SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
Bulletin 62

CATALOGUE OF THE TYPE-SPECIMENS OF MAMMALS IN THE UNITED STATES NATIONAL MUSEUM, INCLUDING THE BIOLOGICAL SURVEY COLLECTION

BY

MARCUS WARD LYON, Jr.
Assistant Curator, Division of Mammals, U. S. National Museum

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WILFRED HUDSON OSGOOD
Assistant, Bureau of Biological Survey, U. S. Department of Agriculture

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ADVERTISEMEXT.

The scientific publications of the National Museum consist of two series—the *Bulletin* and the *Proceedings*.

The *Bulletin*, publication of which was begun in 1875, is a series of more or less extensive works intended to illustrate the collections of the U. S. National Museum and, with the exception noted below, is issued separately. These bulletins are monographic in scope and are devoted principally to the discussion of large zoological and botanical groups, faunas and floras, bibliographies of eminent naturalists, reports of expeditions, etc. They are usually of octavo size, although a quarto form, known as the Special Bulletin, has been adopted in a few instances in which a larger page was deemed indispensable.

This work forms No. 62 of the Bulletin series.

Since 1903 the volumes of the series known as "Contributions from the National Herbarium," and containing papers relating to the botanical collections of the Museum, have been published as bulletins.

The *Proceedings*, the first volume of which was issued in 1878, are intended as a medium of publication of brief original papers based on the collections of the National Museum, and setting forth newly acquired facts in biology, anthropology, and geology derived therefrom, or containing descriptions of new forms and revisions of limited groups. A volume is issued annually, or oftener, for distribution to libraries and scientific establishments, and in view of the importance of the more prompt dissemination of new facts a limited edition of each paper is printed in pamphlet form in advance.

Richard Rathbun,

Assistant Secretary, Smithsonian Institution,

In Charge of the United States National Museum.

PREFACE.

This bulletin is the first of a series of catalogues of type-specimens of recent animals which the U. S. National Museum intends to publish as rapidly as circumstances will permit. The desirability of formally designating a particular specimen to represent a species or subspecies is an idea of comparatively recent origin; and although it has gained general acceptance among zoologists, there are still some who doubt its importance. Though there are perhaps some valid arguments against the practice on theoretical grounds, there can be no doubt that it puts an end to uncertainties with which earlier systematists were often confronted.

The practice was not in vogue generally when the National Museum was established, and many specimens which according to present views ought to have been specially treasured were not cared for more than others, while the methods of preparing skins of mammals were at the same time very crude. It has resulted from these circumstances that the type-specimens of species described many years ago are not in as good condition as they should be. Considering the earlier point of view, however, and the vicissitudes through which the collections have passed in the course of a half century, it is fortunate, I think, that the type-specimens have not fared worse. The type-specimens of the more recently described species of mammals, both in the regular series and in the collection of the Biological Survey, are with few exceptions perfect or nearly so and very accurately and thoroughly labeled.

The National Museum has in recent years fostered the depositing of type-specimens of species of animals of all classes, and in this has had the hearty cooperation of numerous American zoologists who consider it a matter of importance to have these standards, as they may be called, permanently preserved in the national collection.

Frederick W. True,  
Head Curator Department of Biology.
INTRODUCTION.

This catalogue includes all type-specimens of mammals known to be in the U. S. National Museum on July 1, 1908. It embraces, besides the general collection in the Division of Mammals, the large collection of American mammals made by the Bureau of Biological Survey of the U. S. Department of Agriculture. The latter collection is kept in a special hall of the Museum and is under the direct charge of the chief of the Biological Survey. In the preparation of this catalogue, one author has represented the Division of Mammals and the other the Biological Survey, and, though each is responsible only for the facts concerning the types in the collection with which he is officially connected, the entire manuscript and proof have passed through the hands of both authors. The joint authorship has had correspondingly the joint direction of Dr. F. W. True, head curator of biology and curator of mammals, U. S. National Museum, and Dr. C. Hart Merriam, chief of the Bureau of Biological Survey, U. S. Department of Agriculture. Dr. True has in addition contributed all the facts concerning the types of cetaceans and has read the entire proof. It should be said also that this catalogue was begun in the Division of Mammals eight years ago, under the direction of Mr. Gerrit S. Miller, jr., assistant curator of mammals.

The list includes types (or holotypes) and cotypes, and lectotypes and chirotypes, as defined by Thomas (Proc. Zool. Soc. London, 1893, pp. 241-242) and Schuchert (Bull. U. S. Nat. Mus., 53, Pt. 1, pp. 7-18). Appended to the main list of the types now in the Museum is a smaller one, comprising those which, according to the records, should be in the national collection, but which have been lost or destroyed by various accidents.

The name of the species, or subspecies, is given as it occurs in the original description, followed by a reference to the place and date of its publication. This is followed, when necessary owing to changes made by subsequent authors, by the name now currently used for the species or subspecies. The current name is preceded by the sign of equality (=) and followed by a citation of the authority for its use, if such has been found.

The citations are followed by: (1) Museum catalogue number. (2) Nature of specimen, whether skin and skull, or skull only, or skin only,
or skeleton, or specimen preserved in alcohol. (3) Age and sex of specimen; omission of the sex indicates that it is not known. (4) Date when collected; omission of this date indicates that it is not known. (5) Name of person by whom collected, or from whom received, or from whom purchased, if collector is not known. (6) Original number of specimen, usually the number in the collector's field catalogue. In the case of certain of the Biological Survey specimens, the original number is followed by the letter x, which indicates that the specimen is recorded in the "X Catalogue" of the Biological Survey, a book in which is catalogued material received from miscellaneous sources—that is, specimens purchased, acquired by exchange, or received from or collected by persons who are not on the regular staff of the Biological Survey. (7) Date when specimen was catalogued, except in the case of Biological Survey specimens, most of which were catalogued shortly after the date of collection. In the case of many of the National Museum specimens, the date when catalogued gives the only clue as to the probable time when collected.

The condition of the specimen at the present time is then briefly stated.**

Finally, the reasons are given for considering any specimen a type, unless it has been clearly designated as a type by number by the author in the original description. In many early descriptions it is difficult to determine whether any individual specimen has formed the principal basis of the description. In cases where no type was indicated by the author, preference has been given to the specimens which have been figured, or to those which seem to be more minutely described, or measured, than others of the original series. The views of subsequent writers also have been considered in the selection of the type. In some cases it was necessary to choose a number of specimens as cotypes of a species. In a few cases the evidence for considering specimens types is very unsatisfactory. However, even if not types in the present meaning of the word, they are at least old, original specimens of much historic value. These difficulties relate mainly to older specimens in the collection contained in the Division of Mammals.

Since a single type-specimen sometimes has more than one catalogue number, a few words about cataloguing specimens seem desirable. Two systems have been used: First, a "double entry" system, in which all the skulls were entered in one catalogue, and all skins and alcoholics in another; and in the usual case of a single individual represented by both skin and skull, cross references are given in each catalogue. The number of a specimen is indicated by a fraction; thus, No. \( \frac{1163}{2048} \) on a

**A few of the type-specimens are among material that has been lent to specialists for study and have been described while in their hands. Some of these have not yet been returned and it is obviously impossible to make any statement as to their condition, but on the whole it is presumed to be good.
INTRODUCTION.

Skin means skin No. 1163, to which belongs skull No. 2045; ½ skull means skull No. 2045, to which belongs skin No. 1163. This cumbersome system was abandoned at No. 50000 and a "single entry" system was adopted in which each individual is given one number regardless whether preserved as a skin, skull, or alcoholic. Beginning with No. 500001, therefore, there are no separate entries for skins and skulls, one number being used for the entire specimen, except in the case of skins and skeletons of the same individual, when the skeleton usually bears a number in the catalogue of the Division of Comparative Anatomy.

So far as possible the type specimens, with exception of the cetaceans, have been taken out of the general study series and placed in separate storage cases, plainly labeled on the outside "Types." A few types, however, are on exhibition among the mounted mammals, or mounted skeletons.

The orders, families, and genera are arranged in the usual sequence, beginning with the marsupials and ending with the primates. A few subgenera, however, such as Micromys, Arvicola, Alticola, Ptychmys, Puma, Lycodonturus, have recently been raised to generic rank by certain authors in papers in which the natural groups containing such genera are not completely revised. Owing to this lack of general revision as well as the absence of such genera in the current checklists, it has not been deemed advisable to make use of them in this catalogue. It should be observed that the names are given in this list just as they occur in the original descriptions. Frequently the generic term in common use when the species was first described is quite different from the generic designation of today, so that it looks a little peculiar to see such names as Caricus clarus, Dorcatophus croqui, etc., arranged under the genus Odocolleus; or Elasmomysturus bairdii, under the generic name Tapirella, etc. In such cases, however, the specific name is placed with the current generic designation, but in less conspicuous type than that of the original name, immediately following the original citation. Under each genus, the species and subspecies are arranged alphabetically. A complete index will be found at the end of the list.

Marcus Ward Lyon, Jr.
Wilfred Hudson Osgood.
ERRATA.

Page 35, line 25, for urizab read urizabe.

Page 48, line 13 from bottom, for panamintinus read panamintinus.


Page 156, after line 22, insert genus Lophuromys and entire account of Mus aquilus True, p. 144.

Page 231, line 13 from bottom, for horvitas read horvixus.

Page 234, line 4 from bottom, for Neurotrichus read Neurotrichus.
Order MARSUPIALIA.

Family DIDELPHYIDÆ.

Genus DIDELPHIS.


Well-made skin in good condition; skull perfect, except for absence of three right lower premolars.


Well-made skin in good condition; skull perfect, except for absence of one right upper premolar, two left lower premolars, and two lower incisors.


Well-made skin in good condition; skull perfect, except for absence of two left upper and one left lower premolars, and four upper incisors.

45336—08—1*
Didelphis marsupialis texensis Allen. Biological Survey collection.


Didelphis mes-americanæ texensis (Allen). See Allen, op. cit., XVI, p. 256, August 18, 1892.


Well-made skin in good condition; skull perfect, except for absence of occipital condyles.

Didelphis yucatanensis Allen. Biological Survey collection.


Well-made skin in good condition, with a small bare spot on right shoulder; skull perfect, except for absence of one right upper premolar and three left lower premolars.

Genus MARMOSA.

Marmosa insularis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for slightly broken auditory bulla and small perforation in brain case.

Marmosa murina mexicana Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Marmosa oaxacæ Merriam. Biological Survey collection.


Well-made skin in good condition, except for a bare spot on the rump; skull perfect.
Genus METACHIRUS.

Metachirus fuscogriseus pallidus Allen. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Order EDENTATA.

Family DASYPODIDÆ.

Genus CABASSOUS.

Tatoua (Ziphila) centralis Miller.


Formerly mounted; now a well-made skin in good condition, nine or ten scales missing from carapace. Skull nearly perfect; somewhat injured about the bulge. All the teeth in upper jaws lost except first left premolar; all in the lower jaw present except the first left premolar.

Genus TATU.

Tatu novemcinctum texanum Bailey. Biological Survey collection.

North Amer. Fauna, No. 25, pp. 52-56, figs. 5-7, October 24, 1905.


Well-made skin in good condition; skull perfect.

Family MYRMECOPHAGIDÆ.

Genus MYRMECOPHAGA.

Myrmecophaga centralis Lyon.


Skull perfect; no record of a skin.
BALÆNOPTERA—KOGIA.

Order CETE.

Family BALÆNIDÆ.

Genus BALÆNOPTERA.

Balænoptera davidsoni Scammon.

Proc. California Acad. Sci., IV, p. 269, printed in advance, October 4, 1872; True, Smithsonian Contributions to Knowledge, XXXIII, pp. 91 and 298, pl. 25, fig. 1; pl. 23, fig. 1; and pl. 26, fig. 1.


Skull in good condition.

Type not designated by number. See True, op. cit., p. 91.

Family PHYSETERIDÆ.

Genus KOGIA.

Kogia floweri Gill.

Amer. Nat., IV, p. 738; fig. 167, p. 736, and fig. 172, p. 741, 1871.


Posterior end of mandible broken and a few teeth lacking. Water-color sketch (188 by 52 mm.) in good condition.

Type not designated by number. In the original description it is said to be based on "jaw and portrait."

Kogia goodei True.


= Kogia breviceps (Blainville). See True, Report U. S. Fish Commission for 1883. Suggestions to Keepers U. S. Life-Saving Stations, etc., relative to collecting and preserving specimens of Whales and Porpoises, pl. 8, fig. 22.

\[\frac{13}{29} \text{ Cast of entire animal, and skeleton. Adult female. Spring Lake, New Jersey. Received in the flesh from H. S. Howland, April 27, 1883. Original number of cast 40. Catalogued April 27, 1883.} \]

Cast in good condition; in storage.

Skeleton in good condition; on exhibition.

No description of this species has been published. The name occurs in the table and list cited above. Two specimens are mentioned, the above and one from Florida, represented by the mandible and by photographs.
Family ZIPHIID.E.

Genus ZIPHIUS.

Ziphius grebnitzkii Stejneger.


Type designated by Dr. L. Stejneger's original number 1521=Museum No. 20993.

Hyperodon semijunctus Cope.


Skeleton in fair condition, nearly complete.

Type not designated by number. Described while in possession of the Charleston Museum. Since then acquired by the U. S. National Museum.

Genus MESOPLODON.

Mesoplodon stejnegeri True.


Tympanic and malar bones lacking, pterygoids imperfect.

Description based on one specimen, mentioned by number.

Genus BERARDIUS.

Berardius bairdii Stejneger. See page 287.

Family DELPHINID.E.

Genus PHOCÆNA.

Phocæna dalli True.


Skull in good condition, but earbones, malars, and upper teeth lacking and one pterygoid broken.
Type not originally designated by number. On page 98 of the original description measurements are given of "the type skull of Phocaena Bullii." On page 125, Bulletin U. S. National Museum, No. 36, the same measurements are given and the type there indicated as No. 21762.

Phocæna lineata Cope.


Phocæna vomerina Gill. Cotypes.


A little has been cut off the skull behind the orbits. Malars, pterygoids, and teeth lacking.


Cotypes not designated by number. The two above specimens are the only ones in the collection having the data given by Dr. T. N. Gill.

Genus PSEUDORCA.

Orca destructor Cope.


3679. Beak and mandible. Pacific Ocean, off Paita, Peru. Received from Col. E. Jewett (see Smithsonian Report, 1860, p. 80).

In good condition.
Description based upon one specimen, designated by number.
Genus GLOBICEPHALUS.

Globiocephalus scammonii Cope.


In good condition.

For considering this specimen the type, see True, op. cit., p. 139 and p. 140.

Two mandibles, Nos. 9075 and 9076, in the National Museum formed part of the original material. They may be considered as paratypes.

Genus GRAMPUS.

Grampus stearnsii Dall.


"Two jaws of this animal are in my hands for examination." (Dall in Scammon's Marine Mammals, 1874, p. 299.)

For considering this specimen the type, see True, op. cit., p. 130.

Genus SAGMATIAS.

Sagmatias amblodon Cope.


Skull in good condition, but one tympanic bone lacking and the other broken, malar lacking and one pterygoid broken.

Type not designated by number. There was but one specimen taken by the ship Vincennes, locality not known, but probably between Cape Horn and Lima, Peru, or Australia, or New Zealand. This specimen is No. 3887. See True, op. cit., p. 106, table.

Genus LAGENORHYNCHUS.

Lagenorhynchus gubernator Cope. Cotypes.


LAGENORHYNCHUS.

12305 and 12306. Plaster casts (No. 2) made and colored from a fresh specimen. Cope remarks: "This delphinoid was taken by the U. S. Fish Commission at near the same locality as the last" [i.e., near Portland, Maine. "The last," L. perspicillatus, was really from Cape Cod, Massachusetts, but L. gubernator was from Casco Bay, near Portland, Maine. F. W. True].

Casts in good condition.
Cotypes not designated by numbers.

Delphinus longidens Cope.


Skull considerably broken; the malars, earbones, a portion of the pterygoids, and most of the teeth absent.

Type not designated by number. Cope had only one specimen, No. 3886.

Lagenorhynchus obliquidens Gill. Cotypes.


Skulls in good condition, but earbones, all but one malar, and many teeth lacking.

No type designated by Dr. T. N. Gill in the original description. For considering these specimens cotypes, see True, op. cit., p. 98.

Phocæna pectoralis Peale.

U. S. Explor. Exped., VIII, Mamm. and Ornith., p. 32, pl. 6, fig. 1, 1848.


Mandible in good condition; teeth much worn.

Type not designated in the original description, but see True, op. cit., p. 101.

Lagenorhynchus perspicillatus Cope. Cotypes.


"This species is represented in the collections of the Smithsonian Institution by numerous crania, some skeletons and a colored cast of the natural size, taken by the United States Commission of Fisheries, near Portland, Maine" (Cope).
"The foregoing locality is, I believe, incorrect. It should be Woods Hole, Mass., or else Cape Cod. I think cast. No. 12929, Woods Hole, Mass., (original No. 3), and the whole series of skulls and mandibles, Nos. 14228 to 14326, and probably also Nos. 14335 and 14362 to 14373, are to be regarded as cotypes. Two or three of these skulls were missing when the collection was checked up in 1905. No. 14335 is marked 'Skeleton without a head,' but it is on exhibition and there is a skull on it now. This seems to be the only skeleton in the lot." F. W. True.

Genus LISSODELPHIS.

Delphinapterus borealis Peale. See page 287.

Genus DELPHINUS.

Delphinus albimanus Peale.


Mounted specimen is in fair condition for a cetacean skin; the natural color has practically disappeared.

Delphinus albirostratus Peale. See page 287.

Delphinus bairdii Dall. See page 287.

Genus TURSIOPS.

Tursiops gillii Dall.


13922. Mandible (no other portion of specimen known to describer) "and outline of animal drawn by Captain Scammon." Young adult. Monterey, California. Collected by Capt. C. M. Scammon. Mandible in good condition; one tooth lacking. Outline not found. Type not designated by number. For regarding this specimen as the type, see True, op. cit., p. 43, footnote.

Genus PRODELPHINUS.

Delphinus lateralis Peale. See page 288.

Delphinus plagiodon Cope.


3884. Skull. Youngish. Locality unknown. Received from J. Varden. Catalogued June 20, 1860.

Skull in good condition; earbones and two teeth lacking, pterygoids incomplete. Species based on one specimen, No. 3884, mentioned in the original description.
Order UNGULATA

Family BOVIDE.

Genus OVIS.

OVIS canadensis auduboni Merriam.


Skin (lost) and skull. Young adult male. "Upper Missouri." Probably collected in the Badlands of South Dakota in 1855 by Dr. F. V. Hayden. Skin of head catalogued June 21, 1856; skull catalogued April 27, 1887.

Skull and horns, No. 22610, in good condition. Catalogue calls for skin of the head, No. 1520, which can not be found.

OVIS montana dalli Nelson. Cotypes.


In the original description, Mr. Nelson says: "The types of the new race are two specimens brought me by Mr. L. N. McQuesten, a fur trader living at Fort Reliance, on the Upper Yukon River near the point where it crosses the British boundary line. These specimens were killed by the Indians on some mountains south of Fort Yukon and on the west bank of the river." They were taken in the winter of 1879-80. The two cotypes are not designated in the original description by number, but the two specimens that Mr. Nelson had at the time are.

13265. Skin. Adult female.

In fair condition. The catalogues call for a lower jaw No. 20787, now lost. Original number 1534.

13266. Skin and skull. Adult male.

Skin in fair condition; skull perfect, except slight cutting about foramen magnum. Original number 1535.

The skins were catalogued January 5, 1881; the skull and lower jaw September 8, 1882.

Both specimens were mounted by Ward's Natural Science Establishment, of Rochester, N. Y., and were on exhibition for many years in the Museum. In April, 1902, these specimens were made into study skins. Each was found to contain a wooden skull to which horns were fastened. These wooden skulls with the attached horns are still in the skins. The horns fastened to the wooden skull of the male skin are slightly larger than the horns belonging to the skull of the same specimen. As the horns of the skull fit the horn cores it is probable that the horns now on the skin do not naturally belong there, and the true horns of the cotype are those found with the skull. This skull was lost for many years, but was found in the collection January 12, 1905, by Mr. Walter L. Hahn and recognized as a long lost cotype.

OVIS canadensis gaillardi Mearns.

OVIS - CEPHALOPHUS - REDUNCA.


Flat folded skin in good condition; skull somewhat damaged, right horn and part of horn-core knocked off and lost, mandible broken into three pieces. The first permanent molars are in place above, the second molars are just appearing above the alveoli.

Ovis mexicanus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for three broken incisors.

Ovis nelsoni Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except broken left mandibular ramus.

Genus CEPHALOPHUS.

Cephalophus spadix True.


Skin in good condition, mounted and now on exhibition; skull perfect.
No type specified, but the entire description is based upon one specimen, the above, designated by number.

Genus REDUNCA.

Cervicapra chanleri Rothschild.


Both skin and skeleton are in good condition.  

The specimen was mounted in London by Rowland Ward, Ltd., and while in that establishment was described by Hon. Walter Rothschild, who specifically designated it as the type, although it was not in the collection of the U. S. National Museum at that time.

Genus ANTILOCAPRA.

Antilocapra americana mexicana Merriam.  Biological Survey coll.  


Well-made skin in good condition; skull perfect.

Family CERVID.E.

Genus ODOCOILEUS.

Cervus macrotis californicus Caton.  See page 288.

Odocoileus hemionus canus Merriam.  Biological Survey coll.  


Well-made skin in good condition; skull perfect, except broken incisors.

Odocoileus cerrosensis Merriam.  Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken left audit al bulla.

Cariacus clavatus True.


16975. Skin and skull. Young adult male. Open pine forests on the Segovia River, about 50 miles from the sea, eastern Honduras. 1887, probably in July or August. Collected by C. H. Townsend. Skin catalogued December 15, 1887; skull May 13, 1898.

Specimen formerly mounted, but since taken down and made into a modern study skin; in good condition. Skull that of a young adult male, with spike
antlers. It is slightly injured about the pterygoids, and only small proximal portions of the premaxillae remain. All the lower incisors and canines are lost and the tip of the right coronoid process is missing.

No type designated. The greater part of the description is based upon number 16075 in table on page 425, loc. cit. This is the specimen which Doctor True states he considered most typical at the time he described the species and on which had been placed the red type label. It is also the specimen which Mr. Gerrit S. Miller, jr., regarded as the type and measured, but did not designate by number. See Proc. Biol. Soc. Wash., XIV, p. 37, footnote, April 25, 1901.

**Odocoileus costaricensis** Miller.


$\frac{13}{14}$ Skin and skull. Young adult male. Talamancæ, between the coast and the foot of the Cordilleræ, eastern Costa Rica. Latter part of 1872 or early in 1873. Collected by José C. Zeledon. Received from Prof. W. M. Gabb. Original number 46. Catalogued in 1873.

Specimen has been remade into a modern study skin in good condition. The skull is perfect, except for loss of lower left incisors and canine and first and second right incisors, and the right upper and lower premolars.

**Dorcelaphus croki** Mearns.


=**Odocoileus croki** (Mearns). See Thompson, Forest and Stream, L1, p. 286, October 8, 1898.


Skull perfect. The following parts of the skin are present and in good condition: Skin of head, tail, two pieces of body skin, one about 360 by 200 mm., another about 160 by 70 mm., and fore leg and hind leg.

**Dorcelaphus hemionus eremicus** Mearns.

Preliminary diagnoses of new mammals of the genera *Mephitis*, *Dorcelaphus*, and *Dicotyles* from the Mexican border of the United States, p. 4, February 11, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1129, p. 470, December 24, 1897.)

=**Odocoileus hemionus eremicus** (Mearns). See Thompson, Forest and Stream, L1, p. 286, October 8, 1898.

This skin is represented by a rug, well-made and well preserved, and also by a few small fragments, trimmings from the skin, before it was made into a rug. Until March 29, 1902, the skin was owned by Dr. Anita N. McGee, of Washington, D. C., while the small scraps of skin were in the National Museum from the time it was catalogued, May 4, 1896. On March 29, 1902, the skin made up as a rug came into the possession of the Museum.

No type was designated. Doctor Mearns specified three individuals in the original description, namely, skin no. 63403, and two pairs of antlers, nos. 59910 and 60555. The description is based primarily on the skin, and the antlers are mentioned rather incidentally at the end of the description, prefaced by this statement: "It appears to be a larger animal than the male deer of the Eastern Desert Tract, and unless the specimens brought home by our party are abnormal, its horns are heavier," etc., which seems to indicate that the antlers form but a minor part of the description.

Cervus lewisii Peale. See page 288.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect except slight perforations of palate and audital bukle; left supraorbital border slightly broken; left paroccipital process broken.

Dorcelaphus texanus Mearns.


=Odocoileus texanus (Mearns). See Thompson, Forest and Stream, LI, p.268, October 8, 1898.


Skin in good condition; skull nearly perfect. Antlers sawed off, but present; most of the right lower incisiform teeth broken off to the alveoli.

Type designated by the original number.
Odocoileus thomasi Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Genus MAZAMA.

Mazama pandora Merriam. Biological Survey collection.

Well-made skin in good condition; skull with repaired fractures of left maxillary and zygomatic; anterior part of walls of orbits, left side of palate, pterygoids, and most of vomer absent; last left upper molar missing; otherwise perfect.

Genus CERVUS.

Cervus merriami Nelson.

The specimen was in the National Museum for many years without having been entered in the catalogues. The skin had data attached, but the skull was without data and it was not known to belong with the skin until the summer of 1901. In the spring of 1901 the antlers were sawed off the skull. As both antlers and skull were without number or other data, they were thought to be of little value, and no special care was taken of them with the result that the main part of the skull became misplaced. In the summer of 1901 the antlers, in the velvet, were recognized by Mr. Nelson as belonging to the skin which he had collected fifteen years before. A search was made for the skull, but only the lower jaw could be found. Mr. Nelson described the species without the complete specimen. (Cranial characters were obtained, however, from a skull in the American Museum of Natural History, New York City.) In September, 1902, the missing and main part of the skull was found in one of the Museum’s storage sheds, where the antlers were originally discovered.
The skin is a tanned pelt, in fair condition, worn summer pelage. The antlers, in velvet, are nearly perfect; one tip is slightly injured. The main part of the skull is perfect. The lower jaw is injured as follows: The crowns of all the incisors and lower canines are broken off and the ascending rami of the right half of the mandible is broken away.
The skull and antlers are at present hung on the wall of the office of the division of mammals.

Cervus nannodes Merriam. Biological Survey collection.

Skin tanned and in good condition; skull perfect, except fractured second right upper molar.


Well-made skin in good condition; skull perfect, except for absence of occipital condyles and broken paroccipital processes; first and second left upper premolars, third left lower premolar, first left lower molar, and five incisors imperfect; right coronoid absent; antlers perfect, severed from skull at base.

**Genus** *ALCE*.


The skin is a complete tanned hide, folded and in good condition. The skull is in good condition except that the pterygoids were chopped off by the collector. The skull, with antlers attached, is hung on the wall in the office of the Division of Mammals.

**Genus** *MUNTIACUS*.


Well-made skin in good condition, skull perfect.

**Family** *TRAGULIDÆ*.

**Genus** *TRAGULUS*.


Well-made skin in good condition; skull perfect.
Tragulus bancanus Lyon.


Well-made skin in good condition; skull perfect.

Tragulus batuanus Miller.


Well-made skin in good condition; skull perfect.

Type designated as number 121697 an error in cataloguing for 121695, as seen on reference to the original numbers.

Tragulus billitonus Lyon.


Well-made skin in good condition; skull perfect, except right upper canine broken off at alveolus.

Tragulus borneanus Miller.


Skin in fair condition; formerly mounted and on exhibition; the original color much injured by pickling fluid and exposure to light; skull perfect.

When this species was described, the skin could not be found. At that time it was mounted and in storage. In April, 1907, it was made into a study skin.

Tragulus brevipes Miller.


Well-made skin in good condition; skull perfect.

Tragulus bunguranensis Miller.


Well made skin in good condition; skull perfect.

45336—08—2
Tragulus canescens Miller.


Well-made skin in good condition; skull perfect except for loss of right upper canine.

Tragulus carimatae Miller.


Well-made skin in good condition; skull perfect.

Tragulus flavicollis Miller.


Well-made skin in good condition; skull nearly perfect; all the incisiform teeth lost except left lower canine.

Tragulus focalinus Miller.


Well made skin in good condition; skull nearly perfect; all the incisiform teeth lost except left lower canine.

Tragulus formosus Miller.


Well-made skin in good condition; skull perfect, except right upper canine and left incisiform teeth slightly chipped.

Tragulus jugularis Miller.


Well-made skin in good condition; skull perfect.
Tragulus lampensis Miller.


Well-made skin in good condition; skull perfect.

Tragulus lancavensis Miller.


Well-made skin in good condition; skull perfect.

Tragulus luteicollis Lyon.


Well-made skin in good condition; skull perfect.

Tragulus lutescens Miller.


Well-made skin in good condition; skull perfect.

Tragulus natunae Miller.


Well-made skin in good condition; skull perfect.

Tragulus nigricollis Miller.


Well-made skin in good condition; skull perfect.
Tragulus nigrocinctus Miller.


Well-made skin in good condition; skull perfect.

Tragulus pallidus Miller.


Well-made skin in good condition; skull perfect, except slight damage in left temporal region.

Tragulus perflavus Miller.


Well-made skin in good condition; skull perfect.

Tragulus pretiellus Miller.


Well-made skin in good condition; skull perfect.

Tragulus pretiosus Miller.


Well-made skin in good condition; skull perfect, except points of upper canines broken and a small shot hole in base of nasals.

Tragulus ravulus Miller.


Well-made skin in good condition; skull perfect.

Type designated by number 104717, which is an error for 104417.
Tragulus ravus Miller.
83506. Skin and skull. Immature female. Trong (or Tarang), lower Siam. September 6, 1896. Collected by Dr. W. L. Abbott. Catalogued April 24, 1897.
Well-made skin in good condition; skull perfect, except for loss of small right upper canine. Milk molars in place, much worn; last permanent molars not up.

Tragulus rubeus Miller.
Well-made skin in good condition; skull perfect.

Tragulus rufulus Miller.
Well-made skin in good condition; skull perfect, except for loss of both upper canines.

Tragulus russeus Miller.
Well-made skin in good condition; skull perfect.

Tragulus russulus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 3, November 6, 1903.
121701. Skin and skull. Adult male. Tana Bala, Batu Islands, off west coast of Sumatra. February 8, 1903. Collected by Dr. W. L. Abbott. Original number 2249. Catalogued August 1, 1903.
Well-made skin in good condition; skull perfect.

Tragulus subrufus Miller.
Well-made skin in good condition; skull perfect, except left upper canine lost.
Tragulus umbrinus Miller.


Well-made skin in good condition, except for a break about the left carpal joint; skull perfect.

Tragulus virgicollis Miller.


Well-made skin in good condition; skull nearly perfect, left coronoid process of mandible broken off, all incisiform teeth lost except left lower canine.

Family SUIDÆ.

Genus SUS.

Sus babi Miller.


Flat, folded skin in good condition; skull perfect.

Sus jubatulus Miller.


Flat, folded skin in good condition; skull perfect.

Sus jubatus Miller.


Well-made skin in good condition; skull perfect.
Sus mimus Miller.


Flat, folded skin in good condition; skull perfect.

Sus natunensis Miller.


Well-made skin in good condition; skull perfect.

Sus niadensis Miller.


Flat, folded skin in good condition; skull perfect.

Sus nicobaricus Miller.


Well-made skin in good condition; skull perfect.

Sus oi Miller.


Well-made skin in good condition; skull perfect.

Sus peninsularis Miller.


Skull perfect, except loss of four upper incisors and tip of left paroccipital process.
Sus rhionis Miller.


Flat, folded skin in good condition; skull perfect.

Family TAYASSUIDAE.

Genus TAYASSU.

Tayassu angulatus crassus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect except for absence of right outer upper and lower incisors; left postglenoid process broken.

Tayassu angulatus humeralis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect except for several small punctures in auditory bulle.

Tayassu nanus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Tayassu albirostris ringens Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Dicotyles angulatus sonoriensis Mearns.

Preliminary diagnoses of new mammals of the genera Mephitis, Dorcelaphus, and Dicotyles, from the Mexican border of the United States, p. 3, February 11, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1129, p. 409, December 24, 1897.)


Poorly-made skin (laid out on side) in good condition; skull perfect, except for loss of angular process of right half of mandible.

Tayassu angulatus yucatanensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of left outer upper incisor and slight puncture of right audital bulla; left parietal slightly cracked.

Family TAPIRIDÆ.

Genus TAPIRELLA.

Elasmognathus bairdii Gill.


=Tapirella bairdii (Gill). See Elliot, Land and Sea Mammals of Middle America and West Indies, Field Columbian Mus., Zool. Ser., IV, p. 87, 1904.

6019. Skull, no skin. Isthmus of Panama. Collected by Dr. W. S. White. Catalogued April 9, 1863.

Skull in good condition, except that it has been cut in two longitudinally and that the following teeth are lost: The two middle upper incisors, the second left upper premolar, the first left upper molar, the third right upper premolar, and the third right lower incisor.

Dr. T. X. Gill designated no type-specimen. The description is based upon two skulls, adult and young, collected on the Isthmus of Panama by Dr. W. S. White. Two such specimens exist in the National Museum, entered in the catalogue April 9, 1863. The adult is here regarded as the type. In the original
description, Dr. Gill speaks of the vomer and the nasal septum, both of which are wanting in the younger specimen, and it is reasonable to assume that the remainder of the description is based upon the older and more perfect skull.

Elasmognathus dowii Gill.


=Tapirella dowii (Gill). See Elliot, Land and Sea Mammals Middle America and West Indies, Field Columbian Mus., Zool. Ser., IV, p. 88, 1904.


Skull nearly perfect, but vomer lost, and the following teeth are missing: The two first upper premolars and the two first lower premolars; all the upper incisors and canines, except the third right incisor. The last four molars are not yet level with the alveoli.

Type not designated by number. The original description refers to four adults and one young in the Smithsonian collection, all obtained by Capt. John M. Dow. These five specimens are found to be numbers 11278-9, 11280-1-2, bearing original numbers 1, 2, 3, 4, and 5. The title of Dr. Gill’s article is “A new species of Tapir, from Guatemala.” It happens that but one of five specimens came from Guatemala, namely, the first, no. 11278, and that one shows the reduced fused nasals emphasized in the description better than any of the others. This specimen is plainly marked “Guatemala” in old lettering on the skull; the other four are marked “Salvador, C. A.” In the catalogue, number 11278 was first entered as “Salvador, C. Am.” but the “Salvador” has a line drawn through it and “Guatemala” written above. The other four are marked “Salvador.” In view of the above facts, Cat. No. 11278 must be regarded as the type.

Family PROCAVIIDÆ.

Genus DENDROHYRAX.

Dendrohyrax validus True.


Well-made skin in good condition; skull perfect, except for the following injuries to teeth: Two middle lower incisors broken off at alveoli, also first lower left premolar, both upper incisors, first three upper premolars right side, and first two upper premolars left side all broken or worn off to the alveoli.

No type designated. Five specimens are listed by number, of which 11272 is here chosen as the type because, first, it heads the list; second, it is the only one of which a table of skull measurements is given; third, it is the only specimen coming from Mount Kilimanjaro, the other four coming from Taveta, and the title of the paper reads, “Description of two new species of mammals from Mt. Kilimanjaro, East Africa.”

The designation of the skull number 25796 in the original description is due to an error made in the cataloguing. It has been corrected to 34721.
Order GLIRES
Family LEPORIDAE.
Genus LEPUS.

Lepus merriami altamirae Nelson. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for absence of second right upper molar, broken postorbital processes, and two perforations of the brain case.

Lepus asellus Miller.

Well-made skin in good condition; skull perfect, except for some pieces broken out of ascending ramus of left half of mandible.

Lepus bairdi Hayden. Cotype.

No type designated. The description is based upon specimens collected in the Columbia Valley, Wind River Mountains, near Fremonts Peak, long. 110°, lat. 43°, Fremont County, Wyoming, in the first part of June, 1860, by Dr. F. V. Hayden.

The specimens, excluding three marked young in the catalogue, are as follows:
46263. Male. June 2, 1860. Original number 62. Made over into fairly good study skin, March, 1902. Posterior and basal parts of brain case broken away and both ascending parts of mandible more or less injured.
46264. June 2, 1860. Original number 63. Neither skin nor skull can be found.
4264. Skin without skull. June 4, 1860. Original number 90. Skin can not be found.
Catalogued November, 1860, except skull no. 38001, catalogued March 22, 1902.

Lepus arcticus canus Preble. Biological Survey collection.
North Amer. Fauna, No. 22, pp. 59-61, October 31, 1902.
106860. Skin and skull. Immature male. Barren grounds near Hub- bart Point, about 75 miles north of Fort Churchill, Keewatin,

Well-made skin in good condition; skull with right side of maxillary injured; ends of nasals (about one-third) broken away; right condyle imperfect and lower side of right mandibular rami injured.

Lepus americanus dalli Merriam.


Unfilled skin in winter pelage, in rather poor condition; skull perfect.

Type designated by the skull number. Skin was not known to exist at time of publication of description.

Lepus festinus Nelson.


Well-made skin in good condition; skull perfect.

Lepus gaillardi Mearns.


Well-made skin in good condition; pelage somewhat worn. Skull has lost the left bulla and the outer anterior margin of the nasals are somewhat broken, as is also the condyloid process of the left half of mandible.

Lepus texianus griseus Mearns.


Well-made skin in good condition, but made up lying on the side instead of belly; skull perfect.

Lepus klamathensis Merriam.


Well-made skin in good condition; skull perfect, except for slight injury to upper border of foramen magnum and angle of left mandibular ramus.

**Lepus labradorius** Miller. Cotypes.


14149. Skin. Adult. Fort Chimo, Ungava, Labrador. September 28, 1882. Collected by Lucien M. Turner. Original number 1180. This skin should have a skull, 37138, which can not be found. Skin catalogued February 2, 1884; skull, April, 1896.

Skin is well made and in good condition, pelage somewhat worn.

23132. Skull only. Adult. Same place and collector as above. Original number 2326. Catalogued January 12, 1889.

Except for loss of the two left upper incisors, the skull is perfect.

Both cotypes are designated by number. There is a typographical error in the skull number. It should be 23132 instead of 32132.

**Lepus americanus macfarlani** Merriam.


Angular process of right half of mandible somewhat broken, and posterior edge of left half of mandible more or less injured; otherwise, skull in good condition. Catalogue calls for skin number 7111, which can not now be found.

**Lepus Californicus magdalena** Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of left post-orbital process.

**Lepus merriami** Mearns.


Skin well-made and preserved, but made up on its side instead of belly; skull perfect, except for loss of the last upper molar on each side.

Type designated by the collector's original number.
Lepus othus Merriam.  


Left half of mandible is lost and a small piece is out of the condyloid process of the right half; the last right and left upper molars missing; otherwise, skull in good condition.

Lepus poadromus Merriam.  
Biological Survey collection.  


Well-made skin in good condition, except for absence of left hind foot; skull perfect, except for broken left zygoma.

Lepus saliens Osgood.  
Biological Survey collection.  
North Amer. Fauna, No. 19, pp. 39-40, October 6, 1900.


Well-made skin in good condition; skull with numerous small shot perforations; right zygoma broken; anterior portion of vault of cranium, left mandibular condyle, and left lower incisor missing.

Lepus campestris sierrae Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull, posterior portion of brain case, including audital bullae and basioccipital, missing; right mandibular ramus broken in front of molar series.

Lepus tularensis Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.

Lepus varronis Miller.  


Well-made skin in good condition; skull perfect.

$\frac{4}{4} \text{ (not } \frac{2}{4} \text{ as in original description). Skin and skull. Adult female. Touchet, Washington. September 18, 1890. Collected by C. P. Streator. Original number 271. Well-made skin in good condition; skull perfect, except for absence of left supraorbital processes.}$

Lepus washingtoni Baird. Proc. Acad. Nat. Sci. Phila., VII, p. 333; this paper was favorably reported for publication, April 24, 1855.


All four occipitals, the interparietal, tympanic, and mastoid bones of the skull are wanting, and the ascending rami of the mandible are more or less broken on the posterior edge. Otherwise the skull is in good condition. Type not designated by number, but by comparing the measurements of the original description with those in the table on page 585 of Baird's Mammals of North America it is seen that No. $\frac{1223}{1223}$ must be regarded as the type.

Genus SYLVILAGUS.


A flat, poorly preserved skin; one hind leg missing; the other detached from the skin. Type not explicitly designated by number, but on comparing Doctor Allen's remarks, p. 332, loc. cit., with the list of specimens in Table 39, p. 340, it is readily seen that 8439 is the type.

Lepus audubonii Baird. See page 288.


Well-made skin, in good condition; skull lacking right zygoma and left audital bulla; right mandibular ramus broken.
**Sylvilagus.**

Lepus floridanus caniclunis Miller.


=Sylvilagus floridanus chapmani (Allen).


Well-made skin in good condition; skull nearly perfect; left bulla and left last upper molar missing, a small piece out of the left ascending mandibular ramus.

**Sylvilagus auduboni cedrophilus** Nelson. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for two perforations in vault of cranium.


=Sylvilagus floridanus chiapensis (Nelson).


Well-made skin in good condition; skull perfect.

**Sylvilagus cognatus** Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Lepus floridanus connectens Nelson. Biological Survey collection.


=Sylvilagus floridanus connectens (Nelson).


Well-made skin in good condition; skull perfect.

**Sylvilagus bachmani exigus** Nelson. Biological Survey collection.


Collected by E. W. Nelson and E. A. Goldman. Original number 18153.

Well-made skin in good condition; skull perfect, except for broken angle of right mandibular ramus.

**Lepus brasiliensis gabbii Allen.** Cotypes.

Monographs North American Rodentia, p. 349, August, 1877.


Specimen has been made over into a modern study skin, in good condition and state of preservation. The skull is perfect, except for some chips out of the ascending ramus of the left half of the mandible.

11372. Skin with skull inside; all data as above except original number, which is 19. Catalogued 1873.

As Dr. J. A. Allen states, this specimen is quite immature and on the whole is a wretched-looking object. It has never been made up into a modern study skin.

Dr. Allen based this species on three specimens, all designated by number on page 350, Monographs North American Rodentia. One of them, 8140, comes from Chiriqui, and the other two numbers, 11371 and 11372, from Talamanca, Costa Rica. No type or cotypes were designated. In order to avoid two type localities for a single species, the two specimens from Talamanca are considered as cotypes and the Chiriqui specimen as a paratype. This course seems perfectly justifiable, as two-thirds of the specimens upon which the description was based came from Talamanca, and the species is named in honor of the collector and rather, donor, and both of the Talamanca specimens came from Prof. Gabb, while the Chiriqui specimen was collected by Fred Hicks.

**Lepus arizonæ goldmani Nelson.** Biological Survey collection.


=Sylvilagus arizonæ goldmani (Nelson).


Well-made skin in good condition; skull perfect.

**Lepus graysoni Allen.**


8318. Skin, with skull inside. Adult female. Tres Marias Islands, Mexico, probably Maria Madre Island (see Nelson, North Amer. Fauna, No. 14, p. 16, April 29, 1899). Collected during "Explora-

Wretched skin, in poor condition, with a skull inside.

Type not explicitly designated by number, but by comparing Dr. Allen’s remarks on page 347 with the table on page 348 it is seen that 8318 is the type. The specimen is also labeled "Lepus Graysoni type" in Dr. Allen’s handwriting.

Lepus sylvaticus holzneri Mearns.


Well-made skin in good condition; skull perfect.

Lepus insonus Nelson. Biological Survey collection.


=Sylvilagus insonus (Nelson).


Well-made skin in good condition, except for a small bare spot on the back; skull perfect.

Lepus arizonae major Mearns.


Well-made skin in good condition; skull perfect, except that right half of mandible has been broken vertically in two at middle of tooth row.


Well-made skin in good condition; skull perfect, except mandible, of which only the anterior part of left ramus, including teeth, is present.
SYLVILAGUS.

Lepus margaritae Miller.


Well-made skin in good condition; skull perfect.

Lepus arizonae minor Mearns.


Well-made skin in good condition; skull perfect, except for loss of last left lower molar and the left lower incisor broken off to the alveolus.

Sylvilagus auduboni neomexicanus Nelson. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Lepus orizibae Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of posterior portions of both mandibular rami, including the last right lower molar.


=Sylvilagus cunicularius pacificus (Nelson).


Well-made skin in good condition; skull perfect, except for large shot perforation through the maxillaries beneath the base of the nasals and slight injury to right supraorbital border.
Sylvilagus floridanus restrictus Nelson. Biological Survey coll.


Well-made skin in good condition; skull perfect, except mandible, of which only three fragments, including all the teeth, are present.

Lepus sylvaticus rigidus Mearns.


Well-made skin in good condition; skull has right bulla and exoccipital missing and both zygomatic processes of the squamosals broken, last right upper molar missing; mandible considerably broken, the right half posteriorly and the left half anteriorly.

Lepus pinetis robustus Bailey. Biological Survey collection.

North Amer. Fauna, No. 25, pp. 159-160, October 24, 1905.

=Sylvilagus pinetis robustus (Bailey).


Well-made skin in good condition; skull perfect, except for absence of posterior portions of mandibular rami.

Lepus floridanus sanctidiegi Miller.


Well-made skin in good condition; skull perfect, except that there is a chip out of right angular process.


Well-made skin in good condition; skull perfect, except for absence of right supraorbital process; angles of mandible each with two perforations.

**Lepus simplicicanus** Miller.


=Sylvilagus floridanus chapmani (Allen).


Well-made skin in good condition; skull perfect, except for some slight injury about left angular process of mandible.

**Lepus floridanus subcinctus** Miller.


Well-made skin in good condition; skull perfect.

**Lepus trowbridgii** Baird.

Proc. Acad. Nat. Sci. Phila., VII, p. 333, this paper was favorably reported for publication April 24, 1855.


Skull considerably damaged; posterior and inferior parts of brain-case wanting; and most of right side of skull posterior to rostrum broken away. Posterior part of right half of mandible also broken. One loose bulla is present. There should be a skin, No. 310, which can not now be found.

No type designated. By referring to Mammals of North America, pages 610-612, it is seen that most of the description is based upon No. 310; moreover, the measurements of 310 agree more nearly with those given in the original description. For these reasons No. 34\5 is here chosen as the type.

**Lepus truei** Allen.


Sylvilagus.

$6357, 34878$. Skin and skull. Adult. Mirador, Vera Cruz, Mexico. Collected by Dr. C. Sartorius. Original mark "e." Skin catalogued April, 1863; skull, November 27, 1890.

Skin in poor condition, laid out flat on side. A good deal of the epidermis has slipped from the feet. Skull formerly in the skin, and all the posterior parts are more or less damaged by the preservative used on the skin. The posterior parts of the brain-case and the posterior edges of the ascending rami of the mandible, especially of the right half, are lacking.

Type designated by number $25953$. A large series of skulls in the Museum collection in the twenty-five thousands, was misnumbered and the skull of the present specimen, along with others, had to be renumbered, and is now 34878, instead of 25953.

Lepus bachmani ubericolor Miller.


Well-made skin in good condition; skull perfect, except for loss of right half of mandible.

Sylvilagus auduboni vallicola Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of last two right and left upper molars.


Well-made skin in good condition; skull perfect, except mandible, which consists of three fragments, one including both incisors, another the left molar series, and the third the condyle and angular process.

Lepus floridanus yucatanicus Miller.


Specimen recently made over into a modern study skin, well-preserved; skull quite complete, the tympanic, mastoid, and exoccipital bones of the right side broken away, and the angle of the right half of the mandible broken.

Genus **BRACHYLAGUS**.

**Lepus idahoensis** Merriam. Biological Survey collection.

North Amer. Fauna, No. 5, pp. 75-78, 2 figs., July 30, 1891.


Well-made skin in good condition; skull perfect, except for a perforation in each audital bulla.

Genus **ROMEROLAGUS**.

**Romerolagus nelsoni** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of last left upper molar; angle of left mandibular ramus broken.

Family **OCHOTONIDÆ**.

Genus **OCHOTONA**.

**Ochotona cansus** Lyon.

Smithsonian Miscell. Coll., 1, No. 1726, p. 136, pl. 15, figs. 1-3, July 9, 1907.


Well-made skin in good condition; skull perfect.

**Lagomys collaris** Nelson.


Skin fairly well preserved, but badly made up; no wire in legs. Posterior and basal portions of the left half of the cranium and most of the ascending ramus of the left half of the mandible lacking; otherwise skull complete.
ERETHIZON—TRICHYS—ATHERURUS.

Family ERETHIZONTIDÆ.

Genus ERETHIZON.

Erethizon epixanthum couesi Mearns.


Skin well preserved, but poorly made up; skull has lost both malar bones and the last upper and last lower molar of the right side; otherwise complete.

Erethizon epixanthum myops Merriam.


Well-made skin in good condition, rather greasy; skull nearly perfect; upper incisors broken off to the alveoli; lower jaw can not be found.

Family HYSTRICIDÆ.

Genus TRICHYS.

Trichys macrotis Miller.


Well-made skin in good condition; skull perfect.

Genus AHERURUS.

Atherurus terutaus Lyon.


123971. Skin and skull. Adult male. Pulo Terutau (also written Trotau and Trotto), about 15 geographic miles west of the Malay Peninsula, where the 100th meridian east of Greenwich cuts the coast of the Malay Peninsula. April 12, 1904. Collected by Dr. W. L. Abbott. Original number 3223. Catalogued July 23, 1904.

Well-made skin in good condition; skull perfect.

Atherura zygomatica Miller.


Well-made skin in good condition; skull perfect.
Genus THECURUS.

Thecurus sumatrace Lyon.

Proc. U. S. Nat. Mus., XXXII, No. 1552, p. 583, pls. 54-56, fig. 1, and pl. 57, figs. 2, 9, 10, June 29, 1907.


Well-made skin in good condition; skull perfect.

Family OCTODONTID.E.

Genus CAPROMYS.

Capromys prehensilis gundlachi Chapman.


Well-made skin in good condition; skull perfect.

Capromys brachyurus thoracatus True.


Skin well preserved, but not well made up; skull perfect.

Type not designated by number, but of the two original specimens Dr. True has personally selected the above as the type and placed a red label upon it.

Genus PROECHIMYS.

Proechimys guairae Thomas.


Fairly well-made skin in fair condition; skull perfect.

Genus CTENOMYS.

Ctenomys robustus Allen.


CTENOMYS—SICISTA—ZAPUS.


Well-made skin in good condition; skull perfect.

Type designated as No. 84194, an error for 84149. No. 84194 is a specimen of C. sericeus. The measurements of No. 84149 agree with those given by Dr. J. A. Allen as belonging to the type, and the specimen itself bears Dr. Allen’s type label.

Ctenomys sericeus Allen.


Well-made skin in good condition; skull nearly perfect; last right upper molar lost; right external auditory meatus and posterior portion of left bulla slightly injured.

Type designated as No. 84191, which is an error for No. 84189. The measurements of the skin and skull ascribed by Dr. Allen to the type are those of 84189, and do not agree with those of 84191, a smaller individual. To indicate further that No. 84189 is the type, Dr. Allen has tied to the specimen the standard red type label of the American Museum of Natural History, with the italicized words crossed out and the words “U. S. Nat.” added, as well as the name Ctenomys sericeus Allen.

Family ZAPODIDÆ.

Genus SICISTA.

Sminthus flavus True.


Skin well preserved, but poorly made up; no wires in legs or tail; skull perfect, except for loss of angular process of left half of mandible and some slight damage to the right bulla.

Genus ZAPUS.

Zapus hudsonius alascensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.
Zapus hudsonius campestris Preble. Biological Survey collection.

North Amer. Fauna, No. 15, pp. 20-21, August 8, 1899.


Original number 600.

Well-made skin in good condition; skull perfect.

Zapus major Preble. Biological Survey collection.

North Amer. Fauna, No. 15, pp. 24-25, August 8, 1899.


Original number 5720.

Well-made skin in good condition; skull perfect, except for slight perforation in palate.

Zapus princeps minor Preble. Biological Survey collection.

North Amer. Fauna, No. 15, p. 23, August 8, 1899.


Original number 3123.

Well-made skin in good condition; skull perfect.

Zapus trinotatus montanus Merriam. Biological Survey collection.


=Zapus montanus (Merriam). See Preble, North Amer. Fauna, No. 15, p. 28, August 8, 1899.


Original number 1388.

Well-made skin in good condition; skull perfect.

Zapus nevadensis Preble. Biological Survey collection.

North Amer. Fauna, No. 15, pp. 25-26, August 8, 1899.


Original number 6581.

Well-made skin in good condition; skull perfect.

Zapus princeps oregonus Preble. Biological Survey collection.

North Amer. Fauna, No. 15, p. 24, August 8, 1899.


Original number 959.

Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for slight perforation of brain case.

Family HETEROMYIDÆ.

Genus HETEROMYS.


Well-made skin in good condition; skull perfect, except for absence of entire right upper molariform series.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Heteromys goldmani lepturus Merriam. Biological Survey coll.

Well-made skin in good condition; skull perfect, except for absence of right zygoma and right upper molariform series.

Heteromys (Xylomys) nelsoni Merriam. Biological Survey coll.

Well-made skin in good condition; skull perfect.

Genus LIOMYS.

Liomys canus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Liomys crispus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for absence of jugals.

Liomys heterothrix Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Liomys pictus isthmius Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.
Liomyx torridus minor Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Liomyx obscurus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Liomyx orbitalis Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of pterygoids and adjoining parts of palate.

Liomyx parviceps Goldman. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Liomyx phæura Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of last left lower molar.

Liomyx plantinarensis Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of right jugal.


Well-made skin in good condition; skull perfect, except slightly broken nasals; five upper and three lower cheek teeth missing.


Well-made skin in good condition; skull perfect, except for broken supraoccipital; last two lower molars on each side missing.


Well-made skin in good condition; skull perfect, except for absence of last upper molar on each side.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Genus *PEROGNATHUS*.


Well-made skin in good condition; skull perfect.

*Perognathus amplus* Osgood. Biological Survey collection.
North Amer. Fauna, No. 18, pp. 32-33, pl. 1, fig. 2, September 20, 1900.


Well-made skin in good condition; skull perfect.

North Amer. Fauna, No. 18, p. 47, September 20, 1900.


Well-made skin in good condition; skull perfect.

*Perognathus anthonyi* Osgood. Biological Survey collection.
North Amer. Fauna, No. 18, pp. 56-57, September 20, 1900.


Well-made skin in good condition; skull perfect, except for absence of right jugal.


Well-made skin in good condition; skull perfect, except for absence of angular process of left mandibular ramus.

*Perognathus artus* Osgood. Biological Survey collection.
North Amer. Fauna, No. 18, p. 55, September 20, 1900.


Well-made skin in good condition; skull perfect.
Perognathus baileyi Merriam. Biological Survey collection.


\[\text{Perognathus flavus bimaculatus (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 28, September 20, 1900.}\]

\[\text{Perognathus bimaculatus Merriam.}\]

North Amer. Fauna, No. 1, p. 12, October 25, 1889.

\[\text{Perognathus callistus Osgood. Biological Survey collection.}\]


\[\text{Perognathus bimaculatus Merriam.}\]

North Amer. Fauna, No. 1, p. 12, October 25, 1889.

\[\text{Perognathus flavus bimaculatus (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 24, September 20, 1900.}\]

\[\text{Perognathus callistus Osgood. Biological Survey collection.}\]

North Amer. Fauna, No. 18, p. 28, September 20, 1900.

\[\text{Perognathus (Chaetodipus) intermedius canescens Merriam. Biological Survey collection.}\]


\[\text{Perognathus nelsoni canescens (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 54, September 20, 1900.}\]

\[\text{Perognathus baileyi Merriam. Biological Survey collection.}\]


\[\text{Perognathus flavus bimaculatus (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 24, September 20, 1900.}\]

\[\text{Perognathus callistus Osgood. Biological Survey collection.}\]


\[\text{Perognathus bimaculatus Merriam.}\]

North Amer. Fauna, No. 1, p. 12, October 25, 1889.

\[\text{Perognathus flavus bimaculatus (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 24, September 20, 1900.}\]

\[\text{Perognathus callistus Osgood. Biological Survey collection.}\]

North Amer. Fauna, No. 18, p. 28, September 20, 1900.

\[\text{Perognathus (Chaetodipus) intermedius canescens Merriam. Biological Survey collection.}\]


\[\text{Perognathus nelsoni canescens (Merriam). See Osgood, North Amer. Fauna, No. 18, p. 54, September 20, 1900.}\]


\[
\frac{47}{3} \text{ Skin and skull. Young adult male. Pasco, Washington. May 9, 1891. Collected by C. P. Stretor. Original number 768.}
\]
Well-made skin in good condition; skull perfect.


\[
\frac{44}{3} \text{ Skin and skull. Adult male. Carpenteria, Santa Barbara County, California. December 19, 1891. Collected by E. W. Nelson. Original number 1655.}
\]
Well-made skin in good condition; skull perfect.

Perognathus (Chaetodipus) eremicus Mearns.


\[
\frac{148}{4} \text{ Skin and skull. Adult female. Fort Hancock, El Paso County, Texas. June 27, 1893. Collected by Dr. E. A. Mearns, U. S. A. Original number 2380. Catalogued July 29, 1893.}
\]
Well-made skin in good condition, but the tail has a break in both proximal and distal portions. Skull nearly perfect; a piece out of supraoccipital; right malar lacking.

Perognathus fallax Merriam.
North Amer. Fauna, No. 1, p. 19, October 25, 1889.

\[
\]
Well-made skin in good condition; skull perfect.

Perognathus flavus Baird.
Proc. Acad. Nat. Sci. Phila., VII, p. 332, this paper was favorably reported for publication April 24, 1855.

\[
\]
The skull, No. 1130, is represented by the anterior part of the rostrum only. The skin can not be found.

Type not designated by number. Baird says, "Collected at El Paso by J. H. Clark." By referring to Mammals of North America, p. 425, it is seen that \[
\frac{148}{4}
\] is the specimen he must have had in mind, and is consequently the type.
Perognathus fuliginosus Merriam. Biological Survey collection.

North Amer. Fauna, No. 3, p. 74, September 4, 1890.


Well-made skin in good condition; skull nearly complete, but consisting of three separate sections; interparietal missing.

Perognathus merriami gilvus Osgood. Biological Survey coll.

North Amer. Fauna, No. 18, pp. 22-23, September 20, 1900.

96673. Skin and skull. Adult male. Eddy (= Carlsbad), New Mexico. September 18, 1892. Collected by Dr. B. H. Dutcher, U. S. A. Original number 329.

Well-made skin with right hind leg missing; otherwise in good condition; skull perfect.

Perognathus goldmani Osgood. Biological Survey collection.

North Amer. Fauna, No. 18, pp. 54-55, September 20, 1900.


Well-made skin in good condition; skull perfect.

Perognathus hispidus Baird.


Badly-made skin with bare patches on the right flank and on the back. Tail never skinned out and tip gone. Skull in bad condition. All the upper teeth lacking; pterygoid region broken, both zygomatics lacking; a large hole in the middle of the cranium. Lower jaw almost perfect. This skull apparently consists of sections of two different specimens glued together. (See Osgood, North Amer. Fauna, No. 18, p. 43, September 20, 1900.)

No type designated, but the description is clearly based upon No. 577.

Perognathus inornatus Merriam.

North Amer. Fauna, No. 1, p. 15, October 25, 1889.


Specimen generally well preserved, but the color looks changed; some hair has slipped from the left side. Exoccipitals of skull missing and the right bulla damaged; right half of mandible practically perfect; left half broken in two pieces.
Otognosis longimembris Coues.


In alcohol, with skull removed. Female. Fort Tejon, Cañada de las Uvas, Kern County, California. Collected by John Xantus. Alcoholic catalogued January, 1872; skull, April 4, 1898.

Alcoholic in poor condition; it has the appearance of having been completely dried at one time. The skull lacks the right malar. There is a large hole in the right audital bulla and a small one in the left bulla; otherwise it is perfect.

The specimen upon which Coues’s provisional O. longimembris is based is designated by number.

Perognathus spinatus magdalense Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for broken zygomata.


North Amer. Fauna, No. 18, p. 38, September 20, 1900.


Well-made skin in good condition; skull perfect.

Perognathus apache melanotis Osgood. Biological Survey coll.

North Amer. Fauna, No. 18, p. 27, September 20, 1900.


Well-made skin in good condition; skull perfect except for slight perforation in right audital bulla.

Perognathus flavus mexicanus Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Perognathus monticola Baird.


=Perognathus parvus (Peale). See Osgood, North Amer. Fauna, No. 18, p. 34, September 20, 1900.
Perognathus. 58

Mounted skin and skull. Adult female. "W. of Rocky Mts." (Mus. Cat.) 1853. Collected by Dr. George Suckley. Catalogued January 31, 1855. In regard to the locality, the following is quoted from Osgood, *op. cit.*, p. 36: "It is also not improbable that the type of Baird's 'monticola' was also taken at The Dalles [Oregon]. Baird's queried statement that it came from St. Mary's Mission, Mont., is rendered much more doubtful by the unsuccessful efforts of recent collectors to obtain additional specimens from that locality. Dr. Suckley, who collected this type, stopped for some time at The Dalles and may have obtained it there."

The skin is badly mounted and in poor condition. It is much bleached and the ears are more or less broken, and on the posterior parts of body are two large areas without hair. The skull is in better condition, but upper incisors are broken off to the alveoli; the posterior parts of the zygomata, left auditory bulla, and parts about the foramen magnum are broken; lower jaw almost perfect.

Baird had but one specimen, designated by number.

Perognathus (Chaetodipus) nelsoni Merriam. Biological Survey coll.

Well-made skin in good condition; skull perfect.

Perognathus nevadensis Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Perognathus californicus ochrus Osgood. Biological Survey coll.

Well-made skin in good condition; skull perfect, except for broken zygomata.

Perognathus pacificus Mearns.

Well-made skin in good condition; skull perfect.
Perognathus fallax pallidus Mearns.


Well-made skin in good condition; skull perfect, except angular processes of mandible slightly chipped.

Perognathus longimembris panamintinus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Cricetodipus parvus Peale. See page 289.

Perognathus penecillatus Woodhouse.


Skin and skull. Adult male. San Francisco Mountain, Arizona. (Probably a few miles to the northeast. See Osgood, North Amer. Fauna, No. 18, p. 45, footnote, September 20, 1900.) 1851. Collected by Dr. S. W. Woodhouse on an expedition in command of Capt. L. Sitgreaves, U. S. A. Skin catalogued April 10, 1857; skull, June 4, 1898.

Skin formerly mounted, fairly well made up, but badly preserved. The hair looks worn and bleached and there are a couple of bare spots on the specimen. The tail has never been skinned out. Skull in fair condition; both zygomatics are injured, especially the left, and there are more or less extensive openings in the orbital walls. Lower jaw perfect, except some chipping from the angular processes.

Type not designated by number. The original description speaks of a single specimen, a male, from San Francisco Mountain, and by referring to Baird’s Mammals of North America, p. 419, No. 2676 is seen to be this specimen. It should be observed that the measurements given by Baird do not agree well with those given by Dr. Woodhouse.


Skin in fair condition; abdominal incision not sewed up; skull perfect, except for broken zygoma.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Genus MICRODIPODOPS.


Well-made skin in good condition; skull perfect, except for slight injury to lower lip of foramen magnum.
Microdipodops megacephalus Merriam. Biological Survey coll.
North Amer. Fauna, No. 5, pp. 116-117, July 30, 1891.

Well-made skin in good condition; skull perfect except for a few perforations in right mastoid bulla and broken left zygoma.


Well-made skin in good condition; skull perfect.

Microdipodops pallidus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Genus DIPODOMYS.

Dipodomys ambiguus Merriam. Biological Survey coll.
North. Amer. Fauna, No. 4, pp. 42-45, October 8, 1890.

Well-made skin in good condition; skull perfect.

Dipodomys merriami atronasus Merriam. Biological Survey coll.

Well-made skin in good condition; skull lacking right audital bulla, basi-occipital, and adjacent parts of brain case; zygomata broken.

Dipodomys californicus Merriam. Biological Survey coll.
North Amer. Fauna, No. 4, p. 49, October 8, 1890.

Well-made skin in good condition; skull perfect.
Dipodomys compactus True.


Skin rather carelessly made up. Some epidermis has slipped from about the nose. A sewed-up cut along the throat looks as if the specimen had been made up with a skull inside and that the latter had afterwards been removed. This skull can not be found at present.

Type not designated. The description was based upon one specimen only. The data, including three measurements of the above specimen, agree in every respect with those given in the original description.

Dipodomys spectabilis cratodon Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Dipodomys deserti Stephens.


Well-made skin in good condition; skull perfect.

Type designated by the original number.

Dipodomys elator Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Dipodomys merriami exilis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Dipodomys insularis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except broken tips of nasals.
Dipodomys merriami kernensis Merriam. Biological Survey coll.


Well-made skin in good condition, except for a small bare spot in middle of back; skull perfect.

Dipodomys margaritae Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Dipodomys mitchelli Mearns.


Well-made skin in good condition; tail has never been skinned out, but is braced with wire. Skull lacks both malaris; part of the left bulla is broken in two. Angular, coronoid, and condyloid processes of mandible more or less broken.

Dipodomys nelsoni Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Dipodomys merriami nevadensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Dipodomys merriami nitratoides Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last two upper molars and broken right mastoid bulla.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for fractures of mastoid bulke and left audital bulla and absence of last left lower molar.


Well-made skin in good condition; skull with right zygoma and lachrymal shelf missing; right mastoid bulba and left audital bulla slightly broken.


Well-made skin in good condition; skull perfect, except for broken angular processes of mandible.


Well-made skin in good condition; skull perfect.

Genus PERODIPUS.


Well-made skin in good condition; skull perfect, except for slight perforation of right audital bulla.

$\frac{3}{4} \times \frac{3}{4}$. Skin and skull. Adult female. Umatilla, Oregon. October 18, 1890. Collected by C. P. Streator. Original number 386.

Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for broken right auditory bulla.


Well-made skin in good condition; skull perfect.


$\frac{3}{4} \times \frac{3}{4}$. Skin and skull. Adult male. Perognathus Flat, Emigrant Gap, Panamint Mountains, California. April 16, 1891. Collected by V. Bailey. Original number 2668.

Well-made skin in good condition; skull perfect.


$\frac{3}{4} \times \frac{3}{4}$. Skin and skull. Young adult male. Echo Cliffs, Painted Desert, Arizona. September 22, 1889. Collected by Dr. C. Hart Merriam. Original number 512.

Well-made skin in good condition; skull perfect, except for absence of basi-occipital and supraoccipital; mastoid bullae fractured.


$\frac{3}{4} \times \frac{3}{4}$. Skin and skull. Adult male. Lone Pine, Owens Valley, Inyo County, California. December 22, 1890. Collected by E. W. Nelson. Original number 138.

Well-made skin in good condition; skull perfect, except for slight break in right mastoid bulla.
Dipodomys montanus Baird.


\( \frac{4^{10}}{18^{3}} \) Skin and skull. Collected on Pacific Railroad Survey, near 38\(^{2}\) lat., under Lieut. E. G. Beckwith, U. S. A., by Mr. Kreutzfeld in 1853. It was taken in the Rio Grande Valley, near Fort Massachusetts, then in New Mexico, at lat. 37\(^{2}\) 32', long. 105\(^{2}\) 23', now near the present town of Garland, Costilla County, Colorado. Catalogued February 16, 1855.

Skin badly made up, but well-preserved; skull with most of the posterior portions of the brain-case broken away; angular processes of mandible chipped.

Type not designated by number in the original description, but in Baird's Mammals of North America, page 412, a footnote speaks of No. 490 as the type.

Perodipus morroensis Merriam. Biological Survey collection.


\( \frac{4^{13}}{8^{8}} \) Skin and skull. Adult female. Morro, San Luis Obispo County, California. November 11, 1891. Collected by E. W. Nelson. Original number 1464.

Well-made skin in good condition; skull perfect.

Perodipus panamintinus Merriam. Biological Survey collection.


\( \frac{3^{10}}{8^{6}} \) Skin and skull. Adult male. Head of Willow Creek, Panamint Mountains, California. May 12, 1891. Collected by E. W. Nelson. Original number 853.

Well-made skin in good condition; skull perfect.

Perodipus simulans peninsularis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of lachrymals.

Perodipus perplexus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except broken lower incisors and slight injuries to palate and basioccipital.
Perodipus streatori simulans Merriam. Biological Survey coll.  


Well-made skin in good condition; skull perfect, except for broken right auditory bulla and supraoccipital.

Perodipus streatori Merriam. Biological Survey collection.  


Well-made skin in good condition; skull perfect, except for slightly broken right mastoid bulla.

Perodipus agilis tularensis Merriam. Biological Survey collection.  


Well-made skin in good condition; skull perfect, except for absence of lachrymals.

Perodipus montanus utahensis Merriam. Biological Survey coll.  


Well-made skin in good condition; skull perfect.

Perodipus venustus Merriam. Biological Survey collection.  


Well-made skin in good condition; skull perfect, except for slightly injured palate and pterygoid, and absence of right lachrymal.

Family GEOMYIDÆ.

Genus THOMOMYS.

Thomomys talpoides agrestis Merriam. Biological Survey collection.  


Well-made skin in good condition; skull perfect.
Thomomys alpinus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for a perforation in the supraoccipital.

Thomomys angularis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys alpinus awahnee Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of last left upper molar.

Thomomys baileyi Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys bridgeri Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys cabezonæ Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys clusius Coues.


Well-made skin in good condition. It has evidently been recently made over and the skull removed, probably in 1894. The skull has the posterior and basal portions of the cranium broken away; the left malar is missing and the upper incisors broken off to the alveoli. Both coronoid processes of mandible and the left angular process broken.

Thomomys fuscus fisheri Merriam. Biological Survey collection.

101238. Skin and skull. Young adult male. Beckwith, Sierra Valley, Plumas County, California, August 3, 1900. Collected by Dr. W. K. Fisher. Original number 1547.

Well-made skin in good condition; skull perfect, except for absence of left jugal.

Geomys fulvus Woodhouse.


Specimen in good shape and condition, especially considering its age and the time when it was mounted. It is probably much faded.

Type not designated by number. Woodhouse speaks of but one specimen, giving close measurements, and reference to Baird's Mammals of North America shows the above specimen to be the basis of the description.

Thomomys clusius fuscus Merriam. Biological Survey collection.
North Amer. Fauna, No. 5, pp. 69-70, July 30, 1891.


Well-made skin in good condition; skull perfect, except for badly broken zygomatics.

Thomomys goldmani Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Thomomys hesperus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for absence of left upper premolar.

Thomomys idahoensis Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys fulvus intermedius Mearns.

Well-made skin in good condition; skull lacking most of the left zygoma, otherwise perfect.

Thomomys aureus lachuguilla Bailey. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys laticeps Baird.
Proc. Acad. Nat. Sci. Phila., VII, p. 335, this paper was reported favorably for publication April 24, 1855.


Badly made skin in rather poor condition; legs sprawling, tail not skinned out. A naked patch on left side. It has the appearance of once having been in alcohol. Skull much damaged, but lower jaw almost perfect. Rostral and tooth-bearing portions above complete, but the teeth on right side are all broken off. Fragments of cranial bones present and adherent to dried-up brain.
Type not designated by number in the original description, but in Mammals of North America it is seen that Baird had but one specimen referred to by number.

45336—08—5
Thomomys latirostris Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys leucodon Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys limosus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys mazama Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Thomomys melanops Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.
Thomomys myops Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys nasicus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys leucodon navus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of two upper and one lower cheek teeth.

Thomomys nelsoni Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys nevadensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Thomomys niger Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken basioccipital and left audital bulla.

Thomomys clusius ocicus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Thomomys operarius Merriam. Biological Survey collection. 

Well-made skin in good condition; skull perfect, except for broken crown of last left lower molar.

Thomomys douglasii oregonus Merriam. Biological Survey coll. 

Well-made skin in good condition; skull perfect.

Thomomys orizabae Merriam. Biological Survey collection. 

Well-made skin in good condition; skull perfect.

Thomomys angularis pascalis Merriam. Biological Survey coll. 

Skin and skull. Adult male. Fresno, California. March 4, 1892 (not May 4, 1892, as in original description). Collected by C. P. Streator. Original number 1634.
Well-made skin in good condition; skull perfect.

Thomomys perditus Merriam. Biological Survey collection. 

Well-made skin in good condition; skull perfect, except for broken right lower incisor.

Thomomys peregrinus Merriam. Biological Survey collection. 

50130. Skin and skull. Young adult female. Salazar, Mexico, Mexico. October 24, 1892 (not October 23, 1892, as in original description). Collected by E. W. Nelson. Original number 3668.
Well-made skin in good condition; skull perfect.

Thomomys aureus perpes Merriam. Biological Survey collection. 

Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of right jugal and injury to left audital bulla.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of left upper molariform series.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Thomomys douglasi yelmensis Merriam. Biological Survey coll.

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Thomomys douglasi yelmensis Merriam. Biological Survey coll.

13 14 11 11


Thomomys douglasi yelmensis Merriam. Biological Survey coll.

Well-made skin in good condition; skull perfect.

Genus GEOMYS.

Geomys arenarius Merriam. Biological Survey collection. North Amer. Fauna, No. 8, pp. 113, 133-141, pl. 9, fig. 1; pl. 13, fig. 13, January 31, 1895.

51 12 11 11


Well-made skin in good condition; skull perfect.


51 18 12 11


Well-made skin in good condition; skull perfect.

Geomys breviceps Baird.

12 18 12 11


Skin well preserved. It has somewhat the appearance of having been in alcohol at one time; rather badly made up. Skull has a large triangular opening in brain case on the right side, involving basal and posterior parts. Mandible with left coronoid process broken and the right and left last lower molars lost.

Type not designated by number, but close measurements are given in the original description, which apply to No. 156 only, in the tables given in Baird’s Mammals of North America, pages 379 and 380.


12 18 12 11


Well-made skin in good condition; skull perfect.


97 10 12 11


Well-made skin in good condition; skull perfect.
Geomys bursarius lutescens Merriam. Biological Survey collection.

North Amer. Fauna, No. 4, p. 54, October 8, 1890.


Skin and skull. Adult male (not female, as in original description). Sandhills near Birdwood Creek, Lincoln County, Nebraska. May 27, 1889. Collected by A. B. Baker. Original number 11.

Well-made skin in good condition; skull perfect, except for absence of one upper molar.

Geomys tuza mobilensis Merriam. Biological Survey collection.

North Amer. Fauna, No. 8, pp. 113, 119-120, numerous pls. and figs., January 31, 1895.


Well-made skin in good condition; skull perfect, except for absence of right upper and lower molariform series and last left lower molar.

Geomys personatus True. Cotypes.


Skin and skull. Adult male.

Skin and skull. Adult female.


No type designated. Description based equally upon the above two specimens indicated by numbers. Well-made skins in good condition. They originally had skulls inside, which were taken out in February, 1902. Skulls in poor condition; the lower jaws are fairly good, but the rest of each skull is represented by the rostrum and tooth-bearing parts only.

Geomys breviceps sagittalis Merriam. Biological Survey coll.

North Amer. Fauna, No. 8, pp. 113, 134-135, pl. 9, fig. 4, January 31, 1895.


Well-made skin in good condition; skull perfect, except for absence of one upper molar.

Genus PAPPOGEOMYS.

Pappogeomys albinasus Merriam. Biological Survey collection.

North Amer. Fauna, No. 8, pp. 147, 149, January 31, 1895.


Well-made skin in good condition; skull perfect.
Geomys nelsoni Merriam. Biological Survey collection.
=Pappogeomys bulleri (Thomas). See Merriam, North Amer. Fauna, No. 8, p. 147, January 31, 1895.

Well-made skin in good condition; skull perfect.

Genus CRATOGOEMYS.

Pseudostoma castanops Baird.
Report Stansbury's Expedition to Great Salt Lake, p. 313, June, 1852.

48 38 45. Skin and skull. "Collected by Lieutenant Abert along the prairie road to Bent's Fort," near the present town of Las Animas, Bent County, Colorado, on the Arkansas River. Catalogued June 18, 1860.
The specimen formerly mounted has been made over into a modern study skin, but it is bleached and is otherwise in very poor condition. Lower jaw perfect. All the posterior part of the brain-case is missing, also the left zygoma. A large fissure is at base of rostrum, and both upper incisors are broken off at the roots.
Type not designated by number, but Baird, in the Mammals of North America, page 385, says there was but one specimen collected by Lieutenant Abert at the above locality.

Geomys clarkii Baird.
Proc. Acad. Nat. Sci. Phila., VII, p. 332, this paper was favorably reported for publication April 24, 1855.


Skin was formerly mounted, but was made into a modern study skin August, 1898. It is not in first-class condition and appears much bleached. Skull is in better condition, but both nasals are gone; pterygoids are injured and the ascending parts of the right half of mandible are broken. Practically all of the skeleton is present, but some bones are in the feet of the skin.
Type not designated by number in the original description. By referring to Baird's Mammals of North America, page 381, it is seen but two specimens came from Presidio del Norte and one of them is a skull only, not mentioned in the first description. Moreover, the measurements of No. 6 are exactly those given in the original description.
Cratogeomys estor Merriam. Biological Survey collection.
North Amer. Fauna, No. 8, pp. 151, 155-156, pl. 8, figs. 4-5, January 31, 1895.
Well-made skin in good condition; skull perfect.

Cratogeomys fulvescens Merriam. Biological Survey collection.
North Amer. Fauna, No. 8, pp. 151, 161-162, pl. 12, fig. 2, January 31, 1895.
Well-made skin in good condition; skull perfect.

Cratogeomys castanops goldmani Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Cratogeomys oreocetes Merriam. Biological Survey collection.
North Amer. Fauna, No. 8, pp. 151, 156-157, pl. 8, figs. 1-2, January 31, 1895.
Well-made skin in good condition; skull perfect, except for absence of left lower molar series.

Cratogeomys peregrinus Merriam. Biological Survey collection.
North Amer. Fauna, No. 8, pp. 151, 158-159, pl. 8, fig. 3, January 31, 1895.
Well-made skin in good condition; skull perfect, except for right lower molariform teeth, some of which are broken.

Cratogeomys perotensis Merriam. Biological Survey collection.
North Amer. Fauna, No. 8, pp. 151, 154-155, pl. 8, fig. 6, January 31, 1895.
Well-made skin in good condition; skull perfect, except for absence of crown of last left upper molar.
PLATYGEOMYS.

Genus PLATYGEOMYS.

Platygeomy s tylorhinus angustirostris Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Geomys fumosus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Geomys gymnurus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Platygeomy s neglectus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Platygeomy s planiceps Merriam.

Biological Survey collection.

North Amer. Fauna, No. 8, pp. 164, 168–170, pl. 13, fig. 3; pl. 14, fig. 9, January 31, 1895.


Well-made skin in good condition; skull perfect except for absence of crown of left lower premolar, left coronoid process, and left condyle.
Platygeomys tylophinus Merriam. Biological Survey collection.  
North Amer. Fauna, No. 8, pp. 164, 165-168, pl. 13, fig. 1, January 31, 1895.  
Well-made skin in good condition; skull perfect, except broken tips of coronoids.

Genus ORTHOGEOMYS

Orthogeomys latifrons Merriam.  
North Amer. Fauna, No. 8, p. 178, pl. 11, figs. 5 and 6, text fig. 64, January 31, 1895.  
Well-made skin in good condition, except for a little shedding of epidermis about the ears. Facial portion of skull, except right zygoma, complete; posterior portion of brain-case cut away. Mandible with both coronoid processes broken, otherwise complete.  
Type designated by the original number 2. Specimen evidently not entered in catalogue at time the description was written.

Orthogeomys nelsoni Merriam. Biological Survey collection.  
North Amer. Fauna, No. 8, pp. 173, 176-178, fig. 63, January 31, 1895.  
Well-made skin in good condition; skull perfect.

Genus HETEROGEOMYS

Heterogeomys torridus Merriam. Biological Survey collection.  
North Amer. Fauna, No. 8, pp. 180, 182-185, numerous pls. and figs., January 31, 1895.  
Well-made skin in good condition; skull perfect, except for absence of left upper premolar.

Genus MACROGEOMYS

Macrogeomys costaricensis Merriam.  
North Amer. Fauna, No. 8, p. 192, pl. 11, fig. 3; pl. 13, fig. 23; pl. 14, fig. 10, January 31, 1895.  
Well-made skin in good condition; a little hair gone from the occiput; skull in good condition; except right upper incisor broken, also tips of nasals; pterygoids somewhat damaged.
Macrogeomys dolichocephalus Merriam.

North Amer. Fauna, No. 8, p. 189, pl. 5; pl. 10, fig. 7; pl. 13, fig. 19, January 31, 1895.


Skin not very well made up, but apparently in good condition; skull nearly perfect, somewhat damaged about pterygoids, and a quadrangular hole is in supraoccipital, running up from foramen magnum.

Genus ZYGOGEOYMYS.

Zygogeomys trichopus Merriam. Biological Survey collection.

North Amer. Fauna, No. 8, pp. 196-198, pl. 6; pl. 13, fig. 24; pl. 14, fig. 1; pl. 15, fig. 10, January 31, 1895.


Well-made skin in good condition; skull perfect.

Family MURIDÆ.

Genus DICROSTONYX.

Dicrostonyx unalascensis Merriam. Biological Survey Collection.


Nearly perfect skull from owl pellet.

Genus LEMMUS.

Lemmus minusculus Osgood. Biological Survey collection.

North Amer. Fauna, No. 24, pp. 36-37, November 23, 1904.


Well-made skin in good condition; skull perfect.

Myodes nigripes True.


Well-made skin in good condition; skull with part of left zygoma and both coronoid processes of mandible absent; otherwise perfect.


Well-made skin in good condition; skull perfect.

Genus SYNAPTOMYS.


Well-made skin in good condition; skull perfect.


Skin and skull. Received from William Cooper, of Hoboken, New Jersey. Skin catalogued February 26, 1856; skull, June, 1857. Locality unknown. Baird says, "No locality was assigned, but the animal is undoubtedly North American, probably from the New England States or New York; possibly from Iowa or Minnesota." Dr. C. H. Merriam (Proc. Biol. Soc. Wash., VII, 1892, p. 177) thinks it not unlikely that the specimen came from southern New York or northern New Jersey.

The specimen is little more than a ball of fur. Head, legs (except one foreleg detached), and tail are lacking. The skull is in better condition. With the exception of the left zygoma the facial parts are complete and perfect, and the frontal, parietal, and most of the squamosal of the right side are present. The left half of the mandible has the angular and coronoid processes broken away, while the right half has the condyloid broken off as well.

Type designated by number on page 556 of the original description.


49373. Skeleton made from alcoholic specimen No. 10957, no other trace of which can now be found. Adult male. Nulato, Alaska. February, 1867. Collected by Dr. W. H. Dall. Catalogued October 22, 1872; skeleton April 28, 1894.

All of the skeleton is present and in good condition; skull not quite perfect; right malar absent; a piece out of the supraoccipital and both coronoid processes of mandible more or less broken.
Synaptomys helaeletes gossii Merriam.


Skull perfect, except incisors broken off nearly to the alveoli; both pterygoids broken, also tip of right coronoid process of mandible.

Synaptomys helaeletes Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Mictomys innitus True.


Specimen in good state of preservation, but unnecessarily opened up, in order to remove the skull; skull in good condition, except right pterygoid broken away, hole at the posterior lateral angle of the right parietal, and mandible with both angular processes broken away.


Well-made skin in good condition; skull perfect.

Synaptomys (Mictomys) truci Merriam.


Skin a mere flat pelt glued on a piece of cloth with the left hind leg (the only one present) tied to it. In the original description Dr. C. Hart Merriam says the skull was in fragments. These can not now be found.
Synaptomys (Micromys) wrangeli Merriam. Biological Survey coll.


Well-made skin in good condition: skull perfect except for slight injury to end of nasals and an irregular perforation of the anterior part of brain case beneath the frontals.

Genus MICROTUS.

Microtus abbreviatus Miller.


Considering its history, the skin is in good condition. It has been remade into a modern study skin. Mr. Miller (loc. cit.) says: "Mr. Townsend tells me that the specimen was preserved dry. It was received at the National Museum in September, 1886, and its subsequent history is not known. It was found in a bottle of alcohol in October, 1898." Skull not in such good condition as the skin; rather damaged, including the lower jaw, on the right-hand side and posteriorly.

Microtus acrophilus Miller.


Well-made skin in good condition; skull perfect.


Arvicola albicauda True.


Well-made skin in good condition; skull with left malar missing, left bulla injured, and right coronoid process of mandible broken, otherwise perfect.
Neofiber allenii True.

Science, IV, p. 34, July 11, 1884.


The whole specimen was originally in alcohol. It was then skinned, mounted, and placed on exhibition. The skeleton was prepared and the viscera put in alcohol. The mounted specimen has since been taken down and made into a study skin which is well made and in good condition except for a small naked spot on the right hip and the loss of many toenails. It is much lighter than normal, from exposure to light and probably from the effects of alcohol. The skeleton is in excellent condition and on exhibition in the Division of Comparative Anatomy. The viscera, both abdominal and thoracic, are well preserved.

Type not designated by number in the original description. The above specimen is said by Dr. F. W. True and F. A. Lucas to be the original specimen, which was unique at the time of describing.

Arvicola (Mynomes) alticolus Merriam. Biological Survey coll.

North Amer. Fauna, No. 3, pp. 67-69, pl. 5, figs. 1-2; pl. 6, figs. 1-4, September 4, 1890.


Well-made skin in good condition; skull perfect except for perforation in left auditory bulla and repaired fractures of frontals and parietals.


Well-made skin in good condition; skull perfect.

Arvicola apella Le Conte.

Proc. Acad. Nat. Sci. Phila., VI, p. 405, this paper was favorably reported for publication October 25, 1856.


Skin poorly made up, but well preserved.

This specimen not designated by number as a type. The specimen bears two old labels each marked "apella," as well as one of Coues' labels calling it the type. In Monographs of North American Rodentia, pages 223 and 224, Coues refers to No. 4714 as the type of Arvicola apella Le Conte.
Microtus aporodemas Preble.  Biological Survey collection.

North Amer. Fauna, No. 22, pp. 52-53, October 31, 1902.


Well-made skin in good condition; skull perfect.

Microtus montanus arizonensis Bailey.  Biological Survey coll.


Well-made skin in good condition; skull perfect.

Microtus pinetorum auricularis Bailey.  Biological Survey coll.


Well-made skin in good condition; skull perfect.

Arvicola austerus Le Conte.

Proc. Acad. Nat. Sci. Phila., VI, p. 405, this paper was favorably reported for publication October 25, 1853.


Poorly made skin, right hind leg nearly detached, but specimen well preserved. Type not designated by number. The specimen bears one old label inscribed "Arvicola austerus Racine, Wise." on the obverse, and on the reverse "Type of species." In the "Remarks" column in the old original catalogue is written "Type of Maj. Le Conte." On pages 210 and 214 of Monographs of North American Rodentia, Cones speaks of 2249 as the type of Arvicola austerus.

Microtus bairdi Merriam.  Biological Survey collection.


Well-made skin in good condition; skull with badly broken parietals and tips of nasals.

45336—08——6
MICROTUS.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull originally much broken, but glued together so that it is nearly perfect except about the pterygoids.


No particular specimen is designated by Baird as the type and there is nothing to show that any one of the six specimens given in his list should be taken as such. Consequently all six listed become cotypes. They were collected in July, 1856, on Muskeget Island, Massachusetts, by Dr. T. M. Brewer. Catalogued May 31, 1857.

The specimens are as follows:

2828. Adult male in alcohol; in good condition.

2829. Adult male in alcohol; can not be found.

3031. Adult female. Skin and skull.

Skin poorly made, but well preserved, except for two spots devoid of hair on side. Skull quite perfect, except pterygoids; right half of mandible lost.

3034. Adult male. Skin and skull.

Skin poorly made, but well preserved. Skull lacks the right tympanic, periotic, and mastoid bones and the right half of mandible.

3044. Immature male. Skin and skull.

Skin can not now be found. Skull present. Both malaris and posterior half of brain case missing. Two extra molars present, perhaps belonging to the missing lower jaws of the two preceding.

2833. Specimen in alcohol; can not now be found.


= Microtus californicus (Peale). See Trouessart, Catalogus Mammalium, p. 563, 1897.

Skin poorly made up; tail not skinned out. It looks rather discolored. The catalogue entry says "Dry," but the specimen looks as if it had been in alcohol at one time. An old parchment label further bears out this view. Skull injured about the pterygoids; both bullae, especially the left, and the right zygoma somewhat injured. The ascending parts of left half of mandible broken away.

Type not designated by number. In the entry of the skin in 1872 (twelve years after entry of the skull) under the remarks column of the catalogue is written in the handwriting of the original entry "type of californicus." The old parchment label on the specimen is marked "Arvicola Californica Peale." One of Dr. Coues's labels is attached, marked "Monograph of American Muridae. Dr. Elliott Coues, U. S. A., No. 10082. Type of Arvicola californica."

On page 534 of Mammals of North America, Baird speaks of having the original specimen. In the table on page 173, Monographs of North American Rodentia, Dr. Coues has 10082 marked as the type of "californicus."

**Microtus nanus canescens** Bailey. Biological Survey collection.


Well-made skin in good condition; skull lacking entire rostral portion except one loose upper incisor; right antlal bulla injured; anterior wall of brain case perforated; ends of lower incisors broken off.

**Microtus canicaudus** Miller. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of left coronoid process.

**Arvicola (Pedomys) cinnamomea** Baird.


The skin, number 591, according to a note in the catalogue, was misplaced before 1890 and has not been found since. Skull in fair condition; pterygoids broken, both malaris lacking, and pieces broken off the processes of the mandible.

Baird had but one specimen, the above, designated by number.

Baird, North American Fauna No. 17, page 74, says, "Except for a slightly abnormal tooth pattern, Baird's type of *cinnamomea* is a large specimen of typical *anusterus*. I can not believe that it ever came from Pembina."

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*Bailey (North Amer. Fauna, No. 17, p. 35) thinks the skull is abnormal or never came from the same animal as the skin. This lapse of time between the two entries substantiates the latter view.*
Microtus californicus constrictus Bailey. Biological Survey coll.
North Amer. Fauna, No. 17, pp. 15, 30-37, June 6, 1900.


Well-made skin in good condition; skull perfect.

Microtus cricetulus Miller.


Well-made skin in good condition; skull perfect.

Arvicola curtata Cope.


10267. Fragments of skull and feet. Collected by Prof. W. M. Gabb at Pigeon Spring, Mount Magruder, Nevada, near boundary between Inyo County, California, and Esmeralda County, Nevada. Skin catalogued October 15, 1872: skull, May 5, 1898.

The following is an inventory of the fragments: (1) Both hind feet, one of them with tibia attached; (2) both fore feet, one of them with radius and ulna attached, the other radius and ulna present and a portion of each humerus present; (3) a few small, almost unidentifiable fragments of the skull; (4) all the upper molars, still attached or glued to a good-sized fragment of the palate, the free ends of the incisors in small parts of the premaxillaries; (5) all of the lower jaw teeth except the last molar of the left side; the two other molars of that side are attached to a piece of the mandible; the incisors rather fragmentary.

Type not designated by number. In the catalogue, in the handwriting of the original entry, the specimen is marked "Cope's type." The present specimen is indicated as the type by Dr. Coues in Monographs of North American Rodentia, pages 215 to 217, where it appears that the specimen was in as bad condition in 1877 as it is now. One of Dr. Coues's labels, reading "No. 10267, Type of Arvicola curtata Cope," is still attached to the specimen.


Well-made skin in good condition; skull perfect.

Arvicola edax Le Conte.

Proc. Acad. Nat. Sci. Phila., VI, p. 405, this paper was favorably reported for publication October 25, 1853.

MICROTUS.

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Skin and skull. Collected by J. L. Le Conte in California, south of San Francisco. Skin catalogued April 13, 1861; skull, April 27, 1897.

Specimen made into a modern study skin, in good condition, and skull removed in the early part of 1897. The posterior and basal portions of cranium have been cut away, including the left upper molar. The posterior parts of the right half of mandible are broken away. Upper incisors are broken.

Type not designated by number. The present specimen seems to be the only one in the collection collected in California by Le Conte which is positively stated by Baird, page 532 of his Mammals, to be the type. In the table on page 175, Monographs of North American Rodentia, Dr. Cones says the present specimen, 4721, is the type of _elar._

**Microtus elymocetes** Osgood. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Arvicola fertilis** True.


Skin and skull. Adult female. Pir Panjal Range, Kashmir; altitude 8,500 feet. August 30, 1891. Collected by Dr. W. L. Abbott. Catalogued May 9, 1892.

Well-made skin in good condition; skull perfect, except that the bulle and pterygoids have been cut away.

**Microtus abbreviatus fisheri** Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

**Microtus fulviventer** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of both coronoid processes and left angular process of mandible.
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**MICROTUS.**

**Microtus mexicanus guadalupensis** Bailey. Biological Survey coll.


Well-made skin in good condition; skull perfect.

**Microtus guatemalensis** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Arvicola (Pedomys) haydenii** Baird.


69659. Skin and skull. Adult male. Collected in 1854 by Dr. F. V. Hayden at Fort Pierre, then in "Nebraska," now in Stanley County, South Dakota. Catalogued May 19, 1855.

Skin badly made up, legs spreading, tail not skinned out; a small patch on each side of body without hair; general condition of pelage good. Skull in good condition, but left half of mandible lost.

This was Baird's only specimen and was designated by number.

**Microtus innuitus** Merriam. Biological Survey collection.


Skull obtained from an owl pellet; slightly stained; last left upper molar missing; left parietal slightly fractured; left coronoid process and right mandibular ramus missing.

**Microtus kadiacensis** Merriam. Biological Survey collection.


= **Microtus operarius** kadiacensis Merriam. See Osgood, *North Amer. Fauna*, No. 21, p. 64, September 26, 1901.


Well-made skin in good condition; skull perfect except for absence of left auditory bulla.
Arvicola longirostris Baird.


=Microtus montanus (Peale). See Bailey, North Amer. Fauna, No. 17, p. 27, June 6, 1900.


Mounted specimen in fair condition; a little hair gone from the right side. Skull very fragmentary. Both halves of lower jaw complete. Upper teeth loose, but all present from each side and in a separate glass tube. A few other fragments are in another tube.

Baird had but one specimen, the above, which he designated by number.

Microtus ludovicianus Bailey. Biological Survey collection.

North Amer. Fauna, No. 17, pp. 74-75, June 6, 1900.


Well-made skin in good condition; skull perfect.

Microtus macfarlani Merriam.


Specimen remade into a modern study skin and the skull removed and cleaned in March, 1898. The skin is well preserved and in good condition save for some apparent lengthwise stretching. Skull perfect, except for loss of right malar and a hole in left auditory bulla.

Arvicola (Mynomes) macropus Merriam. Biological Survey coll.

North Amer. Fauna, No. 5, pp. 59-61, pl. 2, figs. 7-8, July 30, 1891.

=Microtus richardsoni macropus (Merriam). See Bailey, North Amer. Fauna, No. 17, p. 61, June 6, 1900.


Well-made skin in good condition; skull perfect.

Microtus macrurus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken frontals and right auditory bulla.


Well-made skin in good condition; skull perfect, except for slight perforation in right frontal.

Arvicola modesta Baird.


=Microtus pennsylvanicus modestus (Baird). See Bailey, North Amer. Fauna, No. 17, p. 20, June 6, 1900.


Skin very fragmentary and dilapidated. Right fore foot still attached. Two other feet loose and also tip of tail. Skull young; ends of nasals and upper incisors broken, both maxars, all the occipital bones, the interparietal and most of the parietals missing. Left half of the mandible has angular and coronoid processes broken away; right half, part of angular process and entire coronoid missing.

Of Baird's two specimens, both designated by numbers, the above is the only one that he refers with certainty to modesta.

Arvicola montana Peale. See page 289.

Arvicola montosa True.


Well-made skin in good condition, but rather contracted posteriorly; skull injured about the pterygoids, a hole in right bulla, and both coronoid processes of mandible broken; otherwise perfect.


=Microtus mordax (Merriam). See Trouessart, Catalogus Mammalium, p. 564, 1897.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for broken auditory bulla and left coronoid process.

Arvicola occidentalis Peale.

U. S. Exploring Expedition, Mammalia and Ornithology. p. 45, 1848.

= Microtus townsendi (Bachman). See Bailey, North Amer. Fauna, No. 17, p. 46, June 6, 1900.


Poorly made skin, tail not skinned out. It has somewhat the look of having been in alcohol at one time. Some of the hair has slipped from each side, especially the right. Skull fairly good for an old specimen; right zygoma missing and both bulle and both pterygoids broken, coronoid process of right half of mandible broken.

Type not designated by number. In the entry of the skin in 1872 (twelve years after the skull was entered in the catalogue) under the remarks column is written, in the handwriting of the original entry, "type of occidentalis." On page 555 of Mammals of North America, Baird speaks of having the original specimen. One of Doctor Coues's labels is attached marked "Monograph of American Muridae. Dr. Elliott Coues, U. S. A. No. 10083. Type of Arvicola 'occidentalis,' Peale." In the table on page 173, Monographs of North American Rodentia, Doctor Cones has 10083 marked as the type of "occidentalis."
Arvicola operarius Nelson.


**Microtus operarius**


Skin well preserved, but poorly made up, and right fore leg missing. Skull perfect, except coronoid of left half of mandible broken away, left bulla slightly injured.

**Microtus miurus oreas** Osgood.

= Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken left audital bulla and two slight perforations in brain case.

**Microtus pamirensis** Miller.

= Biological Survey collection.


Well-made skin in good condition; skull with left pterygoid broken and hole in right audital bulla; otherwise perfect.

Arvicola pauperrima Cooper.


Skin in poor condition; parts about head and shoulders glued on to a cotton filling. Posterior upper parts good for color; all the feet present, also the tail. Skull in fragments, viz: (1) The premaxille and maxille all in one piece, containing all the upper jaw teeth except the last right and left upper molars; (2) the interparietal with attached portions of the parietals; (3) a small piece of the left squamosal; (4) the horizontal parts of each half of the mandible containing all the lower jaw teeth, of which the left incisor is broken at the cutting edge.

Type designated by the original number.
**Arvicola phœus Merriam.** Biological Survey collection.


=Microtus mexicanus phœus (Merriam). See Bailey, North Amer. Fauna, No. 17, p. 54, June 6, 1900.


Well-made skin in good condition; skull perfect, except for injured occipital condyles and right audital bulla.

**Microtus unalascensis popofensis Merriam.** Biol. Survey coll.


Well-made skin in good condition; skull perfect, except for slight perforation of right audital bulla and a perforation at base of nasals.

**Arvicola (Pitymys) pineorum quasiater Cones.** See page 289.

**Microtus ravidulus Miller.**


Well-made skin in good condition; skull perfect, except some chips out of coronoid and angular processes of the mandible.

**Arvicola scalopsoides Audubon and Bachman.**


10264. Skin with skull inside. Long Island, New York. Collected by Major J. E. Le Conte, U. S. A. Catalogued October 15, 1872, so that the specimen must have been acquired long after the original description.

Skin in rather poor condition. It has somewhat the appearance of having been made up out of alcohol. The left fore foot and right hind foot are missing. On the left side there is a considerable patch without hair.

Type not designated by number. "Type of *scalopsoides*" is written in the remarks column of the catalogue in the handwriting of the original entry. In the table on page 224 of Monographs of North American Rodentia Dr. Cones calls this specimen, 10264, "Type of 'scalopsoides' LeC." The specimen also bears one of Cones's labels reading "Monograph of American Muridae, Dr. Elliott Cones, U. S. A., No. 10264. Type of A. 'scalopsoides' apud Le Conte (= *pineorum*) Long Island."
Microtus scirpensis Bailey.


Well-made skin in good condition; skull perfect.

Microtus serpens Merriam.


Well-made skin in good condition; skull perfect, except for slight perforation in brain case.

Microtus sitkensis Merriam.


Well-made skin in good condition; skull perfect.

Arvicola trowbridgii Baird.


The mounted specimen is a poor-looking object, with patches devoid of hair on each side. The skull is in fair condition; both malaris, left pterygoid, and right last lower molar are missing.

Microtus tshuktshorum Miller.


Specimen is fairly well preserved; hair rather loose, and a considerable patch on right side devoid of hair; skull perfect.

Microtus umbrosus Merriam.
North Amer. Fauna, No. 17, pp. 107, April 30, 1898.


Well-made skin in good condition; skull perfect.
Microtus unalascensis Merriam.  

Well-made skin in good condition; skull perfect, except for slight perforation in brain case.

Microtus californicus vallicola Bailey.  

Original number 2101 (Dr. A. K. Fisher).  
Well-made skin in good condition; skull perfect, except for slightly fractured frontals.

Microtus yakutatensis Merriam.  

Original number 2101 (Dr. A. K. Fisher).  
Well-made skin in good condition; skull perfect.

Genus ASCHIZOMYS.  

Aschizomys lemmius Miller.  

Well-made skin in good condition; skull perfect, except on the left side, where the roots of the molars have been purposely exposed. The dried-up body is also present. The specimen was originally preserved in alcohol and made into a study skin many years later.

Genus EVOTOMYS.  

Evotomys alascensis Miller.  


Recently remade as a study skin, in good condition; skull perfect, but rather poorly cleaned.
Evotomys californicus Merriam.  Biological Survey collection.  
North Amer. Fauna, No. 4, p. 26, October 8, 1890.  
Well-made skin in good condition; skull perfect, except for broken tip of left nasal.

Evotomys caurinus Bailey.  Biological Survey collection.  
Well-made skin in good condition; skull perfect.

Evotomys idahoensis Merriam.  Biological Survey collection.  
North Amer. Fauna, No. 5, pp. 66-67, pl. 3, figs. 5-6, July 30, 1891.  
Well-made skin in good condition; skull perfect.

Well-made skin in good condition; skull perfect.

Evotomys mazama Merriam.  Biological Survey collection.  
Well-made skin in good condition; skull perfect.

Evotomys nivarius Bailey.  Biological Survey collection.  
Well-made skin in good condition; skull perfect.
Evotomys norvegicus Miller.

Proc. Wash. Acad. Sci., 11, p. 95, July 26, 1900.


Well-made skin in good condition; skull perfect, except broken coronoids of the mandible.

Evotomys obscurus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Evotomys occidentalis Merriam.

Biological Survey collection.

North Amer. Fauna, No. 4, pp. 25–26, pl. 2, fig. 1, October 8, 1890.


Well-made skin in good condition; skull perfect, except for broken coronoids.

Evotomys orca Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Evotomys hercynicus suecicus Miller.


Well-made skin in good condition; skull rather damaged, right half of brain case entirely broken away, angular and coronoid processes of right half of mandible broken off.

Evotomys vasconiae Miller.


Well-made skin in good condition; skull perfect, except for a few almost unnoticeable chippings.
Evotomys wrangeli Bailey.

Biological Survey collection.
Proc. Biol. Soc. Wash., XI, p. 120, pl. 3, fig. 5, May 13, 1897.


Well-made skin in good condition; skull perfect, except for injury to posterior end of palate.

Genus PHENACOMYS.

Phenacomys albipes Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Phenacomys longicaudus True.


Recently made over into a fair study skin, tail has never been skinned out. Skull in rather large and disarticulated fragments. All the teeth are present; both parietals; both frontals; both premaxillae; most of both maxillae; both bulle, and parts about and including the basioccipital and basisphenoid, and most of each half of the mandible.

Phenacomys mackenzii Preble.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Phenacomys orophilus Merriam.

Biological Survey collection.
North Amer. Fauna, No. 5, pp. 65-66, pl. 3, figs. 3-4, July 30, 1891.


Well-made skin in good condition; skull perfect, except for badly injured frontals and slightly perforated audital bulle.

Phenacomys preblei Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.
Phenacomys truei Allen.

Skin and skull. Adult. "Black Hills." August 10, 1857. Collected by Dr. W. A. Hammond, U. S. A. Original number 109. Wagon road to Bridgers Pass, Rocky Mountains. Lieut. F. T. Bryan, U. S. A. Miller, loc. cit., says, "It is therefore almost beyond doubt that the type of Phenacomys truei was collected in Albany County or Laramie County, Wyoming, a few miles northeast of the present town of Laramie." Skin catalogued October 7, 1857; skull, November 13, 1894.

Skin in poor condition, the anterior parts much torn and glued to a cotton filling. Right fore leg missing. Apparently good for color. Skull very fragmentary; practically of value only for the molar teeth, of which three of the left mandibular rami are missing.

Genus FIBER.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; left fore foot injured by insects and hanging by a thread of skin; skull perfect.

Fiber spatulatus Osgood. Biological Survey collection. North Amer. Fauna, No. 19, pp. 36-37, pl. 6, fig. 4, October 6, 1900.


Well-made skin in good condition, except for absence of tip of tail; left fore foot detached; skull perfect.

45336—08—7
Myotalpa kansus Lyon.

Smithsonian Miscell. Coll., L, No. 1726, p. 134, pl. 15, figs. 4-10, July 9, 1907.


Well-made skin in good condition; skull perfect.

Neotoma texicana bullata Merriam.

Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of left coronoid process.

Neotoma cumulator Mearns.

Preliminary Diagnoses of New Mammals of the Genera Sciurus, Castor, Neotoma, and Sigmodon, from the Mexican Border of the United States, p. 3, March 5, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1132, p. 503, January 19, 1898.)


Well-made skin in good condition; skull perfect.

Neotoma desertorum Merriam.

Biological Survey collection.


Skin and skull. Adult male. Furnace Creek, Death Valley, California. January 31, 1894. Collected by Dr. T. S. Palmer. Original number 43.

Well-made skin in good condition; skull perfect.

Neotoma fuscipes dispar Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.
Neotoma fulviventerr Merriam. Biological Survey collection.


Well-made skin in good condition, except for a small bare space on abdomen; skull perfect.

Neotoma occidentalis fusca True.


=Neotoma cinerea fusca (True). See Trouessart, Catalogus Mammalium, p. 544, 1897.


Specimen remade into a modern study skin, February, 1902; a considerable bare spot on left side, a smaller one on nose, right side, and on belly.

Neotoma fuscipes Baird.

Mammals of North America, p. 495, 1857.


The original specimen was No. 2679, preserved in alcohol, but about 1885 it was prepared as a skeleton, No. 22026. Now in good condition and on exhibition in the Division of Comparative Anatomy. Skeleton catalogued March 9, 1885; original specimen April 10, 1857.

The description immediately following the brief diagnosis reads "(2679, 3). This animal * * * *". For that reason the specimen bearing this number is considered the type.

Neotoma goldmani Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Neotoma isthmica Goldman. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Neotoma latifrons Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Neotoma leucodon Merriam. Biological Survey collection.
Well-made skin in good condition, except for a bare space on throat; skull perfect, except for absence of left audital bulla.

Neotoma micropus littoralis Goldman. Biological Survey coll.
Well-made skin in good condition; skull perfect, except for absence of pterygoid processes.

Neotoma mexicana madrensis Goldman. Biological Survey coll.
Well-made skin in good condition; skull perfect, except for absence of last left lower molar.

Neotoma magister Baird. Cotypes.
For remarks concerning the relations of this species with existing forms of Neotoma, see Rhoads, Mammals of Pennsylvania and New Jersey, p. 91, 1903.
The cotypes are as follows, all collected in the bone caves of Pennsylvania by Secretary S. F. Baird. The caves are undoubtedly those at Carlisle. The specimens were not entered in the Museum catalogue until October 24, 1872.
12206. Left half of mandible; complete, except for coronoid process.
12207. Right half of mandible; all molar teeth and angular process missing.
12208. Right half of mandible; last molar, angular, condyloid, and coronoid processes missing.
12209. Right half of mandible; all teeth, angular, condyloid, and coronoid processes missing.
12210. Left half of mandible: all molars, angular, coronoid, and condyloid processes missing.

12211. Middle portion of left half of mandible, containing last two molars and root of incisor.

12212. Left half of mandible: all the teeth, angular, condyloid, and coronoid processes missing.

12213. Anterior portion of right half of mandible, containing only the incisor.

12214. Fragment of left maxilla, containing the incisor.

Cotypes not designated by number. The above are the only specimens known in the Museum and are unquestionably the ones upon which Baird based his description.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Neotoma mexicana Baird. Proc. Acad. Nat. Sci. Phila., VII, p. 533, this paper was favorably reported for publication April 24, 1855.

22487. Skin (lost) and skull. Adult. Near Chihuahua, Chihuahua, Mexico. Collected by John Potts. Skin catalogued July 6, 1854; skull, March 10, 1855.

Skull lacks posterior portion of braincase; otherwise perfect. Skin lost.

Type not designated by number. In the original description it is said; "Collected near Chihuahua by John Potts, esq." Reference to Baird's Mammals of North America, page 942, shows that no. 10274 is the only one to which that remark applies and it is thus regarded as the type. Unfortunately it was without a tail, and that is undoubtedly the reason why the measurements of another specimen, No. 565, are given in the original description.

Neotoma micropus Baird. Proc. Acad. Nat. Sci. Phila., VII, p. 353, this paper was favorably reported for publication April 24, 1855.

should be a skin, No. 554, but it can not be found. Catalogued March 10, 1855.

The skull lacks all four occipital bones, and the periortics and tympanics of each side; otherwise it is in good condition.

Type not designated by number, but by referring to Baird’s Mammals of North America, 1857, page 493, it is seen that the measurements given in the original description apply to No. 554 only, with corresponding skull number 1676, which consequently is considered the type.

Neotoma montezumae Goldman. Biological Survey collection.


Well-made skin in good condition; right hind foot attached to body with wire; distal half of tail missing; skull perfect.

Neotoma navus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of right coronoid process.

Neotoma nelsoni Goldman. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Neotoma nudicauda Goldman. Biological Survey collection.


Well-made skin in good condition; skull with vault of cranium mostly broken away; right audital bulla broken; right frontal with an irregular incision; right mandibular ramus lacking angular process; left ramus lacking coronoid and condyle.

Neotoma occidentalis Baird.

Proc. Acad. Nat. Sci., VII, p. 335, this paper was favorably reported for publication April 24, 1855.

=Neotoma cinerea occidentalis (Baird). See Merriam, North Amer. Fauna, No. 5, July 30, 1891.


According to records, specimen has been mounted, but has been made into a well-made study skin which has the appearance of being considerably bleached and discolored by age and exposure. The ears are somewhat ragged, and a small spot on nose, another on crown, and one on throat have the hair and epidermis missing.

Type not designated by number. It is indicated as coming from Shoalwater Bay and collected by Doctor Cooper. In the original description the dimensions are "Head and body 10 inches. Tail vertebra 8.25 inches." By referring to Baird's Mammals of North America, page 497, where detailed measurements of the only three specimens from Shoalwater Bay are given, it is seen that the above figures belong to No. 572 only, which is therefore considered the type.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of last two right upper molars and last left lower molar; right audital bulla disarticulated.


Well-made skin in good condition; skull perfect.


Well-made skin in fair condition; distal three-fourths of tail missing; skull perfect.


Well-made skin in fair condition; skull perfect, except for a large piece of squamosal broken out on right side.

Neotoma desertorum sola Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect except nasals, which are slightly fractured; angular process of left mandibular ramus broken.

Mr. E. A. Goldman informs us that the skin and the skull in this case are not properly associated, since they belong to different species.


Well-made skin in good condition; skull perfect.

Neotoma splendens True.


Well-made skin in good condition.

Neotoma stephensi Goldman. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Neotoma fuscipes streatori Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Neotoma tenuicauda Merriam. Biological Survey collection.
Skin and skull. Adult male. North slope Sierra Nevada de Colima, Jalisco, Mexico; altitude 12,000 feet. April 13, 1892. Collected by E. W. Nelson. Original number 2446.
Well-made skin in good condition; skull perfect, except for broken right zygoma.

Neotoma tropicalis Goldman. Biological Survey collection.
Well-made skin in good condition, but with a bare spot on rump; skull perfect, except for absence of last right upper molar and left upper incisor.

Well-made skin in good condition; skull perfect.

Neotoma albigula warreni Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Neotoma leucodon zacatecæ Goldman. Biological Survey coll.
Well-made skin in good condition; skull lacking last left lower molar, right audital bulla, ptterygoids, and adjacent parts of brain case; basisphenoid disarticulated; processes of mandibular rami mostly broken away; zygoma broken.

Genus HODOMYS.

Neotoma alleni Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

**Hodomys vetulus** Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect, except for broken zygoma, left coronoid, and disarticulated left auditory bulla.

**Teanopus phenax** Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.

**Xenomys nelsoni** Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.

**Nelsonia goldmani** Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect, except for slightly injured right auditory meatus.

**Nelsonia neotomodon** Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull with mastoid and auditory bullae disarticulated; last right upper molar missing.


Well-made skin in good condition; skull perfect, except for broken right zygoma and right parietal.

Genus SIGMODON.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for broken left auditory bulla.


Well-made skin in good condition, but ears badly damaged by insects; skull with basi-sphenoid and pterygoid region absent; right zygoma broken; right mandibular condyle, coronoid, and angular processes absent.

**Sigmodon berlandieri Baird.**

Proc. Acad. Nat. Sci. Phila., VII, p. 353, this paper was reported favorably for publication April 24, 1855.


The Museum catalogue records that the skin was taken out of alcohol, and that the body is still in alcohol, but neither skin nor body can now be found, and only the injured skull is present. Right zygoma and practically all of the occipital bones and a portion of the right parietal broken away. Right tympanic and parietal are present, but detached from the rest of the skull.

Type not designated by number in the original description, but by referring to Baird's Mammals of North America, page 505, it is seen that the description is based upon the present specimen, designated by number 565. Also see Bailey, loc. cit., page 107.

**Sigmodon hispidus eremicus Mearns.**

Preliminary Diagnoses of New Mammals of the Genera Sciurus, Castor, Neotoma, and Sigmodon, from the Mexican Border of the United States, p. 4, March 5, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1132, p. 504, January 19, 1898.)


Well-made skin in good condition; skull perfect.

**Sigmodon leucotis Bailey.**

Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Sigmodon hispidus major Bailey.**

Biological Survey collection.


Well-made skin in good condition; skull perfect.
Well-made skin in good condition; skull perfect, except for absence of right angular process of mandible and broken right zygoma.

Well-made skin in good condition; skull perfect.

211157. Skin and skull. Adult male. "From upper corner monument, New Mexico, on the Mexican boundary line 100 miles west of the initial monument on the west bank of the Rio Grande" (monument No. 40, 100 miles west of El Paso, Texas). April 26, 1892. Collected by Dr. E. A. Mearns, U. S. A., and F. X. Holzner. Original number 1704. International Boundary Commission. Skin catalogued August 30, 1893; skull, January 5, 1897.
Fairly well made skin in good condition; extreme tip of tail missing and belly a little soiled and torn. Skull has right zygomatic arch completely missing; pterygo-palatal region and both angular processes of mandible somewhat injured.

Well-made skin in good condition, but right ear imperfect; skull perfect.

Sigmodon hispidus pallidus Mearns.
Preliminary Diagnoses of New Mammals of the Genera Sciurus, Castor, Neotoma, and Sigmodon from the Mexican Border of the United States, p. 4, March 5, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1132, p. 504, January 18, 1898.)
Well-made skin in good condition; skull with posterior half of cranial cavity broken away, though many fragments are present.
Sigmodon hispidus saturatus Bailey. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of last right lower molar and slight perforation of right audital bulla.

Sigmodon hispidus tonalensis Bailey. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Genus REITHRODONTOMYS.

Reithrodontomys albenscens Cary. Biological Survey collection.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for broken right zygoma.


Well-made skin in good condition; skull perfect, except for broken zygomata.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


33671. Skin and skull. Adult male. Sierra Nevada de Colima, Jalisco, Mexico; altitude 12,000 feet. April 13, 1892 (not April 21, 1892, as in original description). Collected by E. W. Nelson and E. A. Goldman. Original number 2447.

Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull lacking left half of brain case, including auditoria bulla.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition, but tip of tail absent; skull perfect, except for absence of angular processes of mandible.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

45336—08—8
Reithrodontomys costaricensis jalapaæ Merriam.  
Biological Survey collection.  
Original number 14712.  
Well-made skin in good condition; skull perfect.

Reithrodontomys klamathensis Merriam.  Biological Survey coll.  
North. Amer. Fauna, No. 16, p. 93, 1899.  
Well-made skin in good condition; skull perfect.

Reithrodontomys levipes Merriam.  Biological Survey collection.  
Original number 10839.  
Well-made skin in good condition; skull perfect.

Reithodon longicauda Baird.  Cotypes.  
24115. Skin and skull. Female. Original number 231.  
24117. Skin and skull. Male. Original number 239.  
2581 to 2591, both inclusive, alcoholics.  
All collected at Petaluma, California, by E. Samuels.  
24112, 24113, catalogued April 24, 1856; 24114, June 24, 1856; the alcoholics, April, 1857; 2582, 2584, and 2588 are recorded in the catalogue as “Distributed to C. E. Aiken, June, 1872.”  
Of these fourteen specimens all that can now be found is the skull of 24115. The supraoccipital bone has been broken away; the angular process of the left half of the mandible is broken off, and all the molars on the upper right-hand side are lost.  
No type is designated and there is absolutely nothing by which any one of Baird’s 15 specimens can be picked out as a type. Fourteen of the specimens came from Petaluma, California, and a single one from San Francisco. The former are regarded as cotypes and the type-locality fixed at Petaluma. (See Miller and Rehn, Proc. Bost. Soc. Nat. Hist., XXX, p. 97, December 27, 1901.)

Reithodon megalotis Baird.  
Mammals of North America, p. 451, pl. 84, fig. 4, 1857.  
2281. Skull. Between Janos and San Luis Springs, State of Sonora, Mexico, near border of Grant County, New Mexico. Collected by Dr. C. B. Kennerly, under the command of Maj. W. H. Emory, U. S. A. Catalogued November, 1855.

Skull perfect except for loss of both malar bones. There should be a skin, No. 1039, which can not be found.

No type specified, but Baird’s description is evidently based upon the above specimen, designated by number. The skull of the above is figured. He had one other specimen, an alcoholic, now lost. His brief diagnosis says, “Hind foot near .70.” No. 1039, in the table of measurements, is put down as .68, while 1040, the alcoholic, is .50. Evidently the diagnosis was based on No. 1039. In Report United States and Mexican Boundary Survey, Part 2, page 43, 1859, No. 1039 is alone spoken of.


Well-made skin in good condition; skull lacking posterior half and entire underside of brain case.


Well-made skin in good condition; skull perfect.

Reithrodon montanus Baird.

Proc. Acad. Nat. Sci., Phila., VII, p. 335, this paper was reported favorably for publication April 24, 1855.


Mounted skin in rather poor condition; body doubled up; both fore legs missing. Both hind legs present, but one is detached from the body; tail also detached, but present. Skull with both malar bones gone, a hole in the left parietal, and the right angular process of the mandible missing; otherwise in good condition.

Type not designated by number in the original description, but the single specimen is referred to by number in Baird’s Mammals of North America, page 450.


Well-made skin in good condition; skull perfect.


Skin and skull. Adult female. Foothill region of Sierra Nevada de Colima, Jalisco, Mexico; altitude, 6,500 feet. April 21, 1892. Collected by E. W. Nelson and E. A. Goldman. Original number 2514.

Well-made skin in good condition, but right hind foot nearly severed from skin; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Reithrodontomys tenuirostris Merriam. Biological Survey coll.
76949. Skin and skull. Adult male. Todos Santos, Guatemala.
Well-made skin in good condition; skull perfect.

Reithrodontomys levipes toltecus Merriam. Biological Survey coll.
Well-made skin in good condition; skull perfect.

Well-made skin in good condition; skull perfect.

Well-made skin in good condition; skull perfect, except for broken zygomatic.

Genus Oryzomys.

Oryzomys albiventer Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for broken right mandibular ramus.

Oryzomys angusticeps Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of left auditory bulla.


Well-made skin in good condition; skull perfect, except for broken upper incisors and interorbital region.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Oryzomys natator floridanus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of last upper molars and last two right lower molars.
Oryzomys goldmani Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Oryzomys hylacetes Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Oryzomys medius Robinson and Lyon.
Well-made skin in good condition, except for small loss of hair on nape; skull perfect.

Oryzomys rostratus megadon Merriam. Biological Survey coll.
Well-made skin in good condition; skull perfect, except for absence of angular process of right mandibular ramus.

Oryzomys nelsoni Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Oryzomys palatinus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of last right upper molar and left occipital condyle.


Well-made skin in good condition; skull perfect.

Mus peruvianus Peale. See page 289.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of last two left upper molars and of basi-sphenoid and pterygoid processes, and injured squamosal and supraoccipital.


Well-made skin in good condition; skull perfect, except for absence of angular processes of mandible.


Specimen in good state of preservation; in February, 1902, made into a fair study skin. Left hind leg missing; tail not skinned out and from 2 to 3 cm. of the tip without epidermis. Skull nearly perfect. Pterygoids injured, and angular and coronoid processes of right half of mandible broken. In the original description Dr. Allen remarks there is no lower jaw. The present lower jaw was found in the same vial with the rest of the skull. It was not numbered, however, so there is some doubt as to its belonging to the specimen.


Well-made skin in good condition; skull perfect, except for absence of left occipital condyle.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Genus ONYCHOMYS.


Well-made skin in good condition; skull perfect.

Onychomys torridus arenicola Mearns.

International Boundary Commission. Catalogued April 28, 1892.

Well-made skin in good condition; skull perfect.

North Amer. Fauna, No. 5, pp. 52-53, fig. 2, July 30, 1891.

Well-made skin in good condition; skull lacking basioccipital, supraoccipital, interparietal, and part of parietals.

Onychomys torridus canus Merriam. Biological Survey collection.

Well-made skin in good condition, except for bare patch on abdomen; skull perfect.

Onychomys fuliginosus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Onychomys torridus perpallidus Mearns.

Well-made skin in good condition; skull perfect, except for piece out of left zygoma.

**Hesperomys (Onychomys) torridus** Copes.


Skin taken out of alcohol (according to Copes), well preserved, but poorly made up. No record of a skull.

**Onychomys torridus tularensis** Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

**Onychomys torridus yakiensis** Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last right upper molar; auditory bullae each with a large perforation.

**Genus PEROMYSCUS.**

**Hesperomys (Vesperimus) affinis** Allen.


Skin fairly well preserved, rather poorly made up; tail not skinned out; right foot present, but broken off from body. Skull can not be found.

Type designated by number. In the description the figures read 7382, but it is an error for 9382.
Peromyscus allex Osgood. Biological Survey collection.
March 7, 1892. Collected by E. W. Nelson. Original number 2029.
Well-made skin in good condition; skull perfect.

Peromyscus allophylus Osgood. Biological Survey collection.
Original number 9352.
Well-made skin in good condition; skull perfect.

Peromyscus altilaneus Osgood. Biological Survey collection.
76856. Skin and skull. Adult male. Todos Santos, Guatemala.
Original number 8942.
Well-made skin in good condition; skull perfect.

Peromyscus amplus Osgood. Biological Survey collection.
November 12, 1894. Collected by E. W. Nelson and E. A. Goldman.
Original number 7063.
Well-made skin in good condition; skull perfect.

71442. Skin and skull. Adult female. Puerto Angel, Oaxaca, Mexico.
Original number 7642.
Well-made skin in good condition; skull perfect.

Peromyscus eremicus arenarius Mearns.
Well-made skin in good condition; skull perfect.
PEROMYSCUS. 125

Peromyscus auritus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Hesperomys austerus Baird.

Proc. Acad. Nat. Sci. Phila., VII, p. 336, this paper was reported favorably for publication April 24, 1855.


Skin said to have been mounted; can not be found. Skull much broken; most of mandible present, and most of rostrum, both the upper tooth rows, and a small portion of the cranium. Parts of the skull have a charred appearance.

No type designated. Baird (Mammals of North America, p. 467, 1857) lists 8 specimens as positively austerus: No. 229 from Spokane Plain, and nos. 363, 364, 365, 371, 916, 1964 and 2576 from Steilacoom, Washington. Since Steilacoom is the first locality mentioned in the original description, and since seventeeths of the specimens came from there, Steilacoom should be chosen as the type-locality. (See Allen, Bull. Amer. Mus. Nat. Hist., V, 1893, p. 192.) Miller and Rehn (Proc. Boston Soc. Nat. Hist., XXX, p. 69, December 27, 1901) erroneously give Spokane Plain as the type-locality. Of the specimens coming from Steilacoom only the first four were catalogued at the time the original description appeared. The other three were catalogued later in the same year or in the next year. Evidently they were not in Baird's hands when the original description was prepared and they can not be considered as part of the original material. The first four may properly be considered as the original material. Of these no. 364, as measured by Baird in 1857, agrees very closely (hind foot identical) with the measurements given in the original description and may be chosen as the type. All of these four specimens are represented in the collection by imperfect skulls only. The skins are said to have been mounted. They could not be found in 1893. (See Allen, loc. cit.)

No. 1964 bears one of Dr. Coues's labels marked "Type of I. austerus Baird = leucops," in what is evidently Dr. Coues's handwriting. In Table 16 on page 74, Monographs of North American Rodentia, 1877, Dr. Coues gives no. 1964 as "typical of 'austerus.'" As this specimen was collected after the original description appeared, it obviously can not be considered the type.

Peromyscus yucatanicus radius Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect.
Peromyscus sonoriensis blandus Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Hesperomys boylii Baird.

Proc. Acad. Nat. Sci., Phila., VII, p. 335, this paper was reported favorably for publication April 24, 1855.


Mounted skin, and skull and tail vertebrae. Along the middle fork of the American River, between Placer and Eldorado counties, California. Collected by Dr. C. C. Boyle. Skin catalogued January 4, 1855; skull, December 20, 1854.

Skin mounted and in wretched condition; skull complete except for the right malar and most of the left zygomatic arch.

Type not designated by number. It is referred to in the original description as “collected on the middle fork of the American River, California, by Dr. C. C. Boyle.” In the list of specimens of Hesperomys boylii in Baird’s Mammals, No. 355 is the only one with the above data and is consequently to be taken as the type.

Peromyscus bullatus Osgood.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Hesperomys campestris Le Conte.

Proc. Acad. Nat. Sci. Phila., VI, p. 413, this paper was reported favorably for publication October 25, 1853.

Peromyscus leucopus noveboracensis (Fischer).


Skin in wretched shape and condition. Le Conte’s original specimens were in alcohol, and the specimen is evidently an attempt at making a skin from one of them. Large areas of hair have slipped from the back and belly.

Type not designated by number. Cones is the only authority for considering it the type. On page 51 of Monographs of North American Rodentia he refers to it as the type, and again on page 62. In addition, the specimen is entered in the Museum catalogue as “Hesperomys campestris” and as coming from Le Conte April 13, 1861. One of the old labels on the specimen has written on the back, “Type of the species as described Pr. A. X. S., VI, 1853, 413.”
Peromyscus canus Mearns.


Peromyscus texanus clementis Mearns.


Hesperomys cognatus Le Conte. Cotypes.

Proc. Acad. Nat. Sci. Phila., VII, p. 442, this paper was reported favorably for publication December 25, 1855.

=Peromyscus gossypinus (Le Conte).

4708 and 4709. Poorly made skins but well preserved; skulls inside. Collected by Major J. E. Le Conte, U. S. A. The locality given in the original description is Georgia and South Carolina. Catalogued April 13, 1861.

The specimens are considered cotypes on Dr. Cones's authority. In the synonymy of *Hesperomys leucopus* on page 51, Monographs of North American Rodentia, he gives "*Hesperomys cognatus* Le Conte, Proc. Acad. Nat. Sci. Phila., VII, 1855, p. 442 (Southern States; types, Nos. 4708, 4709, Mus. Smiths.)."

Peromyscus comptus Merriam. Biological Survey collection.

Proc. Biol. Soc. Wash., XII, p. 120, April 30, 1898.


Well-made skin in good condition; skull perfect, except for broken left zygoma.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Hesperomys eremicus Baird. Cotypes.


15041/9. Skin (lost) and skull. Male. Fort Yuma, California. 1853. Received from Maj. G. H. Thomas, U. S. A. Catalogued June
24, 1856. Both halves of mandible present and a portion of the left upper maxilla, all with some of the teeth out, which are still present, however.

2574. Data as above, preserved in alcohol; specimen lost. Catalogued May, 1857.

In alcohol; skull removed. Female. Data as above. Specimen in good condition except for some shedding of hair about the flanks. The skull was removed in May, 1902, and is in good condition. Alcoholic catalogued May, 1857; skull, May 26, 1902.

Baird's description is based upon six specimens, three from Fort Yuma, California, and three from "Colorado bottom, Cal." There is nothing to indicate that any one specimen was regarded as more typical than any of the others. It seems best, however, to restrict the cotypes to the three first mentioned as from Fort Yuma, since this is a definite locality; and to consider the three from "Colorado bottom" as paratypes. Much of the description is based upon details of the soles of the feet, which could be made out more readily in alcoholic specimens. Two of the Fort Yuma specimens were in alcohol, while all the "Colorado bottom" specimens were skins.

**Peromyscus spicilegus evides Osgood.** Biological Survey coll.


Well-made skin in good condition; skull perfect.

**Peromyscus felipensis Merriam.** Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Peromyscus sonoriensis fulvus Osgood.** Biological Survey coll.


Well-made skin in good condition; skull perfect.

**Hesperomys gambelii Baird.** Cotypes.


45336—08—9
Dr. J. A. Allen discusses the status of the type of this species in the Bulletin of the American Museum of Natural History, Volume V, 1893, pages 190 and 191. He says: "Hesperomys grahami" Baird was based primarily on two mounted specimens (Nos. 368 and 369) from Monterey, California, of which No. 369 should probably be regarded as the type, as it is the only specimen specifically mentioned in the original account of the species. This specimen, Mr. F. W. True informs me (in a letter dated June 8, 1893), is not now extant, and has not been in the collection for many years. No. 368, which may be considered as a cotype, is, through the kindness of Mr. True, now before me. It is, however, almost valueless for purposes of comparison, having become greatly faded from long exposure to light as a mounted specimen; it has also lost its ears and is in a sad plight generally. This is the only skin extant positively referred by Baird in his original account of the species to H. grahami."

In a footnote on page 191, op. cit., Dr. Allen skillfully eliminates from his cotypes a large number of specimens from various localities that Baird lists in the original description.

Skin No. 368 in very poor condition, much faded and without ears; No. 369 can not be found. Skull No. 1282 lacks both maxals, No. 1283 lacks all the right upper molars and left malar, otherwise both in good condition.

**Peromyscus gratus gentilis Osgood.** Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Peromyscus goldmani Osgood.** Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Hesperomys gossypinus Le Conte.** Cotype.

Proc. Acad. Nat. Sci. Phila., VI, p. 411, this paper was reported favorably for publication October 25, 1853.


Skin in fair condition, but tail not skinned out; skull still in the skin.

As this is the only one extant in the National Museum of Le Conte's original specimens, it is perhaps well to treat it as a cotype.

No. 546 is the only specimen from Georgia listed in Baird's Mammals of North America. Later, other specimens from Le Conte, from Georgia, came into
the collection—4704, 4705, and 4711. Of these, 4704 is the only one that can be found. The published measurements of 546, both in Baird’s Mammals of North America, page 460, and Cones’s Monographs of North American Rodentia, page 78, more nearly agree with the measurements of the original description than the measurements of any of the others do.

**Hesperomys gracilis Le Conte.**


—**Peromyscus gracilis** (Le Conte).

Skin and skull. Received from Major J. E. Le Conte, U. S. A. Date and locality unknown. Skin catalogued October 15, 1872: skull, May 26, 1902.

The skin is in very poor condition. The left hind leg is the only one present. The skull, removed in May, 1902, is somewhat more serviceable. The posterior half of the brain-case has been cut away; the left zygoma is missing. The right half of the mandible is perfect, while the ascending portion of the left half is broken off.

Attached to the specimen are three labels reading as follows:

1. "Monograph of American Muridæ, Dr. Elliott Cones, U. S. A. No. 10292. Type of *Hesperomys gracilis* [= *leucopus*]."


There is little in the original description to indicate that this specimen is the type. The entry in the catalogue for 10292 reads "Dry type of *gracilis*.

On page 51, Monographs of North American Rodentia, under the synonymy of *Hesperomys leucopus*, Dr. Cones gives "*Hesperomys gracilis*, Le Conte, Proc. Acad. Nat. Sci. Phila., VII, 1855, 442 (Ohio or Michigan and Wisconsin; types Nos.—, 4710, Mus. Smiths.)." The dash may refer to the above specimen; the other specimen, 4710, is one not quite so poor. There is nothing about its labels or catalogue entry to indicate that it is a type or cotype.

**Peromyscus gratus Merriam.**

Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Peromyscus guatemalensis Merriam.** Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of right coronoid process.
Peromyscus hylæus Osgood. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Peromyscus hylocetes Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Peromyscus pectoralis laceianus Bailey. Biological Survey coll.
Well-made skin in good condition; skull perfect.

Peromyscus boylei laceyi Bailey. Biological Survey collection.
92746. Skin and skull. Adult male. Turtle Creek, Kerr County, Texas. December 4, 1897. Collected by H. P. Attwater. Original number 1372x.
Well-made skin in good condition; skull perfect, except for absence of last right lower molar.

Peromyscus lepturus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Peromyscus levipes Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of left coronoid process.


Well-made skin in good condition; skull perfect.

Peromyscus texanus medius Mearns.


Well-made skin in good condition; skull perfect, except for loss of angular process on left half of mandible.


Well-made skin in good condition; skull perfect, except for absence of first upper molars, and angular processes of mandible.
Hesperomys megalotis Merriam. Biological Survey collection.

North Amer. Fauna, No. 3, pp. 63-64, pl. 3, figs. 1-4, pl. 4; September 4, 1890.

=Peromyscus truei (Shufeldt).


Well-made skin in good condition; skull perfect.

Peromyscus mekisturus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken left lower incisor.

Peromyscus melanocarpus Osgood. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken right zygoma.

Hesperomys (Vesperimus) melanophrys Coues.


\[\text{Skin and skull. Adult. Santa Efigenia, near Tapana, Oaxaca, Mexico. July 11, 1871. Collected by Prof. F. Sumichrast. Original number 2. Skin catalogued February 24, 1872; skull, January 4, 1873.}

The skin is in good condition and fairly well made up, except that tail has never been skinned out. The following parts are lacking on the skull: All four occipital bones, both maxars, and both angular processes of the mandible.

The original label bears the following legible measurements: "1g. tot. 245 mill.—tip of snout to tail (below) 11 centim.—tail 135 mill.—from tip of nose to eye 15 mill.—ditto to ear 25.—ear, exteriorly 20 mill., interiorly 22 mill."

Peromyscus merriamii Mearns.


Well-made skin in good condition; skull perfect.
Peromyscus texanus mesomelas Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Peromyscus leucopus minnesotae Mearns.


Well-made skin in good condition; skull perfect.

Peromyscus musculoides Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sitomys musculus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of last left upper molar.

Peromyscus musculus nigrescens Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect.
Peromyscus oaxacensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Peromyscus mexicanus orizabae Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Peromyscus attwateri pectoralis Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last upper molars.

Peromyscus boylii penicillatus Mearns.


Well-made skin in good condition; skull perfect, except for loss of angular process of left half of mandible.

Peromyscus eremicus phæorus Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for slight perforations of left auditory bulla and left parietal.
Peromyscus polius Osgood. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Peromyscus prevostensis Osgood. Biological Survey collection.

North Amer. Fauna, No. 21, pp. 29–30, September 26, 1901.


Well-made skin in good condition; skull perfect.

Peromyscus oreas rubidus Osgood. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Hesperomys leucopus rufinus Merriam. Biological Survey coll.

North Amer. Fauna, No. 3, pp. 64–66, pl. 3, figs. 5–8, September 4, 1890.

=Peromyscus rufinus (Merriam).


Well-made skin in good condition, except for a bare spot on left side; skull perfect.

Peromyscus mexicanus saxatilis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Peromyscus simulatus Osgood. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Peromyscus spicilegus simulus Osgood. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last right upper molar.

Peromyscus sitkensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Hesperomys sonoriensis Le Conte.

Proc. Acad. Nat. Sci. Phila., VI, p. 413, this paper was reported favorably for publication October 25, 1853.


The skin is well made up, probably remade, but the specimen has a worn and dirty look about it. Skull much broken, but now patched up, so that the missing parts are the two zygomatic arches, the last left upper molar, and the angular, condyloid, and coronoid processes of the right half of the mandible.

Type not designated by number, but it is mentioned as one "collected by the Boundary Commission under Major Graham." Referring to Baird's Mammals of North America, page 476, there are found to be three specimens collected by that commission—nos. 144, 146, and 147. The measurements of no. 146 agree very closely with the measurements given by Le Conte; no. 144 does not agree with them at all, and of no. 147 no measurements are given and the specimen itself can not be found. No. 146 is evidently the type. It was so considered and marked by Coues in 1877.

Peromyscus stephensi Mearns.


61026. Skin and skull. Adult female. From the lowest water on the wagon road, in a canyon at the eastern base of the Coast Range Mountains, San Diego County, near Mexican boundary line, California. May 9, 1894. Collected by Dr. E. A. Mearns, U. S. A. Original number 3512. International Boundary Commission. Catalogued November 17, 1894.

Well-made skin in good condition. Skull perfect, except right zygoma broken and some slight injury at base of foramen magnum.


**Peromyscus taylocri subater** Bailey. Biological Survey collection.

North Amer. Fauna, No. 25, pp. 102-103, fig. 15, October 24, 1905.


Well-made skin in good condition; skull perfect.

**Peromyscus mexicanus teapensis** Osgood. Biological Survey collection.  


Well-made skin in good condition; a bare spot on abdomen; skull perfect.

**Peromyscus tehuantepecus** Merriam. Biological Survey collection. 


Well-made skin in good condition; skull perfect.

**Hesperomys texanus** Woodhouse.

 Proc. Acad. Nat. Sci. Phila., VI, p. 242, this paper was reported favorably for publication February 22, 1853.


4444444. Skin preserved in alcohol and fragments of skull. Western Texas on the Rio Grande near El Paso, according to published statements of Woodhouse, but probably from south-central Texas. (See Mearns, Bull. U. S. Nat. Mus., No. 56, p. 406, April 13, 1907.) Collected by Dr. S. W. Woodhouse, on Capt. L. Sitgreaves’s expedition, probably in autumn of 1852. Skin catalogued April, 1857; skull, January 12, 1896.

Skin in alcohol, a miserable looking affair and much discolored. Feet and leg bones complete and perfect. Skull represented by the greater portion of each half of the mandible, most of the rostrum, and a portion of each maxillary bone, each piece containing the two anterior molars.

Type not designated by number. In the description but one specimen is implied, and in Baird’s Mammals, under list of specimens, 2559 is the only one having the data of Doctor Woodhouse’s specimen. Another specimen, No. 4444444, labeled “Hesperomystexanus W. Texas, Dr. Woodhouse,” is in the Museum, but this was not mentioned by Baird and has not been regarded as a type, although it may have been in the hands of Dr. Woodhouse when the description was written.


Well-made skin in good condition; skull prefect.

Peromyscus tiburonensis Mearns.


Skin in fair condition, recently made into a modern study skin, a small area on the left flank without hair; skull prefect, except for loss of right malar.

Peromyscus tornillo Mearns.


Well-made skin in good condition; skull prefect, except for loss of left malar.


Well-made skin in good condition; skull prefect, except for slightly broken basioccipital and right zygoma.

Hesperomys truei Shufeldt.

Proc. U. S. Nat. Mus., VIII, p. 405, pl. 21, figs. 1, 5, and 8, September 14, 1885.


14954. Skin, skull, and skeleton. Adult male. Fort Wingate, New Mexico. March 14, 1885. Collected by Dr. R. W. Shufeldt, U. S. A. Skin catalogued April 17, 1885; skull, April 9, 1891.

Fairly well-made skin in good condition. Right fore and left hind leg used for the skeleton. Skull with both malars absent, and pterygoids injured. Two right upper and lower posterior molars and last left lower molar missing. Angular process of left half of mandible broken off. Greater part of skeleton seems to be present but mostly disarticulated.

Type designated by number on page 405 of the original description, where it reads "14904," evidently a mistake for 14954, as 14904 refers in the Museum catalogue to a Neotoma collected by Doctor Shufeldt at Fort Wingate.
Peromyscus banderanus vicinior Osgood. Biological Survey coll. 
Well-made skin in good condition; skull perfect.

Peromyscus xenurus Osgood. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of last right and left upper molars.

Peromyscus melanotis zamelas Osgood. Biological Survey coll.
Well-made skin in good condition; skull perfect.

Peromyscus melanophrys zamorae Osgood. Biological Survey coll.
Well-made skin in good condition; skull perfect.

Peromyscus zarhynchus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Peromyscus zelotes Osgood. Biological Survey collection.
Well-made skin in good condition; skull perfect.
Genus **NYCTOMYS**.

**Sitomys (Rhipidomys) decolorus** True.


7112. Skin and skull. Young adult female. Rio de las Piedras, Honduras. November 17, 1890. (Not Dec. 11, 1890, as in original description. The original label is marked thus: "17 11.90." The "7" is rather blotted, but scarcely looks like a "2." ) Collected by Erich Wittkägel.

Original number 9. Catalogued August 12, 1893.

Well-made skin in good condition; skull with nearly all of each zygoma broken away; otherwise complete.

Type not designated as such by number, but the single specimen is referred to by number.

Genus **TYLOMYS**.

**Tylomys bullaris** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of nasals.

**Tylomys tumbalensis** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Genus **OTOTYLOMYS**.

**Ototylomys phyllotis** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Ototylomys phyllotis phaenus** Merriam. Biological Survey coll.


Well-made skin in good condition, except for bare space on left shoulder; left ear attached to skin with thread; skull perfect.
Genus EUNEOYMYS.

Euneomys petersoni Allen.


Well-made skin in good condition; skull slightly damaged; pterygoids absent, left bulla broken, tip of right nasal broken, both angular processes of lower jaw broken away.

Genus OXYMYCTERUS.

Oxymycterus microtus Allen.


Well-made skin in good condition; skull perfect, except that left zygoma is broken.

Genus REITHRODON.

Reithrodon hatcheri Allen.


Well-made skin in good condition, but lacks left fore and right hind legs. [It was Mr. Peterson's custom to save a good many skeletons of the animals he had skinned or to make up the skins of the animals he had saved for skeletons.] The skeleton of this individual was probably saved, but there is no record of its being in the Museum. Skull perfect except condyle of right half of mandible broken off, and corresponding angular process is slightly damaged.

Genus MUS.

Mus albicularis Mearns.


Well-made skin in good condition; skull perfect.
Mus anambæ Miller.


Well-made skin in good condition; skull perfect, except for absence of malar and both pterygoids.

Mus vulcani apicis Mearns.


Well-made skin in good condition; skull damaged in pterygoid region, a diagonal hole in brain-case across posterior portion of parietals, and free end of left nasal broken away.

Mus aquilus True.

Proc. U. S. Nat. Mus., XV, No. 915, p. 490, fig. 1, October 26, 1892.

447313. Skin and skull. Adult male. Mt. Kilimanjaro, German East Africa; altitude, 8,000 feet. April 11, 1888. Collected by Dr. W. L. Abbott. Catalogued June 24, 1890.

Skin in good condition, fairly well made up; skull has the right posterior and basal portion of brain case broken away. The specimen was killed by a hawk.

Mus asper Miller.


Well-made skin in good condition; skull perfect.

Mus atratus Miller.


Well-made skin in good condition; skull perfect.
Bullimus bagobus Mearns.

Fairly well-made skin in fair condition, slight loss of hair on lower abdomen; skull perfect.

Mus balæ Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 73, November 6, 1903.

Well-made skin in good condition; skull perfect.

Mus batamanus Lyon.

Well-made skin in good condition; skull perfect, except that both lower incisors are broken off to alveoli.

Mus bentincanus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 38, November 6, 1903.

Well-made skin in good condition; skull perfect.

Mus burrescens Miller.

Well-made skin in good condition; skull perfect.

Mus burrulus Miller.

Well-made skin in good condition; skull perfect.

4538—08—10
Mus burrus Miller.


Well-made skin in good condition; skull nearly perfect, a piece of left pterygoid and nearly all of the left coronoid process of mandible missing.

Mus surifer butangensis Miller.


Well-made skin in good condition; skull perfect.

Mus carimatae Miller.


Well-made skin in good condition; skull perfect.

Mus casensis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 38, November 6, 1905.


Fairly well-made skin in good condition, end of tail lost during life; skull perfect.

Mus catellifer Miller.


Well-made skin in good condition; skull perfect, except for broken right upper incisor.

Mus clabatus Lyon.


Well-made skin in good condition; skull considerably damaged, posterior left half of brain case broken away, and right ramus of mandible broken in two.
Mus commissarius Mearns.


Fairly well-made skin in fair condition; some naked spots on belly; skull perfect, except loss of pterygoids.

Mus cremoriventer Miller.


Well-made skin in good condition; skull perfect, except loss of 2 or 3 mm. of distal end of left nasal.

Mus defua Miller.


Well-made skin in good condition; skull perfect, except right pterygoid missing and some injury about the foramen magnum.

Mus domelicus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 39, November 6, 1903.


Well-made skin in good condition; skull with both zygomata and both condyloid processes, and last upper molar, right side, lacking.

Mus domitor Miller.


Well-made skin in good condition; skull perfect.

Mus enganus Miller.


Well-made skin in good condition; skull perfect, except loss of pterygoids.
Mus exulans Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 47, 1848.


Specimen old, dirty, much bleached, tail broken off, but still present.

It was mounted on a walnut stand with this inscription painted on the bottom:

"11 3730 | Mus exulans, Peale (Type) | (Mus penicillatus, Gould) | Tahiti Rat | Society Isds. T. R. Peale |". This specimen is accordingly considered the type rather than any of the other specimens collected by the Exploring Expedition from widely separated islands in the Pacific.

Mus ferreocanus Miller.


Well-made skin in good condition, except a slight scar on the lower back; skull perfect.

Mus firmus Miller.


Well-made skin in good condition; skull perfect.

Mus surifer flavidulus Miller.


Well-made skin in good condition; skull perfect.

Mus flaviventer Miller.


Well-made skin in good condition; skull perfect, except for loss of right malar.

Mus flebilis Miller.

Proc. U. S. Nat. Mus., XXIV, No. 1269, p. 762, pl. 41, fig. 2; pl. 42, figs. 2, 2a; May 28, 1902.


Well-made skin in good condition; skull perfect.
Mus fremens Miller.


Well-made skin in good condition; skull perfect.

Mus gigiventer Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 35, November 6, 1903.


Well-made skin in good condition; skull perfect.

Mus arianus griseus True. Cotypes.


No type is mentioned, so that the three following specimens designated by numbers, upon which the description of the species is based, are taken as cotypes. They were all collected by Dr. W. L. Abbott in Kashmir in 1891, prepared as skins and skulls. Catalogued May 9, 1892.


Skin fairly well made, in good condition; skull has posterior and basal parts of brain case cut away.


Skin fairly well made, in good condition; skull perfect.


Skin fairly well made, in fairly good condition; skull can not be found.

Mus integer Miller.


Well-made skin in good condition; skull perfect.

Mus julianus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 34, November 6, 1903.


Well-made skin in good condition; skull perfect, except tip of nasal broken.
Mus kelleri Mearns.
Well-made skin in good condition; skull perfect, except for loss of pterygoids and tip of left lower incisor.

Mus vociferans lancavensis Miller.
Well-made skin in good condition; skull perfect.

Mus lingensis Miller.
Well-made skin in good condition, but pelage worn; skull perfect, except for loss of both malars, both pterygoids, and right upper incisor.

Mus lucas Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 30, November 6, 1903.
Well-made skin in good condition; skull perfect.

Mus lugens Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 33, November 6, 1903.
Well-made skin in good condition; skull perfect.

Mus luteolus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 36, November 6, 1903.
Well-made skin in good condition; skull perfect, except loss of right malar.
Mus magnirostris Mearns.


Well-made skin in good condition; skull perfect, except for loss of left pterygoid.

Mus masae Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 32, November 6, 1903.


Well-made skin in good condition; skull perfect.

Mus matthaeus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 29, November 6, 1903.


Well-made skin in good condition; skull perfect, except that pterygoids are broken.

Mus mindanensis Mearns.


Fairly well-made skin in good condition; skull perfect, except that pterygoids are broken.

Mus obscurus Miller.


Well-made skin in good condition, except tip of tail shriveled and a small bare spot on belly; skull perfect.
Mus pagensis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 39, November 6, 1903.

Well-made skin in good condition; skull perfect.

Mus pannosus Miller.

Well-made skin in good condition; skull perfect.

Mus pantarensis Mearns.

Fairly well-made skin in good condition; skull perfect, except that pterygoids and right coronoid process are broken away.

Mus pellax Miller.

Well-made skin in good condition; skull perfect, except for loss of left malar and both pterygoids.

Mus pulliventer Miller.
Proc. U. S. Nat. Mus., XXIV, No. 1269, p. 765, pl. 41, fig. 3; pl. 42, figs. 3, 3a; May 28, 1902.

Well-made skin in good condition; skull perfect, except for loss of left malar.

Mus tullbergi rostratus Miller.

Well-made skin in good condition; skull perfect.
Mus serutus Miller.


Well-made skin in good condition; skull perfect.

Mus siantanicus Miller.


Fairly well-made skin in good condition; skull perfect, except for loss of both mals.

Mus simalurensis Miller.


Well-made skin in good condition; skull perfect.

Mus soccatus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 30, November 6, 1903.


Well-made skin in good condition; skull perfect.

Mus stoicus Miller.

Proc. U. S. Nat. Mus., XXIV, No. 1269, p. 759, pl. 41, fig. 1; pl. 42, figs. 1, 1a, May 28, 1902.


Well-made skin in good condition; skull slightly injured about the left pterygoid and left zygoma, left lower incisor broken off at alveolus, and left condyloid process lacking.

Mus strepitans Miller.


Well-made skin in good condition; skull perfect.
Mus stridens Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 28, November 6, 1903.


Well-made skin in good condition; skull perfect, except that it lacks the pterygoids.

Mus stridulus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 29, November 6, 1903.


Well-made skin in good condition; skull perfect, except that the pterygoids are slightly injured.

Mus surdus Miller.


Well-made skin in good condition; skull perfect.

Mus surifer Miller.


Well-made skin in good condition, save for a break in tail and some damage to left hind leg, probably from jaws of trap; skull perfect, except for injury to pterygoids.

Mus taciturnus Miller.


Well-made skin in good condition; skull perfect.

Mus tagulayensis Mearns.


Well-made skin in good condition; skull perfect, except for loss of pterygoids and right zygoma.
Mus tambelanicus Miller.


Well-made skin in good condition (tail met with an injury during life and is abnormally short); skull perfect, except for lack of right pterygoid.

Mus tana True.


The specimen was originally in alcohol, but at the time the species was described it was made up into a skin, in good condition; skull perfect.

Mus tiomanicus Miller.


Well-made skin in good condition; skull perfect.

Mus todayensis Mearns.


Well-made skin in good condition; skull perfect, except for lack of pterygoids.

Mus umbradorsum Miller.

Smithsonian Miscell. Coll., XLI, No. 1420, p. 37, November 6, 1903.

Well-made skin in good condition; skull perfect, except for lack of pterygoids.

Mus validus Miller.

Proc. Biol. Soc. Wash., XIII, p. 141, pl. 3, fig. 1; pl. 4, fig. 1, April 21, 1900.
86741. Skin and skull. Adult male. Khow Sai Dow (1,000 feet), Trong (or Tarang), lower Siam. February 18, 1899. Collected by Dr. W. L. Abbott. Catalogued July 19, 1899.

Well-made skin in good condition; skull perfect.

Mus vitiensis Peale. See page 289.
Mus vociferans Miller.

Proc. Biol. Soc. Wash., XIII, p. 138, pl. 3, fig. 3; pl. 4, fig. 3, April 21, 1900.

86736. Skin and skull. Adult male. Khow Sai Dow (1,000 feet), Trong (or Tarang), lower Siam. February 21, 1899. Collected by Dr. W. L. Abbott. Catalogued July 19, 1899.

Well-made skin in good condition; skull perfect.

Mus vulcani Mearns.


Well-made skin in good condition; skull perfect except pterygoids and four occipital bones broken away.

Mus zamboangae Mearns.


Well-made skin in good condition, a spot without hair on rump and adjoining part of tail; skull perfect.

Genus CHIROPODOMYS.

Chirododmys niaidis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 40, November 6, 1903.


Well-made skin in good condition; skull perfect.

Genus LIMNOMYS.

Limnomys sibuanus Mearns.


Well-made skin in good condition; skull perfect, except for lack of pterygoids.
Genus **TARSOMYS**.

**Tarsomys apoensis** Mearns.


Alcoholic in good condition; skull removed and perfect.

Genus **APOMYS**.

**Apomys hylocoetes** Mearns.


Well-made skin in good condition; skull perfect, except that the pterygoids are missing.

**Apomys insignis** Mearns.


Well-made skin in good condition; skull perfect, except for lack of pterygoids and right coronoid process missing.

**Apomys petraeus** Mearns.


Well-made skin in good condition; skull perfect, except for lack of pterygoids and malar.

Genus **LENOTHRIX**.

**Lenothrix canus** Miller.


Well-made skin in good condition; skull perfect.
Genus DASYMYS.

Dasymys rufulus Miller.


Well-made skin in good condition; skull with a slight break in right zygoma; otherwise perfect.

Genus ARVICANTHIS.

Arvicanthis planifrons Miller.


Well-made skin in good condition except a small naked area on belly; skull perfect. The specimen was first preserved in alcohol, but shortly after coming to the Museum it was made into a skin.

Genus DENDROMYS.

Dendromys nigrifrons True.


Alcoholic in fair condition. A few small bare spots, and the under side extensively cut open to remove skull, but it has been recently sewed up; skull perfect.

No type designated by number. A skull is figured and marked "typical specimen." An examination of the 5 specimens collected by Dr. Abbott shows that the figured skull is No. 35263, consequently the specimen to which it belongs may be regarded as the type.

Genus GERBILLUS.

Gerbillus arenicolor Miller.


Well-made skin in good condition; skull with left zygoma missing, otherwise perfect.

Type designated by number, which is given as 62143, an error for 62153.
Genus **SPALAX**.

**Spalax berytensis** Miller.


Fairly well-made skin in fair condition, a bare patch about chin and throat; skull perfect, except occipital bones broken away, both upper incisors and left lower incisor broken off to alveoli.

**Spalax dolbrogaei** Miller.


Well-made skin in good condition; skull nearly perfect; pterygoids slightly injured, as well as root caps of lower incisors.

**Family MUSCARDINIDÆ.**

Genus **ELIOMYS**.

**Eliomys cincticauda** Miller.


Well-made skin in good condition; skull perfect.

**Eliomys parvus** True.


The specimen was originally in alcohol, but at the time the species was described it was made into a modern study skin, in good condition; skull perfect.

**Family APLODONTIDÆ.**

Genus **APLODONTIA**.

**Aplodontia olympica** Merriam.


Well-made skin in good condition; skull perfect.
Aplodontia pacifica Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.

Aplodontia major rainieri Merriam.  
Biological Survey collection.  


Well-made skin in good condition; skull perfect.

Family CASTORIDÆ.
Genus CASTOR.

Castor canadensis frondator Mearns.  


Well-made skin, but rather overstuffed, in good condition; skull perfect.

Castor canadensis texensis Bailey.  
Biological Survey collection.  


Skin folded and flattened, having been made over after mounting; rump, underparts, and nose largely bare or with scattered patches of underfur; right fore leg missing; nails of hind toes mostly broken or absent; skull lacks occipital condyles and most of supraoccipital; left pterygoid and upper incisors broken.

Family SCIURIDÆ.
Genus NANNOSCIURUS.

Nannosciurus bancanus Lyon.  


Well-made skin in good condition; skull perfect.
Nannosciurus borneanus Lyon.


Well-made skin in good condition; skull perfect, except loss of left pm1, and right pm1, and pm2.

Nannosciurus pulcher Miller.


Well-made skin in good condition; skull badly injured; all the posterior part of the cranium missing; both nasals and all the ascending part of the left half of the mandible also missing.

Nannosciurus sumatranus Lyon.


Well-made skin in good condition; skull lacks posterior half of brain-case, and left pm1, right pm1, and left pm1.

Genus MARMOTA.

Arctomys olympus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect.

Genus CYNOMYS.

Spermophilus gunnisoni Baird.

Proc. Acad. Nat. Sci. Phila., VII, p. 334, this paper was reported favorably for publication April 24, 1855.


95336—08—11


Skin can not now be found. Most of the skull is present, posterior part of the brain case lacking, last two molars in right half of mandible are missing, one detached bulla is present.

The type is not designated by number in the original description, but in the Mammals of North America it is specified by number.


Skin and skull. Adult male. La Ventura, Coahuila, Mexico. March 24, 1891. Collected by C. P. Streator. Original number 625.

Well-made skin in good condition; skull perfect, except for absence of right upper premolar.

Genus CITELLUS.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of left postorbital process.
Spermophilus spilosoma arenos Bailey. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of left audital bulla.

Spermophilus armatus Kennicott. Cotypes.


No numbers are mentioned in the original description. Kennicott briefly describes new spermophiles in the collection of the Smithsonian Institution, collected by C. Drexler at Fort Bridger, Utah, now Wyoming. Consequently, all the specimens from Fort Bridger collected by C. Drexler and in the collection prior to 1863 are evidently cotypes of the species. In the following list are included all the known specimens from Fort Bridger collected by Drexler. The labels all have armatus written on them, possibly in Kennicott's own hand, and they are entered in the catalogue as Spermophilus armatus. The skins were all collected in April to June of 1858, and the alcoholics were probably taken at the same time.

3463. Female. Skin, can not be found; anterior half of skull and mandible present. Original number 451. Collected May 26, 1858.

3464. Female. Very poor skin, torn in two; part of skull inside. Original number 728. Collected June 25, 1858.

3465. Male. Skin, can not be found; anterior half of skull and of mandible present. Original number 610.

3467. Male. Skin, can not be found; no record of a skull. Original number 261. Collected May 2, 1858.

3470. Female. Skin, can not be found; no record of a skull. Original number 455. Collected May 26, 1858.

3478. Skin and skull; neither can be found. Original number 167. Collected April 11, 1858.

3474. Skin, can not be found; no record of a skull. Original number 215. Collected April 14, 1858.

3475. Male. Skin, can not be found; no record of a skull. Original number 197. Collected April 14, 1858.

3476. Female. Very poor skin, torn in two; two loose detached legs present; part of skull inside. Original number 229. Collected April 15, 1858.
3478. Male. Skin, can not be found; no record of a skull. Original number 140. Collected April 2, 1858.
3481. Skin, can not be found; no record of a skull. Original number 375. Collected May 19, 1858.
5958. Alcoholic, can not be found.
5959. Alcoholic, can not be found.
5960. Alcoholic, can not be found.

4117. Skin; can not be found; anterior half of skull and right half of mandible present. Remarks in catalogue say, "Died at S. I., after two years' confinement," so that it was probably collected at the time the others were taken and brought to Washington alive.

All the skulls catalogued January 20, 1863.

Spermophilus barrowensis Merriam.


Well-made skin in good condition; skull perfect, except for loss of coronoid process of right half of mandible.

Spermophilus beringensis Merriam.


Fairly well-made skin in good condition.

Spermophilus canescens Merriam. Biological Survey collection.

North Amer. Fauna, No. 4, p. 38, October 8, 1890.


Well-made skin in good condition; skull perfect.
Spermophilus mollis canus Merriam. Biological Survey collection.


\[\text{Citellus mollis canus (Merriam). See Trouessart, Catalogus Mammalium, Suppl. p. 339, 1904.}\)


Well-made skin in good condition; skull perfect.

Spermophilus couchi Baird.

Proc. Acad. Nat. Sci. Phila., VII, p. 332, this paper was reported favorably for publication April 24, 1855.

\[\text{Citellus variegatus couchi (Baird). See Bailey, North Amer. Fauna, No. 25, p. 83, October 24, 1905.}\)

\[\text{Skin and skull. Santa Catarina (not on modern maps; see Baird, Mammals of North America, p. 713), a few miles west of Monterey, Nuevo Leon, Mexico. April, 1853. Collected by Lieut. D. N. Couch, U. S. A. Catalogued December 20, 1854.}\]

The specimen was formerly mounted, but it has recently been made a study skin, in fair condition. Some hair has slipped from the underparts. Instead of being the "glossy black" described by Baird, it is now a blackish brown, probably due to exposure to light and consequent bleaching. Skull has left malar, left incisors, and the posterior parts involving the occipital bones, and left bulla, wanting.

Type not designated by number, but the measurements given in the original description agree exactly with those of No. \[\text{7861}\] given by Baird in Mammals of North America, p. 312.


North Amer. Fauna, No. 3, pp. 57-58, pl. 9, figs. 1-3, September 4, 1890.

\[\text{Citellus cryptospilotus (Merriam). See Trouessart, Catalogus Mammalium, Suppl., p. 341, 1904.}\)

\[\text{Skin and skull. Adult male. Tenebito Wash, Painted Desert, Arizona. August 17, 1889. Collected by Dr. C. Hart Merriam. Original number 374.}\]

Well-made skin in good condition; skull perfect, except for slight break in supraorbital border.

Spermophilus elegans Kennicott. Cototypes.


\[\text{Citellus elegans (Kennicott). See Elliot, Check List Mammals North Amer. Cont., etc., Field Columbian Mus., Zool. Ser., VI, p. 113, 1905.}\]

No numbers are mentioned in the original description. Kennicott briefly describes new spermophiles in the collection of the Smithsonian Institution. He speaks of \textit{Spermophilus elegans} as coming from Fort Bridger, Utah (now Wyoming), and collected by
C. Drexler. Consequently all the specimens from Fort Bridger collected by C. Drexler and in the collection prior to 1863 become cotypes of the species. In the following list are included all the known specimens from Fort Bridger collected by Drexler. The labels all have elegans written on them, possibly in Kennicott's hand, and they are entered in the catalogue as Spermophilus elegans. The skins were collected in April and May of 1858 and the alcoholics were probably taken at the same time.

3468. Female. Skin, can not be found; skull, anterior half present and in fair condition; mandible lost. Original number 168. Collected April 11, 1858.

3469. Female. Very poor skin; no record of a skull. Original number 169. Collected April 11, 1858.

3473. Male. Skin, can not be found; no record of a skull. Original number 166. Collected April 11, 1858.

3474. Female. Well-made skin in good condition (remade in February, 1902); skull has most of mandible and upper tooth row and orbit of right side present. Original number 233. Collected April 17, 1858.


4003 Female. Very poor skin; has been mounted; fragmentary skull inside. Original number 3.

5951. Alcoholic. Abdominal viscera removed; condition fair.

5952. Alcoholic. Abdominal viscera removed; condition fair.

5953. Alcoholic. Abdominal viscera removed; condition good.

5954. Alcoholic; abdominal viscera removed; young; condition poor.

5955. Body without feet or head, in alcohol; also a poor skin which has been mounted.

5956. Alcoholic; abdominal viscera removed; condition fair.

5957. Body without feet or head, in alcohol; no skin can be found.

Skins Nos. 3468-3480; catalogued March 3, 1859; No. 4003, June 18, 1860; alcoholic material in February, 1863; skulls January 20, 1863.

Spermophilus beecheyi fisheri Merriam. Biological Survey coll.


Well-made skin in good condition, except for absence of a small patch of hair on the side of the abdomen; skull perfect.
Spermophilus annulatus goldmani Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for small perforation in squamosal.

Spermophilus spilosoma macrospilotus Merriam. Biological Survey coll.
North Amer. Fauna, No. 4, p. 38, October 8, 1890.


Well-made skin in good condition; skull perfect, except for small perforation in brain-case.

Spermophilus spilosoma major Merriam. Biological Survey coll.
North Amer. Fauna, No. 4, p. 39, October 8, 1890.


Well-made skin in good condition; skull perfect, except for several small shot perforations; left coronoid and condyle missing.

Spermophilus spilosoma marginatus Bailey. Biological Survey coll.


108927. Skin and skull. Camp Floyd, Utah (now near Fairfield). March 18, 1859. Collected by C. S. McCarthy during "explora-

Skin remade in February, 1902, in good condition. The skull has most of the brain-case lacking, otherwise it is in good condition.

3775. Skin. Another cotype from the same place and by the same collector, can not be found. Catalogued February 21, 1860.

No type is designated by Kennicott. The specimens are referred to as coming from Camp Floyd and the Rocky Mountains in Utah, and collected by C. Drexler and C. S. McCarthy. The above two specimens are the only ones that fulfill these requirements. Nos. 2437 and 4953 are catalogued as coming from the Rocky Mountains and doubtfully collected by Drexler. In view of this uncertainty in regard to the Rocky Mountain specimens, it seems best to restrict the cotypes to the Camp Floyd specimens, which is the better course, since it gives the species a definite type-locality. Camp Floyd is considered the type-locality by Miller and Rehn, Proc. Bost. Soc. Nat. Hist., XXX, p. 53, December, 1901.

Citellus nebulicola Osgood.


Fairly well-made skin in good condition; skull perfect.

North Amer. Fanna, No. 3, pp. 56-57, September 4, 1890.


Well-made skin in fair condition; underparts somewhat grease-stained; skull perfect, except for perforation in supraoccipital.

Spermophilus obsoletus Kennicott. Cotypes.


No type is designated in the description. The species is based upon specimens in the collection of the Smithsonian Institution, from "Nebraska" (including the present Nebraska, Wyoming, and Dakotas), collected by Doctors Suckley, Cooper, and Hayden. The following seven specimens answer to these requirements and are undoubtedly the ones Kennicott had. This leaves the type-locality rather indefinite. It is the general region of the present western Nebraska.


5\textsuperscript{1/2}25\textsuperscript{2}/4. Skin. Female. Fifty miles west of Fort Kearney, Nebraska. August 9, 1857. Collected by Dr. J. G. Cooper. Original number 44. Fair skin, remade February, 1902. Skull in fair condition; broken about the brain case posteriorly.


3334. Skin and skull. Female. One hundred and thirty miles west of Fort Kearney, Nebraska. August 17, 1857. Collected by Dr. J. G. Cooper. Original number 47. Poor skin; most of skull present, but it is broken in two across the brain case.

3225. Skin. Male. Same data as 3224. Original number 48. Wretched skin, without feet; part of skull inside.

3335. Skin and skull. Black Hills, South Dakota, formerly Nebraska Territory. Collected by Dr. F. V. Hayden. Neither skin nor skull can be found.

Skins catalogued 1857–1858; skins in 1863, except No. 37998, catalogued in February, 1902.

**Spermophilus oregonus** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for several small shot perforations.

**Spermophilus osgoodi** Merriam.


Well-made skin in good condition. Most of the brain-case of the skull has been broken away; left zygomatic arch complete, right broken away; both upper incisors broken off to the roots; left half of mandible perfect, the parts posterior to the molars of the right half of mandible broken off.
Spermophilus mexicanus parvidens Mearns.


Well-made skin in good condition; skull perfect, except for an irregular hole in top of brain-case.

Spermophilus perotensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Spermophilus empetra plesius Osgood. Biological Survey coll.

North Amer. Fauna, No. 19, pp. 29-30, October 6, 1900.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Citellus stejnegeri Allen.


Flat skin; all parts present and apparently in good condition; skull nearly perfect; permanent premolars not yet in place; slightly injured about left zygoma and left pterygoid, a hole in supraoccipital.
Spermophilus mollis stephensi Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of first left upper premolar and slightly injured left pierygoid and angular process of mandible.

Spermophilus tereticaudus Baird. Cotypes.

Mammals of North America, p. 315, pl. 67, fig. 2, head and feet, probably No. 2490; pl. 81, fig. 4, skull No. 2419, 1857.


No type is designated by Baird. The description is apparently equally based upon these three specimens, which are specified by number:

15844 15847. Skin and skull. A not fully adult male. Skin in bad condition; most of hair on the posterior half of body, except the legs and tail, is lacking; skull perfect, except the two small upper premolars lacking.

1585. Skin of the head and neck. The body is said to be in alcohol, but can not be found.

2490. A young female in alcohol. All the hair behind the shoulders, except that on the feet and tail, has sloughed off.

All the specimens were collected at Fort Yuma, Arizona, by Maj. G. H. Thomas, U. S. A. Skins catalogued June 24, 1856, the alcoholic. April 9, 1857.

Spermophilus mollis yakimensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Genus AMMOSPERMOPHILUS.

Tamias leucurus cinnamomeus Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for fractured basioccipital and supraoccipital.

Tamias interpres Merriam. Biological Survey collection.

No. Amer. Fauna, No. 4, pp. 21–22, October 8, 1890.


Well-made skin in good condition; skull perfect.

Spermophilus nelsoni Merriam. Biological Survey collection.


=Ammospermophilus nelsoni (Merriam).


Well-made skin in good condition; skull perfect.

Spermophilus harrisi saxicolus Mearns.


Well-made skin in good condition; skull perfect.

Genus CALLOSPERMOPHILUS.

Spermophilus chrysodeirus brevicaudus Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect, except for small perforation in nasals and broken angular processes of mandible.
Tamias castanurus Merriam. Biological Survey collection.

North Amer. Fauna, No. 4, p. 19, October 8, 1890.

=Callospermophilus castanurus (Merriam).


Well-made skin in good condition; skull perfect, except for a few small shot perforations.

Callospermophilus madreanensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last right upper molar.

Callospermophilus chrysodeirus trinitatis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Genus EUTAMIAS.

Tamias alpinus Merriam. Biological Survey collection.


=Eutamias alpinus (Merriam). See Merriam, op. cit., XI, p. 191, July 1, 1897.

\( \text{16549} \). Skin and skull. Young adult female. Big Cottonwood Meadows, near Mount Whitney, California; altitude 10,600 feet. August 12, 1891. Collected by Dr. B. H. Dutcher, U. S. A. Original number 191.

Well-made skin in good condition; skull perfect.

Eutamias pallidus cacodemus Cary. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Tamias callipeplus Merriam. Biological Survey collection.

Skin and skull. Young adult male. Summit of Mount Pinos, Ventura County, California; altitude 9,000 feet. October 20, 1891. Collected by E. W. Nelson. Original number 1344.
Well-made skin in good condition; skull perfect, except for slight break in supraorbital border.

Eutamias canicaudus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Eutamias caniceps Osgood. Biological Survey collection.
North Amer. Fauna, No. 19, pp. 28-29, October 6, 1900.

Well-made skin in good condition; skull perfect.

Eutamias cinereicollis canipes Bailey. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for broken tip of nasals and absence of right coronoid process of mandible.

Eutamias minimus caryi Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Eutamias caurinus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.
Tamias cinereicollis Allen. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of right postorbital process.

Tamias cooperi Baird. Cotyope.

Proc. Acad. Nat. Sci. Phila., VII, p. 334, this paper was reported favorably for publication April 24, 1855.


$\text{\frac{176}{177}}$. Skin and skull. Klickitat Pass, Cascade Mountains (4,500 feet), Skamania County, Washington. (See Cooper, American Naturalist, II, p. 531; Baird’s published statements regarding the locality are inaccurate.) July, 1853. Collected by Dr. J. G. Cooper. Skin catalogued January 30, 1854; skull October, 1853.

Skin is well preserved, and in June, 1902, was remade into a modern study skin. The posterior half of the brain-case and right zygoma lacking.

No. $\text{\frac{177}{178}}$ is another cotyope, having the same data as the above, but it can not be found.

No type is designated in the original description, but on page 301, Mammals North America, Baird refers to Nos. 211 and 212 as the ones he had in view when Tamias cooperi was first described.

Tamias dorsalis Baird. Cotyopes.

Proc. Acad. Nat. Sci. Phila., VII, p. 332, this paper was reported favorably for publication April 24, 1855.


120. Mounted specimen (which has a skull inside). Fort Webster, copper mines of the Mimbres River; lat. 32° 47', long. 108° 04'. Near the present Georgetown, Grant county, New Mexico. 1851. Collected by J. H. Clark. Catalogued March 31, 1853.

In fair condition. Some skin is broken about the chin and about right fore leg, and tip of tail is missing.

$\text{\frac{178}{179}}$. Data as above. Skin catalogued March 31, 1853; skull, April 10, 1857. Only the mandible of this specimen can be found.

These specimens were designated by number by Baird as the basis of Tamias dorsalis on page 300 of the Mammals of North America, 1857.


1/4. Skin and skull. Adult male. Chief Mountain Lake, northern boundary of Montana. August 24, 1874. Collected by Dr. Elliott Coues on the U. S. Northern Boundary Survey. Skin catalogued October 21, 1874; skull, February 1, 1902. Remade in February, 1902, into a modern study skin, in good condition. A skull was found inside. It is somewhat injured about the optic foramina and pterygopalatal region; last left upper molar is lost; condyloid process of right half of mandible lacking.

Tamias obscurus Allen.


Well-made skin in good condition, but no wire in tail; skull perfect.

Eutamias townsendi ochrogenys Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of post-orbital processes and first left upper premolar.

Eutamias amœnus operarius Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect.

Eutamias oreocetes Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Tamias quadrivittatus pallidus Allen. Lectotype.


Skin originally had skull inside, but in 1906 the skull was removed and the specimen made into a modern study skin, now in good condition. The skull lacks all the occipital bones and one bulla; otherwise in good condition.

For regarding this specimen a lectotype out of a series of cotypes from widely separated localities and representing more than one form, see Cary, Proc. Biol. Soc. Wash., XIX, p. 88, under "Remarks."
Eutamias palmeri Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Tamias panamintinus Merriam. Biological Survey collection.


=Eutamias panamintinus (Merriam). See Merriam, op. cit., XI, p. 191, July 1, 1897.


Well-made skin in good condition; skull perfect.

Eutamias senescens Miller.


Well-made skin in good condition; skull perfect, except that right posterior half of brain-case is broken away.

Genus TAMIOPS.

Sciurus novemlineatus Miller.


=Tamiops novemlineatus (Miller).

Skin and skull. Adult male. One thousand five hundred feet elevation in heavy forest among the hills of Trong (or Tarang), lower Siam. February 19, 1897. Collected by Dr. W. L. Abbott. Catalogued March 25, 1898.

Well-made skin in good condition; skull perfect, except that the left ramus of mandible is lacking.

Genus SCIURUS.

Sciurus abbotti Miller.


Well-made skin in good condition; skull perfect.
Sciurus adangensis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 17, November 6, 1903.
Well-made skin in good condition; skull perfect.

Sciurus alleni Nelson.
Biological Survey collection.
Well-made skin in good condition; skull perfect.

Sciurus altinsularis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 21, November 6, 1903.
Well-made skin in good condition; skull perfect.

Sciurus anambensis Miller.
Well-made skin in good condition; skull perfect.

Sciurus fossor anthonyi Mearns.
Preliminary Diagnoses of New Mammals of the Genera Sciurus, Castor, Neotoma, and Sigmodon, from the Mexican Border of the United States, p. 4, March 5, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1132, p. 501, January 19, 1898.)
Well-made skin in good condition; skull perfect, except for a few shot holes in brain-case.

Sciurus aoris Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 10, November 6, 1903.
Well-made skin in good condition; skull perfect, except for two shot holes on superior surface and one just above right bulla.
Sciurus arizonensis Cones.

Amer. Nat., I, p. 357, footnote, September, 1867.

Sciurus arizonensis. Skin and skull. Female. Fort Whipple, Arizona. December 20, 1865. Collected by Dr. Elliott Cones. Skin catalogued April 16, 1866; skull, November 1, 1898.

Specimen has evidently been mounted, but it has been made into a good study skin. The floor of the brain-case has been broken out, otherwise the skull is complete.

In the catalogue, No. 8475 is recorded as having been collected on December 6, 1864. Dr. Cones says (loc. cit.): The only specimen he obtained was shot December 20, 1865. Dr. Allen, in his list, on page 741, Monographs of North American Rodentia, gives the same date, probably taken from Cones, who was working with him, or from an original label which is now lost. Dr. Cones refers to no number as type in his description, but Dr. Allen, ten years later, in table (loc. cit.), under "Remarks," states that specimen no. 8475 is the type of S. arizonensis.

In the skull catalogue under "Remarks" is written: "Skull taken from mounted type, not naturally attached to skin, and it is very doubtful if it is the type skull. Oct. 31, 98."

Sciurus atratus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 13, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus Hudsonicus baileyi Allen. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sciurus baliæ Miller.


Well-made skin in good condition, but tail was damaged during life and only 23 mm. remain; skull perfect, except loss of left small upper premolar and second right lower molar and left angular process of mandible.


Well-made skin in good condition; skull perfect, except for broken mandible; posterior portion of right ramus missing; left ramus broken, but with teeth and processes intact.

**Sciurus bancanus Miller.**


Well-made skin in good condition; skull perfect, except both small upper premolars lacking.

**Sciurus boothiae belti Nelson.**

Biological Survey collection.


Well-made skin in good condition; skull perfect, except for a few shot perforations.

**Sciurus bentincanus Miller.**

Smithsonian Miscell. Coll., XLV, No. 1420, p. 19, November 6, 1903.


Well-made skin in good condition; skull perfect.

**Sciurus bilimitatus Miller.**

Smithsonian Miscell. Coll., XLV, No. 1420, p. 8, November 6, 1903.


Well-made skin in good condition; skull perfect, except for shot holes in base and vault of cranium.

**Sciurus billitonus Lyon.**


Well-made skin in good condition; skull perfect.
Sciurus carimatae Miller.


Well-made skin in good condition; skull perfect, except slight injury to right condyloid process of mandible.

Sciurus carimonensis Miller.


Well-made skin in good condition; skull nearly perfect, a few small shot injuries.


Well-made skin in good condition; skull perfect, except for a few small shot perforations.

Sciurus casensis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 20, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus castanotus Baird.


11124. Skin and skull. Adult female. Coppermines, near the present site of Georgetown, Grant County, New Mexico. (On page 707 of Mammals of North America, Baird says of Coppermines, "A former station of the United States-Mexican Boundary Survey, subsequently called Fort Webster. Not indicated clearly whether on a tributary of the Gila or Mimbres. About latitude 33°, longitude 108°." In his original description the specimen is spoken

The specimen has evidently been made over into a modern study skin, quite complete except for the tail, which is rather fragmentary; skull perfect.

No numbers are referred to in the original description, but in the Mammals of North America it is seen that there were two specimens, an adult female and a young. Measurements of a skull are given in the first description, which apply to the adult female, no. 1401. Hence it is regarded as the type.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for broken right auditory bulla.


Well-made skin in good condition; skull perfect.

Sciurus aberti concolor True.


Skin in good condition, but not made up in form of a modern study skin; skull perfect, except for a few minor chippings.
Sciurus condurensis Miller.


Well-made skin in good condition; skull nearly perfect, left zygoma lacking and last left upper molar shot away.

Sciurus domiculis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 18, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus dorsalis Woodhouse.


2430. Skin, no skull. San Francisco Mountain, Arizona, on the routes of Captains Sitgreaves and Whipple, about lat. 35° and long. 111° 30'. October, 1851. Collected by Dr. S. W. Woodhouse. Catalogued April 4, 1857.

The specimen was formerly mounted, but it has since been taken down and made into a fairly good study skin. The first description reads: "This beautiful squirrel I procured whilst attached to the expedition under the command of Capt. L. Sitgreaves, Topographical Engineer, U. S. Army, exploring the Zuni and the Great and Little Colorado rivers of the West in the month of October, 1851, in the San Francisco Mountain, New Mexico." This statement makes it practically certain that the above specimen is the one on which Dr. Woodhouse based his description.

Sciurus albipes effugius Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken alisphenoid.

Sciurus erebus Miller.


Well-made skin in good condition; skull perfect.

Sciurus fossor Peale. See page 290.

Sciurus aureogaster frumentor Nelson. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of last two right upper molars and last left upper molar.


Well-made skin in good condition; skull perfect.

Sciurus hippurellus Lyon.

Smithsonian Miscell. Coll., L, No. 1705, p. 27, fig. 12b, April 8, 1907.


Well-made skin in good condition; skull perfect, except loss of two minute upper premolars.

Sciurus hippurosus Lyon.

Smithsonian Miscell. Coll., L, No. 1705, p. 26, fig. 12a, April 8, 1907.


Well-made skin in good condition; skull with a few shot holes in cranium, most of the left half of the mandible destroyed by shot, and right lower incisor shot off at alveolus.


Well-made skin in good condition; skull perfect, except for broken pterygoids.
Sciurus ictericus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 12, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus (Microsciurus) isthmius Nelson.

Bull. Amer. Mus. Nat. Hist., XII, p. 77, fig. 1, April 14, 1899.

3444. Skin and skull. Truando River, northwestern Colombia. Collected by Dr. A. Schott. Original number 232. Received from Lieut. N. Michler, U. S. A. Skin catalogued March 1, 1859; skull, March 25, 1898.

Skin in rather poor condition, tail imperfect; most of the posterior basal portion of the brain case of the skull has been cut away.

Sciurus kaibabensis Merriam.

Biological Survey collection.


Well-made skin in good condition; skull with zygomatics, pterygoids, left auditory bulla, and angular processes of mandible broken.

Sciurus klossi Miller.


Well-made skin in good condition; skull perfect.

Sciurus lanceavensis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 16, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus lautensis Miller.


Well-made skin in good condition; skull perfect, except posterior portion of left half of mandible has been shot away.
Sciurus (Heliosciurus) rufobrachiatus libericus Miller.


Well-made skin in good condition; skull perfect.

Sciurus limitis Baird.

Proc. Acad. Nat. Sci. Phila., VII, p. 331, this paper was reported favorably for publication April 24, 1855.


Skin can not be found; skull perfect, except for loss of left pterygoid and a small piece out of left angular process of mandible.

The original description says, "Collected by J. H. Clark on Devil's River, Texas," and by referring to Baird's Mammals of North America, p. 256, it is seen, that this specimen is no. 35S1, which is consequently considered the type.

Sciurus lingungensis Miller.


Well-made skin in good condition; skull perfect.

Sciurus socialis littoralis Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of two molars, left pterygoid, and adjacent part of the floor of the brain-case.

Sciurus lucas Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 20, November 6, 1903.


Well-made skin in good condition; skull perfect, except that the right pterygoid is defective.
Sciurus lutescens Miller.


Well-made skin in good condition; skull perfect.

Sciurus boothæ managuensis Nelson.


Well-made skin in good condition; skull perfect.

Sciurus mansalaris Miller.


Well-made skin in good condition; skull perfect.

Sciurus matthæus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 19, November 6, 1903.


Well-made skin in good condition; skull perfect.

Sciurus hudsonius mearnsi Townsend.


Well-made skin in good condition; skull perfect.

Sciurus melanops Miller.


Well-made skin in good condition; skull perfect, except for loss of both minute upper premolars.
Sciurus mendanaaus Lyon.


Well-made skin in good condition; skull perfect.

Sciurus mimellus Miller.


Well-made skin in good condition; skull perfect.

Sciurus mimiculus Miller.


Well-made skin in good condition; skull perfect, except right lower incisor broken off, first right upper premolar and last upper molar on left side missing.

Sciurus aberti mimus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of right upper premolars and end of left pterygoid.

Sciurus notatus miniatus Miller.


Well-made skin in good condition; skull perfect.

Sciurus negligens Nelson. Biological Survey collection.


Well-made skin in good condition; skull with nasals and left jugal missing, and left mandibular ramus broken.
Sciurus nelsoni Merriam. Biological Survey collection.
51157. Skin and skull. Adult female. Huitzilae, Morelos, Mexico.

Well-made skin in good condition; skull perfect.

Sciurus albipes nemoralis Nelson. Biological Survey collection.
p. 50, May 9, 1899.
32351. Skin and skull. Adult male. Patzcuaro, Michoacan, Mexico.
Original number 2905.

Well-made skin in good condition; skull perfect.

Sciurus fremonti neomexicanus Allen. Biological Survey collection.
71690. Skin and skull. Adult male. Rayado Canyon, Colfax County,
New Mexico. April 1, 1895. Collected by C. M. Barber. Original
number 89.

Well-made skin in good condition; skull perfect.

Sciurus colliæi nuchalis Nelson. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for absence of second
left upper premolar; right audital bulla and pterygoids slightly broken.

Sciurus borneoensis palustris Lyon.
142330. Skin and skull. Adult male. North bank of the Kapuas
River, below Pulo Limbang, western Borneo. September 22,
1905. Collected by Dr. W. L. Abbott. Original number 4467.
Catalogued January 22, 1906.

Well-made skin in good condition; skull perfect, except slight injury to both
angular processes of mandible.

Sciurus pannovianus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 11, November 6, 1903.
112351. Skin and skull. Adult male. Pulo Pannow, Atas Islands,
South China Sea. May 28, 1901. Collected by Dr. W. L. Abbott.
Original number 952. Catalogued November 8, 1901.

Well-made skin in good condition; skull perfect, shot hole back of right supra-
orbital process.
Sciurus parvus Miller.


S4509. Skin and skull. Adult male. Nulu, Sarawak, Borneo; altitude 1,000 feet. October, 1894. Collected by Charles Hose. Catalogued April 12, 1898.

Well-made skin in good condition; skull slightly broken about the foramen magnum, otherwise complete.

Sciurus pemangilensis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 9, November 6, 1903.


Well-made skin in good condition; skull perfect, except small holes in left bulla.

Sciurus peninsularis Miller.


Well-made skin in good condition; skull perfect.

Sciurus poliopus perigrinator Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for slightly broken pterygoid and supraorbital border.

Sciurus hudsonicus petulans Osgood. Biological Survey collection.

North Amer. Fauna, No. 19, pp. 27-28, pl. 5, fig. 2, October 6, 1900.


Well-made skin in good condition; skull perfect.

Sciurus piniensis Miller.


Well-made skin in good condition; skull perfect, except loss of first and second upper molars on right side.
Sciurus pretiosus Miller.


Well-made skin in good condition; skull perfect.

Sciurus procerus Miller.


Well-made skin in good condition; skull perfect.

Sciurus proserpinae Lyon.


Well-made skin in good condition; skull perfect except loss of left \( pm^1 \), \( pm^2 \), \( m^3 \), and left \( m_4 \), \( m_3 \).

Sciurus pumilus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 15, November 6, 1903.


Well-made skin in good condition; skull perfect, except for a few scarcely noticeable shot holes.

Sciurus albipes quercinus Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for shot perforation from base of nasals through anterior part of palate.
Sciurus richmondi Nelson.  
Biological Survey collection.  
4881. Skin and skull. Adult female. Escondido River, 50 miles from Bluefields, Nicaragua. October 4, 1892. Collected by Dr. C. W. Richmond. Original number 118.  
Well-made skin in good condition; skull perfect.

Sciurus rubeculus Miller.  
Smithsonian Miscell. Coll., XLV, No. 1420, p. 22, November 6, 1903.  
86777. Skin and skull. Adult male. Khow Sai Dow (1,000 feet), Trong (or Tarang), lower Siam. February 21, 1899. Collected by Dr. W. L. Abbott. Catalogued July 20, 1899.  
Well-made skin in good condition; skull perfect, except pterygoids slightly injured.

Sciurus rubidiventris Miller.  
Well-made skin in good condition; skull perfect, except condyloid process of right mandible shot away.

Sciurus rutiliventris Miller.  
Well-made skin in good condition; skull perfect, except several shot holes and angle of right half of mandible lacking.

Sciurus sanggaus Lyon.  
Well-made skin in good condition; skull perfect.

Sciurus saturatus Miller.  
Well-made skin in good condition; skull perfect, except for loss of all the upper premolars, both last upper molars, right last lower molar.

45336—08—13


Well-made skin in good condition; skull perfect, except for absence of first left upper premolar.

Sciurus seraiae Miller.


Well-made skin in good condition; skull perfect.

Sciurus serutus Miller.


Well-made skin in good condition; skull perfect.

Sciurus suckleyi Baird.
Proc. Acad. Nat. Sci. Phila., VII, p. 333, this paper was reported favorably for publication April 24, 1855.

Sciurus douglasii Bachman. See Baird, Mammals of North America, p. 275, 1857.


Specimen made into a modern study skin and the skull removed in November, 1898. The skin is in fair condition, but the left fore leg is lacking. Only that part of the skull anterior to the brain-case, and the right half of the mandible is present.

In Baird's original description he gives the three measurements "Head and body 9 inches. Tail vertebrae 4½ inches. To tip of hairs 6 inches." In 1857, in his Mammals of North America, Baird gives more details of the Pacific Railroad specimens, and in the table on page 278, No. 272, the above specimen is the only one which agrees with the above three measurements, and consequently it is taken as the type.

Sciurus sullivanus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 17, November 6, 1903.


Well-made skin in good condition; skull perfect, except left pterygoid.
Sciurus tenuis surdus Miller.


84412. Skin and skull. Adult male. Trong (or Tarang), lower Siam. February 3, 1897. Collected by Dr. W. L. Abbott. Catalogued March 25, 1898.

Well-made skin in good condition; skull a trifle damaged by shot, the two premolars and first molar in the left upper jaw shot away. In left half of mandible only the two last molars remain, and in the right half the last molar has fallen out.

Type designated by number. In original description under “Measurements,” external measurements of the type are said to be given. This is an error, however, as they are measurements of a paratype, No. 83243.

Sciurus vittatus tapanulius Lyon.


Well-made skin in good condition; skull perfect.

Sciurus vittatus tarussanus Lyon.


Well-made skin in good condition; skull perfect, except loss of left premolar and shot injuries to angular processes of mandible.

Sciurus tedongus Lyon.


Well-made skin in good condition; skull nearly perfect, a few shot holes, right half of mandible especially damaged.

Sciurus tenuirostris Miller.

Proc. Wash. Acad. Sci., II, p. 221, fig. 13c, August 20, 1900.


Well-made skin in good condition; skull with several shot holes, and the last two upper molars on each side shot away; posterior portion of right half of mandible lacking, and the first two right mandibular cheek-teeth shot away.
Sciurus thomasi Nelson.

Proc. Wash. Acad. Sci., I, p. 71, pl. 2, fig. 6, May 9, 1899.

Skin and skull. Talamanca, Costa Rica. 1874. Collected by Prof. W. M. Gabb. Skin catalogued November 11, 1874; skull, April 16, 1889.

The specimen has been remade into a modern study skin and is in good condition; skull is perfect except for loss of pterygoids and of right postorbital process.

Sciurus oculatus tolucæ Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for fractured squamosal and supraoccipital region.


Well-made skin in good condition; skull perfect, except for fractured frontal and supraoccipital and absence of last left upper and lower molars.

Sciurus ubericolor Miller.


Well-made skin in good condition; skull in good condition, except most of left zygoma and anterior half of left ramus of mandible shot away.

Sciurus undulatus True.


Well-made skin in good condition; skull perfect.

Type designated by number, skull No. 34731 being figured and marked "type." Two specimens are listed, the above and a female, No. 19006, also marked "type," but as there can not be two types of the same species, it seems advisable to consider the second specimen as a paratype, the one figured as the type.
Sciurus hudsonicus ventorum Allen. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for numerous small shot perforations and absence of one molar.

Sciurus deppei vivax Nelson. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sciurus carolinensis yucatanensis Allen. Cotype.


The specimen has been remade into a modern study skin and is in good condition; skull in fair condition, right zygoma lacking, and a considerable hole above the foramen magnum as well as breaks about the optic foramina.

In the original description Dr. J. A. Allen speaks of four specimens, all of the same date, locality, and collector as the above. In the table of measurements, on page 711, three of them are referred to by number, namely, 8502, 8503, and 8505, which should be regarded as cotypes. Unfortunately, Nos. 8502 and 8505 can not be found. His fourth specimen, not referred to by number and hence regarded as a paratype, is in good condition and in the collection. It is about half or two-thirds grown.

Genus FUNAMBULUS.

Funambulus castaneus Miller.


Fairly well-made skin in good condition; skull perfect.

Funambulus obscurus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 23, November 6, 1903.


Well-made skin in good condition; skull perfect.
Funambulus peninsulae Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 25, November 6, 1903.
Well-made skin in good condition; skull perfect.

Funambulus rostratus Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 24, November 6, 1903.
Well-made skin in good condition, tail apparently imperfect in life; skull perfect.

Genus RATUFA.

Ratufa anambae Miller.
Well-made skin in good condition; skull perfect.

Ratufa angusticeps Miller.
Well-made skin in good condition; skull perfect, except for left malar shot away.

Ratufa arusinus Lyon.
Well-made skin in good condition; skull perfect.

Ratufa balae Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 6, November 6, 1903.
121715. Skin and skull. Adult male. Tana Bala, Batu Islands, off west coast of Sumatra. February 5, 1903. Collected by Dr. W. L. Abbott. Original number 2224. Catalogued August 1, 1903.
Well-made skin in good condition; skull perfect.
Ratufa polia bancana Lyon.


Well-made skin in good condition; skull nearly perfect, somewhat damaged by shot, especially mandible.

Ratufa carimonensis Miller.


Well-made skin in good condition; skull perfect.

Ratufa catemana Lyon.


Well-made skin in good condition; skull somewhat damaged by shot holes in palate and cranium; left zygoma and anterior portion of right half of mandible lacking.

Ratufa condurensis Miller.


Well-made skin in good condition; skull perfect, except loss of right pterygoid; left m1 and pml worn down to alveoli and right m2 lost.

Ratufa confinis Miller.


Well-made skin in good condition; skull perfect, except loss of left pterygoid.

Ratufa conspicua Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 5, November 6, 1903.


Well-made skin in good condition; skull perfect.
Ratufa femoralis Miller.
Well-made skin in good condition; skull perfect.

Ratufa insignis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 4, November 6, 1903.
Well-made skin in good condition; skull perfect, except that the left pterygoid is broken.

Ratufa laenata Miller.
Well-made skin in good condition; skull perfect.

Ratufa masae Miller.
Well-made skin in good condition; skull perfect, except for a few scattered shot holes.

Ratufa melanopepla Miller.
Well-made skin in good condition; skull perfect, except for loss of left last upper molar and right pterygoid.

Ratufa nigrescens Miller.
Well-made skin in good condition; skull perfect.
Ratufa notabilis Miller.
Well-made skin in good condition; skull perfect.

Ratufa palliata Miller.
Well-made skin in good condition; skull slightly injured by shot, both upper incisors more or less broken, and a piece out of right zygoma.

Ratufa piniensis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 8, November 6, 1903.
Well-made skin in good condition (tail imperfect in life); skull slightly damaged by shot; both lower incisors broken off to alveoli, hole in right bulla, and slight damage about lachrymal region on each side.

Ratufa polia Lyon.
Well-made skin in good condition; skull perfect.

Ratufa pyrsonota Miller.
Well-made skin in good condition; skull perfect.

Ratufa tiomanensis Miller.
Well-made skin in good condition; skull perfect.
Genus Petaurista.

Petaurista batuana Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 27, November 6, 1903.
121742. Skin and skull. Adult male. Tana Bala, Batu Islands, off west coast of Sumatra. February 5, 1903. Collected by Dr. W. L. Abbott. Original number 2233. Catalogued August 1, 1903. Well-made skin in good condition; skull perfect, except for shot holes about left antorbital foramen.

Petaurista terutaus Lyon.

123934. Skin and skull. Adult male. Pulo Terutau (also written Trotau, Trotto), about 15 geographical miles off west coast Malay Peninsula, and about 52° north of equator. April 9, 1904. Collected by Dr. W. L. Abbott. Original number 3219. Catalogued July 22, 1904. Well-made skin in good condition; skull perfect.

Genus Sciuropterus.

Sciuropterus amœnus Miller.


Sciuropterus volans goldmani Nelson. Biological Survey collection.

132833. Skin and skull. Adult male. Twenty miles southeast of Teopisca, Chiapas, Mexico. April 8, 1904. Collected by E. A. Goldman. Original number 16667. Well-made skin in good condition; skull lacking right audital bulla, left upper molars, and posterior part of palate; left mandibular ramus in three pieces.


Sciuropterus sabrinus macrotis Mearns.

lected by Dr. E. A. Mearns, U. S. A. Original number 4036. Catalogued November 16, 1896.
Well-made skin in good condition; skull perfect.

Sciuropterus mærens Miller.
Smithsonian Miscell. Coll., XLI, No. 1420, p. 26, pl. 1, fig. 1, November 6, 1903.
Well-made skin in good condition; skull perfect.

Well-made skin in good condition; skull perfect, except for absence of right postorbital process and right coronoid process.

Sciuropterus yukonensis Osgood.
North Amer. Fauna, No. 19, p. 25, October 6, 1900.
Well-made skin in good condition; skull not quite perfect, some slight damage about the bony palate.

Sciuropterus alpinus zaphæus Osgood. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Family ANOMALURIDÆ.

Genus IDIURUS.

Idiurus macrotis Miller.
Well-made skin in good condition; skull in fair condition, the four occipital bones cut away.
Halichoerus antarcticus Peale.

U. S. Exploring Exped., VIII, Mamm. and Ornithol., p. 30; woodcut, p. 31, 1848.


3648. Skull. Young adult. Said to have been collected by the United States Exploring Expedition at Deception Island, October 10. Catalogued January 10, 1860. Gill and Allen (see references above) strongly and rightly question the locality given by Peale.

The skull has evidently been injured in recent years. Most of the right half of the brain case has been broken away, including the right zygoma. The tips of the nasals are injured and the region about the right premaxillo-maxillo-nasal sutures considerably broken. There should be a skin, No. 3741, which can not be found.

Type not designated by number, but a consideration of Allen’s “Pinnipeds,” pp. 580-582, leaves no doubt that this specimen is the type.

Phoca richardi* geronimensis* Allen. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for perforation of basiscapitale.

Phoca ochotensis macrodens* Allen.


Skull nearly perfect, except right malar and first right lower incisor lost. Atlas present.

Phoca richardi* pribilofensis* Allen.


Well-made skin in good condition; skull perfect (in Division of Mammals); rest of skeleton in storage (Division of Comparative Anatomy).
In the original description, owing to the confusion caused by the double entry of one specimen in two different divisions of the Museum, Dr. J. A. Allen does not seem to have been aware that this skin, 83223, is the same individual as skull and skeleton 49550.

Phoca stejnegeri Allen.


Skull perfect, except for loss of two of the lower incisors.

Genus MIROUNGA.

Macrorhinus angustirostris Gill.


Skull perfect except loss of the five right maxillary teeth, last three left maxillary teeth, inner upper right incisor, right lower canine, and three mandibular cheek teeth, left lower inner incisor and last mandibular cheek tooth.

Type not designated by number. There is but one specimen in the Museum answering to the locality and dimensions published by Dr. T. N. Gill, and that is the above, No. 4704. The type skull is figured by Allen (Hist. North Amer. Pinnipeds, 1880, figs. 57, 58, 59, 60, on pp. 744 to 747). Some of the teeth were lacking at that date. On page 748, footnote to table, No. 4704 is said to be the type of the species.

Family OTARIID.E.

Genus ARCTOCEPHALUS.

Arctocephalus townsendi Merriam.


Skull is an old weatherworn specimen, without teeth and with no lower jaw. On the whole, it is in good condition for such a specimen. The only serious damage to the skull is a large hole in the brain case, superoposteriorly.
Family FELIDÆ

Genus LYNX.

Lynx ruffus californicus Mearns.


Skin and skull. Adult female. San Diego, California. February 2, 1856. Collected by Dr. J. F. Hammond. Skin catalogued February 27, 1856; skull, August 8, 1896.

Well-made skin in fair condition, a small bare spot on throat. It was evidently made over into its present shape and the skull removed and cleaned in 1896. Skull perfect.

Lynx ruffus eremicus Mearns.


Specimen remade in February, 1902, into a modern study skin, in good condition; skull perfect.

Lynx fasciatus pallescens Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken left pterygoid.

Lynx uinta Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Genus FELIS.

Felis æquatorialis Mearns.

Well-made skin in good condition; skull perfect, except that the zygomatic arches have been broken, but are now repaired; right pterygoid lost.

Felis apache Mearns.

Three teeth are missing, both last upper molars and the first left upper premolar; otherwise skull perfect.

Felis hippolestes aztecas Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Felis aztecalis browni Merriam. Biological Survey collection.
=Felis hippolestes browni (Merriam).

Skull with repaired fractures of left mandible, left zygoma, and inner wall of orbit; left auricular bulla broken; left pterygoid and left coronoid absent; two upper incisors, left canine, left carnassial, and last left molar badly broken.

Felis cacomitli Berlandier in Baird.

Skull nearly perfect; lambdoid crest worn by handling, etc., and left bulla broken.

Felis centralis Mearns.

Skull perfect. Catalogue calls for a skin, No. 12177, which can not be found.
Felis costaricensis Mearns.


The catalogue calls for a skin, 12180, but it has never been found, and the type was described without it. Skull is nearly perfect; the pterygoids are chipped and the following teeth are missing from the upper jaw: Right side, first incisor, first premolar, and the molar; left side, first incisor, canine, and first premolar.

Felis fossata Mearns.


Felis hernandesii goldmani Mearns.


105930. Skin only. Adult. Yohaltun, Campeche, Mexico. January 5, 1901. Received from E. A. Goldman. Catalogued June 18, 1901.

The skin is a tanned pelt, without feet, in good condition.

Felis hippocastes Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken spinous bulle and right pterygoid.

Felis limitis Mearns. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Felis hippocastes olympus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.
Felis puma patagonica Merriam. Biological Survey collection.


Tanned skin in good condition, claws missing; skull perfect, except for absence of one lower incisor.

Family VIVERRIDÆ.

Genus ARCTOGALIDIA.

Arctogalidia fusca Miller.


Well-made skin in good condition; skull perfect.

Arctogalidia inornata Miller.


Well-made skin in good condition. Skull perfect, very old; teeth much worn and many of them lost, due to age.

Arctogalidia major Miller.


83510. Skin and skull. Young (permanent dentition in place, but unworn; sutures of rostrum and brain case plainly visible) adult male. Trong (or Tarang), lower Siam. September 3, 1896. Collected by Dr. W. L. Abbott. Catalogued April 28, 1897.

Well-made skin in good condition; skull perfect.

Arctogalidia minor Lyon.


Well-made skin in good condition; skull perfect, except for shot hole in right half of cranium and loss of right m7.

45336—08—14
Arctogalidia simplex Miller.
Well-made skin in good condition; skull perfect.

Genus PARADOXURUS.

Paradoxurus brunneipes Miller.
Well-made skin in good condition; skull perfect.

Paradoxurus canescens Lyon.
Well-made skin in good condition; skull perfect.

Paradoxurus lignicolor Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 44, pl. 4, fig. 1; pl. 5, fig. 1, November 6, 1903.
Well-made skin in good condition; skull perfect.

Paradoxurus robustus Miller.
Well-made skin in good condition; skull perfect.

Genus HEMIGALE.

Hemigale minor Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 43, pl. 3, fig. 2, November 6, 1903.
Well-made skin in good condition; skull perfect.


Well-made skin in good condition. Skull perfect, except for two perforations of palate and absence of three left upper incisors, first right and left upper premolars, first right lower premolar, and last left lower molar; postorbital processes broken.

Urocyon cinereoargenteus californicus Mearns.


Well-made skin in good condition; skull perfect, two upper and three lower incisors lost, apparently due to age.

Urocyon catalinae Merriam. Biological Survey collection.


31323. Skin and skull. Adult male. Catalina Island, Santa Barbara Islands, California. April 14, 1892. Collected by C. P. Streator. Original number 1801.

Well-made skin in good condition; skull perfect.

Urocyon clementae Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of two right lower premolars and one upper and one lower incisor.

Urocyon guatemalae Miller. Biological Survey collection.


Well-made skin in good condition; skull perfect.
UROCYON.

Vulpes (Urocyon) littoralis Baird.

Mammals of North America, p. 143, pls. 1 and 35, fig. 2, 1857.


\[ \frac{1}{2} \text{ Skin and skull. Adult. San Miguel Island, Santa Barbara Islands, California. January, 1856. Collected by Lieut. W. P. Trowbridge, U. S. A. Catalogued February 18, 1856.} \]

Specimen was remade in January, 1902, into a modern study skin, and is in good condition, except a few slight imperfections about head. Skull perfect, except for a V-shaped piece of bone out of basioccipital. Second and third left upper incisors and last left upper molar are missing.

Baird listed two specimens, each designated by number, the one mentioned above, and No. \[ \frac{1}{2} \text{.} \] The latter is an alcoholic specimen, with skull removed. The alcoholic specimen itself can not now be found. No. \[ \frac{1}{2} \text{ is regarded as the type because on Plate 35 of Baird's Mammals, the skull, No. 2154, is figured.} \]

Urocyon parvidens Miller.


\[ \frac{1}{2} \text{ Skin and skull. Adult male, somewhat young. Merida, Yucatan, Mexico. Collected by Dr. A. Schott. Original number 385. Skin catalogued in 1873; skull, May 4, 1899.} \]

Specimen made into a modern study skin and skull removed May, 1899. Skin in good condition; skull perfect except that both upper canines are broken off nearly to the alveoli, and foramen magnum has been slightly enlarged.

Urocyon littoralis santacruzae Merriam. Biological Survey coll.


\[ \frac{1}{2} \text{ Skin and skull. Adult female. Santa Cruz Island, Santa Barbara Islands, California. July 11, 1892. Collected by C. P. Streator. Original number 1914.} \]

Well-made skin in good condition; skull perfect, except for broken right upper canine.

Urocyon cinereoargenteus texensis Mearns.


\[ \frac{1}{2} \text{ Adult skin and skull. San Pedro, near Eagle Pass, Texas. January, 1851. Collected by Dr. A. Schott, Mexican Boundary Survey, under Lieut. W. H. Emory, U. S. A. Catalogued March 31, 1853.} \]

Specimen has been made into a modern study skin in good condition. All parts of the skull posterior to the tooth rows have been cut away; anterior parts perfect.
Urocyon californicus townsendi Merriam.


Well-made skin in good condition. Although Townsend collected skulls at Baird, there is no record of a skull for this skin. Catalogued January 19, 1884.

Genus VULPES.

Vulpes alascensis abietorum Merriam. Biological Survey col'd.


Skull perfect, except for absence of pterygoid processes and broken left upper canine.

Vulpes alascensis Merriam.


Skull perfect. Some of the teeth rather worn from age, especially the left upper canine and the first two pairs of upper premolars.

Vulpes beringensis Merriam. Biological Survey collection.


Skull perfect, except for absence of one upper incisor and first right and left lower premolars.

Vulpes cascadensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Vulpes hallensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken left upper canine.
Vulpes harrimani Merriam. Biological Survey collection.
Cased skin, tanned; in good condition; feet missing.

Vulpes velox hebes Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Vulpes lagopus innuitus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of first left lower premolar.

Vulpes kenaiensis Merriam. Biological Survey collection.
Skull perfect, except for absence of first left upper premolar.

Vulpes macrourus Baird.
Stanbury's Exped. to Valley of Great Salt Lake, Utah, p. 300, May, 1852.
4107. Skin only. Adult. Valley of Great Salt Lake, Utah. 1849 or 1850. Collected by Captain Stanbury's Expedition. Original number “A”. The specimen was purchased from hunters in the Salt Lake Valley. Catalogued June 26, 1860.
Specimen made over into modern study skin in fair condition. The left fore foot is the only foot having claws. The right ear is broken and rather mutilated. It is in an envelope attached to the skin.
In Baird's Mammals of North America, p. 131, the type is designated by the original number “A”.

Vulpes muticus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for slightly fractured left mandibular bulba and broken right outer upper incisor.


Well-made skin in good condition. Skull with brain-case badly shattered but repaired, leaving a large part of the right frontal and parietal absent; auditory bulla badly broken; palate fractured; pterygoids missing.


Skull perfect, except for absence of one first right upper and lower premolars.


Well-made skin in good condition; skull perfect, except for absence of one upper incisor.


Well-made skin in good condition. Skull perfect, except for a few small perforations in rostrum; one lower incisor missing; upper incisors and right upper canine injured.


Skull nearly perfect; pterygoids chipped; third left lower premolar and second lower incisor broken off to roots.

Genus CANIS.


Well-made skin in good condition; skull perfect.
Canis frustror Woodhouse.


Specimen formerly mounted, but since made into a modern study skin. Baird in Mammals of North America and Woodhouse in the original description speak of skulls that have not yet lost their milk teeth. These skulls can not now be found nor is there any record of them in the Museum catalogue.

No type designated. The two specimens procured by Dr. S. W. Woodhouse, a male and a female, both young, do not appear to be mentioned by number in Baird’s Mammals, but 4105 and 4106 are undoubtedly the two specimens that Doctor Woodhouse had. The entry of 4105 reads: "" [Canislutra] written on line above] ♀ juv., Red Fork of Ark., Aug. 1850, Capt. Sitgreaves, Dr. Woodhouse, Type of C. frustror," all in the old original handwriting. The other specimen, 4106 ♂ juv., has the same data, but is not marked "Type of C. frustror."

Hencefore the type-locality of Canis frustror has been stated to be Fort Gibson, Indian Territory. This is the only locality mentioned in the original description, but that is where Dr. S. W. Woodhouse “first saw” the animal. He does not state where the specimens came from. That is found only by consulting the Museum catalogue.

Canis goldmani Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of first left upper premolar and crown of outer right upper incisor.

Canis lestes Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of one lower incisor and last right lower molar.
Canis mearnsi Merriam.  
Well-made skin in good condition; skull perfect, except for loss of first upper premolar, last upper and last lower molars on left side.

Canis microdon Merriam.  
Well-made skin in good condition, except for small bare space on throat; skull perfect.

Canis pallidus Merriam.  
Well-made skin in good condition; skull perfect.

Canis peninsulae Merriam.  
Well-made skin; pelage ragged; skull perfect, except for broken right outer incisor.

Canis nebracensis texensis Bailey.  
North Amer. Fauna, No. 25, pp. 175-177, October 24, 1905.  
Well-made skin in good condition; skull perfect.

Canis vigilis Merriam.  
Well-made skin in good condition; several small bare spaces on underparts; skull perfect.
Genus LATAX.


Skull perfect, except for absence of last right and left lower molars and first left lower incisor.

Genus PUTORIUS.


=Putorius cicognani alascensis (Merriam). See Trouessart, Catalogus Mammalium, p. 277, 1897.


Well-made skin in good condition; skull perfect.

Putorius arcticus Merriam.

North Amer. Fauna, No. 11, p. 15, pl. 2, figs. 2, 2a, June 30, 1896.


Well-made skin in good condition. Skull nearly perfect; left malar broken; and a crack runs through right frontal and nasal.

Putorius culbertsoni Coues. Chirotypes.


=Putorius longicauda (Bonaparte). See Coues, loc. cit.

\[ \frac{3}{19}, \frac{2}{90} \]. Skin and skull. Fort Laramie, Wyoming. December, 1859. Collected by Dr. F. V. Hayden. Exploration of headwaters of Missouri and Yellowstone, under Capt. W. F. Reynolds, U. S. A. Original number 75. Skin catalogued November 22, 1860; skull, January 22, 1902.

Specimen remade into a fairly good study skin in January, 1902, and skull removed. Tail lost, scorched about the rump; skull perfect.

The other chirotypes, 4325, can not be found. The entry in the catalogue corresponding to that number is "Putorius culbertsoni, Ft. Union [now Fort Buford, North Dakota], Aug. 8.60, G. H. Trook."

Chirotypes designated by number. Coues gives the species as a synonym of Putorius longicauda, thus: "Putorius culbertsoni, Bd MSS. Mus. Smiths (labels of nos. 4320, 4325)."
Putorius frenatus goldmani Merriam. Biological Survey collection.
Well-made skin in good condition; skull with rostrum badly injured, lacking most of right nasal, upper part of right maxillary and postorbital processes; two outer upper incisors missing.

Putorius haidarum Preble. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Putorius arcticus kadiacensis Merriam. Biological Survey coll.
North Amer. Fauna, No. 11, p. 16, June 30, 1896.
Well-made skin in good condition; skull perfect, except for broken supraoccipital, basioccipital, and right audital bulla; left outer upper incisor missing.

Putorius kaneii Baird.
Specimen was made into a fairly good modern study skin and skull removed in January, 1902. Brain case of skull broken away, anterior parts, however, quite complete.
No type specified. Baird listed two specimens, No. 1458 from Semipalatinsk, Siberia, in winter pelage, received from the Bremen Museum, through Dr. G. Hartlaub, and the above, No. 2330. Most of the description appears to be based upon summer pelages as in number 2330 and specimens from “among the collections of the North Pacific and Behring’s Straits Expedition.” Further on Baird says, “A winter specimen, 1458, from Semipalatinsk, Siberia, is very similar in size and the characters of the tail.” This would indicate that 1458 was not considered quite typical and leaves 2330 as the type.

Putorius streatori lepto Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.


Well-made skin in good condition. Skull lacking most of brain-case except a fragment of the parietals and supraoccipital; rostrum, left zygoma, palate, and dentition intact; mandible intact except for absence of right coronoid.


Well-made skin in good condition; skull perfect, except for absence of first left upper premolar.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect, except for absence of four upper incisors; right upper canine broken.
Putorius washingtoni Merriam. Biological Survey collection.
North Amer. Fauna, No. 11, pp. 18-19, pl. 4, figs. 3-4, June 30, 1896.


Well-made skin in good condition; skull perfect, except for absence of left outer upper incisor.

Genus LUTREOLA.

Lutreola vison ingens Osgood.
North Amer. Fauna, No. 19, p. 42, pl. 4, fig. 2, October 6, 1900.


Skull perfect.

Lutreola vison lacustris Preble. Biological Survey collection.
North Amer. Fauna, No. 22, p. 66, October 31, 1902.


Well-made skin in good condition; skull perfect, except for broken tip of left nasal and slight fracture of left parietal.

Lutreola macrodon Prentiss.
Proc. U. S. Nat. Mus., XXVI, No. 1336, p. 887, fig. 6, July 6, 1903.

115178. Fragments of skull. Pre-Columbian shell heaps, Brooklin, Hancock County, Maine. 1897. Collected by Drs. F. W. True and D. W. Prentiss, Jr.

"Condition of type.—Fragments of skull composed of the superior maxilla, portions of the nasals, right zygoma, and palate extending 6 mm. back of molars. All the teeth are present on the right side, three incisors and one premolar on the left side. The teeth are in excellent condition except the canine, which is broken at the point, and portion of enamel missing. The bones are very brittle and of a yellowish color on their broken surface." Prentiss, loc. cit.

Genus MUSTELA.

Mustela americana abieticola Preble.
North Amer. Fauna, No. 22, p. 68, October 31, 1902.


Rather poorly made skin, but in good condition. The entire skeleton is present. The digits of the fore feet, the middle and distal phalanges of the digits of the hind feet, and the last few caudal vertebrae are in the skin. The skull is slightly injured, posterior half of left zygoma broken, left audital bulla and adjoining portions of basis cranii broken.
Mustela americana actuosa Osgood.
North Amer. Fauna, No. 19, p. 43, pl. 7, fig. 2, October 6, 1900.
Skull nearly perfect; right malar lost, the two lower middle incisors and the first right upper premolar are wanting, and a U-shaped piece has been broken out of the basioccipital. The catalogue calls for skin 6413, but it can not be found.

Mustela nesophila Osgood. Biological Survey collection.
North Amer. Fauna, No. 21, pp. 33-34, pl. 5, figs. 3-4, September 26, 1901.
Skull earth or smoke stained; perfect, except for absence of incisors, left lower canine, two left and two right lower premolars, and last right lower molar.

Mustela caurina origenes Rhoads.
Well-made skin in good condition; skull perfect.

Genus SPILOGALE.

Spilogale ambiguа Mearns.
Preliminary Diagnoses of New Mammals of the Genera Lynx, Urocyon, Spilogale, and Mephitis, from the Mexican Boundary Line, p. 3, January 12, 1897. (Reprinted in Proc. U. S. Nat. Mus., XX, No. 1126, p. 460, December 24, 1897.)
Well-made skin in good condition. Skull nearly perfect; right canine and two adjacent incisors somewhat broken.

Spilogale angustifrons Howell. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for slightly fractured nasals.
Spilogale angustifrons elata Howell. Biological Survey collection.

North Amer. Fauna, No. 26, pp. 27–28, pl. 9, figs. 7–9, November 24, 1906.


Well-made skin in good condition; skull perfect.

Spilogale gracilis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for a perforation of the inner wall of the right orbit.

Spilogale indianola Merriam.

North Amer. Fauna, No. 4, p. 10, October 8, 1890.


Skull perfect.

Spilogale phenax latifrons Merriam. Biological Survey collection.

North Amer. Fauna, No. 4, p. 15, October 8, 1890.


Well-made skin in good condition. Skull lacking right audital bulla, basioccipital, basisphenoid, pterygoids, and most of supraoccipital; zygoma broken; palate fractured; mandible missing.

Spilogale lucasana Merriam.

North Amer. Fauna, No. 4, p. 11, October 8, 1890.


Specimen formerly mounted, but it is now a well-made skin in good condition; some hair is lost from the tail; skull perfect, except right upper canine is broken off at alveolus.

Spilogale microdon Howell. Biological Survey collection.

North Amer. Fauna, No. 26, pp. 34–35, pl. 10, figs. 4–6, November 24, 1906.


Well-made skin in good condition; skull perfect.
Spilogale ringens Merriam. Biological Survey collection.
North Amer. Fauna, No. 4, pp. 9-10, fig. 2 (p. 2), October 8, 1890.

Well-made skin in good condition. Skull with numerous shot perforations; right auditory bulla and most of right side of brain-case absent, left auditory bulla injured, right coronoid broken.

Spilogale tenuis Howell. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Spilogale angustifrons tropicalis Howell. Biological Survey coll.
Well-made skin in good condition; skull perfect, except for absence of left mastoid bulla, interorbital region considerably injured by parasites.

Genus MEPHITIS.

Mephitis estor Merriam. Biological Survey collection.
North Amer. Fauna, No. 3, pp. 81-82, pl. 10, figs. 1-4, September 4, 1890.

Well-made skin in good condition; skull perfect.

Mephitis frontata Coues.
Skull in good condition for a subfossil; left zygoma lacking and right somewhat broken, two large holes in the brain-case dorsally and anteriorly, two upper and two lower incisors lacking.

Chincha occidentalis major Howell. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for slightly broken left zygoma.

**Mephitis milleri Mearns.**


Well-made skin in good condition; skull perfect.

**Chincha occidentalis notata Howell.** Biological Survey collection.

North Amer. Fauna, No. 20, pp. 36-37, pl. 3, fig. 2, August 31, 1901.


Well-made skin in good condition; skull perfect, except for broken left mastoid bulla.

**Mephitis occidentalis Baird.**


Skull perfect except for loss of 15 mm. of right zygoma. There used to be a skin, No. 1944, marked in the catalogue "Destroyed Jan. 8, 1886."

No type designated. A table of detailed measurements is given of 2617, and this one should be regarded as the type. Four specimens are listed: 2631, skull from Santa Clara, California; 2434, skull; 2617, the above skin and skull both from Petaluma, and a fourth specimen, skin without number, from Steilacoom, Washington. Baird's brief diagnosis is based upon both cranial and skin characters, so that again preference must be given to 2617, the only skin with skull which he had.

Petaluma is regarded as the type locality by Miller and Rehn (Proc. Boston Soc. Nat. Hist., XXX, p. 214, December, 1901), and by Howell (North Amer. Fauna, No. 20, p. 34, August 31, 1901).
Chincha platyrhina Howell. Biological Survey collection.

North Amer. Fauna, No. 20, p. 39, August 31, 1901.


$\frac{22}{4}$ $\frac{84}{138}$. Skin and skull. Adult male. South Fork of Kern River, 25 miles east of Kernville, California. July 5, 1891. Collected by V. Bailey. Original number 2998.

Well-made skin in good condition; skull perfect.

Genus CONEPATUS.

Conepatus filipensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Conepatus pediculus Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Conepatus sonoriensis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Conepatus mesoleucus telmalestes Bailey. Biological Survey coll.

North Amer. Fauna, No. 25, pp. 203-205, fig. 24, October 24, 1905.


Well-made skin in good condition; skull perfect.

Conepatus leuconotus texensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for slightly broken right zygoma.
Conepatus tropicalis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of second left lower premolar and two lower incisors.

Genus TAXIDEA.

Taxidea berlandieri Baird.


Received from Capt. J. Pope, U. S. A. Catalogued in 1856.

Formerly mounted. Made into a fairly good study skin in February, 1902.

Baird's description is based upon one specimen, the above, designated by number.

Taxidea americana neglecta Mearns.


Well-made skin in good condition (skin remade in January, 1902). Skull nearly perfect, a rather large hole in right bulla; three left upper incisors, first right upper incisor, and last right lower molar lost.

Family PROCYONIDAE.

Genus PROCYON.

Procyon lotor insularis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Procyon psora pacifica Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for slight fracture of right nasal and perforation in right audital bulla.
Procyon pallidus Merriam. Biological Survey collection.
Well-made skin in good condition. Skull perfect, except for absence of second left upper incisor and last right upper molar; right auditory bulla broken.

Procyon pygmaeus Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect.

Genus NASUA.

Nasua narica molaris Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for absence of second right and left upper premolars and three upper and four lower incisors.

Nasua nelsoni Merriam. Biological Survey collection.
Well-made skin in good condition; skull perfect, except for broken right auditory bulla and perforation in palate.

Genus BASSARISCUS.

Bassariscus raptor Baird.

975. Skin, skull, and nearly all of the skeleton except the usual leg bones left in the skin. Killed in a hen roost near Washington, D. C., April 23, 1852. It was supposed to have been brought from California and kept in captivity, whence it escaped. A collar mark shows plainly around the neck. Catalogued April 26, 1852.
Specimen has been made into a modern study skin and is in fair condition, although the hair has a dirty yellow color, looking as though at one time preserved in alcohol. The skull is in fair condition. It is somewhat cracked posteriorly, the left malar is wanting, and the following teeth are missing: Third
upper premolar, left side; all the lower incisors and the last lower molar, right side. All the bones of the skeleton are apparently present except the bones from the forearm distally and from the leg distally.

Type indirectly designated by number, and the collar mark and original label leave no doubt as to the specimen Baird had in mind.

**Bassariscus saxicola** Merriam.  
**Biological Survey** collection.  


Well-made skin in good condition; skull perfect.

**Genus BASSARICYON.**

**Bassaricyon gabbii** Allen.

Proc. Acad. Nat. Sci. Phila., 1876, p. 23, pl. 1, fig. 1, April 18, 1876; Proc. Acad. Nat. Sci. Phila., 1877, pp. 267, 288, and pl. 2 of what was supposed to be the entire animal, but what in reality is an illustration of *Nasua maria*.


A U-shaped piece is lacking from the basioccipital, and there is a large hole in the basisphenoid between the pterygoids. The following teeth are present in the upper jaw: The last three teeth on the right side, the last tooth and the second from the last and the third from the last on the left side. The following teeth are missing in the lower jaw: In the left side the last molar, the third premolar, and the third incisor; on the right side the second incisor.

According to the catalogue there should be a skin bearing No. 12237. It has never been found in the Museum collection. In a letter dated May 12, 1908, Dr. J. A. Allen remarks: "In reference to the type of *Bassaricyon gabbii*, I never saw a skin belonging to the type skull. Through some error in cataloguing a skin of *Nasua maria* purported to belong to the skull, and I figured it as such, being at that time unfamiliar with the species of *Nasua*. Careful search was made for the missing skin after the error was discovered, but I am sure it was never found. My knowledge of the external characters of *Bassaricyon* is based on a living specimen of *B. alleni* which I saw some years ago in the London Zoo."

Type designated by number on page 20 of the original description.

**Family URSID.E.**

**Genus URSUS.**


In the description of this subspecies no type was designated. In the collection are 6 skulls from Norton Sound, Alaska, which Dr. C. Hart Merriam had at the time the original description was written. Three of them were left unlabeled and one of these designated by No. 76470 is mentioned as not typical. The 3 remain-
ing skulls bear the name *Ursus alascensis* in Doctor Merriam's handwriting and are therefore considered as cotypes of this form. These 3 skulls are:


Skull perfect, except for repaired fracture of right zygoma, broken right upper and left lower canines, and loss of second right upper and first right lower premolars.


Skull perfect, except for loss of 4 middle upper incisors, first and second right and first left upper premolars, 3 lower incisors, first and second right and first left lower premolars.

This is the only adult male skull labeled as *Ursus alascensis* by Doctor Merriam at the time the description was published and is the only one showing all the characters mentioned.


Skull perfect, except for loss of 2 upper and 1 lower incisors, first and second right and left upper premolars, and first right and left lower premolars.

**Ursus horribilis californicus** Merriam.


Skull in good condition. It is old and most of the teeth are much worn. The canines are split and cracked in the usual way of large teeth; the second lower molar on the left side is nearly decayed away. The whole ascending ramus of the right half of the mandible and the right pterygoid bone are lacking, probably shot away; otherwise skull perfect.

No type designated, but a skull is figured (fig. 15) in the original description, and this skull is regarded as the type. The number 3630 on the skull is quite legible in the figure.

**Ursus (Euarctos) carlottae** Osgood. Biological Survey collection.

North Amer. Fauna, No. 21, pp. 30-32, pl. 4, fig. 1, September 26, 1901.


Skull perfect, except for absence of first right lower incisor and first right upper premolar.

**Ursus dalli** Merriam. Biological Survey collection.

Proc. Biol. Soc. Wash., X, pp. 71-73, pl. 5, fig. 1; pl. 6, fig. 5; figs. 8-9 in text, April 13, 1896.


Skull perfect.
**Ursus americanus eremicus** Merriam. Biological Survey collection.


Well-made skin in good condition, except for bare spot on abdomen; skull perfect except slightly injured second and third upper incisors; canines cracked.

**Ursus eulophus** Merriam. Biological Survey collection.


Skull perfect, except for large bullet hole passing from left parietal through brain-case and out of right frontal.

**Ursus floridanus** Merriam.


Skull without lower jaw, left zygoma entirely broken away, also anterior half of right zygoma. A large hole through the interorbital region, but without injury to the frontal region above it or the palate below it. The second upper incisor of the right side and the small second premolar on both sides lacking, left upper canine somewhat broken.

**Ursus dalli gyas** Merriam. Biological Survey collection.


Skull perfect, except for absence of first right and left upper premolars, second left upper incisor, and first and second right lower incisors.

**Ursus horribilis horraeus** Baird. Lectotype.


990. Skull only. Adult male. Old copper mines, near the Rio Mimbres, Grant County, New Mexico, near the present location of Georgetown. Collected by J. H. Clark. Catalogued November 1, 1852.

Skull perfect, except for loss of 3 upper incisors, 3 of the small upper premolars, 5 lower incisors, and first left lower premolar; both upper canines, and left lower canine, and last right lower molar broken off to alveoli; absence of right coronoid process of mandible, and repaired fracture of right angular and condylloid processes.

No type was designated in the original description. The above specimen was designated as “the type”, that is a lectotype, by Dr. C. Hart Merriam (Proc.
Biol. Soc. Wash., X, p. 75, April 13, 1896). Secretary Baird had two other specimens in his hands at the time the subspecies was described, No. 995, skull only, a young male, with same data as the lectotype, and figured op. cit., pl. 20; and No. $\frac{10047}{2}$ (incorrectly designated by Secretary Baird as No. 147), an adult male from Los Nogales, Sonora, Mexico. In many respects No. 1047 might be considered the type, as the diagnosis of the form and much of the description is based upon this specimen. The skin was in poor condition in Secretary Baird's time and has apparently been destroyed; the skull is in fair condition. This specimen was evidently considered the type by Miller and Rehn (Proc. Boston Soc. Nat. Hist., XXX, p. 233, December, 1901) as the type-locality given by them is Los Nogales, Sonora, Mexico.

Written on the skull in old writing is: ""Said to have a | touch of the Grizzly | by an old hunter | hair brown however"" | J. H. C. | ""Probably a cross"" |

**Ursus kenaicensis Merriam.**

Biological Survey collection.


Skull perfect.

**Ursus kidderi Merriam.**

Biological Survey collection.


Tanned skin in good condition; skull perfect.

**Ursus middendorffi Merriam.**

Biological Survey collection.

Proc. Biol. Soc. Wash., X, pp. 69-71, pl. 4, figs. 2-3; pl. 5, fig. 2; pl. 6, fig. 2; fig. 7 in text, April 13, 1896.


Skull perfect, except for fractured left squamosal and left audital bulla and a small bullet hole passing from the left frontal through the brain-case and out of the right parietal.

**Ursus horribilis phaeonyx Merriam.**

Biological Survey collection.


Tanned skin in good condition; foot pads missing; skull perfect, except for absence of first left lower incisor; most of molariform teeth worn to roots.
Order INSECTIVORA.
Family ERINACEID.E.
Genus PODOGYMNURA.

Podogymnura truei Mearns.

Alcoholic in good condition; anterior half of skull in good condition; brain-case badly broken and in many fragments.

Family TALPID.E.
Genus SCAPANUS.

Scalops æneus Cassin.
Proc. Acad. Nat. Sci. Phila., VI, p. 299, this paper was reported favorably for publication February 22, 1853.


In good state of preservation, but rather badly made up. As Dr. True states (loc. cit.), the specimen has every appearance of having been discolored by immersion in alcohol or other preserving fluid.

The original description says, "A single specimen, apparently fully adult, is in the collection of the Exploring Expedition, labeled as having been obtained in Oregon." No. 3725 is undoubtedly this "single specimen."

Scapanus alpinus Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Scalops californicus Ayres.


A partially cleaned skeleton, in fair condition, all parts of which appear to be present except the right manus and forearm. Skull is well cleaned and perfect
except loss of last left upper molar. The side view of this skull is figured by True (Proc. U. S. Nat. Mus., XIX, No. 1101, pl. 3, fig. 3).

This skeleton is one of Dr. Ayres's original specimens, and probably the only one of them now in existence. It seems well to treat it as a type, although it was not so indicated by the original describer.

**Scapanus orarius** True.


Specimen recently made into a good study skin. The posterior half of the cranium is broken off, though most of it is still present; the part of the skull anterior to the middle of the cranium and the mandibles, perfect.

Type designated by number 381, an error for 1381.

**Scapanus truei** Merriam.

Biological Survey collection.


Well-made skin in good condition; skull perfect, except for slight irregularity of foramen magnum.

**Genus Dymecodon.**

**Dymecodon pilirostris** True.


Alcoholic (skull removed). Immature male. Mouth of Yeddo Bay, Yenosima, Japan. Collected by Prof. E. S. Morse. Received from the Boston Society of Natural History February 19, 1878. Catalogued December 21, 1885.

The alcoholic is in rather bad condition. Considerable hair has slipped from the belly. It has been split open from the chin nearly to the anus, to permit the removal of the skull and shoulder girdle. The right zygoma is lacking and the left basal portion of the brain case is injured, both ascending rami of the mandible broken.

The single specimen is referred to by number in the original description.

**Genus Neurotrichus.**

**Urotrichus gibbsii** Baird.

Mammals of North America, p. 76, pl. 28, 1857.


Original number 15. Received from Dr. George Suckley. Catalogued May 7, 1855.

Skin in rather poor condition, badly made, and left fore foot detached. Skull quite fragmentary and of value only to show the teeth, some of which are of the deciduous set. All the tooth rows are intact.

Baird had but one specimen, which he designated by number.

**Neurotrichus gibbsi major** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

*Family SORICID.E.*

**Genus CROCIDURA.**

**Crocidura andamanensis** Miller.


Well-made skin in good condition; skull perfect.

**Crocidura caudata** Miller.


Alcoholic in fair condition; intestines have been removed, some hair has slipped from left leg. Tip of tail is flattened by some accident. Skull rather badly broken about the right posterior half of brain-case.

**Crocidura lignicolar** Miller.


Well-made skin in good condition. The Museum catalogue calls for a skull, which can not be found.

**Crocidura mimula** Miller.

Proc. Biol. Soc. Wash., XIV, p. 95, fig. 1b, June 27, 1901.


Well-made skin in good condition; skull perfect, except for loss of right tympanic ring.
Crocidura nicobarica Miller.


Specimen well preserved. It contains a large fetus. Tip of tail, hind feet and ankles, left fore foot and tip of snout have been somewhat nibbled, probably by ants. Skull perfect.

Crocidura shantungensis Miller.


Well-made skin in good condition. Skull was formerly in the skin, but has been removed; all the parts posterior to the upper tooth rows are broken away; anterior portion and mandible complete.

Crocidura sicula Miller.


Well-made skin in good condition; skull perfect.

Genus MYOSOREX

Myosorex muricauda Miller.


Alcoholic, in good condition; skull removed and perfect.

Genus NEOMYS

Neomys fodiens minor Miller.


Well-made skin in good condition; skull perfect, except for loss of both tympanic rings.
**Genus BLARINA.**

**Blarina alticola** Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Blarina angusticeps** Baird.


**Blarina brevicauda** (Say). See Merriam, North Amer. Fauna, No. 10, pp. 6 and 10, December 31, 1895.


Skin in fair condition; some hair has sloughed from the sides and belly. Skull has several teeth lacking from the upper jaw, and the tympanic, periotic, and mastoid bones of both sides absent.

Baird had but one specimen, which he specified by number.

**Blarina berlandieri** Baird.


In good condition, save for some sloughing of hair about the belly. The skull remains inside. Baird's figure of the skull must have been made from one of the paratypes, but the lips have been loosened in order that teeth may be seen.

Four specimens, \(\frac{1}{3}, \frac{1}{3}, \frac{1}{3}, \frac{1}{3}\), 2159, and 2160, all from the same locality, are listed in the original description. Of these 2159 is here regarded as the type, since it is figured on pl. 28.

**Blarina exilipes** Baird.


**Blarina parva** (Say). See Merriam, North Amer. Fauna, No. 10, pp. 6–7 and 17, December 31, 1895.


No specimen is designated as the type; eight specimens are listed by Baird, of which No. 2157 is figured on pl. 28. For that reason it is considered as the type.

Specimen rather the worse for shedding of hair on the posterior parts of body. The skull has not been removed, so that a skull of one of the paratypes is probably figured.
Blarina floridana Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, p. 19, pl. 1, fig. 7, December 31, 1895.

Specimen in good condition. Skull perfect, except for broken supraoccipital; angular processes of mandible missing.

North Amer. Fauna, No. 10, p. 28, December 31, 1895.

Well-made skin in good condition; skull perfect.

Blarina mexicana goldmani Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, p. 25, December 31, 1895.

Well-made skin in good condition; skull perfect.

Blarina mexicana machetes Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Blarina magna Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, pp. 28-29, pl. 1, fig. 10, December 31, 1895.

Well-made skin in good condition; skull perfect.

Blarina mayensis Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect, except for absence of basioccipital and part of supraoccipital.
Blarina (Soriciscus) mexicana Cones.


Blarina nelsoni Merriam. Biological Survey collection.

Blarina obscura Merriam. Biological Survey collection.

Blarina carolinensis peninsulæ Merriam. Biological Survey coll.

Blarina mexicana peregrina Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, pp. 24-25, December 31, 1895.

Blarina soricina Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, pp. 22-23, pl. 1, fig. 9, December 31, 1895.


Well-made skin in good condition; skull perfect.

Genus NOTIOSOREX.

Sorex (Notiosorex) crawfordi Coues.


$^4_1^5_3$. In alcohol, skull removed. Fort Bliss, New Mexico (near El Paso, Texas). Collected by Dr. S. W. Crawford, U. S. A. Alcoholic catalogued April 28, 1857; skull, September, 1861.

Body in alcohol in very poor condition. At some time the alcohol had been allowed to evaporate, so that everything about the specimen is now hard and shrunken. It is practically a mummy preserved in alcohol. Skull perfect.

Sorex (Notiosorex) evotis Coues.


All parts of skin present but it is poorly made up; tail not skinned out; left hind foot and right fore foot present, but broken off from the skin. The specimen looks as if it had originally been made up with part of the skull in it, which had subsequently been removed and lost. Coues evidently had the skull, but no mention of it is made in the Museum Catalogue.


Well-made skin in good condition; skull perfect.

Genus SOREX.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Neosorex albibarbis Cope.


Specimen in fair condition. Skull not removed.

No type designated. Cope took two specimens. The above seems to be one of them. The entry in the original catalogue reads: "Neosorex albibarbis (the omitted letters belong to a word root probably intended to mean 'cheek' instead of 'beard'), Profile Lake, N. H., type." The handwriting is entirely different from any of the other handwritings in the catalogue.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.

Sorex araneus alticola Miller.


59330. Skin and skull. Adult male (not female as in original description). Meiringen, Switzerland. October 17, 1898. Collected by J. A. Loring. Original number 5731 (not 5781, as in original description). Catalogued December 27, 1898.

Well-made skin in good condition, except small bare spot on right flank; skull perfect.

45335—08—16
Sorex amoenus Merriam. Biological Survey collection.  
Well-made skin in good condition; skull perfect.

Sorex personatus arcticus Merriam. Biological Survey collection.  
Well-made skin in good condition; skull perfect.

Sorex bairdii Merriam. Biological Survey collection.  
North Amer. Fauna, No. 10, pp. 77-78, pl. 7, figs. 3-3a, December 31, 1895.  
\[\text{Skin and skull. Adult female. Astoria, Oregon. August 2, 1889. Collected by Dr. T. S. Palmer. Original number 270.} \]
Well-made skin in good condition; skull perfect.

Sorex californicus Merriam. Biological Survey collection.  
North Amer. Fauna, No. 10, pp. 80-81, pl. 12, figs. 6-7, December 31, 1895.  
\[\text{Skin and skull. Adult male. Walnut Creek, Contra Costa County, California. February 15, 1892. Collected by C. P. Streator. Original number 1383.} \]
Well-made skin in good condition; skull perfect.

Sorex saussurei caudatus Merriam. Biological Survey collection.  
\[\text{Skin and skull. Adult male. Reyes, Oaxaca, Mexico. October 21, 1894. Collected by E. W. Nelson. Original number 6963.} \]
Well-made skin in good condition; skull perfect.

Sorex dobsoni Merriam. Biological Survey collection.  
North Amer. Fauna, No. 5, pp. 33-34, July 30, 1891.  
\[\text{Skin and skull. Adult female. Sawtooth (also called Alturas) Lake, Idaho. October 3, 1890. Collected by Dr. C. Hart Merriam and V. Bailey. Original number 1929.} \]
Well-made skin in good condition; skull lacking entire brain-case and left angular process of mandible, otherwise complete.
Sorex longicauda elassodon Osgood. Biological Survey collection.

North Amer. Fauna, No. 21, pp. 35-36, September 26, 1901.


Well-made skin in good condition; skull perfect.

Sorex araneus euronotus Miller.


Well-made skin in good condition; skull perfect.

Sorex (Microsorex) eximius Osgood. Biological Survey collection.

North Amer. Fauna, No. 21, p. 71, September 26, 1901.


Well-made skin in good condition; skull perfect.

Sorex fimbripes Bachman.


84556. In alcohol, skull not removed. "Was found [by Prof. Walter R. Johnson] on the high table-land on a branch of Drury's Run [Pennsylvania], a tributary of the west bank of the Susquehannah River." Catalogued April 29, 1898.

Condition of the specimen poor; most of the hair on the posterior half of body lacking, and the cheeks have been split open in order to expose the teeth.

The specimen was found in the collection in the early part of 1898 in a battle with an old-style Museum label, without number, tied around the top, bearing the name "Sorex fimbripes (type)." Tied on the specimen itself is an old parchment label with the words "Sorex fimbripes. Type" written on it. The writing is perfectly legible, but very faint, and is not likely to last another quarter or half a century. The parchment has to be dried in order to read it. On April 29, 1898, this specimen was entered in the Museum catalogue and given the present number, 84556. No original data accompany the specimen to show where it came from, so that the locality has to be taken from Bachman's description. The writing of the old Museum label and parchment tag is unidentifiable; both labels were written many years ago and evidently by some one who knew the history of the specimen.
Sorex fisheri Merriam. Biological Survey collection.

North Amer. Fauna, No. 10, p. 86, pl. 4, fig. 4, December 31, 1895.


Well-made skin in good condition; skull perfect.

Sorex glacialis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sorex godmani Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sorex haydeni Baird.

Mammals of North America, p. 29, pl. 27, 1857.


Specimen in fair condition; lips loosened and left cheek cut in order to expose all the teeth.

No type designated. Baird mentions three specimens, Nos. 1684 and 1685, from Fort Union, and No. 2048 from Fort Pierre, Nebraska; No. 1685 is here regarded as the type because it is figured on pl. 27.

Sorex hoyi Baird.

Mammals of North America, p. 32, pl. 28, No. 1688, 1857.


Specimen is rather stiff and more or less shrunken, but it is otherwise in good condition. The skull has never been removed, but the lips have been loosened in order to expose the front teeth.

No type designated. Two specimens are listed by number in the original description, 1688 and 1689. As the former is figured on pl. 28, it is regarded as the type.
Sorex idahoensis Merriam. Biological Survey collection.
North Amer. Fauna, No. 5, pp. 32-33, pl. 4, fig. 1, July 30, 1891.

Skin and skull. Adult female. Timber Creek, Salmon River Mountains, Idaho. August 26, 1890. Collected by Dr. C. Hart Merriam and V. Bailey. Original number 1674.
Well-made skin in good condition; skull perfect.

Sorex obscurus longicauda Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, p. 74, December 31, 1895.

Well-made skin in good condition; skull perfect.

Sorex tenellus lyelli Merriam. Biological Survey collection.

Well-made skin in good condition; skull perfect.

Sorex macrodon Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, p. 82, pl. 7, figs. 2-2a; pl. 12, figs. 12-13, December 31, 1895.

Well-made skin in good condition; skull perfect.

Sorex macropygmaeus Miller.

Fairly well-made skin, much contracted posteriorly; skull perfect.

Sorex montereyensis Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, p. 79, December 31, 1895.

Well-made skin in good condition; skull perfect, except for fractured supra-occipital.
Sorex monticolus Merriam. Biological Survey collection.
North Amer. Fauna, No. 3, pp. 43-44, fig. 1, September 4, 1890.


Well-made skin in good condition; skull perfect, except for a small perforation in the palate and a larger irregular one in the upper side of the brain-case; angular processes of mandible missing.

Sorex tenellus myops Merriam. Biological Survey collection.


Well-made skin; tail complete, but detached at base; skull perfect.

Sorex tenellus nanus Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, pp. 81-82, pl. 8, figs. 5-5a, December 31, 1895.


Well-made skin in good condition; skull perfect, except for broken supra-occipital.

Neosorex navigator Baird.

Mammals of North America, p. 11, pl. 26, 1857.


Skin in bad condition, almost broken in two in the middle, anterior portion alone showing the hair; feet intact, also tail, which has never been skinned out; skull in good condition except for a break in the right occipital region.
Baird's single specimen is designated by number.

Sorex nevadensis Merriam. Biological Survey collection.
North Amer. Fauna, No. 10, pp. 71-72, December 31, 1895.


Well-made skin in good condition; skull perfect, except for absence of angular processes of mandible.
Sorex oreopolus Merriam. Biological Survey collection.


Skin and skull. Adult male. Sierra Nevada de Colima, Jalisco, Mexico; altitude, 10,000 feet. April 22, 1892. Collected by E. W. Nelson. Original number 2547.

Well-made skin in good condition, skull perfect.

Sorex orizabae Merriam. Biological Survey collection.


Well-made skin in good condition; skull practically complete, although bisected in the interorbital region.

Sorex ornatus Merriam. Biological Survey collection.

North Amer. Fauna, No. 10; pp. 79-80, pl. 8, figs. 3-3a, December 31, 1895.


Well-made skin in good condition; skull perfect, except for absence of right auditory bulla, basioccipital and some adjacent parts.

Sorex pachyurus Baird.

Mammals of North America, p. 20, pl. 27, 1857.


Skeleton in fair condition; all parts of it seem to be present.

No type designated by Baird, who mentioned three specimens, the above, in alcohol at that time, and two skins, 626 from Pembina, and 638 from Ripley, Minnesota. As no. 1674 is figured on pl. 27, it is here considered the type.

Sorex pacificus Coues.


3266. Skin with fragment of skull inside. Fort Umpqua, Oregon. Received from Dr. E. B. Vollum. Catalogued in March, 1858.

Skin in poor condition; torn about the month so as to expose what teeth are present, the unicuspids only; no filling; tail not skinned out; hair everywhere intact.


Well-made skin in good condition; skull perfect, except for absence of right auditory bulla.


Well-made skin in good condition; skull perfect, except for absence of left auditory bulla.

Sorex pribilofensis Merriam. Biological Survey collection. North Amer. Fauna, No. 10, p. 87, pl. 9, figs. 3-3a, December 31, 1895.


Specimen in good condition; skull not removed, apparently slightly fractured.


Well-made skin in good condition; skull perfect.


Skin and skull. Adult female. Sierra Nevada de Colima, Jalisco, Mexico; altitude, 8,000 feet. April 23, 1892. Collected by E. W. Nelson. Original number 2538.

Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.


Well-made skin in good condition; skull perfect.
Sorex alascensis shumaginensis Merriam. Biological Survey coll.


Well-made skin in good condition; skull perfect, except for absence of right auditory bulla.

Sorex vagrans similis Merriam. Biological Survey collection.

North Amer. Fauna, No. 5, pp. 34-35, pl. 4, fig. 3, July 30, 1891.

=Sorex obscurus Merriam. See Merriam, loc. cit., No. 10, pp. 72-73, pl. 8, figs. 1-1a, December 31, 1895.


Well-made skin in good condition; skull perfect, except for broken supraoccipital.

Sorex sphagnicola Coues.


Specimen in very poor condition; skin without filling and completely torn in two at the middle; both front feet missing; tail and hind feet present.

Sorex stizodon Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sorex personatus streator Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Sorex suckleyi Baird.

Mammals of North America, p. 18, pl. 27, No. 1677, 1857.


Specimen is in fair condition; some hair has fallen from the back. The skull has not been removed (and the skull of a paratype is the one probably figured), but the lips have been cut loose and the left cheek split so that all the teeth may be seen.

Baird had seven specimens from four different localities. The description is based upon nos. 362 and 1677. As the latter is figured on pl. 27 it is here taken as the type.

Sorex tenellus Merriam.  
Biological Survey collection.  
North Amer. Fauna, No. 10, p. 81, pl. 12, figs. 8-9, December 31, 1895.

Skin and skull.  
Adult.  
Summit of Alabama Hills, near Lone Pine, California.  
December 22, 1890.  
Collected by E. W. Nelson.  
Original number 131.

Well-made skin in good condition; skull complete, but with a large section of the brain-case broken away.

Sorex thompsoni Baird.  
Mammals of North America, p. 34, pl. 27, No. 1686, 1857.

=Sorex hoyi Baird.  
See Miller, North Amer. Fauna, No. 10, pp. 36 and 43, December 31, 1895.

1686.  
In alcohol.  
Burlington, Vermont.  
Collected by Prof. Zadock Thompson.  
Catalogued October 23, 1856.

Alcoholic in fair condition; some shuffling of hair about the belly; skull not removed, but lips loosened to expose the teeth.

No type designated.  Three specimens listed, the above, and 247 from Zanesville, Ohio, and 2062 from Halifax, Nova Scotia.

As 1686 is figured on pl. 27, it is here regarded as the type.  The skull figured on the same plate is probably one of the paratypes.

Sorex trowbridgii Baird.  
Cotypes.


Skin and skull.  
Astoria, mouth of Columbia River, Oregon.  
Collected by James Wayne.  
Received from Lieut. W. P. Trowbridge, U. S. A.  
Skin catalogued July, 1855, skull January, 1857.

All parts of the skin are present, but it is poorly made up and not in good condition.  The skull is badly cleaned and more or less broken about the cranium, and the right half of the mandible is missing.

967.  
Skin (no skull).  
Same data as the above, with the addition that it was collected on June 10, 1855.  
Catalogued November, 1855.

The skin of the second cotype is even worse than that of the first.  It evidently contained a skull, which has been removed and lost.

Baird lists four specimens by number, the above two and two from Steilacoom, Washington.  From his remarks on page 15 it is clear that the first two form the basis of his description.  On pl. 26 one of the Oregon specimens is figured (see explanation of plates, p. 742).

Sorex tundrensis Merriam.  
Biological Survey collection.  

99286.  
Skin and skull.  
Adult.  
St. Michael, Alaska.  
September 13, 1899.  
Collected by W. H. Osgood.  
Original number 902.

Well-made skin in good condition; skull perfect.
Sorex vagrans Baird.


Specimen entirely devoid of hair, otherwise its preservation is good. The skull has not been removed (so that the skull of a paratype is probably the one that is figured), but the lips have been loosened in order to expose the teeth.

No type designated. Baird had seven specimens from four different localities. The above being figured on pl. 26, is here taken as the type.

Sorex vancouverensis Merriam. Biological Survey collection.

North Amer. Fauna, No. 10, pp. 70-71, December 31, 1895.


Well-made skin in good condition; skull perfect.

Sorex obscurus ventralis Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for absence of angular processes of mandible.

FAMILY TUPAIIDÆ.

Genus TUPAIA.

Tupaia ferruginea batamana Lyon.


Well-made skin in good condition; skull perfect.

Tupaia bunœæ Miller.


Well-made skin in good condition; skull perfect.

Tupaia carimatœ Miller.


125123. Skin and skull. Adult male. Telok Edar, Karimata Island, off west coast of Borneo. September 2, 1904. Collected by Dr.

Well-made skin in good condition; skull perfect, except loss of ascending portion of left half of mandible, loss of left m, and a few shot holes in cranium.

Tupaia castanea Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 54, November 6, 1903.


Well-made skin in good condition; skull perfect, except that most of the ascending portion of right half of mandible is broken away and the last two teeth in right half of mandible are missing.

Tupaia cervicalis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 59, November 6, 1903.


Well-made skin in good condition; skull perfect.

Tupaia chrysogaster Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 58, pl. 10, fig. 1, November 6, 1903.


Well-made skin in good condition; skull perfect.

Tupaia chrysomalla Miller.


Well-made skin in good condition; skull perfect.

Tupaia discolor Lyon.


Well-made skin in good condition; skull perfect.

Tupaia inflata Lyon.


Well-made skin in good condition; skull perfect.
Tupaia phaeura Miller.
Well-made skin in good condition; skull perfect.

Tupaia pulonis Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 56, November 6, 1903.
Well-made skin in good condition; skull perfect.

Tupaia sirhassenensis Miller.
Well-made skin in good condition; skull perfect.

Tupaia sordida Miller.
Well-made skin in good condition; skull perfect.

Tupaia nicobarica surda Miller.
Well-made skin in good condition; skull perfect.

Tupaia tephura Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 57, November 6, 1903.
Well-made skin in good condition; skull perfect.

Genus UROGALE.

Urogale cylindrura Mearns.
125387. Skin and skull. Adult male. Mount Apo, at the Bagobo village of Todaya (altitude 4,000 feet), southern Mindanao, Philip-

Well-made skin in good condition; skull perfect, except loss of left max.

Order DERMOPTERA.

Family GALEOPTERIDAE.

Genus GALEOPTERUS

Galeopithecus aoris Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 47, November 6, 1903.
= Galeopterus aoris (Miller).


Well-made skin in good condition; skull perfect.

Galeopithecus gracilis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 49, pl. 6, fig. 2, November 6, 1903.
= Galeopterus gracilis (Miller).


Well-made skin in good condition; skull perfect.

Galeopithecus natunae Miller.

= Galeopterus natunae (Miller).


Well-made skin in good condition; skull perfect.

Galeopithecus pumilus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 46, pl. 6, fig. 3, November 6, 1903.
= Galeopterus pumilus (Miller).


Well-made skin in good condition; skull perfect.
Galeopithecus saturatus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 51, pl. 7, figs. 3 and 4; pl. 8, figs. 3 and 4; pl. 9, figs. 3 and 4, November 6, 1903.

=Galeopterus saturatus (Miller).


Well-made skin in good condition; skull perfect.

Galeopithecus tuancus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 53, November 6, 1903.

=Galeopterus tuancus (Miller).


Well-made skin in good condition; skull perfect.

Order CHIROPTERA.

Family PTEROPIDÆ.

Genus CYNOPTERUS.

Cynopterus angulatus Miller.


83569. In alcohol, skull not removed. Adult male. Trong (or Tarang), lower Siam. 1896. Collected by Dr. W. L. Abbott. Catalogued April 28, 1897.

Condition good.

Cynopterus major Miller.


Well-made skin in good condition; skull perfect.

Cynopterus minutus Miller.


Well-made skin in good condition; skull perfect.
Cynopterus pagensis Miller.
Well-made skin in good condition; skull perfect, except loss of right premaxilla.

Genus NiADiUS.

Cynopterus princeps Miller.
Well-made skin in good condition, except a bare spot over left thigh; skull perfect.

Genus PTEROPUS.

Pteropus aldabrensis True. Cotypes.
\[\frac{2}{3} \text{ and } \frac{5}{6} \text{ skins and skulls. Adult males. Aldabra Island, northwest of Madagascar. September 26 and October 5, 1892. Collected by Dr. W. L. Abbott. Catalogued June 30, 1893.}\]
Well-made skins in good condition, except proximal extremities of bones of forearm have been cut off, so that measurements of the forearm can not be obtained; skulls perfect.
No type is specified in the original description, but these two specimens are mentioned by number and are here regarded as cotypes.

Pteropus baveanus Miller.
Well-made skin in good condition; skull perfect, except for loss of two last upper molars and both tympanic rings.

Pteropus cagayanus Mearns.
125289. Skin and skull. Adult male. Cagayan Sulu Island, near west side of the Sulu Sea, Philippine Islands. February 25, 1904. Col-
lected by Dr. E. A. Mearns, U. S. A. Original number 5755. Catalogued December 13, 1904.

Well-made skin in good condition; skull perfect, except for loss of tympanics and left upper canine.

Pteropus enganus Miller.


Well-made skin in good condition; skull perfect.

Pteropus faunulus Miller.


Well-made skin in good condition; skull much damaged by shot, but glued together so that practically only the anterior half of the right zygoma is missing.

Pteropus geminorum Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 60, November 6, 1903.


Well-made skin in good condition; skull perfect, except for loss of tympanic rings.

Pteropus lanensis Mearns.


Well-made skin in good condition; skull perfect, except loss of tympanics, left $m_1$, left $pm_3$, and $m_3$.

Pteropus lanigera H. Allen.


=Pteropus insularis Hombron and Jacquinot. See Matschie, Flederm. des Berliner Mus. für Naturk., p. 28, 1899.

19466. Skin and skull. Said to be from the Samoan Islands, but this locality is undoubtedly incorrect. Purchased from Ward's Natural Science Establishment, Rochester, N. Y., bearing No. 4397. Catalogued August 21, 1890; skull, November 14, 1899.

Well-made skin (remade and skull removed in November, 1899) in good condition. Skull somewhat broken about the foramen magnum; two teeth are missing from the mandible.

45336—08——17
Dr. H. Allen fails to specify the type by number, but speaks of only one specimen in his description, and that as being in Ward’s Natural Science Establishment. The specimen was purchased from Ward’s in August, 1890, shortly after Doctor Allen’s description appeared. On the original label is written “Pteropus laniger a sp. nov. Samoa Is.,” the italicized part being in Dr. H. Allen’s handwriting.

Pteropus lepidus Miller.


Well-made skin in good condition; skull perfect.

Pteropus niadicus Miller.


Well-made skin in good condition; skull perfect, except loss of tympanic rings.

Pteropus samoensis Peale. Cotypes.
U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 20, 1848.

This species is based upon material brought back by the U. S. Exploring Expedition. No type is designated, and there is nothing to show that one specimen is more typical than any other. It is inconvenient to regard all the Samoan Pteropus brought back by the Expedition as cotypes. Those specimens from Tutuila are here regarded as the cotypes of the species, the following quotation from the original description seeming to justify this selection: “This species was first discovered on the island of Tutuila, and subsequently on all the islands of the Samoan group; we obtained numerous specimens.”

The specimens from Tutuila are as follows:

8594 25662. Collected by James Gibson. The catalogue, under remarks, says: “Specimen turned over to Dept. Comp. Anat. for exhibition.” Only the skull can now be found. It has the posterior part of brain-case cut away. Skin catalogued July 30, 1866; skull, February 7, 1887.

8596 34862. Female. Original number 14. Recently made into a modern study skin in fair condition and skull removed. Posterior part of brain-case cut away, all molars of upper left hand side broken away, otherwise skull in good condition. Skin catalogued July 30, 1866; skull, February 21, 1900.

8597 37866. Collected by W. Elliott. Recently made into a modern study skin, in fair condition, and skull removed. Skull nearly perfect,
both tympanic bones and posterior half of right zygoma missing; right half of mandible broken into two portions. Skin catalogued July 30, 1866; skull, February 26, 1900.

**Pteropus vociferus** Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 19, 1848.


Specimen once mounted and on exhibition, then packed away in storage, but taken out March 31, 1902. It is in fair condition for an old specimen, evidently bleached. It had no skull inside, nor is there any record of one.

Peale speaks of but one specimen, a male, and unquestionably it is No. 3961, catalogued as *Pteropus macklotii* Temminck from Mangsi.

**Family EMBALLONURID.E.**

**Genus EMBALLONURA.**

**Emballonura anambensis** Miller.


Alcoholic in good condition; skull perfect.

**Emballonura peninsularis** Miller.


Posterior portion of the brain-case largely broken away; skull otherwise complete; alcoholic in good condition.

**Vespertilio semicaudatus** Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 23, 1848.


Skin with wings spread and wing-membranes torn in places. Skin of head badly torn and mutilated, probably due to a clumsy extraction of the skull, which has been lost. Right ear missing.

There is very little doubt that the above is the type. The description is based upon a single specimen collected by the U. S. Exploring Expedition from the Samoan Islands.
Megaderma carimatae Miller.


Alcoholic in good condition; skull perfect.

Genus LAVIA.

Lavia rex Miller.


Alcoholic in good condition; skull badly broken, mandible and rostrum perfect, and three fragments of brain-case present.

Genus RHINOLOPHUS.

Rhinolophus circe Andersen. 6


Rhinolophus hirsutus Andersen. 6


Rhinolophus inops Andersen. 6


See footnote, page viii.
Rhinolophus minutus Miller.


Alcoholic in good condition; skull in good condition, except posterior portion of brain-case much broken, represented by a few small fragments.

Rhinolophus nereis Andersen.²


Rhinolophus affinis nesites Andersen.²


Rhinolophus trifoliatus niasensis Andersen.²


Rhinolophus solitarius Andersen.²


Rhinolophus spadix Miller.


Alcoholic in good condition, right forearm broken; skull perfect.

Rhinolophus virgo Andersen.²


Family HIPPOSIDERIDÆ.
Genus HIPPOSIDEROS.

**Hipposideros barbensis** Miller.


Well-made skin in good condition; skull perfect, except posterior portion somewhat broken.

**Hipposideros nicobarulæ** Miller.


Alcoholic in good condition; skull perfect.

Family PHYLLOSTOMIDÆ.
Genus CHILONYCTERIS.

**Chilonycteris mexicana** Miller. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**Chilonycteris portoricensis** Miller.


Well-made skin in good condition; skull perfect, except for loss of right malar.

Genus MORMOOPS.

**Mormoops intermedia** Miller.


Specimen is in “brown phase” and in fairly good condition; skin broken on the back over lumbar vertebrae; skull not removed.
Mormoops megalophylla senicula Rehn.


Well-made skin in good condition; skull perfect.

Genus MICRONYCTERIS.

Micronycteris megalotis mexicanus Miller. Biological Survey coll.


Specimen in good condition; skull not removed.

Micronycteris microtis Miller.


16366. Skin and skull. Adult male. Greytown, Nicaragua. Collected by Dr. L. F. H. Birt. Catalogued February 2, 1889, as an alcoholic; skull catalogued April 16, 1889. There is no record showing at what time the alcoholic was made into a skin.

Wing membranes considerably torn, but skin otherwise in good condition (see Lyon, Ann. Mag. Nat. Hist., ser. 7th, XVIII, November, 1906, p. 371); skull perfect.

Genus OTOPTERUS.

Macrotus californicus Baird.

See page 290.

Genus TONATIA.

Lophostoma venezuelæ Robinson and Lyon.


Alcoholic in good condition, except for a small bare patch on back; skull perfect.

Genus GLOSSOPHAGA.

Glossophaga elongata Miller.


The specimen was originally preserved in formalin, but on February 27, 1900, was made into a study skin, in good condition; skull perfect.
Glossophaga mutica Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect.

Glossophaga villosa H. Allen.


Skin in alcohol, and skull. The specimen has no original label, and bears only a small tag numbered 9523, which corresponds in the catalogue to a small bat, "Vespertilio," marked in the original catalogue as coming from "Guyana, Venezuela." No other data are given. It was catalogued some time between February 12, and March 17, 1870; skull, April 21, 1898. Dr. H. Allen, in his description of Glossophaga villosa, says that the locality is probably La Guayra, Venezuela. This mistake was probably made by his referring to the copied volume of the original catalogue, where the locality is given as "Guyana, Venezuela," which might be taken to mean La Guayra; but in the original catalogue itself the writing is quite plainly "Guyana, Venezuela." Whether the locality in the catalogue is meant to be the eastern end of Venezuela bordering on Guiana or in the old spelling, Guyana, or whether it means that the specimen came from the general region of Venezuela and Guiana, it is impossible to say. A second specimen which Dr. H. Allen had, No. 9524, has no data whatever, and it may or may not have come from the same locality.

Skin in alcohol in good condition, skull with left posterior basal portion and zygoma broken away. The type is designated by number, "9522," an error for 9523.

Genus MONOPHYLLUS.

Monophyllus clinedaphus Miller.


In alcohol (skull removed). Adult male. Specimen with no history. Alcoholic catalogued October 30, 1869; skull May 2, 1898.

Alcoholic in good condition; skull with right zygoma missing and right condyloid process of mandible broken.

Monophyllus cubanus Miller.


Well-made skin in good condition; skull perfect, except slight break in left zygoma.
Monophyllus luciae Miller.


Alcoholic in good condition; skull perfect.

Monophyllus plethodon Miller.


Alcoholic in good condition; skull somewhat injured, both zygomata incomplete, bulla detached, but present.

Monophyllus portoricensis Miller.


Alcoholic in good condition; skull perfect.

Genus LEPTONYCTERIS.

Leptonycteris curasoae Miller.


Considerable hair has sloughed from alcoholic and viscera are soft; skull perfect.

Genus HEMIDERMA.

Carollia castanea H. Allen.


Alcoholic in good condition; skull perfect.

Hemiderma subrufum Hahn. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for broken zygomata.
Hemiderma tricolor Miller.


Well-made skin in good condition; skull perfect.

Genus BRACHYPHYLLA.

Brachyphylla nana Miller.


No lower jaw present; all the teeth missing except the first molar on each side; posterior right-hand part of brain-case broken away.

Genus URODERMA.

Uroderma convexum Lyon.


Alcoholic in good condition, but rather shrunken from action of formalin and subsequent drying; skull somewhat damaged about the foramen magnum, especially to the right of it.

Genus VAMPYROPS.

Vampyrops fumosus Miller.


Well-made skin in good condition; most of the skull posterior to the roots of the zygomatics broken away, anterior parts perfect.

Genus ECTOPHYLLA.

Ectophylla alba H. Allen.


Specimen in good condition except for some mutilation about the lower lip.
No type designated. Dr. H. Allen had but one specimen, readily seen to be the above from his opening paragraph, where he speaks of its condition, locality, etc. He says, "believed to be from the vicinity of the Segovia River, eastern Honduras." A note from Mr. C. H. Townsend of February 1, 1902, who has referred to No. 313 in his catalogue, writes, "No. 313 (bat) was killed July 1, 1887 on Segovia R." Evidently a slip of the pen for '87, as the specimen was catalogued November 10, 1887.

Genus ARTIBEUS.

**Artibeus aztecus** Andersen. Biological Survey collection.


**Artibeus hirsutus** Andersen. Biological Survey collection.


**Dermanura phæotis** Miller. Biological Survey collection.


Well-made skin, with epidermis about joints of wings and feet damaged by insects; skull perfect.

**Artibeus jamaicensis præceps** Andersen. Biological Survey collection.


**Dermanura rava** Miller.


Well-made skin in good condition; skull perfect.

\(^a\)See footnote, page viii.
Genus **ARDOPS**.

**Stenoderma luciae** Miller.


Alcoholic in good condition; skull perfect.

Genus **CENTURIO**.

**Centurio mcmurtrii** II. Allen.


Alcoholic in good condition; skull perfect.

Type not designated by number, but see Rehn, loc. cit.

Genus **EROPHYLLA**.

**Phyllonycteris bombifrons** Miller.


Alcoholic in good condition; skull perfect.

**Phyllonycteris planifrons** Miller.


Alcoholic in good condition; skull perfect.
Family NATALIDÆ.

Genus NATALUS.

Natalus major Miller.


Alcoholic in good condition; skull perfect.

Natalus mexicanus Miller.

Biological Survey collection.


Specimen in good condition; skull perfect, except for slightly fractured brain-case.

Genus PHODOTES.

Natalus tumidirostris Miller.


Alcoholic in good condition; skull perfect, except right tympanic bone missing.

Genus CHILONATALUS.

Natalus (Chilonatalus) brevimanus Miller.


Specimen in good condition; skull not taken out.

Chilonatalus tumidifrons Miller.


Alcoholic in good condition; skull perfect.
Family VESPERTILIONIDAE.

Genus MYOTIS.

Vespertilio affinis H. Allen.


=Myotis lucifugus (Le Conte). See Miller, North Amer. Fauna, No. 13, p. 20, October 16, 1897.


Specimen in fair condition; all the hair of belly and lower back has slipped off; skull lost.

Species based on one specimen, the above, designated by number.


Specimen in good condition; skull not removed.

Myotis carimatae Miller.


Alcoholic in good condition; skull perfect.


Specimen in good condition, except for slight injury to abdomen; skull not removed.

Myotis dominicensis Miller.


Alcoholic in good condition; skull perfect.
Vespertilio subulatus keenii Merriam. Biological Survey collection.
Amer. Nat., XXIX, pp. 860-861, September 1, 1895.

Specimen in good condition; skull not removed.

Myotis longicrus True.
Science, VIII, p. 588, December 24, 1886.
=Myotis lucifugus longicrus (True). See Miller, North Amer. Fauna, No. 13, p. 64, October 16, 1897.

The hair has slipped off from the lower dorsal and ventral regions and the skin has been incised along the midventral line to permit removal of skull; skull perfect.
Type not designated by number. The description implies but a single specimen, unquestionably the above. The word "Type" is written in the "remarks" column of the catalogue.

Vespertilio macropus H. Allen.

Specimen a flat skin with expanded wings and much of the membrane between the fingers broken out.
The specimen bears the following label: Private collection. Expl. in Rocky Mts. Dr. Elliott Cones U. S. A. [in print] V. macropus. Nov. Tyre [in what seems to be Dr. H. Allen’s handwriting]. Near Fort Mojave, Colorado R., Nov. 1, 1866 [in what seems to be Doctor Cones’s handwriting]." Mojave is so written that it resembles Mojave as given in the original description. The above label agrees in every respect with the data given by Dr. H. Allen in the original description of the single specimen that he had. It was found in the Museum collection unnumbered, and was catalogued as No. 84549, April 21, 1898.

Vespertilio melanorhinus Merriam. Biological Survey collection.
=Myotis californicus (Audubon and Bachman). See Miller, North Amer. Fauna, No. 13, p. 69, October 16, 1897.

Specimen in good condition; skull not removed.
Myotis nesopolus Miller.


Specimen originally preserved entire in formalin, but made into a dry skin on February 8, 1900.

Well-made skin, in good condition; skull perfect.

Vespertilio nitidus H. Allen.


=Myotis californicus (Audubon and Bachman). See Miller, North Amer. Fauna, No. 13, p. 69, October 16, 1897.


The specimen is a skin almost falling to pieces, made up with wings expanded. Skull has lost right tympanic bone, most of right zygoma, and left half of mandible. Parts of occipital about foramen magnum have been broken away.

No type designated. A table of measurements accompanies the original description and five specimens are mentioned. Measurements of these five specimens are given in Allen's Monograph of Bats of North America, p. 61, 1865. There it is readily seen that the measurements given in the original description are not those of the average of the original five specimens, nor do they agree with those of any particular one, but they more nearly represent the measurements of No. 523 than they do any of the others. For that reason No. 523 is here regarded as the type. It may be contended, however, that 1861 being the first mentioned in the original description should be taken as the type; but No. 1861 apparently was an alcoholic and the original description is evidently based upon a skin and skull. Moreover, the greater number of the specimens, four, came from Fort Steilacoom, and these should be taken to represent the species better. Of the original five specimens, the type, No. 523, No. 522, a skin, and skulls, \( \frac{523}{1865} \) and \( \frac{522}{1865} \), seem to be the only ones extant.

Vespertilio obscurus H. Allen.


=Myotis californicus (Audubon and Bachman). See Miller, North Amer. Fauna, No. 13, p. 69, October 16, 1897.


Left wing lacking entirely and only the bones of the right wing remaining. The rest of the specimen is in good condition.


=Myotis californicus (Audubon and Bachman). See Miller, North Amer. Fauna, No. 13, p. 69, October 16, 1897.

Four cotyptes. See Miller, loc cit., p. 33.


Catalogued earlier as No. 4740. Labeled "Vespertilio oregonensis U. States Major Le Conte." Catalogued April 13, and November 1, 1861; skull, March 2, 1898.

A mummified skin with wings spread out, in rather poor condition. Skull with zygomata broken and injured about foramen magnum and left otic region.


$\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2}$ Skin and skull. Adult male. Hamilton, Washington. September 13, 1889. Collected by Dr. T. S. Palmer. Original number 392.

Well-made skin in good condition; skull perfect.


Myotis thysanodes Miller. Biological Survey collection. North Amer. Fauna, No. 13, pp. 80-85, pl. 1, fig. 5; pl. 11, fig. 5; figs. 11b, 12b, 15d, 16-17 in text, October 16, 1897.


Specimen in good condition; skull not removed.

Vespertilio volans H. Allen.


$\frac{3}{3} \frac{3}{3} \frac{3}{3} \frac{3}$ In alcohol (lost), and skull. Cape St. Lucas, Lower California, Mexico. Collected by John Xantus. Catalogued October 31, 1861; skull, March 1, 1898.

The alcoholic specimen can not be found; skull perfect.

Dr. H. Allen had but one specimen, designated by number.


45336—08—18
Genus **PIPISTRELLUS**.

**PIPISTRELLUS.**

Pipistrellus hesperus australis Miller. Biological Survey coll.

North Amer. Fauna, No. 13, p. 90, October 16, 1897.


Specimen in fair condition; viscera protruding and somewhat mutilated; right humerus broken; skull not removed.

**PIPISTRELLUS.**

Pipistrellus camortæ Miller.


Alcoholic in good condition; skull slightly injured just above the foramen magnum.

**PIPISTRELLUS.**

Pipistrellus cinnamomeus Miller. Biological Survey collection.


Well-made skin in good condition; skull perfect.

**SCOTOPHILUS.**

Scotophilus hesperus H. Allen.


Hair on lower back and belly sloughed off; otherwise alcoholic in good condition; skull with central part of each zygoma broken out, right orbital region and right side of rostrum injured.

This specimen may be considered as the type because it is the first one mentioned in the list of three individuals that Dr. H. Allen gives, and the only alcoholic among them. Miller [North Amer. Fauna, No. 13, p. 88] has definitely chosen the above specimen as the type. Again, Miller and Rehn [Proc. Bost. Soc. Nat. Hist., XXX, p. 259] regard Old Fort Yuma, California, as the type-locality. The other two of the original three specimens Nos. 5509 and 5910, came from Poso Creek, Kern County, California, and are dry skins.

**PIPISTRELLUS.**

Pipistrellus minusculus Miller.


Alcoholic in good condition except for an area of sloughed hair on back; skull perfect.
Pipistrellus subflavus obscurus Miller. Biological Survey coll.
North Amer. Fauna, No. 13, p. 93, October 16, 1897.
Well made skin in good condition; skull perfect, except for absence of posterior portion of left mandibular ramus.

Pipistrellus subulidens Miller.
Alcoholic in good condition; skull perfect.

Genus EPTESICUS.

Vespertilio fuscus bahamensis Miller. Biological Survey coll.
North Amer. Fauna, No. 13, pp. 101-102, figs. 24a, 25a, 26b, October 16, 1897.
Specimen in good condition; skull not removed.


Genus NYCTICEIUS.

Nycticea crepuscularis Le Conte. Cotypes.
M'Murrie’s Cuvier, Animal Kingdom, 1, p. 432, 1831.
Specimens in poor condition.
These specimens are regarded as cotypes, more from tradition than anything else. There is nothing in the early description to show that they are cotypes. They were presented to the Museum years ago by Major Le Conte as typical, or perhaps as original specimens. The specimens bear two old labels each, one marked "Crepuscularis," the other "Vespertilio crepuscularis," each in different handwriting. The latter is probably Secretary Baird’s handwriting and seems to be identical with that of the entry in the catalogue.
Genus RHOGÉESSA.

Rhogeessa gracilis Miller. Biological Survey collection.

North Amer. Fauna, No. 13, pp. 126–128, pl. 1, figs. 7, 12; text fig. 406, October 16, 1897.


Specimen in fair condition; right humerus and ulna broken; skull attached to body, but separated from skin.

Rhogeessa minutilla Miller.


Skin in good condition. Skull with zygoma broken away; auditel bulbe missing and posterior basal portion injured.

Rhogeessa parvula II. Allen. See page 292.

Rhogeessa tumida II. Allen.


The skin is said to be in alcohol, but can not be found; skull complete except for the loss of both malar bones.

The specimen is accompanied by these two notes signed G. S. M. [iller], jr.

"In the orig. descr. the number of this sp. is said to be 8195. This is an error. [This number in the Museum catalogues does not refer to a bat; it may be an original number.] Specimen recatalogued 3.1.98."

"There is no doubt that this is the type skull. It was returned by H. A. [illen] with no. given in orig. descr."

Genus LASIURUS.

Atalapha semota II. Allen.


Specimen in good condition.

No type designated. The above specimen is selected as the type, because a great part of the description is based upon it. A table of measurements is given of it; it heads the list of nine specimens, is the first specimen mentioned by Dr. H. Allen, and it is the only one that he considers a "perfect adult specimen."
Atalapha teliotis H. Allen.


84555. In alcohol (skull removed and lost). Probably from the southern part of California. Sent to Dr. H. Allen by Dr. J. G. Cooper, of the California Academy of Sciences. It was not catalogued until April 27, 1898.

As Dr. H. Allen remarks in the original description, the specimen is in poor condition. The skin of the head has been split open in order to take out the skull; most of the hair has sloughed from the back.

No type designated. It was unique at the time of the description. The above has always been regarded as the specimen that Dr. H. Allen had and answers to his description in so far as condition is concerned. It bears an original label marked "Atalapha teliotis, Cal. Acad. U. S."

Genus DASYPTERUS.

Dasypterus floridanus Miller.


Well-made skin in good condition; skull perfect.

Lasiurus intermedius H. Allen. See page 292.

Genus CORYNORHINUS.

Corynorhinus macrotis pallescens Miller. Biological Survey coll.

North Amer. Fauna, No. 13, pp. 52-53, pl. 11, fig. 2; fig. 10 in text, October 16, 1897.


Well-made skin in good condition. Skull in four fragments, the largest including part of the frontals and the right parietal, two fragments of maxillaries bearing three and five teeth, respectively, left mandibular ramus intact.

Genus KERIVOULA.

Kerivoula depressa Miller.


Alcoholic, in good condition; skull perfect.
Kerivoula engana Miller.


Alcoholic, in good condition; skull perfect.

Kerivoula minuta Miller.


Alcoholic, in good condition; skull perfect.

Genus PHONISCUS.

Phoniscus atrox Miller.


Alcoholic, in good condition; skull perfect.

Genus ANTROZOUS.

Antrozous minor Miller. Biological Survey collection.


Well-made skin in good condition, except for slight mutilation of border of interfemoral membrane. Skull lacks entire basal portion of brain-case, otherwise perfect.

Antrozous pallidus pacificus Merriam. Biological Survey coll.


Specimen in fair condition; hairs on back slipping; skull not removed.

Vespertilio pallidus Le Conte.

Proc. Acad. Nat. Sci. Phila., VII, p. 437, this paper was reported favorably for publication December 25, 1855.


The specimen is entered in the Museum catalogue twice: First on May 19, 1853, as No. 152, and having skull No. 1134, which is now lost. This entry was made as a deposit, "Dep." Second as No. 5476, with original number marked 152 and no skull number indicated; column for date marked "8-11.34 (2)."

Specimen in good condition, recently made into a modern study skin.

Dr. Harrison Allen, loc. cit., p. 69, in second table, regarded this specimen as the type. Baird, U. S. and Mexican Boundary Survey, Report, II, 1859, p. 5, writes "the one described by Major Le Conte was taken at El Paso."

Family MOLOSSID.E.
Genus NYCTINOMUS.

Nyctinomus antilullarum Miller.


Alcoholic in good condition; skull perfect.

Dysopes aurispinosus Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 21, 1848.

3726. Skin preserved in alcohol. Adult male. Peale says: "This remarkable bat flew on board the U. S. ship Peacock, off the coast of Brazil, on the 18th of November, when the ship was about one hundred miles from land, south of Cape St. Roque." This specimen is undoubtedly No. 3726, catalogued December 20, 1859, as Molossus aurispinosus from Brazil. It was recatalogued as No. 5476, October 31, 1861. There is no record of a skull in either of the entries.

The specimen was a dry skin until September 27, 1899, when it was placed in alcohol by Mr. Gerrit S. Miller, jr., who made a note of the color at that time, viz., "belly wood brown, back between wood brown and russet. 9. 27, '99." It is in good condition.

Type not designated by number, but there is not the slightest doubt that this is the specimen mentioned by Peale.

Nycticola cynocephala Le Conte.

McMurtrie's Cuvier, Animal Kingdom, I, p. 432, 1831.

4742. Skin with skull inside. Collected by Major J. E. Le Conte, probably on the Le Conte plantation, near Riceboro, Georgia. Catalogued April 13, 1861.

Skin in good condition, but with wings spread out.

No type designated. The above seems to be an original specimen, and has "Cynocephalus" written on two old labels, and is so entered in the catalogue.
Nyctinomus jobensis Miller.


Alcoholic in good condition; skull perfect.

Nyctinomus macrotis nevadensis H. Allen.


Alcoholic in fair condition, rather shrunken and skull badly extracted from top of head; skull is in good condition, right tympanic bone lost, and right half of mandible in two pieces.

For regarding the above as type see J. A. Allen, Bull. Amer. Mus. Nat. Hist., VI, December 16, 1902, footnote, p. 326.

Nyctinomus orthotis H. Allen.


Skin (preserved in alcohol) and skull. Spanish town, Jamaica, West Indies. Collected by W. T. March. Probably August, 1868.

Skin catalogued May 4, 1869; skull, August 17, 1898.

Skin in good condition; a good deal of the posterior parts of the skull broken away.

Nyctinomus pusillus Miller.


Alcoholic in good condition; left half of posterior part of brain-case of skull broken away.

Type designated by No. 37417, an error for 37411.

Nyctinomops yucatanicus Miller. Biological Survey collection.


= Nyctinomus yucatanicus (Miller).


Well made skin in good condition; skull perfect.
MOLOSSUS—NYCTICEBUS.

Genus MOLOSSUS.

**Molossus nigricans** Miller. Biological Survey collection. 


Well-made skin in good condition; skull perfect, except for absence of right angular process of mandible.

**Molossus pretiosus** Miller. 


Well-made skin in good condition; skull perfect.

**Molossus pygmaeus** Miller. 


Alcoholic in good condition; skull perfect.

**Order PRIMATES.**

**Family LEMURIDÆ.**

**Genus NYCTICEBUS.**

**Nycticebus bancanus** Lyon. 


Well-made skin in good condition; skull perfect.

**Nycticebus borneanus** Lyon. 


Well-made skin in good condition; skull perfect, except small upper right incisor broken off at alveolus.
Nycticebus coucang natunae Stone and Rehn.


Well-made skin in good condition; skull perfect.

Family CALLITRICHIDÆ.

Genus LEONTOCEBUS.

Midas elegantulus Slack.


= Leontocebus rufiventer (Gray).

51 13 2

Skin with tip of tail missing and skull with greater portion of the occipital bone broken away; specimen otherwise complete and in good condition.

Type not designated by number. The above is the only specimen in the collection with the data of "the typical specimen."

Family CEBIDÆ.

Genus ALOUATTA.

Alouatta palliata mexicana Merriam. Biological Survey collection.


Well-made skin in good condition; skull perfect, except for slight injury to angle of right mandibular ramus.

Family CERCOPITHECIDÆ.

Genus MACACA.

Macaca adusta Miller.

Proc. U. S. Nat. Mus., XXXIX, No. 1436, p. 559, pls. xiii, fig. 2; xiv, fig. 2; xv, fig. 2; xvi, fig. 2; February 3, 1906.


Well-made skin in good condition; skull perfect.
Cynomolgus mindanensis apoensis Mearns.


= Macaca mindanensis apoensis (Mearns).


Well-made skin in good condition; skull perfect.

Macaca broca Miller.


Well-made skin in good condition; skull perfect.

Cynomolgus cagayanus Mears.


= Macaca cagayana (Mearns).


Well-made skin in fair condition; several bare spots on arms and legs and on belly; originally preserved for some months in alcohol, but now a dry skin. (See under heading "Color" in the original description.) Skull perfect except loss of right c1, i5, and left i7.

Macacus fuscus Miller.


Well-made skin in good condition; skull perfect.

Macaca insulana Miller.


Well-made skin in good condition; skull perfect.
Cynomolgus mindanensis Mearns.


=Macaca mindanensis (Mearns).


Well-made skin in fair condition; bare spots on forehead and arms; skull perfect except loss of right c, c, left pme, and m3.

Macacus pagensis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 61, November 6, 1903.


Well-made skin in good condition; skull perfect.

Macacus phaeura Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 63, November 6, 1903.


Well-made skin in good condition; skull perfect, except shot hole in base of cranium.

Macacus pumilus Miller.


Well-made skin in good condition; skull perfect; an old specimen, teeth worn, especially the canines, the left lower one of which is lost from age, and the two middle lower incisors also lost from age.

Cynomolgus suluensis Mearns.


=Macaca suluensis (Mearns).


Skull perfect, except slight deformity of incisors.
Macacus umbrosus Miller.


Well-made skin in good condition; skull perfect.

Macacus rhesus villosus True.


Well-made skin in good condition; skull perfect, but evidently at one time in some pickling fluid, as it is slightly decalcified, especially the enamel of the teeth.

Genus PRESBYTIS.

Presbytes batuanus Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 65, November 6, 1903.


Well-made skin in good condition; skull perfect.

Presbytis cana Miller.


Well-made skin in good condition; skull perfect.

Presbytis carimatae Miller.


Well-made skin in good condition; skull perfect.

Type designated as No. 125158. It should have been 125157. The skull selected as type and marked as such and measured by Mr. Miller is No. 125157. The skin on which he tied the red label was No. 125158. As the skull of No. 125157 is exactly like that of 125158, and as the skull of No. 125157 is the only one carefully measured, No. 125157 is here considered the type.

Presbytes rhionis Miller.

Smithsonian Miscell. Coll., XLV, No. 1420, p. 61, November 6, 1903.

by Dr. W. L. Abbott. Original number 1888. Catalogued January 5, 1903.
Well-made skin in good condition; skull perfect.

Genus SIMIAS.

Simias concolor Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 67, pls. xiv, xv, xvi, November 6, 1903.

Well-made skin in good condition; skull perfect.

Family HYLOBATIDÆ.

Genus SYMPHALANGUS.

Symphalangus klossii Miller.
Smithsonian Miscell. Coll., XLV, No. 1420, p. 70, pls. xvii and xviii, fig. 2, and pl. xix, fig. 1, November 6, 1903.

Well-made skin in good condition; skull perfect.
TYPE-SPECIMENS THAT SHOULD BE IN THE NATIONAL MUSEUM COLLECTION, BUT NO PART OF WHICH CAN NOW BE FOUND.

Berardius bairdii Stejneger.


Skull in good condition. Type designated by the original number. There is something wrong about the record of this skull. While it appears correct, the measurements do not agree with Doctor Stejneger's original measurements.—F. W. True.

Phocaena australis Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 33, pl. vi, fig. 2, 1848.


Type-locality.—South Atlantic Ocean, off coast of Patagonia.

Nothing is known about this specimen. It is not included in Peale's list of specimens, loc. cit., p. 205.

Delphinus albirostatus Peale.


Type-locality.—Pacific Ocean, lat. 2° 47' 5" S., long. 174° 13' W.

Nothing is known about this specimen. It is not in Peale's list of specimens, loc. cit., p. 305. Cassin says: "We find no specimen in the collection of the expedition." (U. S. Explor. Exped. Mamm. and Ornith., p. 32, 1858.)

Delphinapterus borealis Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 35, pl. viii, fig. 2, 1848.


Type-locality.—Pacific Ocean, lat. 46° 6' 50'' N., long. 134° 5' W.

Nothing is known about this specimen. It is not included in Peale's list of specimens, loc. cit., p. 305. Cassin remarked that he had "no specimens for examination." (Cassin, U. S. Explor. Exped., Mamm. and Ornith., p. 30, 1858.)

Delphinus bairdii Dall. Cotypes.


Two females. Point Arguello, California. 1872. Collected by Capt. C. M. Scaummon. "One entire skeleton has been forwarded to Washington."

A search through the Museum collection and catalogues fails to reveal these specimens. They may never have reached the Museum.

The cotypes were not designated by numbers.
Delphinus lateralis Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 35, pl. vii, fig. 1.


_Type-locality._—Pacific Ocean, lat. $13^\circ 58'$ N., long. $161^\circ 22'$ W.

Nothing is known about this specimen. It is not in Peale's list of specimens, _loc. cit._, p. 305. Cassin remarks, "We find no specimen in the collection of the expedition." (U. S. Explor. Exped., Mamm. and Ornith., 1858, p. 33.)

Cervus macrotis californicus Caton.

_Amer. Nat., X_, p. 464, August, 1876.

=Odocoileus hemionus californicus (Caton). See Thompson, Forest and Stream, LI, p. 286, October 8, 1898.

_Type-locality._—Near Gaviota Pass, 40 miles up the coast from Santa Barbara, California.

Caton, p. 468, says, "As soon as the deer reached camp I selected a fair specimen, a buck, which I judged to be four years old, and prepared the skin and necessary parts of the skeleton for mounting. This I subsequently sent to the Smithsonian Institution. Professor Baird has expressed much interest about it, and assured me that it would be mounted and added to the collection of American quadrupeds at the Centennial [Exposition, Philadelphia, 1876], when those who take an interest in these studies may examine and compare it with others." Specimen killed March 22, 1876, probably.

An examination of the catalogue for 1875–76 shows the specimen to be $\frac{12}{13}$ $\frac{2}{23}$, catalogued in the spring of 1876. Nothing further is known of it.

Cervus lewisii Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 39, 1848.

=Odocoileus columbianus (Richardson). See Trouessart, Catalogus Mammalium, p. 894, 1897.

There should be two cotypes, one from Feather River, upper California, the other from San Francisco Bay.

Nothing is known of their whereabouts; not even numbers are known.

Lepus audubonii Baird.

Mammals of North America, p. 608, pls. xiii (animal) and lvi (skull).

$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$. Skin and skull, both lost. San Francisco, California. Received from Lieut. R. S. Williamson; collected by Dr. J. S. Newberry. Catalogued December 31, 1855.

No type was designated in the original description, and in the description itself there is nothing to show that Baird had in mind any particular one of the five specimens coming from three separated localities. (The specimens labeled "Presidio" probably came from Monterey, as is seen by reading the original labels and the entry in the catalogue. On pl. xiii Baird figures the entire animal, but does not state which specimen; however, on pl. lvi a skull is figured and referred to by number, 2045. As this specimen seems to be mentioned more particularly than any other specimen, it seems well to take it as the type. The _type-locality_ is thus restricted to San Francisco, California, as is done by Miller and Rehn. (Proc. Bost. Soc. Nat. Hist., XXX, p. 185, December, 1901.)
Cricetodipus parvus Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 53, 1848.


_Type-locality._—Oregon. Assumed to be The Dalles. See Osgood, North Amer. Fauna, No. 18, pp. 34–36, September 20, 1900.

Specimen should be in the Museum with the U. S. Exploring Expedition material. Nothing is known of it; not even number can be traced.

Mus vitiensis Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 49, 1848.

=Mus musculus vitiensis (Peale). See Trouessart, Catalogus Mammalium, p. 487, 1897.

_Type-locality._—Fiji Islands.

Specimen should be in the Museum, with other U. S. Exploring Expedition material. It is probably No. 3751, an old mounted specimen that can not now be found. Catalogued December 20, 1859.

Mus peruvianus Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 51, 1848.

=Oryzomys peruvianus (Peale). See Trouessart, Catalogus Mammalium, p. 528, 1897.

_Type-locality._—Callao, Peru.

The specimen should be in the Museum, with other U. S. Exploring Expedition material. It is probably No. 4955, an alcoholic, entered in the catalogue May 30, 1861, as Mus musculus from Callao, which can not be found.

Arvicola montana Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 44, 1848.


Peale says, "Our specimen was obtained on the 4th of October, near the headwaters of the Sacramento River, in California."

The specimen can not be found. Its number is not known.

Arvicola (Pitymys) pinetorum quasiater Coues.


The specimen can not found. There is no record of a skull. Dr. E. Coues says he had not seen the skull.

_Type-designated by number.

45336—08—19
Sciurus fossor Peale.

U. S. Exploring Expedition, VIII, Mammalia and Ornithology, p. 55, 1848.

_Type-locality._—Probably southern Oregon.

The specimen should be in the Museum, with other U. S. Exploring Expedition material, but nothing is known of it. Cassin, _U. S. Explor. Exped. Mamm. and Ornith.,_ 1858, says specimens are in Academy of Natural Sciences, Philadelphia, and in National Museum and mentions it in list on page 424.

Macrotus californicus Baird.


Specimen can not be found. Dr. H. Allen evidently had it in 1894. See p. 39, Monograph Bats North America, March 14, 1894.

_Type not designated by number in original description. One specimen is implied, and a table of measurements is given agreeing exactly with those given for No. 2347 in Baird's Report U. S. and Mex. Bound. Surv., II, Pt. 2, p. 4, 1859.

Vespertilio agilis H. Allen.


Nothing is known of the specimen.

Vespertilio evotis H. Allen. Lectotype.


The following quotation from Miller, _loc. cit.,_ p. 77, is the reason for considering this specimen the type:

"_Type-locality._—Not stated, and no type designated. In the original description specimens are mentioned from the upper Missouri River and the Pacific coast from Puget Sound to Cape St. Lucas. Monterey, Cal. (one of the localities given), may be selected as the type locality."

No. 5389 is the only specimen from Monterey, and Monterey having been chosen as the _type-locality_, 5389 should be considered as the type. The specimen can nowhere be found in the collection.

Vespertilio exiguus H. Allen.


5373. In alcohol. Aspinwall, New Granada, the present Colon.
MISSING TYPE-SPECIMENS.

Panama. Received, from Dr. S. Hayes. Catalogued October 30, 1861.

Dr. H. Allen had but one specimen, a female in alcohol, designated by number. It can not be found.

**Vespertilio mundus H. Allen.**


Dr. H. Allen had but one specimen designated by number. The specimen can not be found.

**Myotis californicus pallidus Stephens.** Biol. Survey Collection.


Specimen probably mislaid temporarily; formerly in collection, but not found at present.

**Vespertilio tenuidorsalis H. Allen.**


=Myotis californicus (Audubon and Bachman). See Miller, North Amer. Fauna, No. 13, p. 36, October 16, 1897.

Dr. H. Allen says, “One individual. ♀. No. 5533. Mus. Smithsonian Institution. Alcohol. Cape St. Lucas, Lower Cal. John Xantu.” There is some mistake in the number, as the catalogue number 5533 calls for a “V. nitidus, Puget Sound.”

This specimen can not be found in the National Museum. Mr. James A. G. Rehn has informed us it is now in the collection of the Academy of Natural Sciences, Philadelphia.

**Vespertilio yumanensis H. Allen.** Cotypes.


No type designated. Four specimens are measured 5367, 6014, 6020, 6021, and all must be considered as cotypes; no preference for one over the other is shown, and all come from one locality, Fort Yuma, California, collected by Maj. G. H. Thomas, U. S. A., in 1855. All were in alcohol. None of the specimens can be found. In his “List of Specimens” Allen says 36 individuals were under number 5367. The catalogue says 8 bore that number.

**Scotophilus miradorensis H. Allen.**


No type mentioned. Dr. H. Allen says, "One individual. ? Mus. of Smithsonian Institution. Alcohol. Mirador, Mexico. Dr. Sartorius." It is undoubtedly No. 5411, catalogued October 31, 1861, along with other bats that Dr. H. Allen was working with at the time. 5411 has the same data that Doctor Allen gives. Also see his second Monographs of Bats of North America, 1893, p. 121, where 5411 is given in the list of specimens of *Adelonycteris fuscus*.

It can not be found.

**Rhogeessa parvula** H. Allen.


The specimen can not be found in the National Museum. Mr. James A. G. Rehn informs us it is in the collection of the Philadelphia Academy of Natural Sciences, and in very bad condition.

**Lasiurus intermedius** H. Allen.


The specimen can not be found.

In the original description a table of measurements is given, and by referring to p. 26 of H. Allen's Monograph of Bats of North America, June, 1864, it is seen that those measurements refer to the last specimen in the table of measurements there given. Unfortunately it is not numbered. By checking off the six preceding numbers in the "List of specimens" it is seen that the single unnumbered specimen in the table of measurements must have been 6136. Since that was the specimen measured in the original description, it is here regarded as type. Of the seven bats listed in the original description, 5328 is the only one that can be found.
SUMMARY OF THE TYPE-SPECIMENS OF MAMMALS IN THE UNITED STATES NATIONAL MUSEUM, GROUPED BY AUTHORS AND BY COLLECTORS.

The total number of type-specimens of mammals in the United States National Museum, as shown by the foregoing catalogue, is 1,405. Of these, 692 are in the collection of the Division of Mammals and 713 in the Biological Survey Collection.

As a matter of some interest, the following tables have been prepared. They show the respective number of type-specimens described by different authors, and similarly the number collected by different persons.

A large proportion of the types have been described by recent authors, who have worked with large series of specimens and with careful as well as modern methods of discrimination. Nearly every prominent worker in the history of American mammalogy is represented. Thus, the list includes such well-known names as Audubon, Bachman, Baird, Cassin, Cope, Cones, Kennicott, LeConte, and Peale, and others equally prominent among the living zoologists. The list of collectors also includes many highly honored names, especially of those connected with early government exploring expeditions and surveys. The large number of type-specimens of African and Malayan mammals is due almost entirely to the enthusiasm of Dr. W. L. Abbott, who has devoted the best years of his life to exploring regions previously but little known. He has generously presented his collections to the National Museum. Dr. E. A. Mearns, U. S. A., has also been a generous contributor of specimens, especially from the region of the Mexican boundary and from the Philippines. All the types in the Biological Survey collection are the result of recent work, and a great majority of them were collected and described by mammalogists on the staff of the Survey.

Type-specimens not at present existing in the National Museum are not taken into account in the following lists. The discrepancy between the number of authors and the number of collectors is caused by the inclusion of cotypes described by one author, but collected by more than one person.

AUTHORS WHO HAVE DESCRIBED TYPE-SPECIMENS OF MAMMALS IN THE UNITED STATES NATIONAL MUSEUM, EXCLUSIVE OF THE BIOLOGICAL SURVEY COLLECTION.

<table>
<thead>
<tr>
<th>Author</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Harrison Allen</td>
<td>17</td>
</tr>
<tr>
<td>Dr. J. A. Allen</td>
<td>21</td>
</tr>
<tr>
<td>Dr. Knud Andersen</td>
<td>9</td>
</tr>
<tr>
<td>John James Audubon and Rev.</td>
<td>1</td>
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<tr>
<td>John Bachman</td>
<td></td>
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<tr>
<td>Dr. W. O. Ayres</td>
<td>1</td>
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<tr>
<td>Rev. John Bachman (see also</td>
<td>1</td>
</tr>
<tr>
<td>Audubon and Bachman)</td>
<td></td>
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<tr>
<td>Secretary S. F. Baird</td>
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<tr>
<td>Dr. J. L. Berlandier</td>
<td>1</td>
</tr>
<tr>
<td>John Cassin</td>
<td>1</td>
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<tr>
<td>Frank M. Chapman</td>
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<tr>
<td>Dr. J. G. Cooper</td>
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<td>Prof. E. D. Cope</td>
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<tr>
<td>Dr. Elliott Coutes, U. S. A.</td>
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<td>Dr. Marcus W. Lyon, jr.</td>
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a Of these 1 was purchased from Ward's Natural Science Establishment, 4 from C. K. Worthen, 1 from Wilhelm Schüler, 1 received from John Varden, and 2 from the U. S. Bureau of Fisheries.
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COLLECTORS OF TYPE-SPECIMENS OF MAMMALS IN THE COLLECTION OF THE UNITED STATES NATIONAL MUSEUM, BIOLOGICAL SURVEY COLLECTION.

J. F. Abbott ........................................ 1
G. S. Agersborg ..................................... 1
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Herbert Brown ....................................... 1
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A. S. Bunnell ........................................ 1
John Burlingame ..................................... 1
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A. Rea ............................................... 1
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P. Schmid ............................................ 2
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Robert T. Young .................................... 1
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