Ardea tricolor MÜLLER, Natursyst. Suppl., 1776, p. 111.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus FLORIDA Baird

Florida BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, pp. xxi, xlv, 659, 671. Type, by monotypy, *Ardea caerulea* LINNAEUS.

***Florida caerulea* (LINNAEUS). Little Blue Heron**

Ardea caerulea LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 143.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus BUTORIDES Blyth

Butorides BLYTH, Cat. Birds Mus. Asiatic Soc., 1849 (1852?), p. 281. Type, by monotypy, *Ardea javanica* HORSFIELD.

***Butorides virescens* (LINNAEUS). Green Heron**

Ardea virescens LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 144.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida; Rancho La Brea, Los Angeles, California.

Genus **NYCTICORAX** Forster

Nycticorax T. FORSTER, Syn. Cat. Brit. Birds, 1817, p. 59. Type, by monotypy, *Nycticorax infaustus* FORSTER = *Ardea nycticorax* LINNAEUS.

Nycticorax nycticorax (LINNAEUS). Black-crowned Night Heron

Ardea nycticorax LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 142.

Modern form reported from Pleistocene: Bradenton, and Itchtucknee River, Florida; McKittrick, and Rancho La Brea, Los Angeles, California.

Genus **NYCTANASSA** Stejneger

Nyctanassa STEJNEGER, Proc. U. S. Nat. Mus., vol. 10, Aug. 3, 1887, p. 295, note. Type, by orig. design., *Ardea violacea* LINNAEUS.

Nyctanassa violacea (LINNAEUS). Yellow-crowned Night Heron¹⁰

Ardea violacea LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 143.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Vero, Florida.

Genus **EOCEORNIS** Shufeldt

Eoecornis SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 39. Type, by monotypy, *Eoecornis ardetta* SHUFELDT.

Eoecornis ardetta SHUFELDT

Eoecornis ardetta SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 39, pl. 13, fig. 102.

Eocene (Bridger): Henry's Fork, Wyoming.

Subfamily **BOTAURINAE**. BITTERNsGenus **BOTAURUS** Stephens

Botaurus STEPHENS, in SHAW, Gen. Zool., vol. 11, pt. 2, August 1819, p. 592. Type, by subs. design., *Ardea stellaris* LINNAEUS (Gray, 1840).

Botaurus lentiginosus (MONTAGU). American Bittern

Ardea lentiginosa MONTAGU, Suppl. Orn. Dict., 1813, not paged, see under Heron, Freckled.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Sarasota, Florida; Fossil Lake, Oregon; Rancho La Brea, Los Angeles, California.

¹⁰ *Larus vero* SHUFELDT, Journ. Geol., 1917, p. 18, from Pleistocene of Vero, Florida, is *Nyctanassa violacea*, according to Wetmore, Smithsonian Misc. Coll., vol. 85, No. 2, 1931, pp. 3, 11, and 16.

Genus **BOTAUROIDES** Shufeldt

Botauroides SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 33. Type, by monotypy, *Botauroides parvus* SHUFELDT.

Botauroides parvus SHUFELDT

Botauroides parvus SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 33.

Eocene (? Bridger): "Spanish John Meadow," Wyoming.

Suborder **CICONIAE**. STORKS, IBISES, AND SPOONBILLSSuperfamily **CICONIOIDEA**. STORKSFamily **CICONIIDAE**. STORKS AND JABIRUSSubfamily **CICONIINAE**. STORKSGenus **JABIRU** Hellmayr²⁰

Jabiru HELLMAYR, Abh. Kön. Bayer. Akad. Wiss., II Kl., vol. 22, May 1906, p. 711. Type, by orig. design., *Ciconia mycteria* LICHTENSTEIN.

Jabiru mycteria (LICHTENSTEIN). **Jabiru**

Ciconia mycteria LICHTENSTEIN, Abh. Kön. Akad. Wiss. Berlin, Phys. Kl., for 1816-1817 (1819), p. 163.

Modern form reported from Pleistocene: Vero (Stratum 2), Melbourne (Stratum 2), Itchtucknee River, Seminole Field, Pinellas County and Venice, Florida.

Genus **CICONIA** Brisson

Ciconia BRISSON, ORN., 1760, vol. 1, p. 48; vol. 5, p. 361. Type, by tautonymy, *Ciconia alba* = *Ardea ciconia* LINNAEUS.

Ciconia maltha MILLER

Ciconia maltha L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 5, No. 30, Aug. 5, 1910, p. 440, figs. 1-7.

Pleistocene: Carpinteria, McKittrick, and Rancho La Brea,^{20a} Los Angeles, California.

²⁰ *Jabiru weillsi* Sellards, Florida State Geol. Surv., 8th Ann. Rep., 1916, p. 14, pl. 26, figs. 1-4, text-fig. 15, fig. C, is a synonym of *Jabiru mycteria* (Lichtenstein). See Wetmore, Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, p. 17.

^{20a} Type locality.

Subfamily MYCTERIINAE. WOOD IBISES

Genus MYCTERIA Linnaeus

Mycteria LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 140. Type, by monotypy, *Mycteria americana* LINNAEUS.

Mycteria wetmorei HOWARD²¹

Mycteria wetmorei HOWARD, Condor, vol. 37, Sept. 15, 1935, p. 253, fig. 47.
Pleistocene: Rancho La Brea, Los Angeles, California.

Superfamily THRESKIORNITHOIDEA. IBISES AND SPOONBILLS

Family THRESKIORNITHIDAE. IBISES AND SPOONBILLS

Subfamily THRESKIORNITHINAE. IBISES

Genus PLEGADIS Kaup

Plegadis KAUP, Skizz. Entw.-Ges. Eur. Thierw., 1829, p. 82. Type, by monotypy, *Tantalus falcinellus* LINNAEUS.

Plegadis guarauna (LINNAEUS). White-faced Glossy Ibis

Scolopax Guarauna LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 242.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus GUARA Reichenbach

Guara REICHENBACH, Avium Syst. Nat., 1852 (1853), p. xiv. Type, by orig. design., *Scolopax rubra* LINNAEUS.

Guara alba (LINNAEUS). White Ibis

Scolopax alba LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 145.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Subfamily PLATALEINAE. SPOONBILLS

Genus AJAIA Reichenbach

Ajaja REICHENBACH, Avium Syst. Nat., 1852 (1853), p. xvi. Type, by orig. design., *Ajaja rosca* REICHENBACH = *Platalea ajaja* LINNAEUS.

Ajaja ajaja (LINNAEUS). Roseate Spoonbill

Platalea ajaja LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 140.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

²¹ Replaces *Mycteria americana* as listed in Check-list of North American Birds, 4th ed., 1931, p. 416.

Suborder PHOENICOPTERI. FLAMINGOS
 Family PHOENICOPTERIDAE. FLAMINGOS

Genus PHOENICOPTERUS Linnaeus

Phoenicopterus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 139. Type, by monotypy, *Phoenicopterus ruber* LINNAEUS.

Phoenicopterus copei SHUFELDT

Phoenicopterus copei SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 820.

Pleistocene: Fossil Lake, Oregon.

Order ANSERIFORMES. SCREAMERS, SWANS, GEESE, AND DUCKS

Suborder ANSERES. SWANS, GEESE, DUCKS, AND ALLIES

Family PARANYROCIDAE. PARANYROCA

Genus PARANYROCA Miller and Compton

Paranyroca A. H. MILLER AND L. V. COMPTON, Condor, vol. 41, July 15, 1939, p. 153. Type, by orig. design., *Paranyroca magna* MILLER AND COMPTON.

Paranyroca magna MILLER AND COMPTON

Paranyroca magna A. H. MILLER AND L. V. COMPTON, Condor, vol. 41, July 15, 1939, p. 153, fig. 34 A, C, D, E.

Lower Miocene (Rosebud formation): Flint Hill, 9 miles west-southwest of Martin, Bennett County, South Dakota.

Family ANATIDAE. SWANS, GEESE, AND DUCKS

Subfamily CYGNINAE. SWANS

Genus CYGNUS Bechstein

Cygnus BECHSTEIN, Orn. Taschenb. Deutschl., vol. 2, 1803, p. 404, footnote. Type, by tautonymy, *Anas cygnus* LINNAEUS.

Subgenus CYGNUS Bechstein

Cygnus columbianus (ORD). Whistling Swan

Anas columbianus ORD, in GUTHRIE, Geogr., 2d Amer. ed., 1815, p. 319.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida; Fossil Lake, Oregon; Rancho La Brea, Los Angeles, and McKittrick, California.

Subgenus CLANGOCYCNUS Oberholser

Clangocycnus OBERHOLSER, Emu, vol. 8, pt. 1, July 1908, p. 3. Type, by monotypy, *Cygnus buccinator* RICHARDSON.

Cygnus buccinator RICHARDSON. **Trumpeter Swan**

Cygnus buccinator RICHARDSON, in WILSON AND BONAPARTE, Amer. Orn., Jameson ed., vol. 4, August 1831, p. 345.

Modern form reported from Pleistocene: Aurora, Illinois; Itchtucknee River, Florida; Fossil Lake, Oregon.

Cygnus matthewi (SHUFELDT)²²

Olor matthewi SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, July 9, 1913, p. 151, pl. 26, fig. 309, pl. 35, fig. 422.

Pleistocene: Fossil Lake, Oregon.

Cygnus paloregonus COPE²²

Cygnus paloregonus COPE, Bull. Geol. and Geogr. Surv. Terr., vol. 4, No. 2, 1878, p. 388.

Pleistocene: Fossil Lake, Oregon; ²³ Froman's Ferry, Idaho.

Subfamily ANSERINAE. GEESE

Genus BRANTA Scopoli

Branta SCOPOLI, Annus 1, Historico-Naturalis, 1769, p. 67. Type, by tautonymy, *Anas bernicla* LINNAEUS (*Branta* ALDROVANDUS, in synonymy).

Branta canadensis (LINNAEUS). **Canada Goose**

Anas canadensis LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 123.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Itchtucknee River, Florida; Fossil Lake, Oregon; Potter Creek Cave, Shasta County, Alameda County, Rancho La Brea, Los Angeles, and Upper San Pedro formation, San Pedro, California. ? Pleistocene: Rattlesnake Hill, Fallon, Nevada.²⁴

Branta canadensis hutchinsi (RICHARDSON). **Hutchins's Goose**

Anser Hutchinsii RICHARDSON, in SWAINSON AND RICHARDSON, Fauna Bor.-Amer., vol. 2, 1831 (1832), p. 470.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Itchtucknee River, and Melbourne, Florida.

²² Subgeneric allocation doubtful.

²³ Type locality.

²⁴ Recorded as *Branta canadensis canadensis*.

Branta esmeralda BURT

Branta esmeralda BURT, Univ. California Publ., Bull. Dep. Geol. Sci., vol. 18, No. 6, Mar. 19, 1929, p. 222, pl. 20.

Lower Pliocene (Esmeralda beds²⁵): Fish Lake Valley, Esmeralda County, Nevada.

Branta howardae MILLER

Branta howardae L. H. MILLER, Condor, vol. 32, No. 4, July 15, 1930, p. 208, fig. 74.

Lower Pliocene (Ricardo formation): Mojave Desert area, California.

Branta bernicla (LINNAEUS). **Brant**

Anas bernicla LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 124.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Branta dickeyi MILLER

Branta dickeyi L. H. MILLER, Condor, vol. 26, No. 5, Sept. 15, 1924, p. 179, fig. 46.

Pleistocene: McKittrick, California.

Branta hypsibata (COPE)

Anser hypsibatus COPE, Bull. Geol. and Geogr. Surv. Terr., vol. 4, No. 2, 1878, p. 387.

Pleistocene: Fossil Lake, Oregon.

Branta propinqua SHUFELDT

Branta propinqua SHUFELDT, Journ. Acad. Nat. Sci. Philadelphia, 2d ser., vol. 9, sign. 53, Oct. 20, 1892, p. 407, pl. 15, fig. 17.

Pleistocene: Fossil Lake, Oregon.

Genus ANABERNICULA Ross

Anabernicula Ross, Trans. San Diego Soc. Nat. Hist., vol. 8, No. 15, Aug. 24, 1935, p. 107. Type, by monotypy, *Anabernicula gracilentia* Ross = *Branta minuscula* WETMORE.²⁶

Anabernicula minuscula (WETMORE)

Branta minuscula WETMORE, Proc. U. S. Nat. Mus., vol. 64, art. 5, Jan. 15, 1924, p. 6, figs. 3-4.

Upper Pliocene: Near Benson, Arizona;²⁷ Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

²⁵ Possibly Upper Miocene.

²⁶ See Howard, H., Condor, 1936, p. 35.

²⁷ Type locality.

Genus **PRESBYCHEN** Wetmore

Presbychen WETMORE, Proc. California Acad. Sci., ser. 4, vol. 19, No. 8, July 15, 1930, p. 92. Type, by orig. design., *Presbychen abavus* WETMORE.

Presbychen abavus WETMORE

Presbychen abavus WETMORE, Proc. California Acad. Sci., ser. 4, vol. 19, No. 8, July 15, 1930, p. 92, figs. 5-7.

Miocene (Tembler): Sharktooth Hill, Kern County, about 7 miles northeast of Bakersfield, California.

Genus **ANSER** Brisson

Anser BRISSON, Orn., 1760, vol. 1, p. 58; vol. 6, p. 261. Type, by tautonymy, *Anser domestica* BRISSON = *Anas anser* LINNAEUS.

Anser albifrons (SCOPOLI). White-fronted Goose

Branta albifrons SCOPOLI, Annus 1, Historico-Naturalis, 1769, p. 69.

Modern form reported from Pleistocene: Fossil Lake, Oregon; Upper San Pedro formation, San Pedro, and Rancho La Brea, Los Angeles, California.

Anser condoni SHUFELDT

Anser condoni SHUFELDT, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 9, sign. 53, Oct. 20, 1892, p. 406, pl. 16, figs. 19, 26, 27.

Pleistocene: Fossil Lake, Oregon.

Genus **CHEN** Boie

Chen BOIE, Isis von OKEN (vol. 10), heft 5 (May), 1822, col. 563. Type, by monotypy, *Anser hyperboreus* PALLAS.

Subgenus **CHEN** Boie**Chen hyperborea** (PALLAS). Snow Goose

Anser hyperboreus PALLAS, Spic. Zool., vol. 1, fasc. 6, 1769, p. 25.

Modern form reported from Pleistocene: Fossil Lake, Oregon; Rancho La Brea, Los Angeles, and McKittrick, California.

Chen caerulescens (LINNAEUS). Blue Goose

Anas caerulescens LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 124.

Modern form reported from Pleistocene: Fossil Lake, Oregon.²⁸

²⁸ Recorded by Shufeldt, Bull. Amer. Mus. Nat. Hist., vol. 32, July 9, 1913, p. 145, on basis of scapula only.

Chen pressa WETMORE²⁹

Chen pressa WETMORE, Smithsonian Misc. Coll., vol. 87, No. 20, Dec. 27, 1933, p. 9, figs. 5-8.

Upper Pliocene (Hagerman Lake Beds): Near Hagerman, Idaho.

Subfamily DENDROCYGNINAE. TREE-DUCKS

Genus **DENDROCYGNA** Swainson

Dendrocygna SWAINSON, Class. Birds, vol. 2 (July 1), 1837, p. 365. Type, by subs. design., *Anas arcuata* HORSFIELD (Gray, 1840).

Dendrocygna eversa WETMORE

Dendrocygna eversa WETMORE, Proc. U. S. Nat. Mus., vol. 64, art. 5, Jan. 15, 1924, p. 3, figs. 1-2.

Upper Pliocene: Near Benson, Arizona.

Subfamily ANATINAE. SURFACE-FEEDING DUCKS

Genus **ANAS** Linnaeus

Anas LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 122. Type, by subs. design., *Anas boschas* LINNAEUS = *A. platyrhynchos* LINNAEUS (Lesson, 1828).

Anas platyrhynchos LINNAEUS. Mallard

Anas platyrhynchos LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 125.

Modern form reported from Pleistocene: Fossil Lake, Oregon; Rancho La Brea, Los Angeles, McKittrick, Carpinteria, and Upper San Pedro formation, San Pedro, California; Itchtucknee River, Florida.

Anas rubripes BREWSTER. Black Duck

Anas obscura rubripes BREWSTER, Auk, vol. 19, No. 2, April 1902, p. 184.

Modern form reported from Pleistocene: Itchtucknee River, Florida.

Anas fulvigula RIDGWAY. Florida Duck

Anas obscura var. *fulvigula* RIDGWAY, Amer. Nat., vol. 8, No. 2, February 1874, p. 111.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Itchtucknee River, and Bradenton, Florida.

²⁹ Miller, A. H., Univ. California Publ. Zool., vol. 42, No. 1, 1937, p. 41, suggests that this species may belong in the genus *Nesochen*.

Genus **CHAULELASMUS** Bonaparte

Chaulelasmus "G. R. GRAY" BONAPARTE, Geogr. and Comp. List, 1838, p. 56.
Type, by monotypy, *Anas strepera* LINNAEUS.

Chaulelasmus streperus (LINNAEUS). Gadwall

Anas strepera LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 125.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.³⁰

Genus **MARECA** Stephens

Mareca STEPHENS, in SHAW, Gen. Zool., vol. 12, pt. 2, 1824, p. 130. Type, by subs. design., *Mareca fistularis* STEPHENS = *Anas penelope* LINNAEUS (Eyton, 1838).

Mareca americana (GMELIN). Baldpate

Anas americana GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 526.

Modern form reported from Pleistocene: Fossil Lake, Oregon; McKittrick, California.

Genus **DAFILA** Stephens

Dafila STEPHENS, in SHAW, Gen. Zool., vol. 12, pt. 2, 1824, p. 126. Type, by monotypy, *Dafila caudacuta* STEPHENS = *Anas acuta* LINNAEUS.

Dafila acuta (LINNAEUS). Pintail

Anas acuta LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 126.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus **NETTION** Kaup

Nettion KAUP, Skizz. Entw.-Ges. Eur. Thierw., 1829, p. 95. Type, by monotypy, *Anas crecca* LINNAEUS.

Nettion carolinense (GMELIN). Green-winged Teal

Anas carolinensis GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 533.

Modern form reported from Lower Pliocene: Cedar Mountain, Nevada; Hemphill County, Texas; Pleistocene: Seminole Field, Pinellas County, Florida; Fossil Lake, Oregon; Hawver Cave, El-dorado County, Rancho La Brea, Los Angeles, McKittrick, and Upper San Pedro formation, San Pedro, California.

³⁰ Listed erroneously in Check-list of North American Birds, 4th ed., 1931, p. 421, from Itchtucknee River, Florida.

Genus **QUERQUEDULA** Stephens

Querquedula STEPHENS, in SHAW, Gen. Zool., vol. 12, pt. 2, 1824, p. 142.

Type, by tautonymy, *Anas circia* LINNAEUS = *Anas querquedula* LINNAEUS.

Querquedula discors (LINNAEUS). Blue-winged Teal

Anas discors LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 205.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Querquedula cyanoptera (VIEILLOT). Cinnamon Teal

Anas cyanoptera VIEILLOT, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 5, 1816, p. 104.

Modern form reported from Pleistocene: McKittrick, and Upper San Pedro formation, San Pedro, California.³¹

Querquedula floridana SHUFELDT

Querquedula floridana SHUFELDT, 9th Ann. Rep. Florida State Geol. Surv., 1917, p. 36, pl. 1, fig. 4, pl. 2, fig. 25.

Pleistocene: Vero³² (Stratum 2), Melbourne, Seminole Field, Pinellas County, Venice, and Itchtucknee River, Florida.

Genus **SPATULA** Boie

Spatula BOIE, Isis von OKEN, vol. 10, heft 5, May 1822, col. 564. Type, by monotypy, *Anas clypeata* LINNAEUS.

Spatula clypeata (LINNAEUS). Shoveller

Anas clypeata LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 124.

Modern form reported from Pleistocene: Fossil Lake, Oregon; McKittrick, California.

Genus **AIX** Boie

Aix BOIE, Isis von OKEN, vol. 21, heft 3-4, March-April 1828, col. 329. Type, by subs. design., *Anas sponsa* LINNAEUS (Eyton, 1838).

Aix sponsa (LINNAEUS). Wood Duck

Anas Sponsa LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 128.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Subfamily NYROCINAE. DIVING DUCKS

Genus **NYROCA** Fleming

Nyroca FLEMING, Phil. Zool., vol. 2, 1822, p. 260. Type, by tautonymy, *Anas nyroca* GÜLDENSTÄDT.

³¹ Record from Fossil Lake, Oregon, by Shufeldt, is only tentative.

³² Type locality.

Subgenus NYROCA Fleming

Nyroca americana (EYTON). Redhead

Fuligula americana EYTON, Monogr. Anatidae, 1838, p. 155.

Modern form reported from Pleistocene: McKittrick, California.

Nyroca collaris (DONOVAN). Ring-necked Duck

Anas collaris DONOVAN, Brit. Birds, vol. 6, 1809, pl. 147.

Modern form reported from Lower Pliocene: Cedar Mountain, Nevada.

Subgenus ARISTONETTA Baird

Aristonetta BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, p. 793. Type, by orig. design., *Anas valisineria* WILSON.

Nyroca valisineria (WILSON). Canvasback

Anas valisineria WILSON, Amer. Orn., vol. 8, 1814, p. 103, pl. 70, fig. 5.

Modern form reported from Pleistocene: Itchtucknee River, Florida; Fossil Lake, Oregon.

Subgenus FULIX Sundevall

Fulix SUNDEVALL, Kongl. Vetensk. Akad. Handl., 1835 (1836), p. 129. Type, by subs. design., *Anas marila* LINNAEUS (Baird, Brewer, and Ridgway, 1884).

Nyroca affinis (EYTON). Lesser Scaup Duck

Fuligula affinis EYTON, Monogr. Anatidae, 1838, p. 157.

Modern form reported from Pleistocene: Melbourne (Stratum 2), Itchtucknee River, Seminole Field, Pinellas County, Venice, and cave deposits near Lecanto, Florida.

Genus GLAUCIONETTA Stejneger

Glaucionetta STEJNEGER, Proc. U. S. Nat. Mus., vol. 8, Oct. 3, 1885, p. 409. Type, by orig. design., *Anas clangula* LINNAEUS.

Glaucionetta islandica (GMELIN). Barrow's Golden-eye

Anas islandica GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 541.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus CHARITONETTA Stejneger

Charitonetta STEJNEGER, Bull. U. S. Nat. Mus., No. 29, 1885, p. 163. Type, by orig. design., *Anas albeola* LINNAEUS.

Charitonetta albeola (LINNAEUS). Buffle-head

Anas Albeola LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 124.

Modern form reported from Pleistocene: Fossil Lake, Oregon; McKittrick, California.

Genus CLANGULA Leach

Clangula LEACH, in Ross, Voyage Discovery, 1819, app., p. xlvi. Type, by monotypy, *Clangula glacialis* = *Anas hyemalis* LINNAEUS.

Clangula hyemalis (LINNAEUS). Old-squaw

Anas hyemalis LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 126.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus HISTRIONICUS Lesson

Histrionicus LESSON, Man. d'Orn., vol. 2, 1828, p. 415. Type, by orig. design., *Anas histrionica* LINNAEUS.

Histrionicus histrionicus (LINNAEUS). Harlequin Duck

Anas histrionica LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 127.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus POLYSTICTA Eyton

Polysticta EYTON, Cat. Brit. Birds, 1836, p. 58. Type, by monotypy, *Anas stelleri* PALLAS.

Polysticta stelleri (PALLAS). Steller's Eider

Anas stelleri PALLAS, Spic. Zool., vol. 1, fasc. 6, 1769, p. 35, pl. 5.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus MELANITTA Boie

Melanitta BOIE, Isis von OKEN, vol. 10, heft 5, May 1822, col. 564. Type, by subs. design., *Anas fusca* LINNAEUS (Eyton, 1838).

Subgenus PELIONETTA Kaup

Pelionetta KAUP, Skizz. Entw.-Ges. Eur. Thierw., 1829, p. 107. Type, by monotypy, *Anas perspicillata* LINNAEUS.

Melanitta perspicillata (LINNAEUS). Surf Scoter

Anas perspicillata LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 125.

Modern form reported from Pleistocene (Upper San Pedro formation): San Pedro, California.

Genus **CHENDYTES** Miller

Chendytes L. H. MILLER, Condor, vol. 27, No. 4, July 15, 1925, p. 145. Type, by monotypy, *Chendytes lawi* L. H. MILLER.

Chendytes lawi MILLER

Chendytes lawi L. H. MILLER, Condor, vol. 27, No. 4, July 15, 1925, p. 145, fig. 40.

Pleistocene: Lower San Pedro formation, Sexton Canyon near Lake Canyon, Ventura County,^{32a} California; and Upper San Pedro formation, near Santa Monica, San Pedro, and Playa del Rey, California.

Subfamily ERISMATURINAE. RUDDY AND MASKED DUCKS

Genus **ERISMATURA** Bonaparte

Erismatura BONAPARTE, Giornale Arcadico, vol. 52, 1832, p. 208. Type, by monotypy, *Anas rubidus* WILSON.

Erismatura jamaicensis (GMELIN). Ruddy Duck

Anas jamaicensis GMELIN, Syst. Nat., vol. 1, pt. 2, 1780, p. 519.

Modern form reported from Pleistocene: Venice, Florida; Fossil Lake, Oregon; McKittrick, California.

Subfamily EONESSINAE. EONESSA

Genus **EONESSA** Wetmore

Eonessa WETMORE, Journ. Pal., 1938, p. 280. Type, by orig. design., *Eonessa anaticula* WETMORE.

Eonessa anaticula WETMORE

Eonessa anaticula WETMORE, Journ. Pal., 1938, p. 280, figs. 1-5.

Eocene: Uinta C horizon of Myton Pocket, Utah.

Subfamily MERGINAE. MERGANSERS

Genus **LOPHODYTES** Reichenbach

Lophodytes REICHENBACH, Avium Syst. Nat., 1852 (1853), p. ix. Type, by orig. design., *Mergus cucullatus* LINNAEUS.

Lophodytes cucullatus (LINNAEUS). Hooded Merganser

Mergus cucullatus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 129.

Modern form reported from Pleistocene: Itchtucknee River, Florida; Fossil Lake, Oregon.

^{32a} Type locality.

Genus **MERGUS** Linnaeus

Mergus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 129. Type, by subs. design., *Mergus merganser* LINNAEUS (Gray, 1840).

Mergus serrator LINNAEUS. Red-breasted Merganser

Mergus Serrator LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 129.

Modern form reported from Pleistocene: Fossil Lake, Oregon; North Shore Channel, Chicago, Illinois.

Order FALCONIFORMES. VULTURES, HAWKS, AND FALCONS

Suborder CATHARTAE. NEW WORLD VULTURES

Family CATHARTIDAE. NEW WORLD VULTURES

Genus **CATHARTES** Illiger

Cathartes ILLIGER, Prodrromus, 1811, p. 236. Type, by subs. design., *Vultur aura* LINNAEUS (Vigors, 1825).

Cathartes aura (LINNAEUS). Turkey Vulture³³

Vultur aura LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 86.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Vero (Stratum 3),³⁴ Melbourne, and cavern deposits near Lecanto, Florida; Potter Creek and Samwel caves, Shasta County, Hawver Cave, Eldorado County, Carpinteria, McKittrick, Rancho La Brea, Los Angeles, and Upper San Pedro formation, San Pedro, California.

Genus **CORAGYPS** Le Maout

Coragyps "GEOFFROY MS" LE MAOUT, Hist. Nat. Oiseaux, 1853, pp. 57, 66.
Type, by monotypy, *Vultur atratus* WILSON = *Vultur atratus* Meyer.

Coragyps atratus (MEYER). Black Vulture

Vultur atratus "BARTRAM" F. A. A. MEYER, Zool. Annalen, vol. 1, 1794, p. 290.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and cavern deposits near Lecanto, Florida.

³³ Wetmore, Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, pp. 4, 6, 7, 23-24, has recorded the small Mexican turkey vulture, *Cathartes aura aura*, from Seminole Field, Pinellas County, Florida. Other reports of this species are mainly of the larger type, of which two races, *septentrionalis* and *teter*, are at present recognized in the United States.

³⁴ Recorded from Stratum 2 erroneously by Shufeldt, 9th Ann. Rep. Florida State Geol. Surv., 1917, p. 36.

Coragyps occidentalis (MILLER)

Catharista occidentalis L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 5, No. 21, Sept. 10, 1909, p. 306.

Pleistocene: McKittrick, Carpinteria and Rancho La Brea,³⁵ Los Angeles, California.³⁶

Coragyps shastensis (MILLER)

Catharista shastensis L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 16, Oct. 28, 1911, p. 388, fig. 1.

Pleistocene: Potter Creek³⁵ and Samwel caves, Shasta County, and Hawver Cave, Eldorado County, California.

Genus PHASMAGYPS Wetmore

Phasmagyps WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 3. Type, by monotypy, *Phasmagyps patritus* WETMORE.

Phasmagyps patritus WETMORE

Phasmagyps patritus WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 3, figs. 1-4.

Oligocene (Chadron): Horsetail Creek, Weld County, Colorado.

Genus PALAEOGYPS Wetmore

Palacogyps WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 5. Type, by monotypy, *Palacogyps prodromus* WETMORE.

Palaeogyps prodromus WETMORE

Palacogyps prodromus WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 5, figs. 5-14.

Oligocene (Chadron): Horsetail Creek, Weld County, Colorado.

Genus GYMNOGYPS Lesson

Gymnogyps LESSON, Écho du Monde Savant, ser. 2, vol. 6, Dec. 8, 1842, col. 1037. Type, by monotypy, *Vultur californianus* SHAW.

Gymnogyps californianus (SHAW). **California Condor**

Vultur californianus SHAW, in SHAW AND NODDER, Nat. Misc., vol. 9, 1797, text to pl. 301.

³⁵ Type locality.

³⁶ Recorded also from deposits that may be late Pleistocene or early Recent in Pit 10 at Rancho La Brea (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43), Conkling Cavern, Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico (Howard, H., and Miller, A. H., Condor, vol. 35, Jan. 15, 1933, pp. 15, 17), and from Smith Creek Cave, 34 miles north of Baker, White Pine County, Nevada (Howard, H., Condor, vol. 37, July 15, 1935, pp. 206-207).

Modern form reported from Pleistocene: Sarasota and Seminole Field, Pinellas County, Florida; Carpinteria and Rancho La Brea, Los Angeles, California.

Gymnogyps amplus MILLER

Gymnogyps amplus L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 16, Oct. 28, 1911, p. 390, fig. 2.

Pleistocene: Samwel Cave, Shasta County, California.

Genus BREAGYPS Miller and Howard

Breagyps L. H. MILLER AND H. HOWARD, Publ. Univ. California at Los Angeles Biol. Sci., vol. 9, Feb. 18, 1938, p. 171. Type, by orig. design., *Vultur clarki* MILLER.

Breagyps clarki (MILLER)

Sarcoramphus clarki L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 1, Nov. 28, 1910, p. 11, figs. 3a, 3b.

Pleistocene: Rancho La Brea, Los Angeles, California.²⁷

Genus SARCORAMPHUS Duméril

Sarcoramphus DUMÉRIL, Zool. Analytique, 1806, p. 32. Type, by subs. design., *Vultur papa* LINNAEUS (Froriep, 1806).

Sarcoramphus kernensis (MILLER)

Vultur kernensis L. H. MILLER, Condor, vol. 33, Mar. 18, 1931, p. 70, fig. 16.

Pliocene: Pozo Creek, Kern River Divide, Kern County, about 9 miles northeast of Bakersfield, California.

Family TERATORNITHIDAE. TERATORNITHES

Genus TERATORNIS Miller

Teratornis, L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 5, No. 21, Sept. 10, 1909, p. 307. Type, by monotypy, *Teratornis merriami* MILLER.

Teratornis merriami MILLER

Teratornis merriami L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 5, No. 21, Sept. 10, 1909, p. 307, text figs. 1-9.

Pleistocene: Seminole Field, Pinellas County, and Bradenton, Florida; Rancho La Brea,²⁸ Los Angeles, McKittrick, and Carpinteria, California.

²⁷ Recorded also by Howard, Condor, vol. 37, July 15, 1935, p. 206, from deposits that may be late Pleistocene or early Recent in Smith Creek Cave, 34 miles north of Baker, White Pine County, Nevada.

²⁸ Type locality. Recorded also from early Recent deposits in Pit 10, at Rancho La Brea (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

Genus **CATHARTORNIS** Miller³⁹

Cathartornis L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 1, Nov. 28, 1910, p. 14. Type, by monotypy, *Cathartornis gracilis* MILLER.

Cathartornis gracilis MILLER

Cathartornis gracilis L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 1, Nov. 28, 1910, p. 14, figs. 4a, 4b.

Pleistocene: Rancho La Brea, Los Angeles, California.

Suborder FALCONES. SECRETARY-BIRDS, HAWKS, AND FALCONS

Superfamily FALCONOIDEA. HAWKS, FALCONS, AND ALLIES

Family ACCIPITRIDAE. HAWKS, OLD WORLD VULTURES,
HARRIERS, AND OSPREYS

Subfamily AEGYPIINAE. OLD WORLD VULTURES

Genus **PALAEOBORUS** Coues

Palaeoborus COUES, Key N. Amer. Birds, 2d ed., 1884, p. 822. Type, by orig. design., *Cathartes umbrosus* COPE.

Palaeoborus umbrosus (COPE)⁴⁰

Cathartes umbrosus COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 26, sign. 10, Oct. 20, 1874, p. 151.

Pliocene: North of Pojauque, New Mexico.

Palaeoborus howardae WETMORE

Palaeoborus howardae WETMORE, Proc. U. S. Nat. Mus., vol. 84, Nov. 3, 1936, p. 73, fig. 13.

Miocene: Dawes County, Nebraska.

Palaeoborus rosatus MILLER AND COMPTON

Palaeoborus rosatus A. H. MILLER AND L. V. COMPTON, Condor, vol. 41, July 15, 1939, p. 156, fig. 34B.

Lower Miocene (Rosebud formation): Flint Hill, 9 miles west-southwest of Martin, Bennett County, South Dakota.

³⁹ Allocated to Teratornithidae by Miller, L. H., and Howard, H., Publ. Univ. California at Los Angeles Biol. Sci., vol. 9, Feb. 18, 1938, pp. 169-170, 173.

⁴⁰ Placed in Aegyptiinae by Howard, Carnegie Inst. Washington, Publ. 349, 1932, pp. 45, 70-73, 75, 76.

Genus **NEOGYPS** Miller

Neogyps L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 9, No. 9, Mar. 10, 1916, p. 108. Type, by monotypy, *Neogyps errans* MILLER.

Neogyps errans MILLER

Neogyps errans L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 9, No. 9, Mar. 10, 1916, p. 108, fig. 2.

Pleistocene: Rancho La Brea,⁴¹ Los Angeles, Carpinteria, and McKittrick, California.

Genus **NEOPHRONTOPS** Miller

Neophrontops L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 9, No. 9, Mar. 10, 1916, p. 106. Type, by monotypy, *Neophrontops americanus* MILLER.

Neophrontops americanus MILLER

Neophrontops americanus L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 9, No. 9, Mar. 10, 1916, p. 106, fig. 1.

Pleistocene: Rancho La Brea,⁴² Los Angeles, Carpinteria, and McKittrick, California.

Neophrontops dakotensis COMPTON

Neophrontops dakotensis COMPTON, Amer. Journ. Sci., ser. 5, vol. 30, October 1935, p. 344, fig. 1.

Lower Pliocene: Big Spring Canyon, 15 miles southwest of Martin, Bennett County, South Dakota.

Subfamily ELANINAE. WHITE-TAILED KITES

Genus **ELANUS** Savigny

Elanus SAVIGNY, Descr. de l'Égypte, vol. 1, 1809, pp. 69, 97. Type, by monotypy, *Elanus caesius* SAVIGNY = *Falco melanopterus* DAUDIN.

Elanus leucurus (VIEILLOT). White-tailed Kite

Milvus leucurus VIEILLOT, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 20, 1818, p. 563 [errore = 556].

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

⁴¹ Type locality. Recorded also from early Recent deposits in Pit 10 at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

⁴² Type locality. Recorded also from early Recent deposits in Pit 10 at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

Subfamily MILVINAЕ. TRUE KITES

Genus PROICTINIA Shufeldt

Proictinia SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 301. Type, by monotypy, *Proictinia gilmorei* SHUFELDT.

***Proictinia effera* WETMORE**

Proictinia effera WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48, art. 12, Dec. 3, 1923, p. 504, figs. 19-20.

Lower Miocene (Harrison beds): Agate Fossil Quarry, Sioux County, Nebraska.

***Proictinia gilmorei* SHUFELDT**

Proictinia gilmorei SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 301, pl. 55, fig. 27.

Lower Pliocene (Loup Fork formation): Long Island, Phillips County, Kansas.

Subfamily ACCIPITRINAE. BIRD HAWKS

Genus ASTUR Lacépède

Astur LACÉPÈDE, Tableaux Oiseaux, 1799, p. 4. Type, by subs. design., *Falco palumbarius* LINNAEUS (Vigors, 1824).

***Astur atricapillus* (WILSON). Goshawk**

Falco atricapillus WILSON, Amer. Orn., vol. 6, 1812, p. 80, pl. 52, fig. 3.

Modern form reported from Pleistocene: Carpinteria, and Rancho La Brea, Los Angeles, California.

Genus ACCIPITER Brisson

Accipiter BRISSON, Orn., 1760, vol. 1, p. 28; vol. 6, p. 310. Type, by tautonymy, *Accipiter* BRISSON = *Falco nisus* LINNAEUS.

***Accipiter striatus velox* (WILSON). Sharp-shinned Hawk⁴³**

Falco velox WILSON, Amer. Orn., vol. 5, 1812, p. 116, pl. 45, fig. 1.

Modern form reported from Pleistocene: Samwel Cave, Shasta County, Carpinteria, and Rancho La Brea, Los Angeles, California.

***Accipiter cooperii* (BONAPARTE). Cooper's Hawk**

Falco cooperii BONAPARTE, Amer. Orn., vol. 2, 1828, p. 1, pl. 10, fig. 1.

Modern form reported from Pleistocene: McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.

⁴³ The sharp-shinned hawk of continental North America is now considered conspecific with the smaller *Accipiter striatus* of the Greater Antilles.

Subfamily BUTEONINAE. BUZZARDS AND EAGLES

Genus BUTEO Lacépède

Buteo LACÉPÈDE, Tableaux Oiseaux, 1799, p. 4. Type, by tautonymy, *Falco buteo* LINNAEUS.

Subgenus BUTEO Lacépède

***Buteo jamaicensis* (GMELIN). Red-tailed Hawk**

Falco jamaicensis GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 266.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Venice, and Melbourne (Stratum 2), Florida; Potter Creek Cave, Shasta County, McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.

***Buteo lineatus* (GMELIN). Red-shouldered Hawk**

Falco lineatus GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 268.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Venice, and Melbourne, Florida; Carpinteria, California.

***Buteo platypterus* (VIEILLOT). Broad-winged Hawk**

Sparvius platypterus VIEILLOT, Tableau Encycl. Méth., vol. 3, 1823, p. 1273.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

***Buteo swainsoni* BONAPARTE. Swainson's Hawk**

Buteo swainsoni BONAPARTE, Geogr. and Comp. List, 1838, p. 3.

Modern form reported from Pleistocene: McKittrick, and Rancho La Brea, Los Angeles, California.

***Buteo typhoius* WETMORE**

Buteo typhoius WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48, art. 12, Dec. 3, 1923, p. 489, figs. 3-5.

Miocene: Lower Harrison beds and Snake Creek beds⁴⁴ south of Agate, Sioux County, Nebraska.

***Buteo antecursor* WETMORE**

Buteo antecursor WETMORE, Bull. Mus. Comp. Zoöl., vol. 75, October 1933, p. 298, figs. 1-5.

Upper Oligocene (Brule): Near Torrington, Goshen County, Wyoming.

⁴⁴Type locality.

Buteo grangeri WETMORE AND CASE

Buteo grangeri WETMORE AND CASE, Contr. Mus. Pal. Univ. Michigan, vol. 4, No. 8, Jan. 15, 1934, p. 129, 1 pl.

Oligocene (Oreodon beds): Big Badlands of Pass Creek, Washa-
baugh County, South Dakota.

Buteo ales (WETMORE)⁴⁵

Geranoaëtus ales WETMORE, Ann. Carnegie Mus., vol. 16, No. 4, Apr. 10,
1926, p. 403, pl. 38, figs. 1-5.

Miocene (Lower Harrison beds): Quarry No. 2, Agate Springs
Fossil Quarries, Sioux County, Nebraska.

Buteo conterminus (WETMORE)

Geranoaëtus conterminus WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48,
art. 12, Dec. 3, 1923, p. 497, figs. 11-13.

Lower Pliocene (Snake Creek beds); 20 miles south of Agate,
Sioux County, Nebraska.

Buteo contortus (WETMORE)

Geranoaëtus contortus WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48, art.
12, Dec. 3, 1923, p. 492, figs. 6-9.

Upper Miocene (Snake Creek beds): Sinclair Draw,⁴⁶ and Olcott
Hill, Sioux County, Nebraska.

Buteo dananus (MARSH)

Aquila danana MARSH, Amer. Journ. Sci., ser. 3, vol. 2, August 1871, p. 125.

Miocene (Loup Fork): Loup Fork River, Nebraska.

Subgenus TRIORCHIS Kaup

Triorchis KAUP, Skizz. Entw.-Ges. Eur. Thierw., 1829, p. 84. Type, by
monotypy, *Falco lagopus* GMELIN = *Falco lagopus* PONTOPPIDAN.

Buteo lagopus (BRÜNNICH). **Rough-legged Hawk**

Falco lagopus BRÜNNICH, Orn. Bor., 1764, p. 4.

Modern form reported from Pleistocene: Rancho La Brea, Los
Angeles, California.

Buteo regalis (GRAY). **Ferruginous Rough-leg**

Archibuteo regalis GRAY, Genera of Birds, vol. 1, pt. 1, May 1844, pl. 6.

Modern form reported from Pleistocene: Hawver Cave, Eldorado
County, Rancho La Brea, Los Angeles, and McKittrick, California.

⁴⁵ *Geranoaëtus*, formerly used for this and certain related species, is now con-
sidered a synonym of *Buteo*, according to Wetmore, Auk, 1933, p. 212.

⁴⁶ Type locality.

Genus **HYPOMORPHNUS** Cabanis⁴⁷

Hypomorphnus CABANIS, Arch. Naturg., vol. 10, bd. 1, 1844, p. 263. Type, by orig. design., *Falco urubitinga* LINNAEUS.

Hypomorphnus enecta (WETMORE)

Urubitinga enecta WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48, art. 12, Dec. 3, 1923, p. 500, figs. 14-18.

Middle Miocene (Sheep Creek beds): 20 miles south of Agate, Sioux County, Nebraska.

Hypomorphnus milleri (HOWARD)

Urubitinga milleri HOWARD, Carnegie Inst. Washington, Publ. 429, October 1932, p. 25, pl. 2, figs. 3-3a, pl. 3, fig. 2.

Pleistocene: Hawver Cave, Eldorado County, California.

Hypomorphnus fragilis (MILLER)⁴⁸

Geranoaëtus fragilis L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 12, Oct. 9, 1911, p. 315, figs. 5a, 5b.

Pleistocene: McKittrick, Rancho La Brea,⁴⁹ Los Angeles, and Carpinteria, California.⁵⁰

Genus **WETMOREGYPS** Miller

Wetmoregyps L. H. MILLER, Condor, vol. 30, No. 4, July 16, 1928, p. 255. Type, by orig. design., *Morphnus daggetti* MILLER.

Wetmoregyps daggetti (MILLER)

Morphnus daggetti L. H. MILLER, Condor, vol. 17, No. 5, Oct. 10, 1915, p. 179, fig. 63.

Pleistocene: Rancho La Brea,⁵¹ Los Angeles, and Carpinteria, California.

⁴⁷ For the use of *Hypomorphnus* to replace *Urubitinga* see Peters, Check-list of the birds of the world, vol. 1, 1931, p. 244.

⁴⁸ Referred to this group by Howard, Carnegie Inst. Washington, Publ. 429, 1932, pp. 16-25.

⁴⁹ Type locality. Recorded also from early Recent deposits in Pit 10 at Rancho La Brea (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

⁵⁰ Recorded also from late Pleistocene or early Recent deposits in Shelter Cave, Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico, by Howard, H., and Miller, A. H., Condor, vol. 35, 1933, pp. 16, 17.

⁵¹ Type locality.

Genus **MORPHNUS** Dumont

Morphnus DUMONT, Dict. Sci. Nat., vol. 1, October 1816, p. 88. Type, by subs. design., *Falco guianensis* Daudin (Chubb, 1916).

Morphnus woodwardi MILLER

Morphnus woodwardi L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 12, Oct. 9, 1911, p. 312, figs. 3a, 3b.

Pleistocene: Rancho La Brea, Los Angeles, California.⁵²

Genus **SPIZAËTUS** Vieillot

Spizaëtus VIEILLOT, Analyse, 1816, p. 24. Type, by subs. design., *Falco ornatus* DAUDIN (Gray, 1840).

Spizaëtus grinnelli (MILLER)⁵³

Geranoaëtus grinnelli L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 12, Oct. 9, 1911, p. 314, figs. 4a, 4b.

Pleistocene: Rancho La Brea,⁵⁴ Los Angeles, and Carpinteria, California.

Spizaëtus willetti HOWARD

Spizaëtus willetti HOWARD, Condor, vol. 37, July 15, 1935, p. 207, fig. 40.

Quaternary (questionably Pleistocene)⁵⁵: Smith Creek Cave, 34 miles north of Baker, White Pine County, Nevada.

Genus **AQUILA** Brisson⁵⁶

Aquila BRISSON, Orn., 1760, vol. 1, pp. 28, 419. Type, by tautonymy, *Aquila* BRISSON = *Falco chrysaëtos* LINNAEUS.

Aquila chrysaëtos (LINNAEUS). **Golden Eagle**

Falco chrysaëtos LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 88.

Modern form reported from Pleistocene: Fossil Lake, Oregon; Rancho La Brea, Los Angeles, Carpinteria, and McKittrick, California.

⁵² Recorded also from early Recent deposits in Pit 10 at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

⁵³ Allocated in *Spizaëtus* by Howard, Carnegie Inst. Washington, Publ. 429, 1932, pp. 33-44.

⁵⁴ Type locality. Recorded also from early Recent deposits in Pit 10 at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

⁵⁵ Uncertainty exists as to whether this deposit is late Pleistocene or early Recent.

⁵⁶ *Aquila ferox* Shufeldt, proves to be a mammal. See Wetmore, Amer. Mus. Nov., No. 680, Dec. 4, 1933, pp. 1-2.

Aquila pliogryps SHUFELDT^{60a}

Aquila pliogryps SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 821.

Pleistocene: Fossil Lake, Oregon.

Aquila sodalis SHUFELDT^{60a}

Aquila sodalis SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 821.

Pleistocene: Fossil Lake, Oregon.

Genus HALIAEETUS Savigny

Haliaeetus SAVIGNY, Descr. de l'Égypte, vol. 1, 1809, pp. 68, 85. Type, by monotypy, *Haliaeetus nisus* SAVIGNY = *Falco albicilla* LINNAEUS.

Haliaeetus leucocephalus (LINNAEUS). **Bald Eagle**

Falco leucocephalus LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 124.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Venice, Melbourne, and cavern deposits near Lecanto, Florida; Niobrara River, near Peters, Sheridan County, Nebraska; Fossil Lake, Oregon; Carpinteria, McKittrick, Rancho La Brea, Los Angeles, and Upper San Pedro, near San Pedro, California.

Subfamily PALAEOPLANCINAE. PALAEOPLANCUS

Genus PALAEOPLANCUS Wetmore

Palaeoplancus WETMORE, Smithsonian Misc. Coll., vol. 87, No. 19, Dec. 26, 1933, p. 1. Type, by orig. design., *Palaeoplancus sternbergi* WETMORE.

Palaeoplancus sternbergi WETMORE

Palaeoplancus sternbergi WETMORE, Smithsonian Misc. Coll., vol. 87, No. 19, Dec. 26, 1933, p. 12, figs. 1-19.

Oligocene (Upper Oreodon beds): East side of Plum Creek, Niobrara County, Wyoming.

Subfamily CIRCINAE. HARRIERS

Genus CIRCUS Lacépède

Circus LACÉPÈDE, Tableaux Oiseaux, 1799, p. 4. Type, by subs. design., *Falco aeruginosus* LINNAEUS (Lesson, 1828).

Circus hudsonius (LINNAEUS). **Marsh Hawk**

Falco hudsonius LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 128.

Modern form reported from Pleistocene: Fossil Lake, Oregon; McKittrick, and Rancho La Brea, Los Angeles, California.

^{60a} Generic allocation questionable. See Howard, Carnegie Inst. Washington, Publ. No. 429, 1932, pp. 32, 76.

Family PANDIONIDAE. OSPREYS⁵⁷

Genus PANDION Savigny

Pandion SAVIGNY, Descr. de l'Égypte, vol. 1, 1809, pp. 69, 95. Type, by monotypy, *Pandion fluvialis* SAVIGNY = *Falco haliaetus* LINNAEUS.

Pandion haliaetus LINNAEUS. Osprey

Falco Haliaetus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 91.

Modern form reported from Pleistocene: Melbourne (Stratum 2), and Itchtucknee River, Florida.

Family FALCONIDAE. CARACARAS AND FALCONS

Subfamily POLYBORINAE. CARACARAS

Genus POLYBORUS Vieillot

Polyborus VIEILLOT, Analyse, 1816, p. 22. Type, by monotypy, Caracara, BUFFON = *Falco plancus* J. F. MILLER.

Polyborus prelutosus prelutosus HOWARD⁵⁸

Polyborus prelutosus HOWARD, Carnegie Inst. Washington, Publ. 487, July 7, 1938, p. 226, pls. 1-3.

Pleistocene: Seminole Field, Pinellas County, and Melbourne, Florida; McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.⁵⁹

Subfamily FALCONINAE. FALCONS

Genus FALCO Linnaeus

Falco LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 88. Type, by subs. design., *Falco subbuteo* LINNAEUS (A. O. U. Comm., 1886).

⁵⁷ Compton, L. V., Univ. California Publ. Zool., vol. 42, 1938, pp. 173-212, on basis of the feather arrangement and the form of the plantar tendons has proposed to remove *Pandion* as a distinct family to the suborder Cathartae. The characters described unquestionably warrant family rank for this strange genus. The American vultures, however, are so highly peculiar that for the present at least it seems to me desirable to recognize the family but to retain the Pandionidae in the suborder Falcones.

⁵⁸ For use of trinomial see Howard, H., Condor, 1940, pp. 40-43.

⁵⁹ Type locality. Recorded also from early Recent deposits at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43), and from Quaternary deposits in Conkling Cavern, Organ Mountains, New Mexico.

Subgenus HIEROFALCO Cuvier

Hierofalco CUVIER, Règne Animal, vol. 1, 1817 (Dec. 7, 1816), p. 312. Type, by monotypy, *Falco candicans* GMELIN.

Falco mexicanus SCHLEGEL. Prairie Falcon

Falco mexicanus "LICHTENSTEIN" SCHLEGEL, Abh. Geb. Zool., heft 3, 1850, p. 15.

Modern form reported from Pleistocene: McKittrick, and Rancho La Brea, Los Angeles, California.

Falco swarthi MILLER

Falco swarthi L. H. MILLER, Condor, vol. 29, No. 3, May 15, 1927, p. 152, fig. 54.

Pleistocene: McKittrick, California.

Subgenus RHYNCHODON Nitzsch

Rhynchodon NITZSCH, Obs. Avium Art. Carot. Comm., 1829, p. 20. Type, by subs. design., *Falco peregrinus* TUNSTALL (A. O. U. Comm., 1886).

Falco peregrinus TUNSTALL. Duck Hawk

Falco Peregrinus TUNSTALL, Orn. Brit., 1771, p. 1.

Modern form reported from Pleistocene: Potter Creek Cave, Shasta County, McKittrick, and Rancho La Brea, Los Angeles, California.

Subgenus TINNUNCULUS Vieillot

Tinnunculus VIEILLOT, Oiseaux Amér. Sept., vol. 1, 1807, p. 39. Type, by subs. design., *Falco columbarius* LINNAEUS (Walden, 1872).

Falco columbarius LINNAEUS. Pigeon Hawk

Falco columbarius LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 90.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

Falco ramenta WETMORE

Falco ramenta WETMORE, Proc. U. S. Nat. Mus., vol. 84, Nov. 3, 1936, p. 75, fig. 14.

Miocene: Dawes County, Nebraska.

Subgenus CERCHNEIS Boie

Cerchneis BOIE, Isis von OKEN, vol. 19, heft 10, October 1826, col. 970. Type, by monotypy, *Falco rupicolus* DAUDIN.

Falco sparverius LINNAEUS. Sparrow Hawk

Falco sparverius LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 90.

Modern form reported from Pleistocene: Cavern deposits near Lecanto, Florida; Samwel and Potter Creek caves, Shasta County, McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.

Order GALLIFORMES. MEGAPODES, CURASSOWS, PHEASANTS,
AND HOATZINS

Suborder GALLI. MEGAPODES, CURASSOWS, GROUSE, AND
PHEASANTS

Superfamily CRACOIDEA. MEGAPODES AND CURASSOWS

Family GALLINULOIDIDAE. GALLINULOIDES

Genus GALLINULOIDES Eastman

Gallinuloides EASTMAN, Geol. Mag., February 1900, p. 54. Type, by monotypy, *Gallinuloides wyomingensis* EASTMAN.

Gallinuloides wyomingensis EASTMAN

Gallinuloides wyomingensis EASTMAN, Geol. Mag., n. s., pt. 4, vol. 7, No. 2, February, 1900, p. 54, pl. 4.

Eocene (Bridger, Green River Shales): Fossil,⁶⁰ and Henry's Fork, Wyoming.

Family CRACIDAE. CURASSOWS, GUANS, AND CHACHALACAS

Subfamily PENELOPINAE. GUANS AND CHACHALACAS

Genus ORTALIS Merrem

Ortalida [= *Ortalis*] MERREM, Avium Rar. Icones et Descrip., vol. 2, 1786, p. 40. Type, by orig. design., *Phasianus motmot* LINNAEUS.

Ortalis phengites WETMORE

Ortalis phengites WETMORE, Bull. Amer. Mus. Nat. Hist., vol. 48, art. 12, Dec. 3, 1923, p. 487, figs. 1-2.

Lower Pliocene (Snake Creek beds): South of Agate, Sioux County, Nebraska.

Ortalis tantala WETMORE

Ortalis tantala WETMORE, Condor, vol. 35, No. 2, Mar. 15, 1933, p. 64, figs. 10-14.

Lower Miocene (Lower Harrison): Carnegie Hill, Sioux County, Nebraska.

⁶⁰ Type locality.

Superfamily PHASIANOIDEA. GROUSE, PHEASANTS, AND
TURKEYS

Family TETRAONIDAE. GROUSE

Genus **DENDRAGAPUS** Elliot

Dendragapus ELLIOT, Proc. Acad. Nat. Sci. Philadelphia, vol. 16, No. 1, January-February (April 23), 1864, p. 23. Type, by subs. design., *Tetrao obscurus* SAY (Baird, Brewer, and Ridgway, 1874).

Dendragapus obscurus (SAY). Dusky Grouse

Tetrao obscurus SAY, in LONG, Exped. Rocky Mts., vol. 2, 1823, p. 14, note.

Modern form reported from Pleistocene: Samwel and Potter Creek caves, Shasta County, California.

Genus **BONASA** Stephens

Bonasa STEPHENS, in SHAW, Gen. Zool., vol. 11, pt. 2, August 1819, p. 298. Type, by subs. design., *Tetrao umbellus* LINNAEUS (Gray, 1840).

Bonasa umbellus (LINNAEUS). Ruffed Grouse⁶¹

Tetrao umbellus LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 275.

Modern form reported from Pleistocene: Cave near Frankstown, Pennsylvania; Cumberland Cave, near Corriganville, Alleghany County, Maryland; caves of Tennessee; Potter Creek Cave, Shasta County, California.

Genus **TYMPANUCHUS** Gloger

Tympanuchus GLOGER, Hand- und Hilfsbuch Naturg., 1842 (pp. 1-450, 1841), p. 396. Type, by monotypy, *Tetrao cupido* LINNAEUS.

Tympanuchus pallidicinctus (RIDGWAY). Lesser Prairie Chicken

Cupidonia cupido var. *pallidicincta* RIDGWAY, Bull. Essex Inst., vol. 5, No. 12, December 1873, p. 199.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Tympanuchus lulli SHUFELDT

Tympanuchus lulli SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 69, pl. 12, fig. 90.

? Pleistocene⁶²: Hornerstown, New Jersey.

⁶¹ *Bonasa ceres* Shufeldt, Bull. Amer. Mus. Nat. Hist., vol. 32, Aug. 4, 1913, p. 299, pl. 55, figs. 18-20, pl. 56, figs. 45-72, from the Pleistocene of the fissure beds of Arkansas is possibly a synonym. On p. 300 of the reference cited the author alludes to it as *Lagopus ceres*.

⁶² Cited in the original description as "Post-Pliocene."

Genus **PEDIOECETES** Baird

Pedioecetes BAIRD, in BAIRD, CASSIN AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, pp. xxi, xlv, [*Pedioecetes*], pp. 619, 625. Type, by orig. design., *Tetrao phasianellus* LINNAEUS.

Pedioecetes phasianellus (LINNAEUS). Sharp-tailed Grouse

Tetrao Phasianellus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 160.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Pedioecetes lucasi SHUFELDT

Pedioecetes lucasi SHUFELDT, Auk, vol. 8, No. 4, October 1891, p. 367.

Pleistocene: Fossil Lake, Oregon.

Pedioecetes nanus SHUFELDT

Pedioecetes nanus SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 821.

Pleistocene: Fossil Lake, Oregon.

Genus **CENTROCERCUS** Swainson

Centrocercus SWAINSON, in SWAINSON AND RICHARDSON, Fauna Bor.-Amer., vol. 2, 1831 (1832), pp. 358, 496. Type, by orig. design., *Tetrao urophasianus* BONAPARTE.

Centrocercus urophasianus (BONAPARTE). Sage Hen

Tetrao urophasianus BONAPARTE, Zool. Journ., vol. 3, No. 10, April-September, 1827, p. 213.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus **PALAEOTETRIX** Shufeldt

Palaeotrix SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 821. Type, by monotypy, *Palaeotrix gilli* SHUFELDT.

Palaeotrix gilli SHUFELDT

Palaeotrix gilli SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 821.

Pleistocene: Fossil Lake, Oregon.

Genus **PALAEAELECTORIS** Wetmore

Palaeaelectoris WETMORE, Condor, vol. 32, No. 3, May 15, 1930, p. 152. Type, by monotypy, *Palaeaelectoris incertus* WETMORE.

Palaeaelectoris incertus WETMORE

Palaeaelectoris incertus WETMORE, Condor, vol. 32, No. 3, May 15, 1930, p. 152, figs. 51-53.

Lower Miocene: Agate fossil quarry, near Agate, Sioux County, Nebraska.

Genus **PALAEOPHASIANUS** Shufeldt

Palaeophasianus SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 291. Type, by monotypy, *Palaeophasianus meleagroides* SHUFELDT.

Palaeophasianus meleagroides SHUFELDT

Palaeophasianus meleagroides SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 291, pl. 58, figs. 81-84, 86-88.

Eocene (Wasatch⁶³ and Bridger) : Elk Creek, Big Horn Basin, and Henry's Fork, Wyoming.

Family PHASIANIDAE. PARTRIDGES, QUAILS, AND PHEASANTS

Subfamily ODONTOPHORINAE. AMERICAN QUAILS

Genus **COLINUS** Goldfuss

Colinus GOLDFUSS, in SCHUBERT, Handb. Naturg., vol. 3 (Zool.), Abt. 2, 1820, p. 220. Type, by monotypy, *Perdix mexicanus*, Caille de la Louisiane, Pl. Enl. 149 = *Tetrao virginianus* LINNAEUS.

Colinus virginianus (LINNAEUS). Bob-white

Tetrao virginianus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 161.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Melbourne, and cavern deposits near Lecanto, Florida; caves of Tennessee.

Colinus eatoni SHUFELDT

Colinus eatoni SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 70, pl. 13, fig. 103.

Geologic age uncertain: Western Kansas.

Genus **LOPHORTYX** Bonaparte

Lophortyx BONAPARTE, Geogr. and Comp. List, 1838, p. 42. Type, by subs. design., *Tetrao californicus* SHAW (Gray, 1840).

Lophortyx californica (SHAW). California Quail

Tetrao californicus SHAW, in SHAW AND NODDER, Nat. Misc., vol. 9, 1798, text to pl. 345.

Modern form reported from Pleistocene: Hawver Cave, Eldorado County, Carpinteria, McKittrick, Rancho La Brea, Los Angeles and Upper San Pedro formation, San Pedro, California.

⁶³ Described from specimen from the Wasatch of Elk Creek.

Genus **OREORTYX** Baird

Orcortyx BAIRD, in BAIRD, CASSIN AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, pp. xxi, xlv, 638, 642. Type, by orig. design., *Ortyx picta* DOUGLAS.

Oreortyx picta (DOUGLAS). Plumed Quail

Ortyx picta DOUGLAS, Trans. Linn. Soc. London, vol. 16, pt. 1, 1829, p. 143.

Modern form reported from Pleistocene: Potter Creek and Samwel caves, Shasta County, and Hawver Cave, Eldorado County, California.

Genus **CYRTONYX** Gould

Cyrtonyx GOULD, Monogr. Odontoph., pt. 1, 1844, pl. 7 and text (also introduction, p. 14, 1850). Type, by subs. design., *Ortyx massena* LESSON = *O. montezumae* VIGORS (Gray, 1855).

Cyrtonyx cooki WETMORE

Cyrtonyx cooki WETMORE, Condor, vol. 36, No. 1, Jan. 15, 1934, p. 30, fig. 5.

Upper Miocene (Upper Sheep Creek beds): 17 miles south of Agate, Sioux County, Nebraska.

Subfamily PHASIANINAE. PHEASANTS

Genus **PHASIANUS** Linnaeus⁶⁴

Phasianus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 158. Type, by tautonymy, *Phasianus colchicus* LINNAEUS.

Phasianus alhildae SHUFELDT

Phasianus alhildae SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 71.

Geologic age uncertain: 100 feet below horizon of Haystack Butte, Haystack Mountain, Wyoming.

Genus **ARCHAEOPHASIANUS** Lambrecht

Archaeophasianus LAMBRECHT, Handb. Palaeorn., 1933, p. 438. Proposed for *Phasianus roberti* STONE, and *Phasianus mioceanus* SHUFELDT. Type, not designated.

Archaeophasianus roberti (STONE)

Phasianus roberti STONE, Auk, vol. 32, No. 3, July (June 29), 1915, p. 376.

Upper Oligocene (Middle John Day): Parilina Creek, 6 miles from junction with Beaver Creek, Oregon.

⁶⁴ Allocation of the following species to the Old World genus *Phasianus* follows the usage of the original describer, and is subject to verification.

Archaeophasianus mioceanus (SHUFELDT)

Phasianus mioceanus SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 60, pl. 13, figs. 94, 96.

Miocene: Chimney Rock and Scott's Bluff, Nebraska.

Family MELEAGRIDIDAE. TURKEYS

Genus MELEAGRIS Linnaeus

Meleagris LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 156. Type, by subs. design., *Meleagris gallopavo* LINNAEUS (Gray, 1840).

Meleagris gallopavo LINNAEUS. Wild Turkey⁶⁵

Meleagris Gallopavo LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 156.

Modern form reported from Pleistocene: Hartman's or Crystal Hill Cave, near Stroudsburg, and Durham Cave, near Riegelsville, Bucks County, and caves near Carlisle, Pennsylvania; Ashmore, Coles County, Illinois; caves of Tennessee; fissure beds, Arkansas; Seminole Field, Pinellas County, Sarasota, Bradenton, Itchtucknee River, Vero, Melbourne, and cavern deposits at Ocala and Lecanto, Florida; near San Antonio, Socorro County, New Mexico.⁶⁶

Meleagris antiqua MARSH

Meleagris antiquus MARSH, Amer. Journ. Sci., ser. 3, vol. 2, August 1871, p. 126.

Oligocene (White River): "G Ranch," Colorado.

Meleagris celer MARSH

Meleagris celer MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 261.

Pleistocene: Monmouth County, New Jersey.

Meleagris richmondi SHUFELDT

Meleagris richmondi SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 67, pl. 2, fig. 19.

Pleistocene: near Mission San Jose, Alameda County, California.

Meleagris superba COPE

Meleagris superbus COPE, Trans. Amer. Phil. Soc., n. s., vol. 14, pt. 1, December 1870, p. 239.

Pleistocene: Monmouth County,⁶⁷ and Manalapan,⁶⁸ New Jersey; Frankstown and Port Kennedy caves, Pennsylvania.

⁶⁵ *Ardea scillardsi* Shufeldt, 9th Ann. Rep. Florida State Geol. Surv., 1917, p. 38, pl. 2, fig. 15, is a synonym of *Meleagris gallopavo* according to Wetmore, Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, pp. 10-11, 32-33.

⁶⁶ Possibly Upper Pliocene.

⁶⁷ Type locality.

⁶⁸ Type of *Meleagris altus* Marsh, Amer. Journ. Sci., ser. 3, vol. 4, 1872, p. 260.

Meleagris tridens WETMORE

Meleagris tridens WETMORE, Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, p. 33, fig. 13, pl. 6.

Pleistocene: Seminole Field, Pinellas County, Florida.

Genus PARAPAVO Miller

Parapavo L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 9, No. 9, Mar. 10, 1916, p. 96. Type, by monotypy, *Pavo californicus* MILLER.

Parapavo californicus (MILLER)

Pavo californicus L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 5, No. 19, Aug. 14, 1909, p. 285, pl. 25.

Upper Pliocene: Cita Canyon, Randall County, Texas; Pleistocene: Carpinteria, Rancho La Brea,⁶⁰ Los Angeles, and near La Habra, California.

Order GRUIFORMES. CRANES, RAILS, AND ALLIES

Suborder GRUES. CRANES, LIMPKINS, TRUMPETERS, AND RAILS

Superfamily GRUOIDEA. CRANES, LIMPKINS, AND TRUMPETERS

Family GERANOIDIDAE. GERANOIDES

Genus GERANOIDES Wetmore

Geranoides WETMORE, Condor, vol. 35, No. 3, May 15, 1933, p. 115. Type, by orig. design., *Geranoides jepseni* WETMORE.

Geranoides jepseni WETMORE

Geranoides jepseni WETMORE, Condor, vol. 35, No. 3, May 15, 1933, p. 115, fig. 22.

Lower Eocene (Greybull formation): South Elk Creek, Bighorn County, Wyoming.

Family GRUIDAE. CRANES

Subfamily GRUINAE. CRANES

Genus ALETORNIS Marsh⁷⁰

Aletornis MARSH, Amer. Journ. Sci., ser. 3, vol. 14, October 1872, p. 256. Type, by subs. design., *Aletornis nobilis* MARSH (Hay, 1902).

Aletornis bellus MARSH⁷¹

Aletornis bellus MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 258.

Eocene (Bridger): Grizzly Buttes, Wyoming.

⁶⁰ Recorded also from early Recent deposits in Pit 10 at this site (Howard, H., and Miller, A. H., Carnegie Inst. Washington, Publ. 514, 1939, p. 43).

⁷⁰ Allocation in the subfamily Gruinae provisional.

⁷¹ Considered by Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 32, 76, as possibly a species of Scolopacidae, together with *A. gracilis*.

Aletornis gracilis MARSH^{71a}

Aletornis gracilis MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 258.

Eocene (Bridger): Henry's Fork, Wyoming.

Aletornis nobilis MARSH⁷²

Aletornis nobilis MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 256.

Eocene (Bridger): Grizzly Buttes, Wyoming.

Aletornis pernix MARSH

Aletornis pernix MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 256.

Eocene (Bridger): Henry's Fork, Wyoming.

Genus FULICALETORNIS Lambrecht

Fulicaletornis LAMBRECHT, Handb. Palaeorn., 1933, p. 479. Type, by monotypy, *Aletornis venustus* MARSH.

Fulicaletornis venustus (MARSH)⁷³

Aletornis venustus MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 257.

Eocene (Bridger): Henry's Fork, Wyoming.

Genus PARAGRUS Lambrecht

Paragrus LAMBRECHT, Handb. Palaeorn., 1933, p. 520. Type, by monotypy, *Gallinuloides prentici* LOOMIS.

Paragrus prentici (LOOMIS)

Gallinuloides prentici F. B. LOOMIS, Amer. Journ. Sci., ser. 4, vol. 22, December 1906, p. 481, figs. 1-3.

Eocene (Wasatch): Head of Elk Creek, 10 miles west of Otto, Wyoming.

^{71a} See footnote 71 on preceding page.

⁷² Marsh in his original proposal of the genus *Alctornis* included in it five species without selecting a type. From the five in question Hay, U. S. Geol. Surv., Bull. 179, 1902, p. 527, designated *Aletornis nobilis* Marsh the type. Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, 1915, pp. 30, 31, placed *A. nobilis* in *Grus*, and described in the same paper (p. 77) *Grus marshi*. Lambrecht, Handb. Palaeorn., 1933, p. 520, proposed the genus *Protogrus* for *Aletornis nobilis* and *Grus marshi*, without designating a type. Lambrecht's action as regards *A. nobilis* obviously is erroneous as his proposed genus includes the genotype of *Alctornis*. *Alctornis nobilis*, therefore, is to be listed as above, and pending study *Grus marshi* is included tentatively under *Grus*.

⁷³ Systematic allocation provisional. Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 31, 32, 76, placed this species in the genus *Fulica*, the principal basis for Lambrecht's action in making a distinct genus for it.

Genus **GRUS** Pallas

Grus PALLAS, Misc. Zool., 1766, p. 66. Type, by tautonymy, *Ardea grus* LINNAEUS.

Grus americana (LINNAEUS). Whooping Crane

Ardea americana LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 142.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Itchtucknee River, and Melbourne (Stratum 2), Florida; Rancho La Brea, Los Angeles, California.

Grus canadensis (LINNAEUS). Brown Crane⁷⁴

Ardea canadensis LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 141.

Modern form reported from Pliocene (Upper Snake Creek formation): Sioux County, Nebraska. From ? Pleistocene: Niobrara River, Nebraska,⁷⁵ and Grizzly Buttes, Wyoming. From Pleistocene: Rancho La Brea, Los Angeles, and McKittrick, California; Melbourne, Seminole Field, Pinellas County, and Bradenton, Florida.

Grus proavus MARSH

Grus proavus MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 261.

Pleistocene: Monmouth County, New Jersey.

Grus nannodes WETMORE AND MARTIN

Grus nannodes WETMORE AND MARTIN, Condor, vol. 32, No. 1, Jan. 20, 1930, p. 62, figs. 23-25.

Middle Pliocene (Ogallala formation): Edson beds, Sec. 25, T. 10 S., R. 38 W., Sherman County, Kansas.

Grus marshi SHUFELDT⁷⁶

Grus marshi SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 77, pl. 15, figs. 144-147.

Eocene (Bridger): Henry's Fork, Wyoming.

⁷⁴ *Grus canadensis* is used as a group name to cover records of cranes of this type from the Pliocene and Pleistocene, including specimens that range in size from the modern little brown crane to the larger races of the sandhill crane.

Grus minor L. H. Miller, Univ. California Publ., Bull. Dep. Geol., vol. 5, August 1910, p. 446, fig. 8, from the Pleistocene of Rancho La Brea, is now considered by the describer as a synonym of *Grus canadensis*.

⁷⁵ This specimen, from either Pliocene or Pleistocene deposits, is the basis of *Grus haydeni* Marsh, Amer. Journ. Sci., ser. 2, vol. 49, 1870, p. 214, considered by Wetmore, Amer. Mus. Nov., No. 302, Feb. 29, 1928, p. 4, as a synonym of *Grus canadensis*.

⁷⁶ Generic allocation doubtful. See footnote under *Aletornis nobilis* (p. 49).

Family ARAMIDAE. LIMPKINS

Genus ARAMUS Vieillot

Aramus VIEILLOT, Analyse, 1816, p. 58. Type, by monotypy, Courliri, BUFFON = *Ardea scolopacea* GMELIN.

Aramus pictus (MEYER). Limpkin

Tantalus pictus "BARTRAM" F. A. A. MEYER, Zool. Annalen, vol. 1, 1794, p. 287.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Itchtucknee River, Florida.

Genus BADISTORNIS Wetmore

Badistornis WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 30. Type, by orig. design., *Badistornis aramus* WETMORE.

Badistornis aramus WETMORE

Badistornis aramus WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 30, figs. 7-10.

Oligocene (*Metamynodon* zone, Brule beds): 35 miles southwest of Scenic, South Dakota.

Genus ARAMORNIS Wetmore

Aramornis WETMORE, Amer. Mus. Nov., No. 211, Mar. 11, 1926, p. 1. Type, by orig. design., *Aramornis longurio* WETMORE.

Aramornis longurio WETMORE

Aramornis longurio WETMORE, Amer. Mus. Nov., No. 211, Mar. 11, 1926, p. 1, figs. 1-4.

Early Middle Miocene (*Merychippus primus* zone of Sheep Creek beds): Snake Creek Quarries, Sioux County, Nebraska.

Superfamily RALLOIDEA. RAILS

Family RALLIDAE. RAILS, GALLINULES, AND COOTS

Subfamily RALLINAE. RAILS

Genus TELMATORNIS Marsh⁷⁷

Telmatornis MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 210. Type, by subs. design., *Telmatornis priscus* MARSH (Hay, 1902).

Telmatornis affinis MARSH

Telmatornis affinis MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 211.

Eocene (Hornerstown): Hornerstown, New Jersey.

⁷⁷ Allocation in the subfamily Rallinae provisional.

Telmatornis priscus MARSH

Telmatornis priscus MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 210.

Eocene (Hornerstown): Hornerstown, New Jersey.

Telmatornis rex SHUFELDT

Telmatornis rex SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 27, pl. 13, fig. 101.

Eocene: Hornerstown, New Jersey.

Genus PALAEORALLUS Wetmore

Palaeorallus WETMORE, Condor, vol. 33, No. 3, May 15, 1931, p. 108. Type, by orig. design., *Palaeorallus troxelli* WETMORE.

Palaeorallus troxelli WETMORE

Palaeorallus troxelli WETMORE, Condor, vol. 33, No. 3, May 15, 1931, p. 108, figs. 26-29.

Eocene (Wasatch): Northwest of Little Tatman Mountain, near Burlington, Wyoming.

Genus CRECCOIDES Shufeldt

Creccoides SHUFELDT, in COPE, Proc. Amer. Phil. Soc., vol. 30, Apr. 14, 1892, p. 125. Type, by monotypy, *Creccoides osbornii* SHUFELDT.

Creccoides osbornii SHUFELDT

Creccoides osbornii SHUFELDT, Proc. Amer. Phil. Soc., vol. 30, Apr. 14, 1892, p. 125.

Pliocene: Blanco Canyon, Crosby County, Texas.

Genus RALLUS Linnaeus

Rallus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 153. Type, by subs. design., *Rallus aquaticus* LINNAEUS (Fleming, 1821).

Rallus elegans AUDUBON. King Rail

Rallus elegans AUDUBON, Birds Amer. (folio), vol. 3, 1834, pl. 203.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, and Itchtucknee River, Florida.

Rallus longirostris BODDAERT. Clapper Rail

Rallus longirostris BODDAERT, Table Pl. Enl., 1783, p. 52.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Rallus limicola VIEILLOT. Virginia Rail

Rallus limicola VIEILLOT, Nouv. Dict. d'Hist. Nat., nouv. éd., vol. 28, 1819, p. 558.

Modern form recorded from Pleistocene: McKittrick, California.

Genus **ARAMIDES** Pucheran

Aramides PUCHERAN, Rev. Zool., vol. 8, August 1845, p. 277. Type, by subs. design., *Rallus cayanensis* GMELIN (Gray, 1855).

Aramides cajanea (MÜLLER). Wood Rail

Fulica cajanea MÜLLER, Natursyst. Suppl., 1776, p. 119.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Subfamily GALLINULINAE. GALLINULES

Genus **GALLINULA** Brisson

Gallinula BRISSON, Orn., 1760, vol. 1, p. 50; vol. 6, p. 2. Type, by tautonymy, *Gallinula* BRISSON = *Fulica chloropus* LINNAEUS.

Gallinula chloropus (LINNAEUS). Florida Gallinule

Fulica chloropus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 152.

Modern form reported from Upper Pliocene (Hagerman Lake beds): Near Hagerman, Idaho. From Pleistocene: Seminole Field, Pinellas County, and Itchtucknee River, Florida.

Genus **PALAEOCREX** Wetmore⁷⁸

Palaeocrex WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 9. Type, by monotypy, *Palaeocrex fax* WETMORE.

Palaeocrex fax WETMORE

Palaeocrex fax WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 9, figs. 15-18.

Oligocene (Chadron): Horsetail Creek, Weld County, Colorado.

Genus **EOCREX** Wetmore

Eocrex WETMORE, Condor, vol. 33, No. 3, May 15, 1931, p. 107. Type, by orig. design., *Eocrex primus* WETMORE.

Eocrex primus WETMORE

Eocrex primus WETMORE, Condor, vol. 33, No. 3, May 15, 1931, p. 107, figs. 21-25.

Eocene (Wasatch): Near Steamboat Springs, Sweetwater County, Colorado (Sec. 13, T. 24 N., R. 102 W., in Cathedral Bluffs).

⁷⁸ Subfamily allocation provisional.

Subfamily FULICINAE. COOTS

Genus FULICA Linnaeus

Fulica LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 152. Type, by subs. design., *Fulica atra* LINNAEUS (Gray, 1840).

Fulica minor SHUFELDT⁷⁹

Fulica minor SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891, p. 820.

Pleistocene: Fossil Lake, Oregon.

Fulica americana GMELIN. American Coot

Fulica americana GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 704.

Modern form recorded from Pleistocene: Seminole Field, Pinellas County, Bradenton, and Itchtucknee River, Florida; Hemphill County, Texas; Fossil Lake, Oregon; Rancho La Brea, Los Angeles, California.

Suborder CARIAMAE. CARIAMAS AND ALLIES

Family BATHORNITHIDAE. BATHORNITHES

Genus BATHORNIS Wetmore

Bathornis WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 11. Type, by monotypy, *Bathornis veredus* WETMORE.

Bathornis veredus WETMORE

Bathornis veredus WETMORE, Proc. Colorado Mus. Nat. Hist., vol. 7, No. 2, July 15, 1927, p. 11, figs. 19-24.

Oligocene (Chadron): Horsetail Creek, Weld County, Colorado;⁸⁰ near Crawford, Nebraska; Indian Creek, Pennington County, South Dakota.

Bathornis celeripes WETMORE

Bathornis celeripes WETMORE, Bull. Mus. Comp. Zoöl., vol. 75, October 1933, p. 302, figs. 6-14.

Upper Oligocene (Brule): Near Torrington, Goshen County, Wyoming⁸⁰; 12 miles northwest of Crawford, Nebraska.

Bathornis cursor WETMORE

Bathornis cursor WETMORE, Bull. Mus. Comp. Zoöl., vol. 75, October 1933, p. 310, figs. 15-19.

Upper Oligocene (Brule): Near Torrington, Goshen County, Wyoming.

⁷⁹ Doubtfully distinct from *Fulica americana*, according to Compton, Condor, 1934, p. 41.

⁸⁰ Type locality.

Order DIATRYMIFORMES. DIATRYMAS

Family DIATRYMIDAE. DIATRYMAS

Genus **BARORNIS** Marsh

Barornis MARSH, Amer. Journ. Sci., ser. 3, vol. 48, 1894, p. 344. Type, by monotypy, *Barornis regens* MARSH.

Barornis regens MARSH⁸¹

Barornis regens MARSH, Amer. Journ. Sci., ser. 3, vol. 48, October 1894, p. 344, text fig.

Eocene: "Squankum," New Jersey.

Genus **DIATRYMA** Cope

Diatryma COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 28, sign. 2, April 18, 1876, p. 11. Type, by monotypy, *Diatryma gigantea* COPE.

Diatryma ajax SHUFELDT

Diatryma ajax SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 287, pls. 52, figs. 4-5, 53, figs. 8-10, 54, figs. 13-14.

Lower Eocene (basal Wasatch): 3⁸² and 5 miles southeast of mouth of Pat O'Hara Creek, Clark's Fork Basin, Wyoming.

Diatryma giganteum COPE

Diatryma gigantea COPE, Proc. Acad. Nat. Sci. Philadelphia, vol. 28, sign. 2, April 18, 1876, p. 11.

Lower Eocene (Lower Wasatch): New Mexico.⁸³

Diatryma steini MATTHEW AND GRANGER

Diatryma steini MATTHEW AND GRANGER, Bull. Amer. Mus. Nat. Hist., vol. 37, art. 11, May 28, 1917, p. 322, pls. 20-33.

Lower Eocene (Gray Bull horizon, Lower Wasatch): South Elk Creek, Bighorn Basin, Wyoming.

Genus **OMORHAMPHUS** Sinclair

Omorhamphus SINCLAIR, Proc. Amer. Phil. Soc., vol. 67, 1928, p. 51. Type, by monotypy, *Omorhamphus storchii* Sinclair.

Omorhamphus storchii SINCLAIR

Omorhamphus storchii SINCLAIR, Proc. Amer. Phil. Soc., vol. 67, 1928, p. 52, pls. 1-2, figs. 1-3.

⁸¹ Considered a species of *Diatryma* by Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 37-38.

⁸² Type locality.

⁸³ Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 34, refers a fragment in Peabody Museum, Yale University, from Island Point, North Horseshoe, Gallina, New Mexico, to this species.

Lower Eocene (Lower Gray Bull horizon, Lower Wasatch): 1½ miles southeast of Dorsey Creek, about 2 miles south of Otto-Basin Road, Bighorn County, Wyoming.

Order CHARADRIIFORMES. SHORE-BIRDS, GULLS, AND AUKS

Suborder CHARADRII. SHORE-BIRDS

Superfamily CHARADRIOIDEA. PLOVERS, SANDPIPERS, AND ALLIES

Family HAEMATOPODIDAE. OYSTER-CATCHERS

Genus **PARACTIORNIS** Wetmore

Paractiornis WETMORE, Condor, vol. 32, No. 3, May 15, 1930, p. 153. Type, by monotypy, *Paractiornis perpusillus* WETMORE.

Paractiornis perpusillus WETMORE

Paractiornis perpusillus WETMORE, Condor, vol. 32, No. 3, May 15, 1930, p. 153, figs. 54-56.

Lower Miocene: Carnegie Hill, Agate Fossil Quarry, near Agate, Sioux County, Nebraska.

Family CHARADRIIDAE. PLOVERS, TURNSTONES, AND SURF-BIRDS

Subfamily CHARADRIINAE. PLOVERS

Genus **CHARADRIUS** Linnaeus

Charadrius LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 150. Type, by tautonymy, *Charadrius hiaticula* LINNAEUS.

Charadrius sheppardianus COPE⁸⁴

Charadrius sheppardianus COPE, Bull. Geol. and Geogr. Surv. Terr., vol. 6, No. 1, Feb. 11, 1881, p. 83.

Upper Miocene (Florissant): Florissant, Colorado.

Genus **EUPODA** Brandt

Eupoda BRANDT, in TCHIHATCHEFF, Voy. Sci. Altai Orient., 1845, p. 444. Type, by monotypy, *Charadrius asiaticus* PALLAS.

Eupoda montana (TOWNSEND). Mountain Plover

Charadrius montanus J. K. TOWNSEND, Journ. Acad. Nat. Sci. Philadelphia, vol. 7, pt. 2, Nov. 21, 1837, p. 192.

Modern form reported from Pleistocene: McKittrick, California.

⁸⁴ Subgeneric relationships not certain.

Genus OXYECHUS Reichenbach

Oxyechus REICHENBACH, *Avium Syst. Nat.*, 1852 (1853), p. xviii. Type, by orig. design., *Charadrius vociferus* LINNAEUS.

***Oxyechus vociferus* (LINNAEUS). Killdeer**

Charadrius vociferus LINNAEUS, *Syst. Nat.*, 10th ed., vol. I, 1758, p. 150.

Modern form reported from Pleistocene: McKittrick, and Rancho La Brea, Los Angeles, California.

Genus SQUATAROLA Cuvier

Squatarola CUVIER, *Règne Animal*, vol. I, 1817 (Dec. 7, 1816), p. 467. Type, by tautonymy, *Tringa squatarola* LINNAEUS.

***Squatarola squatarola* (LINNAEUS). Black-bellied Plover**

Tringa squatarola LINNAEUS, *Syst. Nat.*, 10th ed., vol. I, 1758, p. 149.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus LIMICOLAVIS Shufeldt⁸⁵

Limicolavis SHUFELDT, *Trans. Connecticut Acad. Arts Sci.*, vol. 19, February 1915, p. 55. Type, by monotypy, *Limicolavis pluvianella* SHUFELDT.

***Limicolavis pluvianella* SHUFELDT**

Limicolavis pluvianella SHUFELDT, *Trans. Connecticut Acad. Arts Sci.*, vol. 19, February 1915, p. 55, pl. 15, fig. 129.

? Oligocene: Lower Willow Creek, Oregon.

Family SCOLOPACIDAE. SNIPE, WOODCOCK, AND SANDPIPERS**Subfamily PALAEOTRINGINAE. PALAEOTRINGAS****Genus PALAEOTRINGA** Marsh

Palaeotringa MARSH, *Amer. Journ. Sci.*, ser. 2, vol. 49, March 1870, p. 208. Type, by subs. design., *Palaeotringa littoralis* MARSH (Hay, 1902).

***Palaeotringa littoralis* MARSH⁸⁷**

Palaeotringa littoralis MARSH, *Amer. Journ. Sci.*, ser. 2, vol. 49, March 1870, p. 208.

Eocene (Hornerstown): Hornerstown, New Jersey.

⁸⁵ Family relationship not entirely certain.

⁸⁷ Shufeldt, *Trans. Connecticut Acad. Arts Sci.*, vol. 19, February 1915, pp. 23, 77, pl. 6, fig. 35, believes this to be a gull, but this is open to question.

Palaeotringa vagans MARSH

Palaeotringa vagans MARSH, Amer. Journ. Sci., ser. 3, vol. 3, May 1872, p. 365.

Eocene (Hornerstown): Hornerstown, New Jersey.

Palaeotringa vetus MARSH

Palaeotringa vetus MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 209.

Eocene (Hornerstown): Arneytown, New Jersey.

Subfamily SCOLOPACINAE. WOODCOCK AND SNIPE

Genus CAPELLA Frenzel

Capella FRENZEL, Besch. Vögel und Eyer Wittenberg, 1801, p. 58. Type, by monotypy, *Scolopax coelestis* FRENZEL = *Scolopax gallinago* LINNAEUS.

Capella delicata (ORD). Wilson's Snipe

Scolopax delicata ORD, in reprint WILSON, Amer. Orn., vol. 9, 1825, p. ccxviii.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Subfamily NUMENIINAE. CURLEWS, YELLOW-LEGS, AND ALLIES

Genus TOTANUS Bechstein

Totanus BECHSTEIN, Orn. Taschenb. Deutschl., vol. 2, 1803, p. 282. Type, by tautonymy, *Totanus maculatus* BECHSTEIN = *Scolopax totanus* LINNAEUS.

Totanus melanoleucus (GMELIN). Greater Yellow-legs

Scolopax melanoleuca GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 659.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, and McKittrick, California.

Genus NUMENIUS Brisson

Numenius BRISSON, Orn., 1760, vol. 1, p. 48; vol. 5, p. 311. Type, by tautonymy, *Numenius* BRISSON = *Scolopax arquata* LINNAEUS.

Numenius americanus BECHSTEIN. Long-billed Curlew

Numenius americanus BECHSTEIN, in LATHAM, Allgem. Ueb. Vögel, vol. 4, pt. 2, 1812, p. 432.

Modern form reported from Pleistocene: McKittrick, and Rancho La Brea, Los Angeles, California.

Genus PHAEOPUS Cuvier

Phaeopus CUVIER, Règne Animal, vol. 1, 1817 (Dec. 7, 1816), p. 485. Type, by tautonymy, *Scolopax phaeopus* LINNAEUS.

Phaeopus hudsonicus (LATHAM). Hudsonian Curlew

Numenius hudsonicus LATHAM, Index Orn., vol. 2, 1790, p. 712.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Subfamily CALIDRIINAE. SANDPIPERS, GODWITS, AND ALLIES

Genus PELIDNA Cuvier

Pelidna CUVIER, Règne Animal, vol. 1, 1817 (Dec. 7, 1816), p. 490. Type, by subs. design., *Tringa cinclus* LINNAEUS, 1766 = *Tringa alpina* LINNAEUS, 1758 (Gray, 1840).

Pelidna alpina (LINNAEUS). Red-backed Sandpiper

Tringa alpina LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 149.

Modern form reported from Pleistocene: McKittrick, California.

Genus LIMNODROMUS Wied

Limnodromus WIED, Beitr. Naturg. Brasil, vol. 4, Abt. 2, 1833, p. 716. Type, by monotypy, *Scolopax grisea* GMELIN.

Limnodromus griseus (GMELIN). Dowitcher

Scolopax grisea GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 658.

Modern form reported from Pleistocene: McKittrick, and Rancho La Brea, Los Angeles, California.

Genus MICROPALAMA Baird

Micropalama BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and Surv. R. R. Pac., vol. 9, 1858, pp. xxii, xlvi, 714, 726. Type, by orig. design., *Tringa himantopus* BONAPARTE.

Micropalama hesternus WETMORE

Micropalama hesternus WETMORE, Proc. U. S. Nat. Mus., vol. 64, art. 5, Jan. 15, 1924, p. 11, figs. 6-7.

Upper Pliocene: Two miles south of Benson, Arizona.

Genus LIMOSA Brisson

Limosa BRISSON, Orn., 1760, vol. 1, p. 261; vol. 5, p. 48. Type, by tautonymy, *Limosa* BRISSON = *Scolopax limosa* LINNAEUS.

Limosa vanrossemei MILLER

Limosa vanrossemei L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 116, pl. 6.

Miocene (Temblor, *Turritella ocoyana* zone): Lompoc, California.

Family RECURVIROSTRIDAE. AVOCETS AND STILTS

Genus RECURVIROSTRA Linnaeus

Recurvirostra LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 151. Type, by monotypy, *Recurvirostra avosetta* LINNAEUS.

Recurvirostra americana Gmelin. Avocet

Recurvirostra americana Gmelin, Syst. Nat., vol. 1, pt. 2, 1789, p. 693.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, and McKittrick, California.

Family PRESBYORNITHIDAE. PRESBYORNITHES

Genus PRESBYORNIS Wetmore

Presbyornis WETMORE, Ann. Carnegie Mus., vol. 16, Apr. 10, 1926, p. 396. Type, by monotypy, *Presbyornis pervetus* WETMORE.

Presbyornis pervetus WETMORE

Presbyornis pervetus WETMORE, Ann. Carnegie Mus., vol. 16, Apr. 10, 1926, p. 396, pl. 37, figs. 10-20.

Eocene (Lower Green River formation): White River, Utah, 2 miles from Colorado State line.

Family PHALAROPODIDAE. PHALAROPES

Genus LOBIPES Cuvier

Lobipes CUVIER, Règne Animal, vol. 1, 1817 (Dec. 7, 1816), p. 495. Type, by orig. design., *Tringa hyperborea* LINNAEUS = *Tringa lobata* LINNAEUS.

Lobipes lobatus (LINNAEUS). Northern Phalarope

Tringa lobata [sic] LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 148.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Suborder LARI. GULLS, TERNS, AND SKIMMERS

Family LARIDAE. GULLS AND TERNS

Subfamily LARINAE. GULLS

Genus LARUS Linnaeus⁸⁸

Larus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 136. Type, by subs. design., *Larus canus* LINNAEUS (Selby, 1840).

⁸⁸ *Larus vero* SHUFELDT (Journ. Geol., January-February 1917, p. 18), has been identified by Wetmore as *Nyctanassa violacea* LINNAEUS (Smithsonian Misc. Coll., vol. 85, No. 2, Apr. 13, 1931, p. 16).

Subgenus **LARUS** Linnaeus**Larus glaucescens** NAUMANN. **Glaucous-winged Gull**

Larus glaucescens NAUMANN, Naturg. Vögel Deutschl., vol. 10, 1840, p. 351.

Modern form reported from Pleistocene (Upper San Pedro):
Near San Pedro, California.

Larus argentatus PONTOPPIDAN. **Herring Gull**

Larus argentatus PONTOPPIDAN, Danske Atlas, vol. 1, 1763, p. 622.

Modern form reported from Pleistocene: Fossil Lake, Oregon.⁸⁹

Larus oregonus SHUFELDT⁹⁰

Larus oregonus SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891,
p. 820.

Pleistocene: Fossil Lake, Oregon.

Larus pristinus SHUFELDT⁹¹

Larus pristinus SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19,
February 1915, p. 54, pl. 14, fig. 112.

? Oligocene (John Day): Willow Creek, Oregon.

Larus robustus SHUFELDT⁹⁰

Larus robustus SHUFELDT, Amer. Nat., vol. 25, No. 297, September 1891,
p. 819.

Pleistocene: Fossil Lake, Oregon.

Subgenus **CHROICOCEPHALUS** Eyton

Chroicocephalus EYTON, Hist. Rarer Brit. Birds, 1836, p. 57. Type, by subs.
design., *Larus capistratus* TEMMINCK = *L. ridibundus* LINNAEUS (Gray,
1840).

Larus philadelphia (ORD). **Bonaparte's Gull**

Sterna philadelphia ORD, in GUTHRIE, Geogr., 2d Amer. ed., 1815, p. 319.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Genus **XEMA** Leach

Xema LEACH, in ROSS, Voyage Discovery, 1819, app., p. lvii. Type, by mono-
typy, *Larus sabini* SABINE.

Xema sabini (SABINE). **Sabine's Gull**

Larus sabini J. SABINE, Trans. Linn. Soc. London, vol. 12, pt. 2, 1819, p. 522,
pl. 29.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

⁸⁹ Through a *lapsus calami* listed from the Pleistocene of Florida by Wetmore, Proc. 8th Int. Orn. Congr., Amsterdam, 1930, July 1931, p. 481.

⁹⁰ Subgeneric allocation provisional.

⁹¹ Generic assignation in original description tentative.

Subfamily STERNINAE. TERNS

Genus **CHLIDONIAS** Rafinesque

Chlidonias RAFINESQUE, Kentucky Gazette, n. s., vol. 1, No. 8, Feb. 21, 1822, p. 3, col. 5. Type, by monotypy, *Chlidonias melanops* RAFINESQUE = *Sterna surinamensis* GMELIN.

Chlidonias nigra (LINNAEUS). Black Tern

Sterna nigra LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 137.

Modern form reported from Pleistocene: Fossil Lake, Oregon.

Suborder ALCAE. AUKS

Family ALCIDAE. AUKS, AUKLETS, AND MURRES

Subfamily NAUTILORNITHINAE. NAUTILORNITHES

Genus **NAUTILORNIS** Wetmore

Nautilornis WETMORE, Ann. Carnegie Mus., vol. 16, Apr. 10, 1926, p. 392.
Type, by orig. design., *Nautilornis avus* WETMORE.

Nautilornis avus WETMORE

Nautilornis avus WETMORE, Ann. Carnegie Mus., vol. 16, Apr. 10, 1926, p. 392, pl. 36, figs. 1-8.

Eocene (Lower Green River formation): White River, Utah, 2 miles from Colorado State line.

Nautilornis proavitus WETMORE

Nautilornis proavitus WETMORE, Ann. Carnegie Mus., vol. 16, Apr. 10, 1926, p. 394, pl. 36, fig. 9.

Eocene (Lower Green River formation): White River, Utah, 2 miles from Colorado State line.

Genus **HYDROTHERIKORNIS** Miller

Hydrotherikornis A. H. MILLER, Univ. California Publ., Bull. Dep. Geol. Sci., vol. 20, No. 3, Apr. 21, 1931, p. 24. Type, by orig. design., *Hydrotherikornis oregonus* MILLER.

Hydrotherikornis oregonus MILLER

Hydrotherikornis oregonus A. H. MILLER, Univ. California Publ., Bull. Dep. Geol. Sci., vol. 20, No. 3, Apr. 21, 1931, p. 24, fig. 1.

Upper Eocene (Arago series): Sunset Bay, near Coos Bay, Coos County, Oregon.

Subfamily ALCINAE. AUKS AND MURRES

Genus **URIA** Brisson

Uria BRISSON, Orn., 1760, vol. 1, p. 52; vol. 6, p. 70. Type, by tautonymy,
Uria BRISSON = *Colymbus aalge* PONTOPPIDAN.

Uria affinis (MARSH).

Catarractes affinis MARSH, Amer. Journ. Sci., ser 3, vol. 4, October 1872,
p. 259.

Pleistocene: Railroad cut on bank of Penobscot River, near Bangor, Maine.

Uria antiqua (MARSH)

Catarractes antiquus MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870,
p. 213.

Miocene: Tarboro, Edgecombe County, North Carolina.

Uria aalge (PONTOPPIDAN). Murre

Colymbus aalge PONTOPPIDAN, Danske Atlas, vol. 1, 1763, p. 621, pl. 26.

Modern form reported from Pleistocene (Upper San Pedro): Near Playa del Rey, California.

Genus **MANCALLA** Lucas

Mancalla LUCAS, Proc. U. S. Nat. Mus., vol. 24, art. 1245, Sept. 27, 1901,
p. 133. Type, by orig. design., *Mancalla californiensis* LUCAS.

Mancalla californiensis LUCAS

Mancalla californiensis LUCAS, Proc. U. S. Nat. Mus., vol. 24, art. 1245, Sept.
27, 1901, p. 133, figs. 1-2.

Pliocene: Third Street tunnel, Los Angeles,⁶² and San Diego formation, San Diego, California.

Genus **MIOCEPPHUS** Wetmore

Miocepphus WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 35. Type, by
orig. design., *Miocepphus mcclungi* WETMORE.

Miocepphus mcclungi WETMORE

Miocepphus mcclungi WETMORE, Journ. Morph., vol. 66, Jan. 2, 1940, p. 35,
figs. 11-14.

Miocene (zone 12, Calvert formation): Near the mouth of Parker Creek, Calvert County, Maryland.

⁶² Type locality.

Genus **SYNTHLIBORAMPHUS** Brandt

Synthliboramphus BRANDT, Bull. Sci. Acad. Imp. Sci. St. Pétersburg, vol. 2, No. 22, Mar. 19, 1837, col. 347. Type, by subs. design., *Alca antiqua* GMELIN (Gray, 1840).

Synthliboramphus antiquus (GMELIN). Ancient Murrelet

Alca antiqua GMELIN, Syst. Nat., vol. 1, pt. 2, 1789, p. 554.

Modern form reported from Pleistocene (Upper San Pedro formation): San Pedro, California.

Genus **CERORHINCA** Bonaparte

Cerorhinca BONAPARTE, Ann. Lyc. Nat. Hist. New York, vol. 2, 1828, p. 427. Type, by monotypy, *Cerorhinca occidentalis* BONAPARTE = *Alca monocerata* PALLAS.

Cerorhinca dubia MILLER

Cerorhinca dubia L. H. MILLER, Carnegie Inst. Washington, Publ. 349, August 1925, p. 115, pl. 2.

Miocene (Temblor, *Turritella ocoyana* zone): Lompoc, California.

Genus **PLIOLUNDA** Miller

Pliolunda L. H. MILLER, San Diego Soc. Nat. Hist., vol. 8, Dec. 15, 1937, p. 376. Type, by monotypy, *Pliolunda diegensis* MILLER.

Pliolunda diegensis MILLER

Pliolunda diegensis L. H. MILLER, San Diego Soc. Nat. Hist., vol. 8, Dec. 15, 1937, p. 376, 2 figs.

Upper Middle Pliocene (San Diegan formation): Market Street, near Euclid Ave., San Diego, California.

Order **COLUMBIFORMES**. SAND-GROUSE, PIGEONS, AND DOVESSuborder **COLUMBAE**. PIGEONS AND DOVESFamily **COLUMBIDAE**. PIGEONS AND DOVESGenus **COLUMBA** Linnaeus

Columba LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 162. Type, by subs. design., *Columba oenas* LINNAEUS (Vigors, 1825).

Subgenus **CHLOROENAS** Reichenbach

Chloroenas REICHENBACH, Avium Syst. Nat., 1852 (1853), p. xxv. Type, by monotypy, *Columba monilis* VIGORS = *Columba fasciata* SAY.

Columba micula (WETMORE)

Chloroenas micula WETMORE, Proc. U. S. Nat. Mus., vol. 64, art. 5, Jan. 15, 1924, p. 13, figs. 8-9.

Upper Pliocene: 14 miles southeast of Benson, Arizona.

Columba fasciata SAY. Band-tailed Pigeon

Columba fasciata SAY, in LONG, Exped. Rocky Mts., vol. 2, 1823, p. 10, note.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, and Carpinteria, California.

Genus ZENAIDURA Bonaparte

Zenaidura BONAPARTE, Consp. Avium, vol. 2, sign. II, Dec. 10, 1854 (Apr. 15, 1855), p. 84. Type, by monotypy, *Columba carolinensis* LINNAEUS.

Zenaidura macroura (LINNAEUS). Mourning Dove

Columba macroura LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 164.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida; McKittrick, and Rancho La Brea, Los Angeles, California.

Genus ECTOPISTES Swainson

Ectopistes SWAINSON, Zool. Journ., vol. 3, 1827, p. 362. Type, by subs. design., *Columba migratoria* LINNAEUS (Gray, 1840).

Ectopistes migratorius (LINNAEUS). Passenger Pigeon

Columba migratoria LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 285.

Modern form reported from Pleistocene: Cave deposits of Tennessee; Rancho La Brea, Los Angeles, California.

Order PSITTACIFORMES. PARROTLIKE BIRDS

Family PSITTACIDAE. LORIES, PARROTS, AND MACAWS

Subfamily ARINAE. PAROQUETS AND MACAWS

Genus CONUROPSIS Salvadori

Conuropsis SALVADORI, Cat. Birds Brit. Mus., vol. 20, 1891, pp. 146, 203. Type, by orig. design., *Psittacus carolinensis* LINNAEUS.

Conuropsis fratercula WETMORE

Conuropsis fratercula WETMORE, Amer. Mus. Nov., No. 211, Mar. 11, 1926, p. 3, figs. 5-6.

Middle Miocene (*Merychippus primus* zone, Sheep Creek beds): Snake Creek Quarries, Sioux County, Nebraska.

Order CUCULIFORMES. PLANTAIN-EATERS AND CUCKOOS

Suborder CUCULI. CUCKOOS, ROAD-RUNNERS, AND ANIS

Family CUCULIDAE. CUCKOOS, ROAD-RUNNERS, AND ANIS

Subfamily NEOMORPHINAE. ROAD-RUNNERS

Genus **GEOCOCCYX** Wagler

Geococcyx WAGLER, Isis von OKEN, vol. 24, heft 5, May 1831, col. 524.
Type, by monotypy, *Geococcyx variegata* WAGLER = *Saurothera californiana* LESSON.

Geococcyx californianus (LESSON). Road-runner

Saurothera californiana LESSON, Compl. Oeuvres BUFFON, vol. 6, 1829, p. 420.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, McKittrick, and Carpinteria, California.

Geococcyx conklingi HOWARD

Geococcyx conklingi HOWARD, Condor, vol. 33, No. 5, Sept. 15, 1931, p. 208, fig. 49-50.

Pleistocene: ⁹³ Conkling Cavern, ⁹⁴ and Shelter Cave, Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico.

Order STRIGIFORMES. OWLS

Family PROTOSTRIGIDAE. PROTOSTRIX ⁹⁵

Genus **PROTOSTRIX** Wetmore

Protostrix WETMORE, Amer. Mus. Nov., No. 680, Dec. 4, 1933, p. 3. Type, by orig. design., *Aquila lydekkeri* SHUFELDT.

Protostrix lydekkeri (SHUFELDT)

Aquila lydekkeri SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16, Aug. 4, 1913, p. 298.

Eocene (Bridger): Lower Cottonwood Creek, Wyoming.

Protostrix saurodosis (WETMORE)

Minerva saurodosis WETMORE, Proc. Acad. Nat. Sci. Philadelphia, vol. 73, 1921 (Apr. 6, 1922), p. 455, figs. 1-2.

Eocene (Bridger): Near Lodgepole Trail Crossing on Dry Creek, about 10 miles from Fort Bridger, Wyoming.

⁹³ Possibly of Recent period.

⁹⁴ Type locality.

⁹⁵ *Aquila antiqwa* Shufeldt, type of the genus *Minerva* Shufeldt, formerly considered an owl, proves to be a mammal. See Wetmore, Amer. Mus. Nov., No. 680, Dec. 4, 1933, pp. 1, 2.

Protostrix leptosteus (MARSH)⁶⁶

Bubo leptosteus MARSH, Amer. Journ. Sci., ser. 3, vol. 2, August 1871, p. 126.

Eocene (Bridger): Grizzly Buttes, near Fort Bridger, Wyoming.

Protostrix mimica WETMORE

Protostrix mimica WETMORE, Proc. U. S. Nat. Mus., vol. 85, Jan. 17, 1938, p. 27, figs. 4-5.

Eocene (Wasatch): South side of Ten Mile Creek, 12 miles north-west of Worland, Wyoming.

Family TYTONIDAE. BARN OWLS

Genus **TYTO** Billberg

Tyto BILLBERG, Syn. Faunae Scand., vol. 1, pt. 2, 1828, tab. A. Type, by monotypy, *Strix alba* SCOPOLI.

Tyto alba (SCOPOLI). Barn Owl

Strix alba SCOPOLI, Ann. 1, Historico-Naturalis, 1769, p. 21.

Modern form reported from Pleistocene: Vero (Stratum 3), and cavern deposits near Lecanto, Florida; Rancho La Brea, Los Angeles, and Carpinteria, California.

Family STRIGIDAE. HORNED OWLS AND ALLIES

Genus **OTUS** Pennant

Otus PENNANT, Indian Zool., 1769, p. 3. Type, by monotypy, *Otus bakamoena* PENNANT.

Otus asio (LINNAEUS). Screech Owl

Strix asio LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 92.

Modern form reported from Pleistocene: Cavern deposits near Lecanto, Florida; cave deposits of Tennessee; Potter Creek Cave, Shasta County, Carpinteria, and Rancho La Brea, Los Angeles, California.

Otus flammeolus (KAUP). Flammulated Screech Owl

Str[ix] flammeola "LICHT." KAUP, in JARDINE, Contr. Orn., 1852 (1853), p. 111.

Modern form reported from Pleistocene: Samwel Cave,⁶⁷ Shasta County, California.

⁶⁶ See Wetmore, Condor, 1937, pp. 84-85.

⁶⁷ Recorded originally as *Micropallas whitneyi*. See Miller, L. H., Trans. San Diego Soc. Nat. Hist., vol. 7, No. 19, Mar. 31, 1933, pp. 209-210.

Genus **BUBO** Duméril

Bubo DUMÉRIL, Zool. Analytique, 1806, p. 34. Type, by tautonymy, *Strix bubo* LINNÆUS.

Bubo sinclairi MILLER

Bubo sinclairi L. H. MILLER, Univ. California Publ., Bull. Dep. Geol., vol. 6, No. 16, Oct. 28, 1911, p. 393, figs. 4-5.

Pleistocene: Samwel and Potter Creek⁹⁸ caves, Shasta County, California.

Bubo virginianus (GMELIN). Great Horned Owl

Strix virginiana GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 287.

Modern form reported from Pleistocene: Fossil Lake, Oregon; Samwel Cave, Shasta County, Carpinteria, McKittrick, and Rancho La Brea, Los Angeles, California.

Genus **GLAUCIDIUM** Boie

Glaucidium BOIE, Isis von OKEN, vol. 19, heft 10, October 1826, p. 970. Type, by monotypy, *Strix passerina* LINNÆUS.

Glaucidium gnoma WAGLER. Pygmy Owl

Glaucidium gnoma WAGLER, Isis von OKEN, vol. 25, heft 3, March 1832, p. 275.

Modern form reported from Pleistocene: Samwel Cave, Shasta County, Carpinteria, and Rancho La Brea, Los Angeles, California.

Genus **SPEOTYTO** Gloger

Speotyto GLOGER, Hand- und Hilfsbuch, 1842 (pp. 1-450, 1841), p. 226. Type, by monotypy, *Strix cucicularia* MOLINA.

Speotyto cucicularia (MOLINA). Burrowing Owl

Strix Cucicularia MOLINA, Sagg. Stor. Nat. Chili, 1782, p. 263.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

Genus **STRIX** Linnaeus

Strix LINNÆUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 92. Type, by tautonymy, *Strix stridula* LINNÆUS = *Strix aluco* LINNÆUS.

Strix varia BARTON. Barred Owl

Strix varius BARTON, Fragm. Nat. Hist. Pennsylvania, 1799, p. 11.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Melbourne, and cavern deposits near Lecanto, Florida.

⁹⁸ Type locality.

Strix brea HOWARD

Strix brea HOWARD, Condor, vol. 35, No. 2, Mar. 15, 1933, p. 66, fig. 15.

Pleistocene: Rancho La Brea, Los Angeles, California.

Genus ASIO Brisson

Asio BRISSON, Orn., 1760, vol. 1, pp. 28, 477. Type, by tautonymy, *Asio*
BRISSON = *Strix otus* LINNAEUS.

Asio wilsonianus (LESSON). Long-eared Owl

Otus Wilsonianus LESSON, Traité d'Orn., livr. 2, May 8, 1830, p. 110.

Modern form reported from Pleistocene: Samwel Cave, Shasta County, McKittrick, and Carpinteria, California.⁹⁹

Asio flammeus (PONTOPPIDAN). Short-eared Owl

Strix flammea PONTOPPIDAN, Danske Atlas, vol. 1, 1763, p. 617, pl. 25.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus CRYPTOGLAUX Richmond¹⁰⁰

Cryptoglaux RICHMOND, Auk, vol. 18, No. 2, April 1901, p. 193. Type, by orig. design., *Strix tengmalmi* GMELIN = *Strix funerea* LINNAEUS.

Cryptoglaux acadica (GMELIN). Saw-whet Owl

Strix acadica GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 296.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Order PICIFORMES. JACAMARS, BARBETS, TOUCANS, AND
WOODPECKERS

Suborder PICI. WOODPECKERS

Family PICIDAE. WOODPECKERS AND PICULETS

Subfamily PICINAE. WOODPECKERS

Genus COLAPTES Vigors

Colaptes VIGORS, Trans. Linn. Soc. London, vol. 14, pt. 3, 1825, p. 457, note.
Type, by orig. design., *Cuculus auratus* LINNAEUS.

Colaptes cafer (GMELIN). Red-shafted Flicker

Picus cafer GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 431.

⁹⁹ According to a communication from L. H. Miller records formerly cited from Rancho La Brea are erroneous.

¹⁰⁰ *Cryptoglaux funerea* is recorded by Howard, Condor, 1931, p. 216, from Shelter Cave, Dona Ana County, New Mexico, in deposits that may be of late Pleistocene or early Recent age.

Modern form reported from Pleistocene: Samwel and Potter Creek caves, Shasta County, Hawver Cave, Eldorado County, McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.

Genus CEOPHLOEUS Cabanis

Ceophloeus CABANIS, Journ. für Orn., vol. 12, No. 5, May 1862, p. 176. Type, by orig. design., *Picus lineatus* LINNAEUS.

Subgenus PHLOEOTOMUS Cabanis and Heine

Phloeotomus CABANIS AND HEINE, Mus. Hein., vol. 4, pt. 2, sign. 13, July 11, 1863, p. 102. Type, by orig. design., *Picus pileatus* LINNAEUS.

***Ceophloeus pileatus* (LINNAEUS). Pileated Woodpecker**

Picus pileatus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 113.

Modern form reported from Pleistocene: Cave deposits of Tennessee; Rancho La Brea, Los Angeles, California.

Genus ASYNDESMUS Coues

Asyndesmus COUES, Proc. Acad. Nat. Sci. Philadelphia, vol. 17, No. 1, January-March (June 11), 1866, p. 55. Type, by orig. design., *Picus torquatus* WILSON = *Picus lewis* GRAY.

***Asyndesmus lewis* (GRAY). Lewis's Woodpecker**

Picus Lewis "DRAPIEZ" GRAY, Gen. Birds, vol. 3, 1849, app., p. 22.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Order PASSERIFORMES. PERCHING BIRDS

Suborder PASSERES. SONG BIRDS

Family ALAUDIDAE. LARKS

Genus OTOCORIS Bonaparte

Otocoris BONAPARTE, Nuovi Ann. Sci. Nat. (Bologna), vol. 2, 1838, p. 407. Type, by monotypy, *Phileremos cornutus* BONAPARTE = *Alauda cornuta* WILSON = *Alauda alpestris* LINNAEUS.

***Otocoris alpestris* (LINNAEUS). Horned Lark**

Alauda alpestris LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 166.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

Family PALAEOSPIZIDAE. PALAEOSPIZA

Genus PALAEOSPIZA Allen

Palaeospiza ALLEN, Bull. Geol. and Geogr. Surv. Terr., vol. 4, No. 2, May 3, 1878, p. 443. Type, by monotypy, *Palaeospiza bella* ALLEN.

Palaeospiza bella ALLEN

Palaeospiza bella ALLEN, Bull. Geol. and Geogr. Surv. Terr., vol. 4, No. 2, May 3, 1878, p. 443, pl. 1, figs. 1-2.

Upper Miocene (Florissant lake beds): Florissant, Colorado.

Family HIRUNDINIDAE. SWALLOWS

Genus PETROCHELIDON Cabanis

Petrochelidon CABANIS, Mus. Hein., vol. 1, October 1851, p. 47. Type, by subs. design., *Hirundo melanogaster* SWAINSON (Gray, 1855).

Petrochelidon albifrons (RAFINESQUE). Cliff Swallow

Hirundo albifrons RAFINESQUE, Kentucky Gazette, n. s., vol. 1, No. 7, Feb. 14, 1822, p. 3.

Modern form reported from Pleistocene: McKittrick, California.

Family CORVIDAE. JAYS, MAGPIES, AND CROWS

Subfamily GARRULINAE. JAYS AND MAGPIES

Genus CYANOCITTA Strickland

Cyanocitta STRICKLAND, Ann. Mag. Nat. Hist., ser. 1, vol. 15, No. 98, April 1845, p. 261. Type, by orig. design., *Corvus cristatus* LINNAEUS.

Cyanocitta stelleri (GMELIN). Steller's Jay

Corvus stelleri GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 370.

Modern form reported from Pleistocene: Samwel Cave, Shasta County, Hawver Cave, Eldorado County, Rancho La Brea, Los Angeles, and Carpinteria, California.

Genus APHELOCOMA Cabanis

Aphelocoma CABANIS, Mus. Hein., vol. 1, sign. 28, Oct. 15, 1851, p. 221 (note). Type, by subs. design., *Garrulus californicus* VIGORS (Baird, 1858).

Subgenus APHELOCOMA Cabanis

Aphelocoma californica (VIGORS). California Jay

Garrulus Californicus VIGORS, in Zool. Beechey's Voy., 1839, p. 21, pl. 5.

Modern form reported from Pleistocene: McKittrick, Carpinteria, and Rancho La Brea, Los Angeles, California.

Genus **PICA** Brisson

Pica BRISSON, Orn., 1760, vol. 1, p. 30; vol. 2, p. 35. Type, by tautonymy,
Pica BRISSON = *Corvus pica* LINNAEUS.

Pica nutallii (AUDUBON). Yellow-billed Magpie

Corvus nutallii AUDUBON, Birds Amer. (folio), vol. 4, 1836 (1837?), pl.
362, fig. 1.

Modern form reported from Pleistocene: McKittrick, Carpinteria,
and Rancho La Brea, Los Angeles, California.

Subfamily **CORVINAE**. CROWS AND RAVENSGenus **CORVUS** Linnaeus

Corvus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 105. Type, by subs.
design., *Corvus corax* LINNAEUS (Gray, 1840).

Corvus corax LINNAEUS. Raven

Corvus corax LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 105.

Modern form reported from Pleistocene: Hawver Cave, Eldorado
County, Carpinteria, McKittrick, Rancho La Brea, Los Angeles, and
Upper San Pedro, near Playa del Rey, California.

Corvus cryptoleucus COUCH. White-necked Raven

Corvus cryptoleucus COUCH, Proc. Acad. Nat. Sci. Philadelphia, vol. 7, No.
2, May 20, 1854, p. 66.

Modern form reported from Pleistocene: McKittrick and Rancho
La Brea, Los Angeles, California.

Corvus shufeldti SHARPE

Corvus shufeldti SHARPE, Hand-list Gen. Spec. Birds, vol. 5, 1909, p. 599.

Pleistocene: Fossil Lake, Oregon.

Corvus brachyrhynchos BREHM. Crow

Corvus brachyrhynchos C. L. BREHM, Beitr. Vögelkunde, vol. 2, 1822, p. 56.

Modern form reported from Pleistocene: Seminole Field, Pinellas
County, Florida; Potter Creek Cave, Shasta County, Carpinteria and
Rancho La Brea, Los Angeles, California.

Corvus caurinus BAIRD. Northwestern Crow¹

Corvus caurinus BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. and
Surv. R. R. Pac., vol. 9, 1858, pp. xiii, 559, 569.

Modern form reported from Pleistocene: Carpinteria, and Rancho
La Brea, Los Angeles, California.

¹ Although currently listed as a subspecies of *Corvus brachyrhynchos*, this
bird in my opinion is not of that species, being more closely allied to the fish
crow, *Corvus ossifragus*.

Corvus ossifragus WILSON. Fish Crow

Corvus ossifragus WILSON, Amer. Orn., vol. 5, 1812, p. 27, pl. 37, fig. 2.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus CYANOCEPHALUS Bonaparte

Cyanocephalus BONAPARTE, Osserv. Stato Zool. Eur., 1842, p. 17. Type, by monotypy, *Gymnorhinus cyanocephalus* WIED.

Cyanocephalus cyanocephalus (WIED). Piñon Jay

Gymnorhinus cyanocephalus WIED, Reise Nord-Amer., vol. 2, 1841, p. 22.

Modern form reported from Pleistocene: Conkling Cavern, Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico.

Family SITTIDAE. NUTHATCHES**Subfamily SITTINAE. TYPICAL NUTHATCHES****Genus SITTA Linnaeus**

Sitta LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 115. Type, by monotypy, *Sitta europaea* LINNAEUS.

Sitta canadensis LINNAEUS. Red-breasted Nuthatch

Sitta canadensis LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 177.

Modern form reported from Pleistocene: Carpinteria, California.

Sitta pygmaea VIGORS. Pygmy Nuthatch

Sitta pygmaea VIGORS, in Zool. Beechey's Voy., 1839, p. 25, pl. 4, fig. 2.

Modern form reported from Pleistocene: Carpinteria, California.

Family CHAMAEIDAE. WREN-TITS**Genus CHAMAEA Gambel**

Chamaea GAMBEL, Proc. Acad. Nat. Sci. Philadelphia, vol. 3, No. 7, January-February (May 7), 1847, p. 154. Type, by orig. design., *Parus fasciatus* GAMBEL.

Chamaea fasciata (GAMBEL). Wren-tit

Parus fasciatus GAMBEL, Proc. Acad. Nat. Sci. Philadelphia, vol. 2, No. 10, July-August (Dec. 5), 1845, p. 265.

Modern form reported from Pleistocene: Carpinteria, California.

Family MIMIDAE. THRASHERS AND MOCKINGBIRDS

Genus **TOXOSTOMA** Wagler

Toxostoma WAGLER, Isis von OKEN, vol. 24, heft 5 (May) 1831, col. 528.

Type, by monotypy, *Toxostoma vetula* WAGLER = *Orpheus curvirostris* SWAINSON.

Toxostoma bendirei (COUES). **Bendire's Thrasher**

Harporhynchus bendirei COUES, Amer. Nat., vol. 7, No. 6, June 1873, p. 330.

Modern form reported from Pleistocene: McKittrick, California.

Toxostoma redivivum (GAMBEL). **California Thrasher**

Harpes rediviva GAMBEL, Proc. Acad. Nat. Sci. Philadelphia, vol. 2, No. 10, July-August (Dec. 5), 1845, p. 264.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus **OREOSCOPTES** Baird

Oreoscoptes BAIRD, in BAIRD, CASSIN, AND LAWRENCE, Rep. Expl. Surv.

R. R. Pac., vol. 9, 1858, pp. xix, xxxv. Type, by monotypy, *Orpheus montanus* TOWNSEND.

Oreoscoptes montanus (TOWNSEND). **Sage Thrasher**

Orpheus montanus TOWNSEND, Journ. Acad. Nat. Sci. Philadelphia, vol. 7, pt. 2, Nov. 21, 1837, p. 192.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, California.

Family TURDIDAE. THRUSHES

Genus **TURDUS** Linnaeus

Turdus LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 168. Type, by subs. design., *Turdus merula* LINNAEUS (Selby, 1825).

Turdus migratorius LINNAEUS. **Robin**

Turdus migratorius LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 292.

Modern form reported from Pleistocene: Carpinteria, California.

Genus **SIALIA** Swainson

Sialia SWAINSON, Phil. Mag., n. s., vol. 1, No. 5, May 1827, p. 369. Type, by monotypy, *Sialia azurea* SWAINSON = *Motacilla sialis* LINNAEUS.

Sialia mexicana SWAINSON. **Mexican Bluebird**

Sialia mexicana SWAINSON, Fauna Bor.-Amer., vol. 2, 1831, p. 202.

Modern form reported from Pleistocene: Carpinteria, California.

Family BOMBYCILLIDAE. WAXWINGS

Genus BOMBYCILLA Vieillot

Bombycilla VIEILLOT, Oiseaux Amér. Sept., vol. 1, 1807 (1808), p. 88.
Type, by monotypy, *Bombycilla cedrorum* VIEILLOT.

Bombycilla cedrorum VIEILLOT. Cedar Waxwing

Bombycilla cedrorum VIEILLOT, Oiseaux Amér. Sept., vol. 1, 1807 (1808),
p. 88, pl. 57.

Modern form reported from Pleistocene: Carpinteria and Rancho La Brea, Los Angeles, California.

Family LANIIDAE. SHRIKES

Subfamily LANIINAE. SHRIKES

Genus LANIUS Linnaeus

Lanius LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 93. Type, by subs.
design., *Lanius excubitor* LINNAEUS (Swainson, 1824).

Lanius ludovicianus LINNAEUS. Loggerhead Shrike

Lanius ludovicianus LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 134.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

Family ICTERIDAE. BLACKBIRDS AND TROUPIALS

Genus STURNELLA Vieillot

Sturnella VIEILLOT, Analyse, 1816, p. 34. Type, by monotypy, Stourne, ou
Merle à fer-à-cheval BUFFON = *Alda magna* LINNAEUS.

Sturnella neglecta AUDUBON. Western Meadowlark

Sturnella neglecta AUDUBON, Birds Amer., octavo ed., vol. 7, 1844, p. 339,
pl. 489.

Modern form reported from Pleistocene: Carpinteria, Rancho La Brea, Los Angeles, and Upper San Pedro, San Pedro, California.

Genus AGELAIUS Vieillot

Agelaius VIEILLOT, Analyse, 1816, p. 33. Type, by subs. design., Troupiale
commandeur BUFFON = *Oriolus phoeniceus* LINNAEUS (Gray, 1840).

Agelaius phoeniceus (LINNAEUS). Red-winged Blackbird

Oriolus phoeniceus LINNAEUS, Syst. Nat., 12th ed., vol. 1, 1766, p. 161.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus **EUPHAGUS** Cassin²

Euphagus CASSIN, Proc. Acad. Nat. Sci. Philadelphia, vol. 18, No. 5, November-December, 1866 (July 20, 1867), p. 413. Type, by monotypy, *Psarocolius cyanocephalus* WAGLER.

Euphagus affinis (SHUFELDT)

Scolecophagus affinis SHUFELDT, Journ. Acad. Nat. Sci. Philadelphia, ser. 2, vol. 9, sig. 53, Oct. 20, 1892, p. 418, pl. 15, fig. 10.

Pleistocene: Fossil Lake, Oregon.

Euphagus magnirostris MILLER

Euphagus magnirostris A. H. MILLER, Univ. California Publ., Bull. Dep. Geol. Sci., vol. 19, No. 1, Dec. 21, 1929, p. 14, pl. 1, figs. *f, h*.

Pleistocene: Rancho La Brea, Los Angeles, California.

Genus **CASSIDIX** Lesson

Cassidix LESSON, Traité d'Orn., livr. 6, Feb. 1, 1831, p. 433. Type, by subs. design., *Cassidix mexicanus* LESSON = *Corvus Mexicanus* GMELIN (Gray, 1840).

Cassidix mexicanus (GMELIN). **Great-tailed Grackle**

Corvus mexicanus GMELIN, Syst. Nat., vol. 1, pt. 1, 1788, p. 375.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus **QUISCALUS** Vieillot

Quiscalus VIEILLOT, Analyse, 1816, p. 36. Type, by subs. design., *Gracula quiscula* LINNAEUS (Gray, 1840).

Quiscalus quiscula (LINNAEUS). **Purple Grackle**

Gracula quiscula LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 109.

Modern form reported from Pleistocene: Seminole Field, Pinellas County, Florida.

Genus **PYELORHAMPHUS** Miller

Pyelorhamphus A. H. MILLER, Auk, vol. 49, No. 1, January 1932, p. 39. Type, by orig. design., *Pyelorhamphus molothroides* MILLER.

Pyelorhamphus molothroides MILLER

Pyelorhamphus molothroides A. H. MILLER, Auk, vol. 49, No. 1, January 1932, p. 39, pl. 4.

² *Euphagus cyanocephalus* reported by L. H. Miller from the Pleistocene of Hawver Cave, Eldorado County, California (Univ. California Publ. Geol., vol. 6, Oct. 28, 1911, pp. 399, 400), was subsequently questioned by the same author (Condor, 1921, p. 130). In recent correspondence A. H. Miller writes that he has examined the material reported on from this cave and does not find this species represented. It is therefore omitted from the list.

Quaternary (Pleistocene?):³ Shelter Cave, Pyramid Peak, Organ Mountains, Dona Ana County, New Mexico.

Family FRINGILLIDAE. GROSBEAKS, FINCHES, AND BUNTINGS

Subfamily CARDUELINAE. PURPLE FINCHES, GOLDFINCHES,
AND ALLIES

Genus CARPODACUS Kaup

Carpodacus KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, p. 161. Type, by subs. design., *Loxia rosea* PALLAS (Gray, 1842).

Carpodacus mexicanus (MÜLLER). House Finch

Fringilla mexicana MÜLLER, Syst. Nat., Suppl., 1776, p. 165.

Modern form reported from Pleistocene: McKittrick, California.

Genus SPINUS Koch

Spinus KOCH, Syst. Baier. Zool., 1816, p. 233. Type, by tautonymy, *Fringilla spinus* LINNAEUS.

Spinus pinus (WILSON). Pine Siskin

Fringilla pinus WILSON, Amer. Orn., vol. 2, 1810, p. 133, pl. 17, fig. 1.

Modern form reported from Pleistocene: Carpinteria, and Rancho La Brea, Los Angeles, California.

Spinus tristis (LINNAEUS). Goldfinch

Fringilla tristis LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 181.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus LOXIA Linnaeus

Loxia LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 171. Type, by subs. design., *Loxia curvirostra* LINNAEUS (Gray, 1840).

Loxia curvirostra LINNAEUS. Red Crossbill

Loxia Curvirostra LINNAEUS, Syst. Nat., 10th ed., vol. 1, 1758, p. 171.

Modern form reported from Pleistocene: Carpinteria, California.

³ The deposits in which this extinct species was found are possibly Recent.

Subfamily EMBERIZINAE. BUNTINGS

Genus PALAEOSTRUTHUS Wetmore

Palaeostruthus WETMORE, Bull. Mus. Comp. Zoöl., vol. 67, May 1925, p. 192.
Type, by orig. design., *Palaeospiza hatcheri* SHUFELDT.

Palaeostruthus hatcheri (SHUFELDT)

Palaeospiza hatcheri SHUFELDT, Bull. Amer. Mus. Nat. Hist., vol. 32, art. 16,
Aug. 4, 1913, p. 301, pl. 55, fig. 28.

Miocene: Near Long Island, Kansas.

Genus PIPILO Vieillot

Pipilo VIEILLOT, Analyse, 1816, p. 32. Type, by monotypy, Pinson aux yeux
rouges BUFFON = *Fringilla erythrophthalma* LINNAEUS.

Pipilo maculatus SWAINSON. Spotted Towhee

Pipilo maculata SWAINSON, Phil. Mag., n. s., vol. 1, 1827, p. 434.

Modern form reported from Pleistocene: Carpinteria, California.

Pipilo fuscus SWAINSON. Brown Towhee

Pipilo fusca SWAINSON, Phil. Mag., n. s., vol. 1, 1827, p. 434.

Modern form reported from Pleistocene: Carpinteria, California.

Genus AMPHISPIZA Coues

Amphispiza COUES, Birds Northwest, 1874, p. 234. Type, by orig. design.,
Emberiza bilineata CASSIN.

Amphispiza bilineata (CASSIN). Black-throated Sparrow

Emberiza bilineata CASSIN, Proc. Acad. Nat. Sci. Philadelphia, vol. 5, No.
5, September-October (Dec. 7), 1850, p. 104, pl. 3.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Amphispiza belli (CASSIN). Bell's Sparrow

Emberiza Belli CASSIN, Proc. Acad. Nat. Sci. Philadelphia, vol. 5, No. 5,
September-October (Dec. 7), 1850, p. 104, pl. 4.

Modern form reported from Pleistocene: McKittrick and Rancho La Brea, Los Angeles, California.

Genus SPIZELLA Bonaparte

Spizella BONAPARTE, Giornale Arcadico, vol. 52, 1832, p. 205. Type, by monotypy, *Fringilla pusilla* WILSON.

Spizella passerina (BECHSTEIN), Chipping Sparrow

Fringilla passerina BECHSTEIN, in LATHAM, Allgem. Ueb. Vögel, vol. 3,
pt. 2, 1798, p. 544, pl. 120, fig. 1.

Modern form reported from Pleistocene: Rancho La Brea, Los Angeles, California.

Genus **PASSERELLA** Swainson

Passerella SWAINSON, Class. Birds, vol. 2, July 1, 1837, p. 288. Type, by monotypy, *Fringilla iliaca* MERREM.

Passerella iliaca (MERREM). Fox Sparrow

Fringilla iliaca MERREM, Avium Rar. Icones et Descrip., vol. 2, 1786, p. 37, pl. 10.

Modern form reported from Pleistocene: Carpinteria, California.

INCERTAE SEDIS

Genus **CIMOLOPTERYX** Marsh⁴

Cimolopteryx MARSH, Amer. Journ. Sci., ser. 3, vol. 38, 1889, p. 83, footnote. Type, by monotypy, *Cimolopteryx rarus* MARSH.

Cimolopteryx rarus MARSH

Cimolopteryx rarus MARSH, Amer. Journ. Sci., ser. 3, vol. 38, July 1889, p. 83, footnote.

Upper Cretaceous (Lance): Niobrara County, Wyoming.

Cimolopteryx retusus MARSH

Cimolopteryx retusus MARSH, Amer. Journ. Sci., ser. 3, vol. 44, August 1892, p. 175.

Upper Cretaceous (Lance): Niobrara County, Wyoming.

Genus **EOPTERYX** Meyer

Eopteryx MEYER, Ber. Senckenberg. Nat. Ges. Frankfurt am Main, 1887, p. 14. Type, by monotypy, *Eopteryx mississippiensis* MEYER.

Eopteryx mississippiensis MEYER⁵

Eopteryx mississippiensis MEYER, Ber. Senckenberg. Nat. Ges. Frankfurt am Main, 1887, p. 14, pl. 2, figs. 22a-22c.

Eocene: Jackson, Mississippi.

(Genus uncertain)

Falco falconellus SHUFELDT⁶

Falco falconella SHUFELDT, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, p. 40, pl. 15, figs. 139-143.

Eocene (Bridger): Dry Creek?, Wyoming.

⁴Lambrecht, Handb. Palaeorn., 1933, pp. 586-587, lists this genus at the end of the Ichthyornithiformes. He suggests that the two species belong in separate genera, possibly in different families. See also Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 11, 12, and 76.

⁵Described from a fragmentary vertebra.

⁶Not a falcon; relationships doubtful. See, Wetmore, A., Proc. U. S. Nat. Mus., vol. 84, Nov. 3, 1936, pp. 77-78.

Genus **FONTINALIS** Lesquereux

Fontinalis LESQUEREUX, Rep. U. S. Geol. Surv. Terr., vol. 8, 1883, p. 135.
Type, by monotypy, *Fontinalis pristina* LESQUEREUX.

Fontinalis pristina LESQUEREUX⁷

Fontinalis pristina LESQUEREUX, Rep. U. S. Geol. Surv. Terr., vol. 8, 1883, p. 135, pl. 21, fig. 9.

Upper Miocene (Florissant lake beds): Florissant, Colorado.

Genus **HEBE** Shufeldt

Hebe SHUFELDT, Journ. Geol., vol. 21, October-November (Nov. 1), 1913, p. 644. Type, by monotypy, *Hebe schucherti* SHUFELDT.

Hebe schucherti SHUFELDT⁸

Hebe schucherti SHUFELDT, Journ. Geol., vol. 21, October-November (Nov. 1), 1913, p. 644, fig. 10, a, b.

Eocene:° Five miles west of Green River, Wyoming.

Genus **IGNOTORNIS** Mehl

Ignotornis MEHL, Amer. Journ. Sci., ser. 5, vol. 21, May 1931, p. 443. Type, by monotypy, *Ignotornis mcconnelli* MEHL.

Ignotornis mcconnelli MEHL¹⁰

Ignotornis mcconnelli MEHL, Amer. Journ. Sci., ser. 5, vol. 21, May 1931, p. 444, fig. 1.

Cretaceous (Dakota Sandstone): about 1½ miles northwest of Golden, Colorado.

Genus **LAOPTERYX** Marsh

Laopteryx MARSH, Amer. Journ. Sci., ser. 3, vol. 21, April 1881, p. 341. Type, by monotypy, *Laopteryx priscus* MARSH.

Laopteryx priscus MARSH¹¹

Laopteryx priscus MARSH, Amer. Journ. Sci., ser. 3, vol. 21, April 1881, p. 341.

⁷ Type a fragment of a fossil feather, described originally as a species of moss. See Knowlton, Proc. U. S. Nat. Mus., vol. 51, Nov. 24, 1916, p. 245, and Wetmore, Bull. Mus. Comp. Zoöl., vol. 67, May 1925, p. 184.

⁸ Said to be a passeriform bird with four notches in the posterior border of the sternum; of uncertain affinity. *Hebe* Shufeldt 1913, is preoccupied by *Hebe* Risso 1826 (applied to a genus of crustaceans) so that should the form here under consideration be definitely identified it may require a new generic appellation. There is no necessity for action at this time in view of its uncertain relationships.

⁹ From data furnished by Dr. M. R. Thorpe, of the Peabody Museum, Yale University.

¹⁰ Described from fossil impressions of four-toed footprints, apparently with webs connecting the three anterior toes.

¹¹ J. D. Dana, Amer. Journ. Sci., ser. 5, vol. 12, July 1926, pp. 3, 4, considers the avian affinity of this supposed species as not definitely certain.

Upper Jurassic (Morrison): Quarry 9, Como Bluff, southern Wyoming.

Genus **LAORNIS** Marsh

Laornis MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 206. Type, by monotypy, *Laornis edwardsianus* MARSH.

Laornis edwardsianus MARSH¹²

Laornis edwardsianus MARSH, Amer. Journ. Sci., ser. 2, vol. 49, March 1870, p. 206.

Eocene (Hornerstown): near Birmingham, New Jersey.

Genus **PALAEONORNIS** Emmons

Palaeonornis EMMONS, Amer. Geol., pt. 6, 1857, p. 148. Type, by monotypy, *Palaeonornis struthionoides* EMMONS.

Palaeonornis struthionoides EMMONS¹³

Palaeonornis Struthionoides EMMONS, Amer. Geol., pt. 6, 1857, p. 148, fig. 114.

? Triassic: Anson County, North Carolina.

Genus **UINTORNIS** Marsh

Uintornis MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 259. Type, by monotypy, *Uintornis lucaris* MARSH.

Uintornis lucaris MARSH¹⁴

Uintornis lucaris MARSH, Amer. Journ. Sci., ser. 3, vol. 4, October 1872, p. 259.

Eocene (Bridger): near Henry's Fork, Wyoming.

Genus **YALAVIS** Shufeldt

Yalavis SHUFELDT, Journ. Geol., vol. 21, October-November (Nov. 1), 1913, p. 649. Type, by monotypy, *Yalavis tenuipes* SHUFELDT.

Yalavis tenuipes SHUFELDT¹⁵

Yalavis tenuipes SHUFELDT, Journ. Geol., vol. 21, October-November (Nov. 1), 1913, p. 649, figs. 11c and 12c.

Geologic age and locality of occurrence not known.

¹² Doubtfully related to Anseriformes. Lambrecht, Handb. Palaeorn., 1933, pp. 526-527, has placed it uncertainly after the Aramididae.

¹³ Affinity doubtful: possibly not avian.

¹⁴ According to Shufeldt, Trans. Connecticut Acad. Arts Sci., vol. 19, February 1915, pp. 50-52, 77, pl. 6, fig. 42, this species is of uncertain affinity, and is not a woodpecker as suggested by Marsh.

¹⁵ Said in the original description to be a passeriform bird of uncertain affinity.