FIELD MUSEUM OF NATURAL HISTORY
FOUNDED BY MARSHALL FIELD, 1893

PUBLICATION 265

ZOOLOGICAL SERIES VOL. XVII, No. 4

THE LAND MAMMALS OF URUGUAY

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CHICAGO, U. S. A.
OCTOBER 24, 1929

PRINTED IN THE UNITED STATES OF AMERICA
BY FIELD MUSEUM PRESS

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The object of this paper is to bring together in workable reference form all the known records of mammals from Uruguay and to report on the collection made by the Captain Marshall Field Expedition during its four month's stay in Uruguay in 1926 and 1927. No complete zoological survey has ever been made in Uruguay. The Captain Marshall Field Expedition intended to make one but was able to cover only the southern half of the country. All work done previously has been mainly local.

The first record of any mammal from Uruguay dates back to the capture of a bat (*Lasiurus borealis bonariensis*) by one of the officers of the "Coquille" in November, 1822. The first mammal collector to work there was H. Sello who collected near Maldonado in December, 1826 and January, 1827. His work resulted in the discovery of three new species which were described by Lichtenstein. Five years later, during the voyage of the "Beagle", Charles Darwin spent some time about Maldonado and Montevideo, and his collecting resulted in the discovery of a number of new species of mammals. Burmeister visited Uruguay in 1857 and 1858, mainly along the Uruguay River. He records the occurrence of certain species of mammals but does not mention the capture of many. His published papers relate mainly to the mammals of the La Plata region and Argentina.

In 1890, Oldfield Thomas collected at Colon, near Montevideo, but, aside from scattered mention of specimens, he published nothing on his collections. Senor E. Budin, collecting for Thomas in 1924, stopped near Mercedes, but nothing has been published on his Uruguayan collection, which was probably not very large. For nine months, during 1892 and 1893, O. V. Aplin collected birds in the departments of Soriano and Rio Negro for Dr. Sclater. He took but few mammals although he records twenty-five species. Senor Juan Tremoleras of Montevideo has collected a few specimens near his city but has done no extensive work.

The Captain Marshall Field Brazilian Expedition spent four months, from October, 1926 to February, 1927, in the southern part of Uruguay. The expedition covered about two thousand miles by automobile truck, passing through eight departments and collecting at twelve places. The total number of mammals collected was 345, embracing thirty species. Besides these, 462 birds, 787 reptiles and amphibians, and 4,000 fish were collected. Although the northern half of the country is less thickly inhabited and probably more interesting zoologically, the southern half was visited first to secure topotypical material. It had been planned to cover the whole of Uruguay, but circumstances prevented. It is hoped that the work may be continued later in the northern part of the country, which has as yet been untouched by mammal collectors.

I wish to take this opportunity to thank my various hosts for their kind hospitality and to thank the Uruguayan national officials and the many local police chiefs for their interest and help. Especial thanks are due Mr. Enrique Estrazulas for his help and Mr. H. J. Doyle, of Armour and Company, who provided letters of introduction to many of his clients.

A brief description of localities follows:

Fifteen kilometers north of San Carlos, Department Maldonado. Oct. 19-23, 1926. This region was open, rolling pasture land, dotted here and there with Ombu trees or patches of thorny brush, and with small swamps in the low places between the hills. The small streams were narrowly fringed with brushy woods. Work was carried on at the Estancia San Carlos, owned by Senor Nicolas Alverez. Only a brief stay was made here as house rats were the most numerous mammals.

Maldonado, Department Maldonado. Oct. 23-Nov. 2. Trapping was done along the beach, just outside the town of Maldonado. Large sand dunes were the common formation here but were cut by small streams and patches of swamp which drained the country behind them. The dunes have been planted with maritime pines by Dr. Enrique Burnett, who by this means saved the town from being buried in sand. Dr. Burnett allowed the party the use of his beach cottage during their stay.

Arroyo Garzon, Department Rocha. Nov. 2-5. This part of the country consisted of a range of high, rocky hills given over to sheep raising. The streams were bordered by groves of small trees and patches of swamp occurred here and there. The pasture was eaten

down very close and the ground under the trees was bare. Rodents were very scarce, but one being taken.

Fifteen miles north of San Vicente de Castillos, Department Rocha. Nov. 8-17. Like the Arroyo Garzon, this locality was rocky, hilly, sheep country, but there was a little more level land with large forests of palm trees on the lower ground. Ten miles to the north the country began to open out into more level pampas. While some of the larger mammals were taken here, 8,000 sheep leave little cover for small rodents.

Passo de las Avarias, Rio Cebollati, Department Minas. Nov. 20-24. The Cebollati at this point was bordered by a narrow strip of fairly heavy woods about one hundred yards wide. Beyond the woods were wheat fields and sheep pasture. The water rat (*Holochilus*) was first met with here, but mice were scarce.

Eight miles east of Treinta y Tres, Department Treinta y Tres. Nov. 25-Dec. 4. This locality, the Estancia Jeffries, was made up of gently rolling hills given over to sheep and cattle raising. It was cut by numerous streams and swamps, but woods, aside from eucalyptus groves, were practically absent. As on other sheep ranches, mice were scarce.

Quebrada de los Cuervos, 45 kilometers north of Treinta y Tres, Department Treinta y Tres. Dec. 4-12. The Quebrada de los Cuervos lay in a high, hilly, and rocky country with fair pasture and many small swamps and streams. The Quebrada itself was a narrow canyon between the hills, about three hundred feet deep, and a mile or a mile and a half long. The sides, which were covered by small trees, brush, and palms, were very steep and there were only two places where a descent could be made safely. This class of terrain and its fauna gave an idea of what might be expected in the more northern and hilly departments.

Arroyo Polanco, Department Minas. Dec. 13-19. There were many wheat fields here among the sheep pastures where mice and cavies were plentiful in the grain shocks. The grain fields are the only places in Uruguay where any satisfactory trapping can be done. The Arroyo itself was a small stream bordered by willows and other trees. This was as far inland as Darwin travelled during his work in Uruguay.

Minas, Department Minas. Dec. 19-23. A short stop was made at Minas to visit the Gruta de Arrequita or Gruta Colon, which lay

in a large, rocky mesa, a few miles outside the town. The Gruta was a large cave in which there were many bats.

Arazati, Department San Jose. Jan. 7-12, 1927. Arazati, which lay south of the town of Santa Eclida, was but a waste of low, brush-covered, sand dunes on the edge of the La Plata River. These were cut by swamps and streams which rose when the tide came in. Mice were fairly common, but house rats more so.

Ten kilometers south of La Lata, Department Colonia. Jan. 14-18. This locality was in another region of rolling wheat fields and sheep pasture.

Fifteen miles southwest of Dolores, Department Soriano. Jan. 18-31. Two camps were made here, one on the edge of a wheat field and the other in the heavy, brushy woods on the banks of the Uruguay River. This locality is the Estancia Concordia, a large tract of land owned by an English company.

Passo Correntino, Rio Negro, Department Rio Negro. Feb. 4-8. This part of the Rio Negro, which had a thin strip of woods along its banks, ran through grazing land and wheat fields.

Didelphis paraguayensis Oken.

Didelphis paraguayensis OKEN, Lehrbuch d. Naturgesch., 3, Zool., pp. 1147-1148, 1816.

This opossum was found to be fairly common for a medium-sized animal. Four were shot in one night while we were hunting with a head lamp. A large female contained twelve young, and a younger female four very small young, in the pouches.

Specimens taken.—Total 7: Maldonado 1; Quebrada de los Cuervos, Dept. Treinta y Tres 1 (skull only); 10 miles south of La Lata, Dept. Colonia 4; 15 miles southwest of Dolores, Dept. Soriano 1.

Other records.—*Didelphys azarae* Waterhouse, 1839, p. 93; Burmeister, 1861, p. 412; Aplin, 1894, p. 314; Figueira, 1894, p. 8.

Monodelphis dimidiata (Wagner).

Didelphys dimidiata WAGNER, Abhandl. math-phys. Cl. K. Bayer. Akad. Wiss., München, V., lste Abth., p. 151, footnote, 1847.

One specimen was seen in the Museo Nacional de Montevideo, taken in Montevideo. Darwin says that his example was caught by some boys digging in a garden.

Other records.—*Didelphys brachyura* Waterhouse, 1839, p. 97, pl. 32; *Didelphys brevicaudata* Figueira, 1894, p. 1.

Lutreolina crassicaudata paranalis Thomas.

Lutreolina crassicaudata paranalis THOMAS, Ann. and Mag. Nat. Hist., (9), **11**, p. 584, 1923. Type from Las Rosas, Prov. Sante Fe, Argentina.

The only one seen was found dead in the road near Colonia Suiza, in January, 1927. It was too badly crushed to save but according to Thomas's geographic divisions, should be this subspecies.

Other records.—Didelphis crassicaudata Aplin, 1894, p. 315; Figueira, 1894, p. 2 (either this or the next subspecies).

Lutreolina crassicaudata lutrilla Thomas.

Lutreolina crassicaudata lutrilla THOMAS, Ann. and Mag. Nat. Hist., (9), **11**, p. 585, 1923.

Two young ones were caught in rat traps baited with meat, placed on a bank along a small stream. After the first one was taken, steel traps were set but no adults were caught.

Specimens taken.—Total 2: Arroyo Polanco, Dept. Minas.

Other records.—Didelphis crassicaudata Waterhouse, 1839, p. 94, pl. 30, pl. 34, (skull) fig. 25.

Sturnira lilium (Geoffroy).

Phyllostoma lilium GEOFFROY, Ann. Mus. d'Hist. Nat. Paris, **15**, p. 181, 1810.

The only mention of this bat from Uruguay is by Figueira who says, "Is common in all the Republic." He had no specimens in the National Museum, however.

Myotis chiloensis alter Miller and Allen.

Myotis chiloensis alter MILLER AND ALLEN, U. S. Nat. Mus. Bull. No. 144, p. 194, 1928.

Many specimens of this bat were taken in the Gruta de Arrequita, near the town of Minas. It was said that disturbances, caused by the removal of guano and the many visitors that came to the cave had driven most of the bats away, but there were still some hundreds left there. Figueira states that *Plecotus velatus* is very common in the cave, but whether it has been driven out and its place taken by *Myotis* or whether it is a misidentification, is uncertain.

Specimens taken.—Total 43: Gruta de Arrequita, Dept. Minas.

Myotis chiloensis dinellii Thomas.

Myotis dinellii THOMAS, Ann. and Mag. Nat. Hist., (7), **10**, p. 493, 1902.

Miller and Allen (1928, p. 192.) mention one specimen from Dept. Soriano and four others with no exact locality.

Myotis ruber (E. Geoffroy).

Vesp (ertilio) ruber E. GEOFFROY, Ann. Mus. d'Hist. Nat., Paris, 8, p. 204, 1806.

Myotis albescens (E. Geoffroy).

Vesp (ertilio) albescens E. GEOFFROY, Ann. Mus. d'Hist. Nat. Paris, 8, p. 204, 1806.

While there are no specimens of either of these bats from Uruguay, both have been taken in Rio Grande do Sul, Brazil, and *M. albescens* in Buenos Aires, Argentina, on which grounds they are included in this list. In the course of future collecting they will undoubtedly be found to occur in Uruguay.

Myotis pilosus (Peters).

Vespertilio (Leuconoë) pilosus PETERS, Monatsber. K. Akad. Wiss. Berlin, p. 403, 1869.

Only the type of this species is known and there appears to be some doubt as to its having come from Montevideo. (See Miller and Allen, 1928, p. 209).

Histiotus velatus (Is. Geoffroy).

Plecotus velatus Is. GEOFFROY, Ann. Sci. Nat., p. 446, 1824.

Figueira reported this bat as common in the Gruta de Arrequita. (See *Myotis c. alter*).

Histiotus montanus (Philippi).

Vespertilio montanus PHILIPPI, Wiegm. Archiv., p. 289, 1861.

Aplin's specimen is apparently the only record for this species in Uruguay. (See Thomas, 1916, p. 274).

Lasiurus borealis bonariensis Less. and Garnot.

Vespertilio bonariensis LESS. AND GARNOT, Voyage autor du Monde, 1, p. 137; Atlas, pl. ii, fig. 1, 1827.

Figueira's record appears to be the only recent one for Uruguay (1894, p. 26). Thomas records it from Paraguay (1901, p. 435). I secured two specimens from Senor Juan Heider of Misiones, Argentina, who took them near his home at Monte Carlo on the Parana River.

Tadarida brasiliensis (Is. Geoffroy).

Nyctinomus brasiliensis Is. GEOFFROY, Ann. des Sci. Nat., p. 343, 1824.

One of the commonest bats in Uruguay. Large colonies were found in the attic of the police station in Maldonado and in an old building in Rocha.

Figueira (1894, p. 28) lists *Nyctinomus macrotis nevadensis* Allen, but he had no specimens and gives no authority for the record. He says, "This species is found in all the country, especially in the departments of the north." If there is any basis for this record, it might refer to *Tadarida gracilis*.

Specimens taken.—Total 32: Maldonado 28; Rocha, Dept. Rocha 2; Arroyo Polanco, Dept. Minas 2.

Other Records.—*Dysopes nasutus* Waterhouse, 1839, p. 6; *Dysopes naso* Burmeister, 1861, p. 392; *Nyctinomus brasiliensis* Figueira, 1894, p. 27.

Molossus currentium Thomas.

Molossus obscurus currentium THOMAS, Ann. and Mag. Nat. Hist., (7), 8, p. 438, 1901.—Type from Goya, Corrientes, Argentina.

One specimen was taken eight miles east of the town of Treinta y Tres. This is the first record for Uruguay.

Eumops bonariensis (Peters).

Promops bonariensis PETERS, Monatsb. Akad. Wiss. Berlin, p. 232, 1874. Type from Buenos Aires, Argentina.

The specimen secured was caught with the preceding in one of the buildings on a ranch in Treinta y Tres. Curiously enough, this seems to be the first record for this species in Uruguay, although it has been known from Buenos Aires for over fifty years.

Procyon cancrivorus nigripes Mivart.

Procyon cancrivorus nigripes MIVART, Proc. Zool. Soc. London, p. 347, 1885. Type from southeastern Brazil.

This animal was said to be rather scarce but it may be more common in the northern departments. Skins were seen at Rocha and the Quebrada de los Cuervos. The specimen secured was killed by a dog early in the morning.

Specimens taken.—Passo de las Avarias, Rio Cebollati, Dept. Minas 1.

Other records.—*Procyon cancrivorus* Aplin, 1894, p. 302; Figueira, 1894, p. 22.

Nasua sp.

Said by Figueira to be found in the northern departments. A man at the Quebrada de los Cuervos described a ring-tailed animal to me that had been killed there, which may have been a Coati.

Record.—*Nasua narica* Figueira, 1894, p. 21.

Lutra platensis Waterhouse.

Lutra platensis WATERHOUSE, Zool. Voyage Beagle, pt. 2, Mammalia, p. 21, pl. 35, fig. 4 (skull), 1838.

No otters were seen or reported during the work in Uruguay.

Record.—*Lutra paranensis* Figueira, 1894, p. 23.

Pteronura brasiliensis (Zimmerman).

Lutra brasiliensis ZIMMERMAN, Spec. Zool. Geog., p. 485, 1777.

Record.— *Lutra brasiliensis* Aplin, 1894, p. 301.

Tayra barbara subsp.

Burmeister (1861, p. 409) gives the only record for this animal in Uruguay.

Grisonella huronax Thomas.

Grisonella huronax THOMAS, Ann. and Mag. Nat. Hist., (9), 8, p. 213, 1921. Type from Mar del Plata, Prov. Buenos Aires, Argentina.

Two specimens were purchased in the department of Soriano. One was killed near Rocha a few days before I reached there but the body could not be found.

Specimens taken.—Total 2: 15 miles southwest of Dolores, Dept. Soriano (1 skin only and 1 skull only).

Other records.—*Galictis vittata* Waterhouse, 1838, p. 21; Aplin, 1894, p. 306; Figueira, 1894, p. 23.

Conepatus feuilleii (Eydoux and Souleyet).

Mephitis feuilleii EYDOUX AND SOULEYET, Zool. Voyage of the Bonite, 1, pp. 10-14, pl. 3, figs. 1-3, 1841. Type from near Montevideo.

The skunk is one of the commonest of the larger mammals in Uruguay.

Specimens taken.—Total 23: San Carlos, Dept. Maldonado 1; 15 miles north of San Vicente de Castillos, Dept. Rocha 3; Quebrada de los Cuervos, Dept. Treinta y Tres 7; 10 kilometers south of La

Lata, Dept. Colonia 5; 15 miles southwest of Dolores, Dept. Soriano 6; Passo Correntino, Dept. Rio Negro 1.

Other records.—Mephitis suffocans Figueira, 1894, p. 22; *Conepatus mapurito monzoni* Aplin, 1894, p. 302.

Pseudalopex culpaeola Thomas.

Pseudalopex culpaeola THOMAS, Ann. and Mag. Nat. Hist., (8), **13**, p. 359, 1914. Type from Santa Elena, Dept. Soriano, Uruguay.

Foxes were not very common, no doubt on account of the packs of dogs kept at the ranches. Two specimens taken at Passo Correntino, Rio Negro, are practically topotypes and as only the measurements of the type have been published those for these two skulls are listed below. Two skulls picked up at the Quebrada de los Cuervos have been referred to this species though they are a little smaller.

Measurements.—Condylo-basilar length 141.8, ——; basilar length 131.1, ——; zygomatic breadth 73.8, 77.3; interorbital constriction 24.6, 25.8; braincase 47.3, ——; palatal length 74.2, 73.9; nasals 58.7, 56.5; fourth upper premolar 13.7, 12.3; third and fourth upper molars 17, 15.5.

Specimens taken.—Total 4: Passo Correntino, Dept. Rio Negro 2; Quebrada de los Cuervos, Dept. Treinta y Tres 2 (skulls only).

Other records.—Canis azarae Burmeister, 1861, p. 405; Aplin, 1894, p. 298; Figueira, 1894, p. 23.

Lycalopex entrerianus (Burmeister).

Canis entrerianus BURMEISTER, Reise durch die La Plata Staaten, **2**, p. 400, 1861.

Four skins, said to have been taken in the department of Rocha, and an odd skull from the Quebrada de los Cuervos, have been referred to this species until more material for comparison can be obtained.

Other records.—Canis sp. Aplin, 1894, p. 299 (see Thomas, 1914, p. 359, footnote).

Chrysocyon brachyurus (Illiger).

Agouara-gouazou AZARA, Quad. Paraguay, **1**, p. 307, 1801.

Canis brachyurus ILLIGER, Abhandl. K. Akad. Wiss. Berlin (1811), pp. 109, 121, 1815.

The only mention of this animal is by Figueira (1894, p. 24) who says that it may be found in the northern and eastern departments.

Felis geoffroyi D'Orbigny and Gervais.

Felis geoffroyi D'ORBIGNY AND GERVAIS, Bull. Soc. Philom, Paris, pp. 40-41 (seance 6 Mai), 1844; atlas, Voy. Amer. Merid., 9, pl. 13, fig. 1, pl. 14, 1844.

Apparently this is the only species of cat which still exists in any numbers in Uruguay. A skin and skull were purchased in the department of Soriano and an odd skull at the Quebrada de los Cuervos.

Felis pajero and *F. concolor* are listed by Aplin and Figueira; both are said to be scarce but might be found in the north. Figueira also lists *paraguensis, eyra,* and *yaguarondi,* with the same remarks.

Akodon arenicola (Waterhouse).

Mus arenicola WATERHOUSE, Proc. Zool. Soc. London, p. 18, Feb. 14, 1837; Voy. Beagle, Zool., p. 48, pl. 13, pl. 34, figs. 7a, b, c, d. Type from Maldonado.

This is the most common mouse in Uruguay. It was taken in fields, woods, and swamps.

Specimens taken.—Total 54: Maldonado 6; 15 miles north of San Vicente de Castillos, Dept. Rocha 5; Passo de las Avarias, Rio Cebollati, Dept. Minas 1; 8 miles east of Treinta y Tres 1; Polanco, Dept. Minas 11: Arazati, Dept. San Jose 1; 10 kilometers south of La Lata, Dept. Colonia 5; 15 kilometers southwest of Dolores, Dept. Soriano 23; Mercedes, Dept. Rio Negro 1 (received in exchange from British Museum).

Other records.—*Hesperomys arenicola,* Figueira, 1894, p. 18; *Akodon arenicola,* Thomas, Ann. and Mag. Nat. Hist., (7), 9, p.62, 1902.

Akodon obscurus (Waterhouse).

Mus obscurus WATERHOUSE, Proc. Zool. Soc. London, p. 16, Feb. 14, 1837; Voy. Beagle, Zool., p. 52, pl. 15, fig. 2, pl. 34, figs. 9a, b. Type from Maldonado.

Akodon obscurus was found with *A. arenicola* but only towards the eastern side of the country.

Specimens taken.—Total 13: Maldonado 1; 15 miles north of San Vicente de Castillos, Dept. Rocha 5; Polanco, Dept. Minas 7.

Other records.—*Hesperomys obscurus* Figueira, 1894, p. 18; *Akodon obscurus,* Thomas, Ann. and Mag. Nat. Hist., (9), 3, p. 214, 1919.

Hesperomys bimaculatus (Waterhouse).

Mus bimaculatus WATERHOUSE, Proc. Zool. Soc. London, p. 18, Feb. 14, 1837; Voy. Beagle, Zool., p. 43, pl. 12, pl. 34, figs. 3a, b, c. Type from Maldonado.

This mouse was rather scarce, only three specimens being taken, one in a wheat field and two in some wooded country near the edge of a river.

Specimens taken.—Total 3: Passo de los Avarias, Rio Cebollati, Dept. Minas 2; Polanco, Dept. Minas 1.

Other record.—Figueira, 1894, p. 17.

Oryzomys flavescens (Waterhouse).

Mus flavescens WATERHOUSE, Proc. Zool. Soc. London, p. 19, Feb. 14, 1837; Voy. Beagle, Zool., p. 46, pl. 13, pl. 34, figs. 5a, b. Type from Maldonado.

This rodent was always found with the *Akodons* but was not so common.

Specimens taken.—Total 25: Maldonado 11; Quebrada de los Cuervos, Dept. Treinta y Tres 3; 10 kilometers south of La Lata, Dept. Colonia 2; 15 miles southwest of Dolores, Dept. Soriano 6; Passo de las Avarias, Rio Cebollati, Dept. Minas 3.

Other record.— *Hesperomys flavescens* Figueira, 1894, p. 17.

Oryzomys delticola Thomas.

Oryzomys delticola THOMAS, Ann. and Mag. Nat. Nist., (8), **20**, p. 96, 1917. Type from Isla Ella, Parana Delta, Argentina.

Six of the specimens taken were caught sixty miles up river from the type locality and are referred to this species until comparison with the type is possible.

Specimens taken.—Total 10: 15 kilometers southwest of Dolores, Rio Uruguay, Dept. Soriano 6 (3 skins and skulls, and 3 skulls only); Passo de las Avarias, Rio Cebollati, Dept. Minas 2; Quebrada de los Cuervos, Dept. Treinta y Tres 2.

Oxymycterus nasutus (Waterhouse).

Mus nasutus WATERHOUSE, Proc. Zool. Soc. London, p. 16, Feb. 14, 1837; Voy. Beagle, Zool., p. 56, pl. 17, fig. 2, pl. 33, figs. 7a, b, c, pl. 34, fig. 10a. Type from Maldonado.

Most of the specimens taken were found near the coast. All were caught in or near swamps or swampy ground, in traps baited with cheese.

Specimens taken.—Total 7: Maldonado 5; 15 kilometers north of San Carlos, Dept. Maldonado 1; Arazati, Dept. San Jose 1.

Other records.—*Hesperomys nasutus* Figueira, 1894, p. 18.

Reithrodon typicus Waterhouse.

Reithrodon typicus WATERHOUSE, Proc. Zool. Soc. London, p. 30, Feb. 14, 1837; Voy. Beagle, Zool., p. 71, pl. 33, fig. 4a. Type from Maldonado.

This mouse was not common but specimens were taken at four widely separated localities. It was obtained in rocky hills, wheat fields, and along the sandy coast.

Specimens taken.—Total 7: 15 miles north of San Vicente de Castillos, Dept. Rocha 1; Quebrada de los Cuervos, Dept. Treinta y Tres 2; Polanco, Dept. Minas 3; Arazati, Dept. San Jose 1.

Other records.—Figueira, 1894, p. 18.

Holochilus vulpinus (Lichtenstein).

Mus vulpinus LICHTENSTEIN, in Brants' Het. Geslacht. d. Muizen, pp. 137-138, 1827; Darstellung, Tafel 33, fig. 2, 1827. Type from Uruguay.

This rat was rather common along the Rio Cebollati and in some marshes in Treinta y Tres. One was shot at night by shining its eyes with a jack light.

Specimens taken.—Total 9: Passo de las Avarias, Rio Cebollati, Dept. Minas 4; 8 miles east of Treinta y Tres 5.

Scapteromys tomentosus (Lichtenstein).

Mus tomentosus LICHTENSTEIN, Darstellung, Tafel 33, fig. 1, 1827. Type from Uruguay.

Scapteromys tumidus (Waterhouse).

Mus tumidus WATERHOUSE, Proc. Zool. Soc. London, p. 15, 1837. Voy. Beagle, Zool., p. 57, pl. 18, pl. 34, fig. 11a. Type from Maldonado.

Although a good deal of trapping was done in swampy places and near rivers, neither of these animals was caught. Of *S. tomentosus* apparently only the type is known, and of *S. tumidus* the type and one specimen collected by Aplin. As both of these species have Maldonado for a type locality, it seems probable that more specimens will show that *tumidus* is a synonym of *tomentosus*. Mr. Thomas, in his description of *S. aquaticus* (Ann. and Mag. Nat. Hist., 1920, (9), 5, p. 477), seems to hint at this in a footnote for he states that "Prof. Matschie informs me that Sellow's collections

were made near Maldonado." *S. aquaticus* appears to be much more common as Mr. Thomas reports 23 specimens from the Isla Ella, Parana Delta, Argentina.

Figueira mentions this animal but the specimens labeled *Hesperomys tumidus* which I saw in the Museo Nacional at Montevideo were *Holochilus vulpinus*.

Ctenomys torquatus Lichtenstein.

Ctenomys torquatus LICHTENSTEIN, Darstellung, Tafel 31, fig. 1, 1827. Type from Uruguay River.

These animals were especially abundant in the sandy country about Maldonado. They were easily shot by waiting near the hole until one appeared. Even when shot at and missed, it was not more than five minutes before the animal appeared again. They come out on top of the ground at times, and, if frightened then, become confused and dash about looking for a hole to escape by. They are rather awkward above ground however. The call is a deep throaty, "Tuco-tuco-tuco tuc."

One was caught by placing a slip noose over the hole and was kept alive for a number of days. In digging it worked hand over hand and pushed the dirt out behind it, using both feet at once and raising the end of the body by pushing down with the tail. This explained the worn places on the tails of the ones secured. Some of the people eat these animals roasted.

Besides the localities where specimens were taken, holes were seen at Arazati, Dept. San Jose. There are two specimens in the Museo Nacional at Montevideo from the department of Tacuarembo.

Specimens taken.—Total 17: Maldonado 15; 15 miles north of San Vicente de Castillos, Dept. Rocha 2; Passo Mercedes, Dept. Rio Negro 2 (received in exchange from British Museum).

Other records.—*Ctenomys brasiliensis* Waterhouse, 1839, p. 79; Aplin 1894, p. 308; Figueira, 1894, p. 16.

Cavia rufescens pamparum Thomas.

Cavia pamparum THOMAS, Ann. and Mag. Nat. Hist., (7), 8, p. 538, 1901.

Cavies are no doubt the commonest rodents in Uruguay, where every swamp is filled with them. They caused much trouble as they sprung the small mouse traps set in or near swamps for other mammals. When roasted over the fire, the flesh has a very good taste.

Specimens taken.—Total 23: Maldonado 13; Quebrada de los Cuervos, Dept. Treinta y Tres 1; Polanco, Dept. Minas 6; Arazati, Dept, San Jose 1; 15 miles southwest of Dolores, Dept. Soriano 2.

Other records.—*Cavia cobaia* Waterhouse, 1839, p. 89; *Cavia aperea* Aplin, 1894, p. 309; *Cavia leucopyga* Figueira, 1894, p. 15; *Cavia pamparum* Thomas, 1901a, p. 536; *Cavia rufescens pamparum* Thomas, 1917, p. 155.

Myocastor coypus bonariensis (Geoffroy).

Myopotamus bonariensis "Commerson MS," E. GEOFFROY, Ann. Mus. d'Hist. Nat. Paris, 6, pp. 81-83, 1805.

Coypus have been so hunted for their fur that they are now quite scarce in settled districts. I heard of many at the Laguna Negra in Rocha but did not have a chance to visit there. At most places the people said there were a few left where many had been.

Specimens taken.—15 miles southwest of Dolores, Dept. Soriano 2 juv.

Other records.—*Myopotamus coypu* Aplin, 1894, p. 313; Figueira, 1894, p. 16.

Hydrochoerus hydrochaeris notialis Hollister.

Hydrochoerus hydrochaeris notialis HOLLISTER, Proc. Biol. Soc. Wash., 27, p. 58, 1914.

Capybaras were quite plentiful in the rivers and swamps. In hunting them at night with a jack light I found that the reflection of their eyes was very similar to that of the nighthawk (*Hydropsalis torquata furcifera*). Before discovering that the capybara's eye was a dull yellow and the nighthawk's a bright, sparkling yellow, I wasted shells on birds and let the animals escape.

Specimens taken.—Total 2: Passo de las Avarias, Rio Cebollati, Dept. Minas 1; Quebrada de los Cuervos, Dept. Treinta y Tres 1 (skull only).

Other records.—*Hydrochoerus capybara* Waterhouse, 1839, p. 91; Aplin, 1894, p. 309; Figueira, 1894, p. 15.

Mus musculus musculus Linnaeus.

Mus musculus LINNAEUS, Syst. Nat., ed. 10, 1, p. 62, 1758.

Rattus norvegicus (Erxleben).

Mus norvegicus ERXLEBEN, Syst. Regni. Anim., 1, p. 38, 1777.

Both of these rodents were only too plentiful in many places. At the first camp, near Maldonado, there was almost nothing but

house rats and they were met with everywhere else. On the Rio Cebollati a man told me that his corn crib, placed in the middle of an open field, was overrun with mice. With the traps I loaned him he caught thirty-five house mice in one night.

Other records.—Waterhouse, 1839; Aplin and Figueira, 1894.

Lepus europaeus europaeus Pallas.

Lepus europaeus PALLAS, Nov. Spec. Glir. Ord., p. 30, 1778.

The *liebre* is one of the commonest and most destructive rodents in Uruguay. It was seen in all departments visited. At every estancia, packs of dogs were kept to hold it in check. The dogs, however, seemed to have killed off more of the other medium-sized mammals than hares. I could not find out when the hares were introduced.

Specimens taken.—Total 8: 15 miles north of San Carlos, Dept. Maldonado 1; Maldonado 1; 15 miles north of San Vicente de Castillos, Dept. Rocha 2; 8 miles east of Treinta y Tres 1; Quebrada de los Cuervos, Dept. Treinta y Tres 1; Polanco, Dept. Minas 1; 15 miles southwest of Dolores, Dept. Soriano 1.

Lagostomus maximus (Desmarest).

Dipus maximus "Blainville," DESMAREST, Nouv. Dict. d'Hist. Nat., nov. ed., **13**, pp. 117-119, 1817.

The only mention of this animal is found in Marelli's list in which he includes Uruguay in its range. Its occurrence in Uruguay is doubtful.

Pecari tajacu (Linnaeus).

Sus tajacu LINNAEUS, Syst. Nat., ed. 10, **1**, p. 50, 1758.

Figueira says that this peccary is almost extinct in Uruguay but that it might be found in Artigas or Cerro Largo.

Blastocerus bezoarticus campestris (Cuvier).

Gouazouti AZARA, Quad. Paraguay, **1**, p. 77, 1801.

Cervus campestris CUVIER, Dict. Sci. Nat., Paris, **7**, pp. 484-485, 1817.

This deer was plentiful in one locality in Rocha but I heard little about it elsewhere. In this place the country was open, with a few palms, a little swamp, and large patches of high grass. I hunted them from the Ford truck, which was found to be the best way, as they were very wary of a man on foot or horseback. They

were curious about the truck and easily approached. I saw about twenty-five and shot four in about an hour and a half. The owner of the land considered that there were very few there and said that on another piece of land which he had rented out, there were hundreds.

Specimens taken.—25 miles north of San Vicente de Castillos, Dept. Rocha 4.

Other records.—*Cervus campestris* Waterhouse, 1839, p. 29; Burmeister, 1861, p. 430; Figueira, 1894, p. 14; *Cariacus campestris* Aplin, 1894, p. 313.

Blastocerus dichotomus (Illiger).

Premier Cerf ou Gouazoupou AZARA, Quad. Paraguay, 1, p. 70, 1801.

Cervus dichotomus ILLIGER, Abhandl. K. Akad. Wiss. Berlin, (1811), p. 117, 1815.

The marsh deer is now very rare in Uruguay. I was told there might be a few in Rocha near where the pampa deer was taken.

Other records.—*Cervus paludosus* Figueira, 1894, p. 15; Aplin, 1894, p. 314.

Mazama simplicicornis (Illiger).

Quatrieme cerf ou gouazoubira AZARA, Quad. Paraguay, 1, p. 86, 1801.

Cervus simplicicornis ILLIGER, Abhandl. K. Akad. Wiss. Berlin, (1811), p. 117, 1815.

From reports received, the brocket deer appears to be rather scarce. Even in 1894 Aplin and Figueira reported it as rare. There were a few at the Quebrada de los Cuervos, where I saw three skulls and purchased two. I feel sure that farther north in Tacuarembo, Salta, and Artigas it would be more plentiful. Allen (Bull. Am. Mus. Nat. Hist., **34**, p. 527, 1915) reported the longest antler of his series of many species of brocket deer as 135 mm. on a specimen of *M. simplicicornis* from Paraguay. On one of our specimens the antlers measure 144.3 mm. and 134.7 mm. respectively, from burr to tip.

Myrmecophaga tridactyla Linnaeus.

Myrmecophaga tridactyla LINNAEUS, Syst. Nat., ed. 10, p. 35, 1758.

Figueira is the only one who records the Great Anteater and he gives it as scarce and only found in the northern and eastern departments.

Dasypus septemcinctus Linnaeus.

Dasypus septemcinctus LINNAEUS, Syst. Nat., ed. 10, p. 51, 1758.

This is the common armadillo of Uruguay and is known as the *Mulita*. At one estancia in Treinta y Tres the owner protected it and there were many there. Five or six could be seen running about almost any evening about sunset. The flesh is quite good, tasting a little like roast pork. When pursued the *Mulita* starts to dig in and in hunting it one man tries to hold its tail while another man digs it out. I found that putting a small calibered pistol down the hole and shooting it in the back, was the surest way of getting the animal.

Specimens taken.—Total 8: 15 miles west of San Vicente de Castillos, Dept. Rocha 1; Passo de las Avarias, Rio Cebollati, Dept. Minas 1; 8 miles east of Treinta y Tres 3; 10 kilometers south of La Lata, Dept. Colonia 1; 15 miles southwest of Dolores, Dept. Soriano 1.

Other records.—Dasypus hybridus Waterhouse, 1839, p. 92; *Praopus hybridus* Burmeister, 1861, p. 428; *Tatusia septemcincta* Aplin, 1894, p. 307; *Dasypus septemcinctus* Figueira, 1894, p. 10.

Dasypus novemcinctus Linnaeus.

Euphractus sexcinctus flavimanus (Desmarest).

Euphractus villosus (Desmarest).

I saw no specimens of any of these armadillos but heard of one that the natives call the "*Peludo.*" Aplin and Figueira agree that *D. novemcinctus* is scarce but regarding the other two they differ. Aplin records *E. s. flavimanus* as the more common while Figueira claims that *D. villosus* is the common form. It will take more work in northern Uruguay to settle this question.

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