

OCCASIONAL PAPERS OF THE MUSEUM OF
ZOOLOGY
UNIVERSITY OF MICHIGAN
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TYPE SPECIMENS OF RECENT MAMMALS IN THE MUSEUM OF
ZOOLOGY, THE UNIVERSITY OF MICHIGAN

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Because type specimens (holotypes, syntypes, lectotypes and neotypes) are the property of science, institutions which maintain them have special obligations to insure their safety and permanence and to make available essential information about them. Publishing a list is one way to make that information available. It is a procedure recommended by national and international organizations concerned with systematic collections, for example by the American Society of Mammalogists' Committee for Systematic Resources, 1974, and by the Association of Systematic Collections. The International Council of Museums also, in its efforts to draw forth information on types, considered preparing a universal catalogue of type specimens in zoology and paleontology. Though the objective was not achieved, the Council, in 1968, did produce "A preliminary list of catalogues of type specimens in zoology and paleontology" authored by A. W. Frank Banfield. This publication cites, for Recent Mammalia, catalogues of specimens in 12 Museums. Additional lists have been published (*e. g.*, Jones and Genoways, *Misc. Publ. Mus. Nat. Hist. Univ. Kans.*, 51: 129-146, 1969; Schlitter, *J. Mamm.*, 55: 264-266, 1974). The present writing is the first report on the mammalian types contained in The University of Michigan Museum of Zoology.

LIST OF TYPES

Listed below are the 118 holotypes and two neotypes contained in the collection. They are arranged under the names by which they were originally described and, when appropriate, are cross-listed to accord with current usage. Under each ordinal name, genera are arranged to agree with standard works (*e. g.*, for North America: Hall and Kelson, *Mamm. N. Amer.*, Ronald

Press, 1959) and species and subspecies are listed alphabetically. The data on each type is taken directly from the specimen tag. Additional information on a specimen and on recent status of the taxon is mentioned when appropriate. The symbols UMMZ and CMNH indicate, respectively, The University of Michigan Museum of Zoology and the Cleveland Museum of Natural History. Abbreviations of publications follow the 1974 List of Serials with Coden, Title Abbreviations, New, Changed and Ceased Titles (Biosci. Info. Serv. Biol. Abstr., Phila., 218 pp).

INSECTIVORA

Sorex cinereus ohioensis Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 89, 11 Sept. 1942.

Holotype.— Adult male, skin and skull, CMNH 16901, UMMZ 121247, Ohio, Cuyahoga Co., Hunting Valley; obtained 5 April 1942 by Wilbur B. Quay, original symbol F.

Sorex palustris labradorensis Burt, Occ. Pap. Mus. Zool. Univ. Mich., 383: 1, 27 Aug. 1938.

Holotype.— Adult female, skin and skull, UMMZ 68109, Labrador, Red Bay, Straits of Belle Isle, obtained 9 Feb. 1933 by E. Doane, original no. 7.

Sorex palustris punctulatus Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 463: 1, 15 Sept. 1942.

Holotype.— Adult male, skin and skeleton, UMMZ 85498, West Virginia, Randolph Co., 6 mi. NW Durbin, Shavers Fork of Cheat River, 3600 ft.; obtained 18 July 1941 by Emmet T. Hooper, original no. 1664.

Sorex vagrans longiquus Findley, Univ. Kans. Publ. Mus. Nat. Hist., 9: 49, 10 Dec. 1955.

Holotype.— Adult male, skin and skull, UMMZ 87332, Montana, Chouteau Co., 25 mi. ESE Big Sandy, Eagle Creek; obtained 21 July 1942 by Emmet T. Hooper, original no. 2184.

Blarina brevicauda churchi Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 109, 11 Sept. 1942.

Holotype.— Adult female, skin and skull, CMNH 42158 (old no.), 640 (new no.), UMMZ 121249, North Carolina, Mitchell Co., Roan Mt.; obtained 20 Aug. 1910 by Morton L. Church, Church Coll. no. 640.

Remarks.— Fur is missing on left flank of skin.

Blarina brevicauda hooperi Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 110, 11 Sept. 1942.

Holotype.— Young adult female, skin and skull, UMMZ 77380, Vermont, Caledonia Co., Lyndon; obtained 26 July 1931 by Victor H. Cahalane, original no. 38.

Blarina brevicauda kirtlandi Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 99, 11 Sept. 1942.

Holotype.— Young adult male, skin and skull, CMNH 16895, UMMZ 121250, Ohio, Geauga Co., Holden Arboretum; obtained 13 Oct. 1939 by B. Patterson Bole, Jr., original no. X-881.

Cryptotis parva elasson Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 97, 11 Sept. 1942.

Holotype.— Adult female, skin and skull, CMNH 14025, UMMZ 121248, Ohio, Seneca Co., Bettsville; obtained 1 Feb. 1939 by Winston C. Jesseman, original no. 685.

Scalopus aquaticus porteri Schwartz, J. Mamm., 33: 381, 19 Aug. 1952.

Holotype.— Young adult female, skin and skull, UMMZ 97718, Florida, Dade Co., Uleta; obtained 31 Aug. 1951 by Albert Schwartz, original no. 1999.

CHIROPTERA

Balantiopteryx plicata pallida Burt, Occ. Pap. Mus. Zool. Univ. Mich., 515: 1, 30 Oct. 1948. (My copy received 11 Nov. 1948.)

Holotype.— Adult female, skin and skull, UMMZ 83056, México, Sonora, Río Mayo, San Bernardo; obtained 11 Feb. 1935 by Howard S. Gentry, original no. 321.

Remarks.— Tympanic areas of skull are missing.

Chilonycteris torrei continentis Sanborn, Occ. Pap. Mus. Zool. Univ. Mich., 373: 1, 26 May 1938.

Holotype.— Adult male, preserved in alcohol, skull separate, UMMZ 77085, Guatemala, Petén, Laguna de Zotz; obtained 4 Mar. 1935 by Carl L. Hubbs and Henry van der Schalie.

Remarks.— A synonym of *Pteronotus personatus psilotis* (Smith, Misc. Publ. Mus. Nat. Hist. Univ. Kans., 56: 92, 1972).

Rhinolophus anderseni aequalis G. M. Allen, Occ. Pap. Mus. Zool. Univ. Mich., 110: 2, 25 Feb. 1922.

Holotype.— Adult male, alcoholic, skull separate, UMMZ 53112, Philippine Islands, Palawan, Puerto Prusse; obtained by Joseph B. Steere.

PRIMATES

Aotus bipunctatus Bole, Sci. Publ. Clev. Mus. Nat. Hist., 7: 152, 31 Aug. 1937.

Holotype.— Adult female, skin and skull, CMNH 1204, UMMZ 121263, Panamá, Veraguas, Peninsula de Azuero, 3 mi. E Montijo Bay, Marioto, Paracoté; obtained 19 Mar. 1932 by Pinkney Davies, original no. B-A 84.

Remarks.— Original description states: collected on "Mariato-Suay Lands."

Alouatta palliata pigra Lawrence, Bull. Mus. Comp. Zool. Harv. Univ., 75: 333, Nov. 1933.

Holotype.— Adult male, skin and skeleton, UMMZ 63510, Guatemala, Dept. Petén, Uaxactún; obtained 4 May 1931 by Adolph Murie, original no. 2107.

Remarks.— Skin is flat, salted, untanned. *A. pigra* considered specifically distinct from *A. palliata* (J. D. Smith, J. Mamm., 51: 358, 1970).

LAGOMORPHA

Sylvilagus andinus carchensis Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 393: 5, 1 Dec. 1938.

Holotype.— Young adult female, skin and skull, UMMZ 77062, Ecuador, Carchí, Montufar, near San Gabriel, 2900 m; obtained 27 Oct. 1934 by Philip Hershkovitz, original no. M296.

Remarks.— A synonym of *S. brasiliensis andinus* (Cabrera, Cat. Mam. Amer. Sur, Rev. Argent. Cien. Nat., 4: 345, 1961).

Sylvilagus andinus chotanus Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 393: 8, 1 Dec. 1938.

Holotype.— Adult female, skin and skull, UMMZ 77061, Ecuador, Imbabura, Pimampiro, San Nicolas, 2000 m; obtained 18 July 1934, by Philip Hershkovitz, original no. M268.

Remarks.— *S. brasiliensis chotanus* (Cabrera, Cat. Mam. Amer. Sur, Rev. Argent. Cien. Nat., 4: 346, 1961).

Sylvilagus bachmani virgulti Dice, Occ. Pap. Mus. Zool. Univ. Mich., 166: 24, 11 Feb. 1926.

Holotype.— Adult male, skin and skeleton, UMMZ 54562, California, Monterey Co., Soledad; obtained 1 Sept. 1922 by Lee R. Dice, original no. 1200.

Sylvilagus dicei Harris, Occ. Pap. Mus. Zool. Univ. Mich., 248: 1, 4 Aug. 1932.

Holotype.— Adult female, skin and skull, UMMZ 64043, Costa Rica, San José, El Copey de Dota, 6000 ft.; obtained 24 May 1931 by Austin Smith.

Sylvilagus floridanus costaricensis Harris, Occ. Pap. Mus. Zool. Univ. Mich., 266: 3, 28 June 1933.

Holotype.— Adult female, skin and skull, UMMZ 65232, Costa Rica, Guanacaste, Hacienda Santa María, 3200 ft.; obtained 1 Feb. 1932, by Austin Smith.

Sylvilagus floridanus ilanensis Blair, Occ. Pap. Mus. Zool. Univ. Mich., 380: 1, 17 June 1938.

Holotype.— Adult male, skin and skull, UMMZ 66778, Texas, Briscoe Co., Quitaque, Old F-Ranch headquarters; obtained 8 July 1932, original no. 285.

Lepus americanus pineus Dalquest, J. Mamm., 23: 178, 14 May 1942.

Holotype.— Adult female, skin and skull, UMMZ 53867, Idaho, Latah Co., Cedar Mountain; obtained 29 May 1921 by Philip Putman, original no. 6.

Remarks.— My records indicate date of first mailing is 6 June 1942.

Lepus californicus vigilax Dice, Occ. Pap. Mus. Zool. Univ. Mich., 166: 11, 11 Feb. 1926.

Holotype.— Adult female, skin and skeleton, UMMZ 54454, California, Shasta Co., Balls Ferry; obtained 23 Aug. 1922 by Lee R. Dice, original no. 1185.

Remarks.— A synonym of *L. c. californicus* (Grinnell, Univ. Calif. Publ. Zool., 40: 200, 1933; and subsequent authors).

RODENTIA

Tamias striatus ohioensis Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 135, 11 Sept. 1942.

Holotype.— Young adult male, skin and skull, CMNH 16189, UMMZ 121255, Ohio, Hamilton Co., Cincinnati; obtained 4 July 1940 by Woodrow Goodpaster, original no. 1044.

Tamias striatus peninsulae Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 461: 1, 15 Sept. 1942. (My copy received 18 Sept. 1942.)

Holotype.— Adult male, skin and skull, UMMZ 82610, Michigan, Presque Isle Co., 3 mi. SE Millersberg, Barnhart Lake; obtained 3 Sept. 1939 by William H. Burt, original no. 4519.

Tamias striatus rufescens Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 130, 11 Sept. 1942.

Holotype.— Young adult female, skin and skull, CMNH 9077, UMMZ 121256, Ohio, Geauga Co., Chesterland Caves; obtained 14 Aug. 1935 by Philip N. Moulthrop.

Eutamias amoenus cratericus Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 366: 1, 21 Dec. 1937.

Holotype.— Adult female, skin and skull, UMMZ 78001, Idaho, Butte Co., 26 mi. SW Arco, Grassy Cone, Craters of the Moon National Monument, 6000 ft.; obtained 3 Oct. 1936 by Philip M. Blossom, original no. 1262.

Sciurus adolphei atrirufus Harris, Occ. Pap. Mus. Zool. Univ. Mich., 219: 2, 15 Oct. 1930.

Holotype.— Adult male, skin and skull, UMMZ 59842, Costa Rica, Guanacaste, Peninsula de Nicoya, Tambor, 25 ft.; obtained 28 Nov. 1928 by Austin Smith.

Remarks.— *Sciurus variegatoides atrirufus* (Harris, Misc. Publ. Mus. Zool. Univ. Mich., 38: 19, 1937).

Sciurus candelensis carchensis Harris and Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 391: 3, 10 Nov. 1938.

Holotype.— Adult male, skin and skull, UMMZ 77041, Ecuador, Carchi, Montúfar, Hacienda Vincuro-Indujel, near San Gabriel. Atal, 2700 m; obtained 22 Sept. 1934 by Philip Hershkovitz, original no. M274.

Remarks.— *Sciurus granatensis carchensis* (Hershkovitz, Proc. U. S. Nat. Mus., 97: 37, 1947).

Sciurus gerrardi imbaburae Harris and Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 391: 1, 10 Nov. 1938.

Holotype.— Adult female, skin and skull, UMMZ 77020, Ecuador, Imbabura, Intag, near Peñaherrera, Hacienda Chinipamba, 1500 m; obtained 2 May 1934 by Philip Hershkovitz, original no. M212.

Remarks.— *Sciurus granatensis imbaburae* (Hershkovitz, Proc. U. S. Nat. Mus., 97: 37, 1947).

Sciurus miravallensis Harris, Occ. Pap. Mus. Zool. Univ. Mich., 227: 1, 4 June 1931.

Holotype.— Adult male, skin and skull, UMMZ 59882, Costa Rica, Guanacaste, Volcán Miravalles, 1500 ft.; obtained 23 Jan. 1930 by Austin Smith.

Remarks.— *Sciurus deppiei miravallensis* (Harris, Occ. Pap. Mus. Zool. Univ. Mich., 476: 10, 1943).

Sciurus niger cinereus Linné, Barkalow, Proc. Biol. Soc. Wash., 69: 13, 21 May 1956.

Neotype.— Adult female, skin and skull, UMMZ 58158, Maryland, Dorchester Co., Cambridge; obtained 13 Nov. 1926 by Ralph W. Jackson, original no. 327.

Sciurus variegatoides austini Harris, Occ. Pap. Mus. Zool. Univ. Mich., 266: 1, 28 June 1933.

Holotype.— Adult male, skin and skull, UMMZ 65118, Costa Rica, Puntarenas, Río Las Agujas, near sea level; obtained 22 Sept. 1931 by Austin Smith.

Tamiasciurus regalis Howell, Occ. Pap. Mus. Zool. Univ. Mich., 338: 1, 7 July 1936.

Holotype.— Adult male, skin and skull, UMMZ 61802, Michigan, Keweenaw Co., Isle Royale; obtained 8 May 1930 by Adolph Murie, original no. 1088.

Remarks.— *Tamiasciurus hudsonicus regalis* (Burt, Occ. Pap. Mus. Zool. Univ. Mich., 481: 6, 1943).

Callosciurus erythraeus woodi Harris, Occ. Pap. Mus. Zool. Univ. Mich., 228: 1, 15 July 1931.

Holotype.— Adult male, skin and skull, UMMZ 55827, China, Kiang-Su, 25 mi. E Nanking, Purple Mts., Lung-tan; obtained 14 Dec. 1923 by Norman A. Wood, original no. 162.

Remarks.— A synonym of *Callosciurus flavimanus styani* (Moore and Tate, Fieldiana, Nat. Hist. Mus. (Chic.), 48: 152, 1965).

Thomomys bottae camoae Burt, Occ. Pap. Mus. Zool. Univ. Mich., 344: 1, 5 Jan. 1937.

Holotype.— Adult female, skin and skull, UMMZ 75263, México, Sonora, Río Mayo, Camoa; obtained 19 Oct. 1934 by J. T. Wright, original no. 8225.

Thomomys bottae collis Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 422: 7, 14 Nov. 1940. (My copy received 22 Nov. 1940.)

Holotype.— Young adult male, skin and skull, UMMZ 82108, New Mexico, Valencia Co., Shuman's Ranch, Town. 6 N, Range 10 W, section 30; obtained 15 May 1939 by Emmet T. Hooper, original no. 1067.

Thomomys bottae limpiae Blair, Occ. Pap. Mus. Zool. Univ. Mich., 403: 2, 16 June 1939.

Holotype.— Young adult male, skin and skull, UMMZ 79105, Texas, Jeff Davis Co., 1 mi. N Fort Davis, 4700 ft.; obtained 22 Mar. 1937 by W. Frank Blair, original no. 697.

Thomomys bottae litoris Burt, Occ. Pap. Mus. Zool. Univ. Mich., 424: 1, 29 Nov. 1940. (My copy received 27 Nov. 1940.)

Holotype.— Adult male, skin and skeleton, UMMZ 80997, México, Baja California, Bahía Magdalena, Stearns Point; obtained 29 Jan. 1938 by William H. Burt, original no. 4010.

Thomomys bottae paguatae Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 422: 4, 14 Nov. 1940. (My copy received 22 Nov. 1940.)

Holotype.— Adult female, skin and skull, UMMZ 82158, New Mexico, Valencia Co., ½ mi. N Cebolleta; obtained 22 June 1939 by Emmet T. Hooper, original no. 1332.

Thomomys bottae planorum Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 422: 5, 14 Nov. 1940. (My copy received 22 Nov. 1940.)

Holotype.— Adult female, skin and skull, UMMZ 82140, New Mexico, Valencia Co., 1½ mi. SW San Mateo; obtained 10 June 1939 by Emmet T. Hooper, original no. 1232.

Thomomys fulvus morulus Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 422: 9, 14 Nov. 1940. (My copy received 22 Nov. 1940.)

Holotype.— Adult female, skin and skull, UMMZ 82094, New Mexico, Valencia Co., 8 mi. SE Paxton; obtained 31 May 1939 by Emmet T. Hooper, original no. 1178.

Remarks.— Treated as *Thomomys bottae morulus* (Kelson, Publ. Mus. Nat. Hist. Univ. Kans., 5: 70, 1951), but possibility of specific separation of *P. fulvus* suggested (Sands and Findley, J. Mamm., 40: 331, 1959).

Thomomys talpoides taylori Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 422: 11, 14 Nov. 1940. (My copy received 22 Nov. 1940.)

Holotype.— Adult female, skin and skull, UMMZ 82132, New Mexico, Valencia Co., 6 mi. NE summit Mt. Taylor; obtained 15 June 1939 by Emmet T. Hooper, original no. 1256.

Geomys lutescens hylaeus Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 368: 1, 6 April 1938.

Holotype.— Adult female, skin and skull, UMMZ 77890, Nebraska, Dawes Co., 10 mi. S Chadron; obtained 19 June 1935 by Philip M. Blossom, original no. 709.

Remarks.— A synonym of *Geomys bursarius lutescens* (Jones, Publ. Mus. Nat. Hist. Univ. Kans., 16: 156, 1964).

Geomys lutescens jugossicularis Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 420: 1, 28 June 1940.

Holotype.— Young adult male, skin and skull, UMMZ 56951, Colorado, Prowers Co., Lamar; obtained 28 Aug. 1925 by Dora L. Dice, original no. 399.

Remarks.— *Geomys bursarius jugossicularis* (Villa and Hall, Publ. Mus. Nat. Hist. Univ. Kans., 1: 234, 1947).

Heterogeomys hispidus cayoensis Burt, Occ. Pap. Mus. Zool. Univ. Mich., 365: 1, 16 Dec. 1937.

Holotype.— Adult male, skin and skeleton, UMMZ 63038, Belize (British Honduras), 12 mi. S Cayo, "Mountain Pine Ridge"; obtained 18 Feb. 1931 by Adolph Murie, original no. 1473.

Remarks.— *Orthogeomys hispidus cayoensis* (Russell, Publ. Mus. Nat. Hist. Univ. Kans., 16: 531, 1968).

Macrogeomys cavator nigrescens Goodwin, Amer. Mus. Novit., 1227: 3, 17 Mar. 1943.

Holotype.— Adult male, skin and skull, UMMZ 67536, Costa Rica, Cartago, 10 mi. S Cartago, Río Navarro, El Muñeco, 4000 ft.; obtained 22 Jan. 1933 by Austin Smith.

Remarks.— Ascending ramus of right lower jaw and right squamosal area of cranium are missing. *Orthogeomys cavator nigrescens* (Russell, Publ. Mus. Nat. Hist. Univ. Kans., 16: 532, 1968).

Cratogeomys tylorhinus arvalis Hooper, J. Mamm., 28: 45, (15?) Feb. 1947.

Holotype.— Adult female, skin and skull, UMMZ 88222, México, Distrito Federal, Colonia del Valle, 2275 m; obtained 18 Jan. 1942 by Helmuth O. Wagner, original no. 16.

Remarks.— A synonym of *Pappogeomys tylorhinus tylorhinus* (Russell, Publ. Mus. Nat. Hist. Univ. Kans., 16: 739, 1968).

Pappogeomys bulleri burti Goldman, J. Mamm., 20: 97, 15 Feb. 1939.

Holotype.— Adult female, skin and skeleton, UMMZ 81017, México, Jalisco, Tenacatita Bay; obtained 19 Feb. 1938 by William H. Burt, original no. 4121.

Perognathus collis blairi Blair, Occ. Pap. Mus. Zool. Univ. Mich., 381: 1, 20 June 1938.

Holotype.— Adult female, skin and skeleton, UMMZ 79299, Texas, Jeff Davis Co., 1 mi. NW Fort Davis, Limpia Canyon, 4800 ft.; obtained 12 May 1937 by W. Frank Blair, original no. 1007.

Remarks.— A synonym of *Perognathus nelsoni canescens* (Borell and Bryant, Univ. Calif. Publ. Zool., 48: 25, 1942).

Perognathus collis popei Blair, Occ. Pap. Mus. Zool. Univ. Mich., 381: 3, 20 June 1938.

Holotype.— Adult male, skin and skeleton, UMMZ 79303, Texas, Brewster Co., Big Bend of Rio Grande, Pinnacle Spring, 2600 ft.; obtained 20 April 1937 by W. Frank Blair, original no. 858.

Remarks.— A synonym of *Perognathus nelsoni canescens* (Borell and Bryant, Univ. Calif. Publ. Zool., 48: 25, 1942).

Perognathus gypsi Dice, Occ. Pap. Mus. Zool. Univ. Mich., 203: 1, 19 June 1929.

Holotype.— Adult male, skin and skull, UMMZ 58465, New Mexico, Otero Co., 12 mi. SW Alamogordo, White Sands; obtained 12 July 1927 by Robert M. Bradley, original no. 27-123.

Remarks.— *Perognathus apache gypsi* (Benson, Univ. Calif. Publ. Zool., 40: 26, 1933).

Perognathus intermedius ater Dice, Occ. Pap. Mus. Zool. Univ. Mich., 203: 2, 19 June 1929.

Holotype.— Adult male, skin and skeleton, UMMZ 58474, New Mexico, Otero Co., 12 mi. SW Three Rivers, Malpais Spring; obtained 17 July 1927 by Lee R. Dice, original no. 27-257.

Perognathus intermedius nigrimontis Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 265: 1, 21 June 1933.

Holotype.— Adult male, skin and part skeleton (skull, humeri, femora and scapulae), UMMZ, 63682, Arizona, Pima Co., 10 mi. S Tucson, Black Mt.; obtained 11 Mar. 1931 by Philip M. Blossom, original no. 239.

Remarks.— Original description erroneously indicates type specimen obtained 11 April.

Perognathus intermedius pinacate Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 273: 4, 31 Oct. 1933.

Holotype.— Adult female, skin and skull, UMMZ 67434, México, Sonora, Pinacate Mts., Papago Tanks; obtained 26 April 1933 by Philip M. Blossom, original no. 605.

Perognathus longimembris salinensis Bole, Sci. Publ. Clev. Mus. Nat. Hist., 5: 3, 4 Dec. 1937.

Holotype.— Adult male, skin and skull, CMNH 6242, UMMZ 121257, California, Inyo Co., Saline Valley, Salt Camp, 1100 ft.; obtained 29 Mar. 1934 by Philip N. Moulthrop, original no. S.V.E-642.

Remarks.— Original description indicates specimen is from western edge of Salt Lake, 1 mi. N Salt Camp, 1060 ft.

Perognathus parvus yakimensis Broadbooks, J. Mamm., 35: 96, 10 Feb. 1954.

Holotype.— Adult male, skin and skull, UMMZ 95978, Washington, Yakima Co., 17 mi. NW Naches, 3800 ft.; obtained 27 Aug. 1947 by Harold E. Broadbooks, original no. 1042.

Remarks.— Original description indicates type specimen is from Rocky Flat (or Rocky Prairie) 16 mi. NW Naches.

Dipodomys merriami frenatus Bole, Sci. Publ. Clev. Mus. Nat. Hist., 5: 1, 17 Jan. 1936.

Holotype.— Adult female, skin and skull, CMNH 6771, UMMZ 121258, Utah, Washington Co., Toquerville; obtained 14 May 1934 by F. J. Tobin, original no. S.V.E.-771.

Remarks.— Original description indicates specimen from 3200 ft. altitude. A synonym of *D. m. vulcani* (Durrant and Setzer, Bull. Univ. Utah, 35: 31, 1945).

Dipodomys ordii idoneus Setzer, Univ. Kans. Publ. Mus. Nat. Hist., 1: 546, 21 Dec. 1949.

Holotype.— Adult male, skin and skull, UMMZ 90029, México, Durango, 12 mi. W Lerdo, San Juan, 3800 ft.; obtained 1 Mar. 1946 by Frances and Frederick Hammerstrom, original no. 140.

Dipodomys phillipsii oaxacae Hooper, J. Mamm., 28: 48, (15?) Feb. 1947.

Holotype.— Adult male, skin and skull, UMMZ 88652, México, Oaxaca, Teotitlán 950 m; obtained 15 Sept. 1944 by Helmuth O. Wagner, original no. 524.

Remarks.— Tip of tail lost after tail had been measured by collector.

Liomys irroratus pullus Hooper, J. Mamm., 28: 47, (15?) Feb. 1947.

Holotype.— Adult male, skin and skull, UMMZ 88735, México, Distrito Federal, Tlalpam, 2250 m; obtained 23 Aug. 1944 by Helmuth O. Wagner, original no. 467.

Remarks.— A synonym of *Liomys irroratus alleni* (Genoways, Spec. Publ. Mus. Tex. Tech. Univ., 5: 99, 1973).

Heteromys oresterus Harris, Occ. Pap. Mus. Zool. Univ. Mich., 248: 4, 4 Aug. 1932.

Holotype.— Young adult male, skin and skull, UMMZ 64027, Costa Rica San José, El Copey de Dota, 6000 ft.; obtained 25 May 1931 by Austin Smith.

Microryzomys altissimus chotanus Hershkovitz, J. Mamm., 21: 82, 14 Feb. 1940.

Holotype.— Adult male, skin and skull, UMMZ 77222, Ecuador, Imbabura, Pimam-
piro, San Nicolas, 2000 m; obtained 20 June 1934 by Philip Hershkovitz, original no. M262.

Remarks.— Skull broken; parts reassembled. *Oryzomys altissimus chotanus* (Cabrera, Rev. Mus. Argent. Cien. Nat., 4: 398, 1960).

Microryzomys altissimus hylaeus Hershkovitz, J. Mamm., 21: 81, 14 Feb. 1940.

Holotype.— Young adult male, skin and skull, UMMZ 77224, Ecuador, Carchí, Montufar, Atal, 2700 m; obtained 29 Sept. 1934 by Philip Hershkovitz; original no. M288.

Remarks.— *Oryzomys altissimus hylaeus* (Cabrera, Rev. Mus. Argent. Cien. Nat., 4: 398, 1960).

Oryzomys alfaroi intagensis Hershkovitz, J. Mamm., 21: 78, 14 Feb. 1940.

Holotype.— Adult male, skin and skull, UMMZ 77152, Ecuador, Imbabura, Intag, near Peñaherrera, Hacienda Chinipamba, 1500 m; obtained 24 April 1934 by Philip Hershkovitz, original no. M195.

Oryzomys aphrastus Harris, Occ. Pap. Mus. Zool. Univ. Mich., 248: 5, 4 Aug. 1932.

Holotype.— Adult female, skin and skull, UMMZ 62875, Costa Rica, San José, Sierra de Dota, San Joaquin, 3800 ft.; obtained 15 Feb. 1931 by Austin Smith.

Remarks.— Right parietal-zygomatic area of skull missing. Original description erroneously indicates holotype was obtained 29 June 1931.

Oryzomys azuerensis Bole, Sci. Publ. Clev. Mus. Nat. Hist., 7: 165, 31 Aug. 1937.

Holotype.— Juvenile male, skin and skull, CMNH 1178, UMMZ 121261, Panamá, Veraguas, 1½ mi. E Montijo Bay, Mariato; obtained 19 Feb. 1932 by B. Patterson Bole, Jr.

Remarks.— Original description states: specimen obtained 1½ mi. S mouth of Angulo River, Mariato-Suay Lands, sea level; original no. BA58. *Oryzomys palustris azuerensis* (Handley, Ectoparasites of Panamá, Field Mus. Nat. Hist. (Chic.), p. 781, 1966).

Oryzomys couesi pinicola Murie, Occ. Pap. Mus. Zool. Univ. Mich., 245: 1, 9 June 1932.

Holotype.— Adult female, skin and skull, UMMZ 63039, Belize (British Honduras), 12 mi. S Cayo, Mt. Pine Ridge; obtained 18 Feb. 1931 by Adolph Murie, original no. 1470.

Remarks.— *Oryzomys palustris pinicola* (Hall, Southw. Nat., 5: 171, 1960).

Oryzomys fulvescens pacificus Hooper, Proc. Biol. Soc. Wash., 65: 23, 29 Jan. 1952.

Holotype.— Adult male, skin and skull, UMMZ 96764, México, Chiapas, Mapastepec, 45 m; obtained 7 Nov. 1949 by Helmuth O. Wagner, original no. 5384.

Oryzomys spodiurus Hershkovitz, J. Mamm., 21: 79, 14 Feb. 1940.

Holotype.— Adult male, skin and skull, UMMZ 77176, Ecuador, Imbabura, Intag, near Peñaherrera, Hacienda Chinipamba, 1500 m; obtained 6 May 1934 by Philip Hershkovitz, original no. M228.

Remarks.— Possibly conspecific with *Oryzomys longicaudatus* (Hershkovitz, *loc. cit.*).

Neacomys spinosus carceleni Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 419: 1, 27 June 1940.

Holotype.— Adult male, skin and skull, UMMZ 80171, Ecuador, Napo-Pastaza, Río Napo, Llunchi, 250 m; obtained 5 Oct. 1936 by Philip Hershkovitz, original no. M618.

Oecomys endersi Goldman, J. Wash. Acad. Sci., 23: 525, 15 Nov. 1933.

Holotype.— Old male, skin and skull, UMMZ 64931, Panama Canal Zone, Barro Colorado Island; obtained 12 Feb. 1931 by Robert K. Enders, original no. 474.

Remarks.— A synonym of *Oryzomys bicolor trabeatus* (Hershkovitz, Proc. U. S. Nat. Mus., 110: 533, 1960).

Nectomys squamipes napensis Hershkovitz, Misc. Publ. Mus. Zool. Univ. Mich., 58: 56, 4 Jan. 1944.

Holotype.— Adult male, skin and skull, UMMZ 80178, Ecuador, Napo-Pastaza, Aguarico, Río Napo, San Francisco, 200 m; obtained 5 April 1936 by Philip Hershkovitz, original no. M532.

Akodon mollis fulvescens Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 418: 2, 27 June 1940.

Holotype.— Adult male, skin and skull, UMMZ 77281, Ecuador, Imbabura, Cordillera de Chillur, Ibarra, La Carolina, 900 m; obtained 16 Dec. 1934 by Philip Hershkovitz, original no. M338.

Rheomys thomasi chiapensis Hooper, J. Mamm., 28: 53, (15?) Feb. 1947.

Holotype.— Young adult male, skin and skull, UMMZ 88320, México, Chiapas, 23 mi. NNW Mapastepec, Finca Prusia, 1100 m; obtained 14 Mar. 1942 by Helmuth O. Wagner, original no. 31.

Reithrodontomys fulvescens infernatis Hooper, Proc. Biol. Soc. Wash., 63: 167, 29 Dec. 1950.

Holotype.— Young adult male, skin and skull, UMMZ 91470, México, Oaxaca, Teotitlán, 950 m; obtained 26 Feb. 1947 by Helmuth O. Wagner, original no. 2728.

Reithrodontomys harrisi Goodwin, Amer. Mus. Novit., 1293: 2, 20 July 1945.

Holotype.— Adult male, skin and skull, UMMZ 65220, Costa Rica, Guanacaste, 18 mi. E Liberia, Hacienda Santa María, 3200 ft.; obtained 27 Jan. 1932 by Austin Smith.

Remarks.— *Reithrodontomys gracilis harrisi* (Hooper, Misc. Publ. Mus. Zool. Univ. Mich., 77: 136, 1952).

Reithrodontomys mexicanus eremicus Hershkovitz, Occ. Pap. Mus. Zool. Univ. Mich., 441: 4, 18 July 1941.

Holotype.— Adult male, skin and skull, UMMZ 77250, Ecuador, Imbabura, Pimampiro, San Nicolas, 2000 m; obtained 14 June 1934 by Philip Hershkovitz, original no. M255.

Reithrodontomys mexicanus riparius Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 565: 12, 31 Mar. 1955.

Holotype.— Adult female, skin and skull, UMMZ 98658, México, Michoacán, 2½ mi. SW Coalcomán, 3600 ft.; obtained 6 Aug. 1951 by W. E. Duellman, original no. 14.

Reithrodontomys mexicanus scansor Hooper, J. Wash. Acad. Sci., 40: 418, 15 Dec. 1950. (Actual date of publication is 22 Dec. 1950.)

Holotype.— Adult male, skin and skull, UMMZ 96816, México, Chiapas, Villa Flores, 600 m; obtained 22 Mar. 1950 by Helmuth O. Wagner, original no. 6023.

Reithrodontomys microdon wagneri Hooper, Proc. Biol. Soc. Wash., 63: 169, 29 Dec. 1950.

Holotype.— Adult female, skin and skull, UMMZ 94185, México, Michoacán, 10 mi. N Hidalgo, Cerro San Andrés, 9400 ft.; obtained 19 Mar. 1949 by Helmuth O. Wagner, W. B. McIntosh no. 463.

Peromyscus eremicus pullus Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 265: 3, 21 June 1933.

Holotype.— Adult female, skin and skull, UMMZ 63802, Arizona, Pima Co., 10 mi. S Tucson, Black Mt.; obtained 17 Mar. 1931 by Philip M. Blossom, original no. 270.

Remarks.— Humeri, femora and scapulae also are preserved.

Peromyscus gossypinus allapaticola Schwartz, J. Mamm., 33: 383, 19 Aug. 1952.

Holotype.— Adult female, skin and skull, UMMZ 97721, Florida, Monroe Co., 12 mi. NE Rock Harbor, north end Key Largo; obtained 28 Dec. 1950 by Albert Schwartz, original no. 1608.

Peromyscus gossypinus telmaphilus Schwartz, J. Mamm., 33: 384, 19 Aug. 1952.

Holotype.— Adult male, skin and skull, UMMZ 97728, Florida, Collier Co., Royal Palm Hammock; obtained 5 April 1951 by Albert Schwartz, original no. 1830.

Remarks.— Original description indicates type specimen obtained 4 April 1951.

Peromyscus comanche Blair, Contr. Lab. Vert. Biol. Univ. Mich., 24: 7, July 1943.

Holotype.— Adult female, skin and skull, UMMZ 66901, Texas, Briscoe Co., Tule Canyon, 22 mi. E Tulia, H. Gill ranch; obtained 23 May 1932 by Milton F. Landwer, original no. 237.

Remarks.— This taxon has been considered a full species and as a subspecies of *P. nasutus*, *P. difficilis* and *P. truei* (reviews by Schmidly, Southw. Nat., 18: 269, 1973; Johnson and Packard, Occ. Pap. Mus. Tex. Tech. Univ., 24, 1974).

Peromyscus maniculatus anticostiensis Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 11, 4 Dec. 1937.

Holotype.— Adult male, skin and skull, CMNH 12128, UMMZ 121259, Quebec, Anticosti Island, Fox Bay; obtained 22 June 1937 by Philip Moulthrop, original no. AI28.

Peromyscus mayensis Carleton and Huckaby, J. Mamm., 56: 444, May 1975.

Holotype.— Young adult male, skin, skeleton and glans penis, UMMZ 117902, Guatemala, Huehuetenango, 4 km. NW Santa Eulalia, "Yaiquich," 2950 m, San Mateo; obtained 28 May 1970 by Ernesto Barriga-B, original no. 1829.

Remarks.— Original description correctly indicates that type specimen was obtained 7 km. NW Santa Eulalia.

Peromyscus nudipes hesperus Harris, Occ. Pap. Mus. Zool. Univ. Mich., 423: 1, 29 Nov. 1940. (My copy received 27 Nov. 1940.)

Holotype.— Adult female, skin and skull, UMMZ 65201, Costa Rica, Guanacaste, about 15 mi. NE Liberia, Hacienda Santa María, 3200 ft.; obtained 23 Jan. 1932 by Austin Smith.

Peromyscus pectoralis collinus Hooper, J. Mamm., 33: 372, 19 Aug. 1952.

Holotype.— Adult male, skin and skull, UMMZ 61310, México, Tamaulipas, Sierra San Carlos, San José; obtained 11 July 1930 by Lee R. Dice, original no. 511.

Peromyscus perfulvus chrysopus Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 565: 18, 31 Mar. 1955.

Holotype.— Adult female, skin and skull, UMMZ 100471, México, Jalisco, ½ mi. N Barro de Navidad, 50 ft.; obtained 23 Feb. 1953 by Emmet T. Hooper, original no. 3559.

Peromyscus thomasi cryophilus Musser, Occ. Pap. Mus. Zool. Univ. Mich., 636: 13, 17 June 1964.

Holotype.— Adult male, skin, skeleton and glans penis, UMMZ 112872, México, Oaxaca, 13 mi. NE (Tuxtepec hwy.) Llanos de las Flores, Cerro Pelón, 9200 ft.; obtained 8 Aug. 1963 by Guy G. Musser, original no. 2828.

Peromyscus truei zapotecae Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 586: 6, 30 April 1957.

Holotype.— Young adult male, skin and skull, UMMZ 103080, México, Oaxaca, 1 mi. E Tlacolula, 5700 ft.; obtained 19 Aug. 1955 by Nicholas Kim Hooper, original no. 112.

Peromyscus winkelmanni Carleton, Occ. Pap. Mus. Zool. Univ. Mich., 675: 2, 1 Mar. 1977.

Holotype.— Adult male, skin, skull and glans penis, UMMZ 110585, México, Michoacán, 6.3 mi. (by road) WSW Dos Aguas, 8000 ft.; obtained 25 July 1960 by John R. Winkelmann, original no. 779.

Ochrotomys nuttalli aureolus (Audubon and Bachman), Packard, Misc. Publ. Univ. Kans. Mus. Nat. Hist., 51: 395, 11 July 1969.

Remarks.— See *Mus aureolus*.

Baiomys musculus infernalis Hooper, J. Mamm., 33: 96, 18 Feb. 1952.

Holotype.— Adult male, skin and skull, UMMZ 91497, México, Oaxaca, Teotitlán, 950 m; obtained 24 Feb. 1947 by Helmuth O. Wagner, original no. 2702.

Baiomys taylori ater Blossom and Burt, Occ. Pap. Mus. Zool. Univ. Mich., 465: 2, 8 Oct. 1942.

Holotype.— Adult male, skin and skull, UMMZ 85425, Arizona, Cochise Co., 7 mi. W Hereford; obtained 25 Mar. 1941 by Philip M. Blossom, original no. 2195.

Scotinomys harrisi Goodwin, Amer. Mus. Nat. Hist. Novitat., 1279: 3, 21 Feb. 1945.

Holotype.— Young adult male, skin and skull, UMMZ 62886, Costa Rica, Cartago, Cerro Las Vueltas, 8000 ft.; obtained 28 April 1931 by Austin Smith.

Remarks.— A synonym of *Scotinomys xerampelinus* (Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 665: 24, 1972).

Neotoma albigula melas Dice, Occ. Pap. Mus. Zool. Univ. Mich., 203: 3, 19 June 1929.

Holotype.— Adult male, skin only, UMMZ 59337, New Mexico, Lincoln Co., lava beds near Carrizozo; obtained 27 July 1928 by Glenn W. Bradt, original no. 1.

Remarks.— The skull for the holotype skin is one of the six skulls, all without field numbers, accompanying the six skins obtained by Bradt in July 1928 on the lava beds.

Neotoma albigula robusta Blair, Occ. Pap. Mus. Zool. Univ. Mich., 403: 3, 16 June 1939.

Holotype.— Adult male, skin and skull, UMMZ 79238, Texas, Jeff Davis Co., 16 mi. N Fort Davis, Limpia Canyon, 4300 ft.; obtained 1 May 1937 by W. Frank Blair, original no. 936.

Neotoma auripila Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 273: 1, 31 Oct. 1933.

Holotype.— Young adult male, skin and skull, UMMZ 66746, Arizona, Pima Co., Agua Dulce Mts., 9 mi. E Papago Well; obtained 3 Oct. 1932 by Philip M. Blossom, original no. 427.

Remarks.— *N[eotoma] l[epida] auripila* (Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 315: 1, 1935).

Neotoma floridana osagensis Blair, Occ. Pap. Mus. Zool. Univ. Mich., 403: 5, 16 June 1939.

Holotype.— Adult male, skin and skeleton, UMMZ 76070, Oklahoma, Osage Co., Okesa; obtained 2 Aug. 1936 by W. Frank Blair, original no. 493.

Neotoma lepida bensoni Blossom, Occ. Pap. Mus. Zool. Univ. Mich., 315: 1, 29 May 1935.

Holotype.— Adult male, skin and skull, UMMZ 67373, México, Sonora, Sierra Pinacate, Papago Tanks; obtained 26 April 1933 by Philip M. Blossom, original no. 586.

Neotoma mexicana atrata Burt, Occ. Pap. Mus. Zool. Univ. Mich., 400: 1, 1 Mar. 1939.

Holotype.— Young adult female, skin and skeleton, New Mexico, Lincoln Co., 4 mi. W Carrizozo; obtained 21 Oct. 1938 by W. Frank Blair, original no. 1164.

Microtus mexicanus neveriae Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 565: 23, 31 Mar. 1955.

Holotype.— Adult male, skin and skull, UMMZ 100740, México, Jalisco, 20 mi. SE Autlan, 8200 ft.; obtained 26 Feb. 1953 by Emmet T. Hooper, original no. 3568.

Microtus ochrogaster ohioensis Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 155, 11 Sept. 1942.

Holotype.— Young adult female, skin and skull, CMNH 10430, UMMZ 121251, Ohio, Lawrence Co., 2 mi. N Chesapeake, Symmes Creek; obtained 26 Aug. 1936 by Scott R. Inkley.

Neofiber alleni exoristus Schwartz, Occ. Pap. Mus. Zool. Univ. Mich., 547: 12, 29 July 1953.

Holotype.— Adult male, skin and skull, UMMZ 99028, Georgia, Ware Co., 12.1 mi. SE Waycross; obtained 6 Feb. 1952 by Thomas M. Uzzell, Jr., Albert Schwartz Collection no. 2205.

Neofiber alleni struix Schwartz, Chicago Acad. Sci. Nat. Hist. Misc., 101: 1, 15 Feb. 1952.

Holotype.— Adult male, skin and skull, UMMZ 97732, Florida, Dade Co., 21 mi. W Miami; obtained 3 Feb. 1951 by Raymond P. Porter, Albert Schwartz Collection no. 1676.

Synaptomys cooperi saturatus Bole and Moulthrop, Sci. Publ. Clev. Mus. Nat. Hist., 5: 149, 11 Sept. 1942.

Holotype.— Adult male, skin and skull, CMNH 13450, UMMZ 121252, Illinois, McLean Co., Bloomington; obtained 2 Sept. 1938 by Winston C. Jessemann; original no. 250.

Remarks.— A synonym of *Synaptomys cooperi cooperi* (Wetzel, J. Mamm., 36: 8, 1955).

Mus aureolus Audubon and Bachman, Packard, Misc. Publ. Univ. Kans. Mus. Nat. Hist., 51: 395, 11 July 1969.

Neotype.— Old female, skin and skull, CMNH 3800, UMMZ 104075; North Carolina, Madison Co., Marshall; obtained 25 Feb. 1914, Morton L. Church Coll. no. 800.

Remarks.— Auditory bullae are separate from skull. Currently *Ochrotomys nuttalli aureolus* (Packard, *loc. cit.*).

Mus musculus percnnotus Moulthrop, *Sci. Publ. Clev. Mus. Nat. Hist.*, 5: 79, 1 June 1942.

Holotype.— Adult male, skin and skull, CMNH 16801, UMMZ 121260, Cuba, Cumanayagua, Mina Carlota, Santa Clara, 380 m; obtained 5 April 1941 by Philip N. Moulthrop, original no. CC-46.

Remarks.— Original description indicates Mina Carlota is in Trinidad Mts.

Zapus hudsonius brevipes Bole and Moulthrop, *Sci. Publ. Clev. Mus. Nat. Hist.*, 5: 168, 11 Sept. 1942.

Holotype.— Young adult female, skin and skull, CMNH 13797, UMMZ 121253, Ohio, Seneca Co., Bettsville; obtained 5 Nov. 1938 by Winston C. Jesseman, original no. 467.

Remarks.— A synonym of *Zapus hudsonius americanus* (Krutzsch, *Publ. Mus. Nat. Hist. Univ. Kans.*, 7: 437, 1954).

Zapus hudsonius intermedius Krutzsch, *Univ. Kans. Publ. Mus. Nat. Hist.*, 7: 447, 21 April 1954.

Holotype.— Adult male, skin and skull, UMMZ 83400, Iowa, Winneshiek Co., Ridge-way; obtained 22 July 1939 by Sherman A. Hoslett, original no. 617.

Remarks.— Original description indicates Hoslett's field number is 517.

Zapus hudsonius rafinesquei Bole and Moulthrop, *Sci. Publ. Clev. Mus. Nat. Hist.*, 5: 169, 11 Sept. 1942.

Holotype.— Young adult male, skin and skull, CMNH 13260, UMMZ 121254, Ohio, Belmont Co., Powhatan Point, Cat Run; obtained 27 Aug. 1938 by Scott R. Inkley, original no. R193.

Remarks.— A synonym of *Zapus hudsonius americanus* (Krutzsch, *Publ. Mus. Nat. Hist. Univ. Kans.*, 7: 437, 1954).

Zapus princeps utahensis Hall, *Occ. Pap. Mus. Zool. Univ. Mich.*, 296: 3, 2 Nov. 1934.

Holotype.— Adult female, skin and skull, UMMZ 59153, Utah, Daggett Co., 19 mi. S Manila, Beaver Creek; obtained 16 July 1928 by Arthur and Ruth D. Svihla, original no. 176.

Dasyprocta punctata pallidiventris Bole, *Sci. Publ. Clev. Mus. Nat. Hist.*, 7: 182, 31 Aug. 1937.

Holotype.— Adult female, skin and skull, CMNH 1226, UMMZ 121264, Panamá, Veraguas, Marioto; obtained 21 Mar. 1932 by Benjamin P. Bole, original no. BA105.

Remarks.— Original description reads: Marioto-Suay Lands, 1½ mi. S mouth Angulo Riv., Paracoté (plantation headquarters of Boston-Panamá Cocomanut Co.).

Proechimys quadruplicatus Hershkovitz, *Proc. U. S. Natl. Mus.*, 97: 138, 1948.

Holotype.— Adult female, skin and skull, UMMZ 80080, Ecuador, Napo-Pastaza, Río Napo, Llunchi, 250 m; obtained 21 Oct. 1936 by Philip Hershkovitz, original no. M635.

Remarks.— Original description indicates Llunchi, an island in the Río Napo, is 18 km below mouth of the Río Coca.

Proechimys semispinosus goldmani Bole, Sci. Publ. Clev. Mus. Nat. Hist., 7: 178, 31 Aug. 1937.

Holotype.— Adult male, skin and skull, CMNH 1191, UMMZ 121264, Panamá, Veraguas, Mariato, Altos Cacao, 1400 ft.; obtained 4 Mar. 1932 by B. Patterson Bole Jr.

Remarks.— Original description indicates: collected at 1500 ft. elevation, 3 March.

CARNIVORA

Urocyon cinereoargenteus madrensis Burt and Hooper, Occ. Pap. Mus. Zool. Univ. Mich., 430: 4, 27 May 1941. (My copy received 5 June-1941.)

Holotype.— Adult male, tanned skin, skull and part skeleton, UMMZ 83176, México, Chihuahua, Río Mayo, Carimechi; obtained 21 Dec. 1934 by Howard S. Gentry, original no. 259.

Remarks.— Skeleton consists of: two femurs; one tibia, fibula, part humerus, pelvic girdle, and scapula; some vertebrae and ribs.

Bassariscus astutus bolei Goldman, Proc. Biol. Soc. Wash., 58: 105, 18 July 1945.

Holotype.— Adult male, skin and skull, CMNH 17234, UMMZ 121265, México, Guerrero, Chilpancingo; obtained 16 Feb. 1940 by W. W. Brown, original no. 551.

Remarks.— May be inseparable from *Bassariscus astutus astutus* (Davis and Lukens, J. Mamm., 39: 354, 1958).

Bassaricyon lasius Harris, Occ. Pap. Mus. Zool. Univ. Mich., 248: 3, 4 Aug. 1932.

Holotype.— Adult male, skin and skull, UMMZ 64104, Costa Rica, Cartago, Estrella de Cartago, 4500 ft.; obtained 29 June 1931 by Austin Smith.

Remarks.— Original description erroneously indicates number of holotype is 64103.

Spilogale angustifrons yucatanensis Burt, Occ. Pap. Mus. Zool. Univ. Mich., 384: 1, 27 Aug. 1938.

Holotype.— Adult female, study skin and skull, UMMZ 75780, México, Yucatán, Chichen Itzá; obtained 2 Mar. 1936 by Milton B. Trautman.

Remarks.— *Spilogale putorius yucatanensis* (Van Gelder, Bull. Amer. Mus. Nat. Hist., 117: 319, 1959).

ARTIODACTYLA

Anoa mindorensis Steere, Nature, 98: 363, 16 Aug. 1888.

Holotype.— Adult male, mounted animal and separate skeleton, UMMZ 84106, Philippine Islands, Mindoro, Catuiran River, 2 days travel upriver from Calapan; obtained in June (prior to 18th, 1888) by Mateo Francisco for Joseph B. Steere.

Remarks.— Hooper (Occ. Pap. Mus. Zool. Univ. Mich., 443: 1-4, 1941) discussed the specimens and the taxonomic status of *A. mindorensis* Steere, a synonym of *Bubalis mindorensis* Heude.

GEOGRAPHIC SOURCES OF THE SPECIMENS

The type specimens are listed below by major political divisions where they were obtained. Arrangements are alphabetical.

BELIZE

Heterogeomys hispidus cayoensis Burt
Oryzomys couesi pinicola Murie

CANADA

Labrador

Sorex palustris labradorensis Burt

Quebec

Peromyscus maniculatus anticostiensis Moulthrop

CHINA

Callosciurus erythraeus woodi Harris

COSTA RICA

Cartago

Bassaricyon lasius Harris
Macrogeomys cavator nigrescens Goodwin
Scotinomys harrisi Goodwin

Guanacaste

Peromyscus nudipes hesperus Harris
Reithrodontomys harrisi Goodwin
Sciurus adolphei atrirufus Harris
Sciurus miravallensis Harris
Sylvilagus floridanus costaricensis Harris

Puntarenas

Sciurus variegatoides austini Harris

San José

Heteromys oresterus Harris
Oryzomys aphrastus Harris
Sylvilagus dicei Harris

CUBA

Mus musculus percnnotus Moulthrop

ECUADOR

Carchi

- Microryzomys altissimus hylaeus* Hershkovitz
Sciurus candelensis carchensis Harris and Hershkovitz
Sylvilagus andinus carchensis Hershkovitz

Imbabura

- Akodon mollis fulvescens* Hershkovitz
Microryzomys altissimus chotanus Hershkovitz
Oryzomys alfaroi intagensis Hershkovitz
Oryzomys spodiurus Hershkovitz
Reithrodontomys mexicanus eremicus Hershkovitz
Sciurus gerrardi imbaburae Harris and Hershkovitz
Sylvilagus andinus chotanus Hershkovitz

Napo-Pastaza

- Neacomys spinosus carceleni* Hershkovitz
Nectomys squamipes napensis Hershkovitz
Proechimys quadruplicatus Hershkovitz

GUATEMALA

Huehuetenango

- Peromyscus mayensis* Carleton and Huckaby

Petén

- Alouatta palliata pigra* Lawrence
Chilonycteris torrei continentis Sanborn

MÉXICO

Baja California

- Thomomys bottae litoris* Burt

Chihuahua

- Urocyon cinereoargenteus madrensis* Burt and Hooper

Chiapas

- Oryzomys fulvescens pacificus* Hooper
Reithrodontomys mexicanus scansor Hooper
Rheomys thomasi chiapensis Hooper

Distrito Federal

- Cratogeomys tylosinus arvalis* Hooper
Liomys irroratus pullus Hooper

Durango

- Dipodomys ordii idoneus* Setzer

Guerrero

Bassariscus astutus bolei Goldman

Jalisco

Microtus mexicanus neveriae Hooper

Pappogeomys bulleri burti Goldman

Peromyscus perfulvus chrysopus Hooper

Michoacán

Peromyscus winkelmanni Carleton

Reithrodontomys mexicanus riparius Hooper

Reithrodontomys microdon wagneri Hooper

Oaxaca

Baiomys musculus infernatis Hooper

Dipodomys phillipsii oaxacae Hooper

Peromyscus thomasi cryophilus Musser

Peromyscus truei zapotecae Hooper

Reithrodontomys fulvescens infernatis Hooper

Sonora

Balantiopteryx plicata pallida Burt

Neotoma lepida bensoni Blossom

Perognathus intermedius pinacate Blossom

Thomomys bottae camoae Burt

Tamaulipas

Peromyscus pectoralis collinus Hooper

Yucatán

Spilogale angustifrons yucatanensis Burt

PANAMÁ

Aotus bipunctatus Bole

Dasyprocta punctata pallidiventris Bole

Oecomys endersi Goldman

Oryzomys azuerensis Bole

Proechimys semispinosus goldmani Bole

PHILIPPINE ISLANDS

Anoa mindorensis Steere

Rhinolophus anderseni aequalis G. M. Allen

UNITED STATES

Arizona

Baiomys taylori ater Blossom and Burt

Neotoma auripila Blossom

Perognathus intermedius nigrimontis Blossom
Peromyscus eremicus pullus Blossom

California

Lepus californicus vigilax Dice
Perognathus longimembris salinensis Bole
Sylvilagus bachmani virgulti Dice

Colorado

Geomys lutescens jugossicularis Hooper

Florida

Neofiber alleni struix Schwartz
Peromyscus gossypinus allapaticola Schwartz
Peromyscus gossypinus telmaphilus Schwartz
Scalopus aquaticus porteri Schwartz

Georgia

Neofiber alleni exoristus Schwartz

Idaho

Eutamias amoenus cratericus Blossom
Lepus americanus pineus Dalquest

Illinois

Synaptomys cooperi saturatus Bole and Moulthrop

Iowa

Zapus hudsonius intermedius Krutzsch

Maryland

Sciurus niger cinereus Linne

Michigan

Tamias striatus peninsulae Hooper
Tamiasciurus regalis Howell

Montana

Sorex vagrans longiquus Findley

Nebraska

Geomys lutescens hylaeus Blossom

New Mexico

Neotoma albigula melas Dice
Neotoma mexicana atrata Burt
Perognathus gypsi Dice
Perognathus intermedius ater Dice

Thomomys bottae collis Hooper
Thomomys bottae paguatae Hooper
Thomomys bottae planorum Hooper
Thomomys fulvus morulus Hooper
Thomomys talpoides taylori Hooper

North Carolina

Blarina brevicauda churchi Bole and Moulthrop
Mus aureolus Audubon and Bachman

Ohio

Blarina brevicauda kirtlandi Bole and Moulthrop
Cryptotis parva elasson Bole and Moulthrop
Microtus ochrogaster ohioensis Bole and Moulthrop
Sorex cinereus ohioensis Bole and Moulthrop
Tamias striatus ohioensis Bole and Moulthrop
Tamias striatus rufescens Bole and Moulthrop
Zapus hudsonius brevipes Bole and Moulthrop
Zapus hudsonius rafinesquei Bole and Moulthrop

Oklahoma

Neotoma floridana osagensis Blair

Texas

Neotoma albigula robusta Blair
Peromyscus comanche Blair
Perognathus collis Blair
Perognathus collis popei Blair
Thomomys bottae limpieae Blair
Sylvilagus floridanus llanensis Blair

Utah

Dipodomys merriami frenatus Bole
Zapus princeps utahensis Hall

Vermont

Blarina brevicauda hooperi Bole and Moulthrop

Washington

Perognathus parvus yakimensis Broadbooks

West Virginia

Sorex palustris punctulatus Hooper

