

R. M. BARQUEZ

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# A MANUAL OF NEOTROPICAL SIGMODONT RODENTS

BY

NILS GYLDENSTOLPE

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WITH 18 PLATES

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Everyone who has been working with the classification and the determination of Neotropical Sigmodont Rodents has certainly been aware of the great difficulties that arise when trying to get a general view of the multitude of genera and species, that have been described especially in recent years. The literature on this subject is furthermore both widely scattered and sometimes not easily accessible. A comprehensive account has, at least as far as I know, never been published.

When classifying the South American Rodents in the Collections of the Royal Natural History Museum in Stockholm it soon became evident to me, that rather extensive notes had to be prepared about the generic as well as about the specific characteristics of all hitherto described forms, before a more or less satisfactory result of exact determination could possibly be reached.

Parts of these notes are now being printed with the hope that they may be of some use, and in the present memoir I have tried to record all such Sigmodont Rodents, that have hitherto been found in the Neotropical Region South of the Isthmus of Panama. Only such species have, however, been included that have definitely been obtained or described from within the geographical limits of South America. Undoubtedly several forms may await discovering, as large areas of South America even nowadays are zoologically unexplored. Others, that have previously only been recorded from North of the Isthmus of Panama, may also be found to extend into the Region under consideration. These latter forms have not been mentioned in the present work, as their names and geographical distribution may be found in MILLER's useful »*List of North American Recent Mammals*», published in the Bulletin of the United States National Museum 1924.

Considering the sedentary habits of these Rodents it is by no means surprising, that the number of species is very great and that the different forms have developed more or less well-marked geographical or purely local races within rather narrow limits. Some of these races have, however, either been based on minor colour differences or on more or less distinct and constant (?) cranial characteristics.

The Neotropical Rodents have during the last 30 years attracted a great deal of attention from systematists. A large number of generic, subgeneric, specific and subspecific names have consequently been bestowed upon them, principally by O. THOMAS and J. A. ALLEN. It is therefore evident, that the group has become extremely difficult to deal with from a systematical point of view. Much work remains to be done before a real satisfactory account may or can be written, as several of the large genera are highly in need of a critical revision.

Nevertheless I strongly suspect that a far too great number of both generic, specific and subspecific names have been given. The question of their validity or

not, can, however, certainly only be solved by someone, who either will or can be able to undertake the herculean task of a comparative and critical examination of all material that from time to time has accumulated in the Collections of the principal Museums in the Old as well as in the New World.

A recognition of a fair number of genera certainly may help to get a better view of the material under consideration in case the generic distinctions are drawn up with sufficient accuracy, but otherwise they may only be of inconvenience and increase the difficulties of a correct identification. Genera should, if possible, point out the true affinities of one group to another within the same family in such manner as species and subspecies do in a genus.

Besides external adaptations of the respective species to piscivorous, aquatic, arboreal, terrestrial and fossorial habits, the generic characteristics are generally drawn from cranial and dental features. The external distinctions are mostly based on characters of the pelage, the shape of the tail, feet, claws etc.

The aquatic and especially the piscivorous forms have their toes more or less webbed, a well-haired, cylindrical but in height vertically increased tail, fringed hindfeet and small or rudimentary ears. Species with arboreal habits generally have broad and comparatively short feet, a more or less distinctly pencilled tail and well-developed foot-pads, while fossorial forms may be distinguished by having short ears and strong claws on the forefeet.

The cranial distinctions are most marked among such species that have piscivorous and aquatic habits. In the first-mentioned ones, the dorsal outline of the skull is flattened and depressed throughout, the supraorbital foramina are situated at or nearly at the top of the interorbital constriction a. s. o.

Other cranial features that have served as generic characteristics are the form of the anterior zygomatic plate, the shape of the supraorbital edges, the shape of the rostrum and the bullae as well as the absence or presence of pits on the posterior palate etc.

The dental characteristics used for generic separation are based on several more or less pronounced features such as the molar pattern, the height of the molar crowns, the position of the incisors to the plane of the skull, the shape of the incisors, the presence or absence of a groove on the same etc.

Several of the hitherto proposed and currently recognized genera are without doubt based on somewhat vague characters, or such as are rather of specific than of generic value. For the sake of convenience all the proposed generic names have, however, been maintained in the present work, as the nowadays accepted generic distinctions among Neotropical Rodents are more or less based on such characteristics that future investigations may not support. Certain modifications will also be found necessary among such species that at the present time are considered distinct, and a number of forms will probably have to be registered as synonyms, being merely based on individual variation. With our present state of knowledge, or from a study of the literature only, it would be very difficult, if not impossible, to undertake a more thorough investigation about the relationship of the allied forms.

Every form occurring within the area in question have thus been duly men-

tioned and given either specific or subspecific rank, except in such cases where their identity is quite obvious. Such races which probably are identical with other already described ones, but whose identity is still somewhat problematical, have been mentioned, but put in brackets.

A number of species, principally those described by the old time authors, are rather difficult to identify without the actual comparison of the types with fresh material from the terra typica. Such species, as well as some described by PHILIPPI, may in certain cases alter the nomenclature used in the present treatise, but as far as possible I have tried to ascertain the exact status of these forms.

In addition to short compilatory descriptions, certain measurements of the type-specimens have been put in tabular form. Some plates showing the cranial and dental characteristics of the different genera have also been added, and it is to be hoped, that they will help to make the identification of specimens easier for future fellow-workers.

The measurements as well as the photographic reproductions of the skulls may of course not always be taken as unailing evidence for a correct identification, as the dimensions naturally vary individually sometimes even to a rather large extent. They may, however, perhaps facilitate the determination of such forms that more or less resemble each other superficially, but which show marked cranial or dental differences.

Thanks to the great courtesy of several Zoologists, I have had the advantage of receiving much help and assistance during my work. Among those who have greatly helped me, I especially want to mention Mr. M. A. C. HINTON and Captain G. DOLLMAN of the British Museum of Natural History. During a few weeks stay in London these two well-known scientists, as well as other members of the staff of the Mammal Department, always showed me great amiability and gave me free accession to the study-collections with their immense and invaluable material. Without their aid and assistance it would certainly have been quite impossible to complete my work. A personal examination of the numerous types kept in London has proved to be of utmost value.

I am also greatly indebted to the Trustees of the British Museum Natural History, who have kindly given their permission of forwarding a number of specimens and skulls to Stockholm in order that the latter there may be further studied and photographed. Professor AD. JENSEN at the Zoological Museum in Copenhagen has also at my request kindly forwarded some specimens and skulls from Brazil.

From the gentlemen in charge of several other Museums in Europe as well as in the United States of America I have had the pleasure of receiving much valuable information about the type-specimens kept in their respective Institutions. I therefore take this opportunity to publicly express my great obligations for all their help and kind assistance. Concerning certain type-specimens presumably kept in the Berlin and the Munich Museums it has, however, unfortunately been impossible to receive requested information, a fact which I regret very much.

Last but not least, I want to mention Miss R. WALLÉN, who has shown great skill in making all the photographs of the skulls and teeth.

Genus *Ichthyomys* Thomas.

1893. *Ichthyomys* Thomas, Proc. Zool. Soc., London, p. 337. — *Type: Ichthyomys stolzmanni* Thos.

Form highly modified for aquatic life. Fur short and semi-hispid with an abundance of long guard-hairs. Eyes small. External ear small, but with a functional conch. Whiskers long and prominent. Tail long, cylindrical, but increased in height vertically and with the ventral surface clothed with short, elongated bristles. Toes partially webbed. Hindfeet very broad and heavily fringed with stiff hairs. Pollex with an elongated nail. Claws sharply curved. Palms and soles naked with five broad and low pads. Mammae: 1—2 = 6.

Skull strongly built with a heavy rostrum and with the dorsal outline concave over the orbits, flattened and depressed throughout. Braincase inflated laterally. Supraorbital edges smoothly rounded without any trace of ridges or beads. Supraorbital foramina comparatively large and situated upon the top of the interorbital constriction. Zygomata extraordinarily weak and not completely ossified. Anterior zygomatic plate very narrow and not projecting forwards enough to be visible from above. Interparietal small. Palate long and extending as a rather broad shelf beyond the plane of the last molars. Palatine foramina of medium length, but not reaching posteriorly to the level of the first molars. Mesopterygoid fossa broad and rather squarely open in front. Bullae not inflated, but pinched in anteriorly.

Incisors rather slender. Upper incisors with their front surfaces turned in towards each other and with the outer corners of their cutting-edges projecting downwards as sharp divergent points. Molars with high crowns and opposite — not alternating — cusps, of which there are six in the first and four in the second molar both above and below, although in the lower jaw the two most anterior tend to fuse into one another. Last upper molar subtriangular. Last lower molar divided into two easily distinguished subequal sections.

*Ichthyomys stolzmanni* Thomas.

1893. *Ichthyomys stolzmanni* Thos., Proc. Zool. Soc., London, p. 339.

*Type locality:* Central Peru, Chanchamayo. Alt. 3000 feet. (Type in Brit. Mus. N:o 94. 8. 6. 14. ♀.)

A rather small species with a bicolored tail. Fur short, close and thick. General colouration above mouse-grey, strongly grizzled with fulvous. Ventral surface dirty white, the hairs grey at their bases and dull white terminally. Upper portions of hands and feet pure white, the metacarpals, however, slightly tinged with brown.

*Ichthyomys söderströmi* de Winton.

1896. *Ichthyomys söderströmi* de Winton, Proc. Zool. Soc., London, p. 512.

*Type locality:* Western Ecuador, Rio Machangará. Alt. 9000—10000 feet. (Type in Brit. Mus. N:o 96. 1. 28. 5. ♀.)

General colouration above dark olive brown, minutely grizzled with dull yellowish and thickly intermixed with long shining black hairs, which are broadly

tipped with silvery white on the hindquarters. Ventral surface dirty white, the hairs grey at their bases. Tail entirely dark brownish black. Skull smaller than that of *I. stolzmanni* and with differently shaped interparietal and zygomatica. Ectoptyergoids little perceptible, and parapterygoid fossae quite narrow.

#### *Ichthyomys caurinus* Thomas.

1924. *Ichthyomys caurinus* Thos., Ann. & Mag. Nat. Hist. (9) xiii, p. 541.

*Type locality*: Western Ecuador, Gualea. Alt. 2000—3000 feet. (Type in Brit. Mus. N:o 24. 4. 18. 7. ♂.)

Nearly allied to *I. söderströmi*, but somewhat larger. Fur shorter and closer. Tail uniform black. General colouration as in *I. söderströmi*. Skull larger and with larger braincase. Nasals long and produced in a narrow point posteriorly. Cranial ridges distinct. Parapterygoid fossae broad and distinct, the ectoptyergoids also well-developed.

#### *Ichthyomys tweedii* Anthony.

1921. *Ichthyomys tweedii* Anth., Amer. Museum Novitates N:o 20, p. 1.

*Type locality*: South-western Ecuador, Portovelo, Provincia del Oro. Alt. 2000 feet. (Type in Amer. Museum Nat. Hist. N:o 47798. ♂.)

A very large species. General colouration above a mixture of black, grey and buff. Ventral surface whitish, the hairs plumbeous at their bases. Tail slaty black, practically unicolor. Skull strong and heavily built with a very broad rostrum.

#### *Ichthyomys orientalis* Anthony.

1923. *Ichthyomys orientalis* Anth., Amer. Museum Novitates N:o 55, p. 7.

*Type locality*: Eastern Ecuador, Rio Napo. Alt. 3000 feet. [Type in Amer. Museum Nat. Hist. N:o 62382. ♀ (?).]

A very large species with a sharply bicolored tail. General colouration above grizzled black and buff, interspersed with long glistening hairs. Ventral surface dirty whitish. Skull large and strongly built.

#### *Ichthyomys hydrobates* Winge.

1891. *Habrothrix hydrobates* Winge, Vidensk. Meddel. Naturh. Foren., Kjøbenhavn, p. 20.

*Type locality*: Western Venezuela, Sierra de Merida. (Type in Zool. Museum, Copenhagen. N:o 862. ♀.)

General colouration above grizzled brown and pale buff, interspersed with numerous long glistening dark brown hairs. Ventral surface whitish, the hairs plumbeous at their bases. Tail brownish, unicolor. Skull with nasals extending posteriorly much beyond the premaxillae.

#### *Ichthyomys nicefori* Thomas.

1924. *Ichthyomys nicefori* Thos., Ann. & Mag. Nat. Hist. (9) xiii, p. 165.

*Type locality*: Central Colombia, Paima, Bogotá region. (Type in Brit. Mus. N:o 23. 11. 13. 9. ♂.)

Apparently most closely allied to *I. hydrobates*, but readily distinguished by much darker colour. General colouration of a similar grizzled blackish as that of *I. söderströmi*, though a little darker, very decidedly darker than the brown *I. hydrobates*, but line of demarcation on sides less sharply defined. Inner aspect of ear white with black edges. Tail uniform blackish. Skull larger and with a more bulbous braincase than that of *I. hydrobates* or *I. söderströmi*. Parapterygoid fossae comparatively broad with well-developed ectopterygoids as in *I. hydrobates*.

### Genus *Anotomys* Thomas.

1906. *Anotomys* Thomas, Ann. & Mag. Nat. Hist. (7) xvii, p. 86. — Type: *Anotomys leander* Thos.

Form highly modified for aquatic life. Fur very rich and woolly with the long guard-hairs comparatively few in number. External ear rudimentary, forming a mere slit without a functional conch. Hindfeet broad and heavily fringed with stiff hairs as in *Ichthyomys*.

Skull less strongly built than that of *Ichthyomys* and *Daptomys*. Rostrum much more slender with the muzzle bent upwards owing to the strong angle at which its upper profile meets the marked rise of the frontal. This profile continues perfectly straight anteriorly without any descent towards the tip of the nasals. Braincase inflated. Interorbital region narrow, constricted. Supraorbital edges smoothly rounded. Supraorbital foramina opening laterally into the orbit. Zygomatica very weak, completely ossified even at the middle. Anterior zygomatic plate very slender and delicate, not projecting forwards enough to be visible from above. Interparietal distinct. Palate broad and extending posteriorly beyond the last molars. Palatine foramina much broader behind than in front, not extending posteriorly to the level of the first molars. Bullae not inflated. Mesopterygoid fossa very broad and squarely open in front. Parapterygoid fossae shallow.

Incisors narrower than in *Ichthyomys*, the lower ones particularly narrow with long slender points. In front of the anteorbital foramen there is a marked lateral projecting incisive capsule over the root of each upper incisor. Molar dentition as in *Ichthyomys*. The last lower molar is thus divided into two easily perceptible subequal sections, the posterior one being about half as large as the anterior.

### *Anotomys leander* Thomas.

1906. *Anotomys leander* Thos., Ann. & Mag. Nat. Hist. (7) xvii, p. 87.

Type locality: Western Ecuador, Mt. Pichincha. Alt. 11500 feet. (Type in Brit. Mus. No 5. 11. 7. 1. ♂.)

Fur very thick, soft and velvety. General colouration above uniform dark slaty, becoming slightly paler on the sides of the body. Ventral surface whitish grey, the hairs dark slaty at their bases. A distinct white patch over each ear-hole. Tail dull brown, rather lighter below.

Genus *Daptomys* Anthony.

1929. *Daptomys* Anthony, American Museum Novitates N:o 383, p. 1. — Type: *Daptomys venezuelae* Anth.

Closely allied to *Ichthyomys*, but externally not so highly modified for an aquatic life. Fur fairly soft, but long guard-hairs less abundant. Ear-conch present and fairly conspicuous. Tail densely haired. Hindfeet of normal proportions, not developed into broad swimming organs and with the marginal fringe of hairs scarcely discernible.

Skull strongly built with a thick and heavy rostrum. Dorsal outline of skull flat, the nasals, frontals and parietals forming a straight line when viewed in profile. Braincase but slightly inflated laterally. Interorbital region only slightly constricted. Supraorbital foramina opening laterally into the orbit. Zygomatic arch incomplete and reduced to a mere thread just posterior to the orbit, where there is a short gap. Palatine foramina fairly long and broad. Bullae moderately inflated and not pinched in anteriorly. Interparietal very narrow and strap-shaped.

Incisors slender and acutely pointed, their anterior faces slightly inclined towards one another. Molar dentition about as in *Ichthyomys*, but last upper molar very small. Last lower molar with only one functional lamina, the posterior section reduced to a mere vestige.

*Daptomys venezuelae* Anthony.

1929. *Daptomys venezuelae* Anth., Amer. Museum Novitates N:o 383, p. 2.

Type locality: Northern Venezuela, Neveri, Cumanacoa. Alt. 2400 feet. (Type in Amer. Museum Nat. Hist. N:o 69907. ♂.)

General colouration above uniform blackish brown. Tips of long hairs glistening black. Sides of the body lighter. Ventral surface grizzled grey and slaty, the tips of the long hairs silvery whitish.

Genus *Rheomys* Thomas.

1906. *Rheomys* Thomas, Ann. & Mag. Nat. Hist. (7) xvii, p. 421. — Type: *Rheomys underwoodi* Thos.

Form less highly specialized for aquatic life. Fur soft and glossy with the long guard-hairs rather inconspicuous. Ear-conch fairly conspicuous. Tail well-haired. Hindfeet not developed into broad swimming organs and with the marginal fringe of hairs only slightly visible. Hallux not reduced, the tip of the claw reaching beyond the most posterior plantar pad.

Skull not especially robust, smoothly rounded and slightly ridged. Rostrum comparatively slender. Nasals not bent upwards. Anterior zygomatic plate very short horizontally, its border vertical and not projecting forwards. Anteorbital foramen more widely open than in *Ichthyomys*. Pterygoids in normal proportion to each other. Bullae moderately inflated and not pinched in anteriorly.

Incisors quite normal, narrow, slightly but evenly rounded in front, the lower ones somewhat pointed. Molar dentition as in *Ichthyomys*, but the posterior section of the last lower molar reduced in size.

#### **Rheomys trichotis** Thomas.

1897. *Ichthyomys trichotis* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 220.

*Type locality*: Western Colombia, near Rio Magdalena, Cundinamarca District. (Type in Brit. Mus. N:o 97. 7. 2. 2.)

General colouration above and below dark smoky grey except chest and centre of belly, which are white. Tail well-haired, blackish throughout.

#### Genus **Neusticomys** Anthony.

1921. *Neusticomys* Anthony, American Museum Novitates N:o 20, p. 2. — *Type*: *Neusticomys monticolus* Anth.

Form less highly specialized for an aquatic life than *Ichthyomys* and *Anotomys*. Fur very soft and close. Long guard-hairs rather inconspicuous. Ear-conch present and fairly distinct. Hindfeet less highly modified for aquatic habits, the fringes of stiff hairs weakly developed. Hallux greatly reduced, tip of claw not reaching to the plane of the most posterior plantar pad.

Skull smooth, compressed, without ridges on frontals and parietals. Plane of nasals continuous with that of frontal area. Rostrum slender. Braincase broad and flat. Supraorbital foramina placed laterally. Zygomata threadlike or incomplete. Infraorbital foramina very large. Palatine foramina very long, broadest mesially and extending from molar toothrow almost to the incisors.

Incisors not so highly specialized as in *Ichthyomys*. Upper molars as in that genus. Anterior cusp of first lower molar, however, broader. Last lower molar with only one functional cusp, the posterior one reduced to a vestigial cone.

#### **Neusticomys monticolus** Anthony.

1921. *Neusticomys monticolus* Anth., Amer. Museum Novitates N:o 20, p. 2.

*Type locality*: Western Ecuador, Nono. Alt. 3900 feet. (Type in Amer. Museum Nat. Hist. N:o 46574. ♀.)

General colouration above uniform clove-brown, the hairs blackish plumbeous at their bases. Ventral surface lighter and irregularly washed with smoke-grey mesially. A small ivory yellow pectoral spot.

#### Genus **Oryzomys** Baird.

1857. *Oryzomys* Baird, Mammals of North America, pp. xlii, 458, 482. — *Type*: *Mus palustris* Harlan.

Form murine. Fur rather harsh. Colouration variable, but ventral surface generally strongly contrasting with the upperparts. Tail long, thinly haired, white or whitish underneath at least proximally. Ears comparatively small. Forefeet

small. Pollex with a nail. Hindfeet rather long. Claws of hindfeet relatively long. Palms and soles naked, normally with six pads. Mammae: 2—2 = 8.

Skull rather long and narrow. Interorbital region narrow. Supraorbital margins generally sharply edged or beaded. Interparietal variable in size and form. Zygomata comparatively slender. Anteorbital foramina nearly circular above. Anterior zygomatic plate rounded or slightly angular on its upper border, projected forwards enough to be distinctly visible from above. Palate long and produced posteriorly beyond plane of last molars between which and the corner of the mesopterygoid fossa there is a small pit or pairs of pits, often deeply excavated and always distinctly perceptible. Palatine foramina of various size, but usually long and then reaching to or beyond the level of the first molars. Parapterygoid fossae broad and shallow, not pointed anteriorly.

Incisors ungrooved. Molars brachyodont with prominent cusps and well-marked styles, the cusps nearly opposite to each other and persisting to old age. First upper molar with a well-defined anterior notch and generally prominent secondary parastyle. Upper molars with mesostyles and metostyles only indicated as small cusps, or else represented by enamel ridges in connection with the principal inner cusps. Last upper molar with its posterior portions more or less obsolete, the hypocone varying in development and the metacone usually only represented by a low enamel fold.

#### *Oryzomys longicaudatus longicaudatus* Bennet.

1832. *Mus longicaudatus* Benn., Proc. Zool. Soc., London, p. 2.

*Type locality*: Western Chile. (Type in Brit. Mus. N:o 55. 12. 24. 152.)

*Syn.* *Mus Philippii* Landb., Arch. f. Naturgesch., xxiv, I, 1858, p. 80. — Chile.

*Mus macrocercus* Philippi, An. Mus. Nac. d. Chile, 1900, p. 30. — Chile, Colchagua Prov.

*Mus nigribarbis* Philippi, » » » » » » p. 31. — Chile, Talcaregüe Andes.

*Mus saltator* Philippi, » » » » » » p. 32. — Chile, Peine, Santiago Prov.

*Mus amblyrrhynchus* Philippi, » » » » » » p. 36. — Chile, Valdivia Prov.

*Mus diminutivus* Philippi, » » » » » » p. 43. — Chile, Illapel, O'Higgins Prov.

*Mus peteroanus* Philippi, » » » » » » p. 56. — Chile, Peteroa, Curicá Prov.

Fur long and soft. General colouration above pale yellowish brown, becoming clear fulvous on the sides of the body. Ventral surface white, indistinctly washed with yellowish, the hairs dark grey at their bases. Tail long and slightly bicolor.

#### *Oryzomys longicaudatus magellanicus* Bennet.

1835. *Mus magellanicus* Benn., Proc. Zool. Soc., London, p. 191.

*Type locality*: Southern Chile, Port Famine, Straits of Magellan. (Type in Brit. Mus. N:o 55. 12. 24. 174.)

A dark-coloured member of the *O. longicaudatus*-group. Fur very long and moderately soft. General colouration above deep brown, the hairs tipped with

yellowish brown and intermixed with long black hairs. Sides of the body yellowish. Ventral surface greyish white, faintly tinged with yellowish. Tail short and bicolor.

**Oryzomys longicaudatus destructor** Tschudi.

1844. *Hesperomys destructor* Tsch., Unters. ü. d. Fauna Peruana, I, p. 182.

*Type locality*: Eastern Peru. (Type in Musée d'Histoire Naturelle, Neuchatel).

*Syn.* ? *Hesperomys melanostoma* Tsch., Unters. ü. d. Fauna Peruana, I, 1844, p. 182. — Eastern Peru. (Type in Musée d'Histoire Naturelle, Neuchatel).<sup>1</sup>

General colouration above reddish brown intermixed with numerous black hairs. Sides of the body reddish yellow. Throat and chest whitish grey. Remainder of ventral surface yellowish white.

[**Oryzomys longicaudatus mizurus** Thomas.]

1916. *Oryzomys magellanicus mizurus* Thos., Ann. & Mag. Nat. Hist. (8) xvii, p. 186.

*Type locality*: Southern Patagonia, Koslowsky Valley, Chubut Territory. (Type in Brit. Mus. N:o 14. 4. 4. 17. ♂.)

Said to be allied to *O. l. magellanicus*, but tail longer. General colouration above olivaceous, lined with black and suffused with dull fulvous on the rump. Ventral surface dull greyish buff. THOMAS himself states (1929) that this form is probably identical with *O. l. longicaudatus*.

**Oryzomys delticola** Thomas.

1917. *Oryzomys delticola* Thos., Ann. & Mag. Nat. Hist. (8) xx, p. 96.

*Type locality*: Eastern Argentine, Isla Ella, Paraná Delta, Buenos Aires Province. Alt. 1 m. (Type in Brit. Mus. N:o 17. 6. 1. 23. ♂.)

A medium-sized species apparently most closely allied to *O. longicaudatus*. General colouration above lined buffy brown, the light rings on the hairs cinnamon buff. Ventral surface greyish white, the hairs slaty at their bases. Skull as in *O. longicaudatus*, but interorbital region broader with sharply square, but not ridged, edges.

**Oryzomys coppingeri** Thomas.

1881. *Hesperomys (Calomys) coppingeri* Thos., Proc. Zool. Soc., London, p. 4.

*Type locality*: Southern Chile, Cockle Cove, Madre de Dios Island, Trinidad Channel. (Type in Brit. Mus. N:o 79. 8. 21. 15. ♂.)

Size larger than in *O. l. magellanicus*. Fur very long and soft. General colouration above lined yellowish and black, intermixed with long black hairs. Sides of the body lighter yellowish. Ventral surface nearly pure white, the hairs slaty at their bases. Tail long and slightly bicolor. Skull with faint supraorbital ridges.

**Oryzomys eliurus** Wagner.

1845. *Hesperomys eliurus* Wagn., Arch. für Naturgesch., xi, N:o 1, p. 147.

*Type locality*: Eastern Brazil, Ytararé, Sao Paulo Province. (Type in Naturhist. Museum, Vienna N:o 423. ♂.)

<sup>1</sup> The type of *H. melanostoma* Tsch., has the upperparts and sides of the body darker than in *destructor*. Tail also more hairy at the tip. Skull unfortunately broken. Perhaps a member of the genus *Oecomys*.

*Syn.* *Hesperomys pygmaeus* Wagn, Arch. für Naturgesch., xi, N:o 1, 1845, p. 147. —

Type locality: Eastern Brazil, Ypanema. (Type in Naturhist. Museum, Vienna N:o 422. ♀ juv.)

General colouration above dark orange brown, intermixed with numerous blackish brown hairs and becoming more orange yellow on the sides of the body. Ventral surface greyish white, more or less washed with cinnamon, the hairs plumbeous at their bases.

#### ***Oryzomys balneator balneator* Thomas.**

1900. *Oryzomys balneator* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 273.

Type locality: Eastern Ecuador, Mirador, Upper Rio Pastaza. Alt. 1500 m. (Type in Brit. Mus. N:o 99. 9. 9. 34. ♂.)

External appearance of a dark-coloured member of the *O. longicaudatus*-group. General colouration above dark greyish brown, almost bistre. Ventral surface dark soiled greyish, the hairs slaty at their bases. Tail slender.

#### ***Oryzomys balneator hesperus* Anthony.**

1924. *Oryzomys balneator hesperus* Anth., Amer. Museum Novitates N:o 139, p. 7.

Type locality: South-western Ecuador, El Chiral, Provincia del Oro. Alt. 5350 feet. (Type in Amer. Museum Nat. Hist. N:o 47583. ♂.)

Very similar to *O. balneator*, but ventral surface averaging whiter and with a more or less extensive white patch on throat or chest. General colouration above between Prout's brown and mummy brown, intermixed with black hairs along mid-dorsal region and becoming clearer brown on the sides of the body. Ventral surface ivory yellow, the hairs slaty at their bases.

#### ***Oryzomys intectus* Thomas.**

1921. *Oryzomys intectus* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 356.

Type locality: Central Colombia, Santa Elena, Medellin, Antioquia District. Alt. 9000 feet. (Type in Brit. Mus. N:o 21. 7. 1. 17. ♂.)

General colouration above dark mouse-grey, the hairs finely ticked with drabby. Sides of the body more drab. Ventral surface slaty grey, the hairs dull whitish at their bases. Skull broad and low, without supraorbital ridges. Molars stout and heavy.<sup>1</sup>

#### ***Oryzomys ratticeps ratticeps* Hensel.**

1873. *Hesperomys ratticeps* Hensel, Abhandl. Kön. Akad. d. Wissensch., Berlin, für 1872, p. 36.

Type locality: Southern Brazil, Rio Grande do Sul Province. (Type presumably in Zool. Museum, Berlin. ♀.)

General colouration above greyish brown intermixed with black hairs. Ventral surface yellowish white, becoming nearly white on the throat. Tail unicolor.

#### ***Oryzomys ratticeps tropicius* Thomas.**

1924. *Oryzomys ratticeps tropicius* Thos., Ann. & Mag. Nat. Hist. (9) xiv, p. 143.

<sup>1</sup> This small, short-tailed form is externally somewhat similar to *O. balneator*. The skull, however, is rather *Melanomys*-like.

*Type locality*: Eastern Brazil, Piquete, Sao Paulo Province. Alt. 700 m. (Type in Brit. Mus. N:o 1. 6. 6. 34. ♂.)

Similar in size to *O. ratticeps*, but general colouration above buffy brown, becoming stronger buffy on the sides of the body. Ventral surface more definitely buffy.

***Oryzomys ratticeps paraganus* Thomas.**

1924. *Oryzomys ratticeps paraganus* Thos., Ann. & Mag. Nat. Hist. (9) xiv, p. 144.

*Type locality*: Paraguay, Sapucay. (Type in Brit. Mus. N:o 4. 1. 5. 24. ♀.)

Size larger than in *O. r. ratticeps* and *O. r. tropicius*. General colouration also richer than that of the last-mentioned form.

***Oryzomys albigularis albigularis* Tomes.**

1860. *Hesperomys albigularis* Tomes, Proc. Zool. Soc., London, p. 264.

*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 7 1. 1. 05.)

Fur rather long and soft. General colouration above yellowish brown thickly mixed on mid-dorsal area with shining black hairs. A pure white patch on the throat. Ventral surface greyish white mesially, the hairs slaty at their bases. A well-marked line of demarcation between the dark colour of the head and the pale yellowish brown of the cheeks.

***Oryzomys albigularis maculiventer* J. Allen.**

1899. *Oryzomys maculiventer* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 204.

*Type locality*: North-eastern Colombia, Sierra El Libano, Santa Marta District. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 15306. ♂.)

A large form. General colouration above tawny rufous varied with black. Underparts pure white to the bases of the hairs. Skull with short palatal foramina.

***Oryzomys albigularis moerex* Thomas.**

1914. *Oryzomys albigularis moerex* Thos., Ann. & Mag. Nat. Hist. (8) xiv, p. 241.

*Type locality*: Western Ecuador, Mindo. Alt. 4200 feet. (Type in Brit. Mus. N:o 13. 10. 24. 43 a. ♂.)

A dark form. General colouration above near Prout's brown, the sides rather more fulvous. Ventral surface slaty, washed with creamy white as usual, but without any white pectoral patch. Skull as in *O. albigularis*, but palatal foramina shorter.

***Oryzomys keaysi* J. Allen.**

1900. *Oryzomys keaysi* J. Allen, Bull. Amer. Museum Nat. Hist., xiii, p. 225.

*Type locality*: South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 16062. ♀.)

Allied to *O. albigularis*, but usually without a white pectoral patch. General colouration above yellowish brown varied with black. Ventral surface greyish white. Skull with short and broad palatal foramina.

[*Oryzomys levipes* Thomas.]

1902. *Oryzomys levipes* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 129.

*Type locality*: South-eastern Peru, Limbane, Puno District. Alt. 2200 m. (Type in Brit. Mus. N:o 1. 1. 1. 24. ♀.)

Probably identical with *O. keaysi*. Said to be smaller and by having the palatal foramina large and well-opened, extending backwards almost to the level of the front of  $m^1$  as in that form.

↘ *Oryzomys velutinus* J. Allen & Chapman.

1893. *Oryzomys velutinus* J. Allen & Chapm., Bull. Amer. Museum Nat. Hist., v, p. 214.

*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5949/4679. ♂.)

Allied to *O. meridensis*. Fur thick and rather short. General colouration above dark cinnamon brown, darkest and mixed with blackish on the centre of the back and lighter, more reddish, on the sides of the body. Ventral surface greyish white, the hairs dusky plumbeous at their bases. Skull with comparatively feeble supraorbital ridges.

↘ *Oryzomys tenuicauda* J. Allen.

1899. *Oryzomys tenuicauda* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 211.

*Type locality*: Northern Venezuela, Las Palmales, Cumana District. Alt. 50 feet. (Type in Amer. Museum Nat. Hist. N:o 14737. ♂.)

Apparently most closely allied to *O. velutinus*, but somewhat paler and with a longer tail. General colouration above dark fawn, passing into bright fulvous on the sides of the body. Ventral surface white, the hairs plumbeous at their bases.

↘ *Oryzomys modestus* J. Allen.

1899. *Oryzomys modestus* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 212.

*Type locality*: Northern Venezuela, Campo Alegre, Cumana District. Alt. 3000 feet. (Type in Amer. Museum Nat. Hist. N:o 14734. ♀.)

Seems to be most closely allied to *O. tenuicauda*. General colouration above dark rufous brown mixed with black and becoming clearer deep rufous on the sides of the body. Ventral surface grey, the hairs tipped with white and plumbeous at their bases. Tail short. Ears large.

↘ *Oryzomys meridensis* Thomas.

1894. *Oryzomys meridensis* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 351.

*Type locality*: Western Venezuela, Merida. (Type in Brit. Mus. N:o 94. 9. 25. 13.)

Allied to *O. albigularis* and *O. velutinus*. Size moderately large. General colouration above dark rufous lined with blackish on mid-dorsal region, clearer and brighter rufous on the sides. Chest pure white, the hairs white to the roots. Remainder of ventral surface grey-mixed white. Skull strongly built with rounded supraorbital edges and short palatine foramina.

[*Oryzomys childi* Thomas.]1895. *Oryzomys Childi* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 59.*Type locality*: Central Colombia, Bogotá region. Alt. 8750 feet. (Type in Brit. Mus. N:o 95. 8. 1. 38. ♀.)

A medium-sized species with rather long fur allied to *O. meridensis*, with which it is probably identical. Said to differ from that form by its dull grey brown colouration, becoming blackish on the dorsal area.

*Oryzomys villosus* J. Allen.1899. *Oryzomys villosus* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 210.*Type locality*: North-eastern Colombia, Valparaiso, Santa Marta District. Alt. 5000 feet. (Type in Amer. Museum Nat. Hist. N:o 15321. ♀.)

Allied to *O. meridensis*, but smaller, with a relatively longer tail and with smaller ears. Fur soft and velvety. General colouration above yellowish brown mixed with black. Ventral surface whitish grey, the hairs plumbeous at their bases.

*Oryzomys pectoralis* J. Allen.1912. *Oryzomys pectoralis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 83.*Type locality*: Western Colombia, Popayan, Cauca District. Alt. 10340 feet. (Type in Amer. Museum Nat. Hist. N:o 32561. ♀.)

Allied to *O. albigularis*, but much larger. General colouration above yellowish brown, slightly grizzled with black on the mid-dorsal region and becoming clear yellow on the sides. Pectoral region white, the hairs white to the roots. Remainder of ventral surface white, the hairs greyish plumbeous at their bases. Perhaps identical with *O. meridensis*.

*Oryzomys o'connelli* J. Allen.1913. *Oryzomys o'connelli* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 597.*Type locality*: Eastern Colombia, Buenavista. Alt. 4500 feet. (Type in Amer. Museum Nat. Hist. N:o 34583. ♂.)

Closely allied to *O. pectoralis* and *O. meridensis*, with which latter it may possibly be identical. General colouration above ochraceous orange, strongly varied with black on the dorsal region. Ventral surface dark buffy grey, the hairs blackish at their bases. Skull as in *O. pectoralis*, but larger and with wider mesopterygoid fossa.

*Oryzomys caracolus* Thomas.1914. *Oryzomys caracolus* Thos., Ann. & Mag. Nat. Hist. (8) xiv, p. 242.*Type locality*: Northern Venezuela, Galiparé, Cerro del Avila. Alt. 6000 feet. (Type in Brit. Mus. N:o 14. 7. 27. 5. ♀.)

A small species allied to *O. meridensis*. General colouration above greyish brown washed with fulvous on the sides of the body. Ventral surface as in *O. meridensis*, but white pectoral patch usually smaller in extent. Skull with interorbital region more square-edged, palatal foramina longer and toothrow shorter.

**Oryzomys bolivaris** J. Allen.

1901. *Oryzomys bolivaris* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 405.

*Type locality*: Central Ecuador, Porvenir, Bolivar Province. Alt. 1800 m. (Type in Brit. Mus. N:o 99. 9. 9. 27. ♂.)

A dark-coloured species with small ears and with the tail considerably shorter than the combined length of the head and body. General colouration above dark chestnut brown, becoming lighter and more yellowish brown on the sides of the body. Ventral surface sharply defined white, the hairs plumbeous at their bases. Skull with rather large palatal foramina.

**Oryzomys rivularis** J. Allen.

1901. *Oryzomys rivularis* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 407.

*Type locality*: Northern Ecuador, Rio Verde. Alt. 3200 feet. (Type in Brit. Mus. N:o 1. 1. 6. 5. ♀.)

General colouration and size of ears similar to *O. bolivaris*, but much larger and with the tail much longer than the combined length of the head and body.

**Oryzomys barbacoas barbacoas** J. Allen.

1916. *Oryzomys barbacoas* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 85.

*Type locality*: South-western Colombia, Barbacoas. Alt. 75 feet. (Type in Amer. Museum Nat. Hist. N:o 34193. ♂.)

Similar in essential characters to *O. bolivaris*, but much larger and with the ventral surface cinereous instead of white. No bristly tuft of white hairs at the base of the toe-nails. Skull very stout with strong ridges, narrow nasals and short palatal foramina. Incisors thick and opisthodont.

**Oryzomys barbacoas ochrinus** Thomas.

1921. *Oryzomys barbacoas ochrinus* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 449.

*Type locality*: Western Ecuador, W. of Quito. Alt. 9350 feet. (Type in Brit. Mus. N:o 21. 2. 15. 4. ♂.)

Similar to typical *O. barbacoas*, but brighter and more vivid ochraceous buff. Fur crisp. General colouration above rich glossy ochraceous buff, darkened on the back, bright and rich on the sides. Ventral surface paler buffy. Skull as in *O. barbacoas*, but with broader muzzle. Incisors opisthodont.

**Oryzomys laticeps laticeps** Lund.

1841. *Mus laticeps* Lund, K. Danske Vidensk. Selsk. Afhandl., viii, p. 279.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province. (Type in Zool. Museum, Copenhagen.)

*Syn. Calomys saltator* Winge, E Museo Lundii, I, N:o 3, 1888, p. 48. — Eastern Brazil, Lagoa Santa. (Type in Zool. Museum, Copenhagen.)

General colouration above dull brown very finely grizzled with dark greyish yellow. Ventral surface sharply defined greyish white, the hairs broadly dark slaty at their bases.

**Oryzomys laticeps nitidus** Thomas.1884. *Hesperomys laticeps* var. *nitidus* Thos., Proc. Zool. Soc., London, p. 452.*Type locality*: Central Peru, Amable Maria, Rio Chanchamayo. Alt. 2000 feet. (Type in Brit. Mus. N:o 85. 4. 1. 41. ♂.)

A rather variable form, which sometimes has the upper parts rich fulvous, sometimes dark smoky mouse-grey. The sides of the body are, however, always fulvous. Ventral surface greyish white, washed with pale fulvous.

**Oryzomys laticeps intermedius** Leche.1886. *Hesperomys laticeps* var. *intermedius* Leche, Zool. Jahrb., i, p. 693.*Type locality*: Southern Brazil, Taquara do Mundo Nova, Rio Grande do Sul Province. (Type in Zool. Museum, Copenhagen.)

Slightly larger than typical *O. laticeps*. General colouration above rufous, lined with black and becoming clearer fulvous along the sides of the body. Ventral surface white, the hairs dark slaty at their bases. Skull relatively slender with the zygomatica evenly curved outwards.

**Oryzomys laticeps magdalenae** J. Allen.1899. *Oryzomys magdalenae* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 209.*Type locality*: North-eastern Colombia, Minca, Santa Marta District. Alt. 2000 feet. (Type in Amer. Museum Nat. Hist. N:o 15318. ♀.)

General colouration above yellowish brown strongly varied with black. Sides of the body paler and of a more uniform yellowish brown. Ventral surface uniform whitish grey, the hairs plumbeous at their bases.

**Oryzomys laticeps perenensis** J. Allen.1901. *Oryzomys perenensis* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 406.*Type locality*: Central Peru, Perené, Junin District. Alt. 800 m. (Type in Brit. Mus. N:o 0. 7. 7. 25. ♂.)

Very similar in general colouration, texture of pelage, size and proportions to *O. l. magdalenae*, but with the skull broader and the dentition much heavier.

**Oryzomys goeldi** Thomas.1897. *Oryzomys Goeldi* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 494.*Type locality*: Central Brazil, Itaituba, Rio Tapajoz. (Type in Brit. Mus. N:o 97. 4. 1. 1. ♀.)

Allied to *O. laticeps*, but much smaller. General colouration above dull brown tinged with dark buff. Ventral surface sharply defined greyish white, the hairs slaty grey at their bases.

**Oryzomys boliviae** Thomas.1901. *Oryzomys boliviae* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 536.*Type locality*: Northern Bolivia, Mapiiri, Upper Rio Beni. Alt. 800 m. (Type in Brit. Mus. N:o 1. 1. 1. 64. ♂.)

Allied to *O. l. intermedius*, but with a shorter tail and smaller molars. General colouration above heavily lined fulvous brown, clearing into rich fulvous on the sides of the body. Ventral surface dull white, the hairs slaty at their bases.

#### *Oryzomys lamia* Thomas.

1901. *Oryzomys lamia* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 528.

*Type locality*: Eastern Brazil, Paranahyba, Rio Jordão, S. W. Minas Geraes Province.

Alt. 800 m. (Type in Brit. Mus. N:o 1. 11. 3. 32. ♂.)

A fairly large form, allied to *O. l. intermedius* and *O. boliviae*. Fur soft and close. General colouration above a beautiful ochraceous buff, more or less lined with black on the dorsal region. Flanks bright ochraceous buff. Ventral surface sharply defined white, the hairs slaty at their bases except on chin and inguinal region. Skull with broad muzzle and a broad, distinctly beaded interorbital region.

#### *Oryzomys castaneus* J. Allen.

1901. *Oryzomys castaneus* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 406.

*Type locality*: North-western Ecuador, San Janvier. Alt. 60 feet. (Type in Brit. Mus.

N:o 1. 3. 19. 11. ♀.)

Similar to *O. l. nitidus*, but much smaller, with very much shorter and narrower hindfeet, relatively shorter tail and much weaker dentition. General colouration above dark reddish brown, becoming paler, more yellowish brown, on the sides of the body. Ventral surface dull whitish, the hairs plumbeous at their bases.

#### *Oryzomys yunganus* Thomas.

1902. *Oryzomys yunganus* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 130.

*Type locality*: Central Bolivia, Charuplaya, Rio Securé. Alt. 1350 m. (Type in Brit. Mus.

N:o 2. 1. 1. 39. ♂.)

Most closely allied to *O. l. perenensis*, but more uniformly rufous. General colouration above dark fulvous, finely and profusely lined with black. Skull with narrower interorbital region and shorter tooththrow.

#### *Oryzomys oniscus* Thomas.

1904. *Oryzomys oniscus* Thos., Ann. & Mag. Nat. Hist. (7) xiii, p. 142.

*Type locality*: Eastern Brazil, Sao Lorenzo, Pernambuco Province. Alt. 50 m. (Type in

Brit. Mus. N:o 3. 10. 1. 42. ♂.)

A medium-sized species allied to *O. laticeps* and *O. intermedius*. Fur close and rather short. General colouration above dark greyish tinged with buffy, becoming darker on the mid-dorsal region and rather more buffy on the sides. Ventral surface greyish white, the hairs slaty at their bases. Skull about as in *O. l. intermedius*, but palatal foramina shorter.

#### *Oryzomys macconnelli* Thomas.

1910. *Oryzomys macconnelli* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 186.

*Type locality*: British Guiana, Rio Supinaam, Demerara District. (Type in Brit. Mus. N:o

10. 5. 4. 34. ♀.)

A large species apparently most closely allied to *O. l. intermedius*. General colouration above bright rich tawny, darkening on the mid-dorsal region and becoming more tawny ochraceous on the sides. Ventral surface sharply defined white, the hairs slaty at their bases. Skull with the general outline rather long and slender.

#### *Oryzomys legatus* Thomas.

1925. *Oryzomys legatus* Thos., Ann. & Mag. Nat. Hist. (9) xv, p. 577.

*Type locality*: Southern Bolivia, Carapari, Yacuiba, Tarija District. Alt. 1000 m. (Type in Brit. Mus. N:o 25. 2. 1. 24. ♂.)

Allied to *O. l. intermedius*. General colouration above dark-lined buffy with brighter buffy sides. Ventral surface white, the hairs slaty at their bases. Skull as in *O. l. intermedius*, but zygomata more spread out behind. Incisors unusually opisthodont.

#### *Oryzomys gracilis* Thomas.

1894. *Oryzomys gracilis* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 358.

*Type locality*: Central Colombia, Concordia, Medellin, Antioquia District. Alt. 5807 feet. (Type in Brit. Mus. N:o 73. 11. 5. 4. ♀.)

Size small. Form very slender and delicate. General colouration above finely grizzled yellowish brown. Ventral surface sharply defined white, the hairs slaty at their bases. Skull with a narrow, delicately built nasal region. Supraorbital edges sharply square with only faint traces of beading. Molars rather narrow.

#### *Oryzomys mollipilosus* J. Allen.

1899. *Oryzomys mollipilosus* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 208.

*Type locality*: North-eastern Colombia, Valparaiso, Santa Marta District. Alt. 5000 feet. (Type in Amer. Museum Nat. Hist. N:o 15323. ♀.)

Allied to *O. gracilis*, but larger and with the ventral surface clear uniform ashy grey instead of white. General colouration above yellowish grey-brown, strongly varied with black on the mid-dorsal region and becoming paler on the sides of the body.

#### *Oryzomys sylvaticus* Thomas.

1900. *Oryzomys sylvaticus* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 272.

*Type locality*: Southern Ecuador, Santa Rosa. Alt. 10 m. (Type in Brit. Mus. N:o 0. 1. 1. 21. ♂.)

Probably most nearly allied to *O. gracilis*. Fur straight, close and rather crisp. General colouration above dull fulvous, considerably darkened with black on the dorsal region, less so on the sides of the body. Ventral surface soiled whitish. Skull larger than that of *O. gracilis* and with the supraorbital edges evenly divergent and finely beaded.

#### *Oryzomys medius* Robinson & Lyon.

1901 *Oryzomys medius* Rob. & Lyon, Proc. United States National Museum, xxiv, N:o 1246, p. 142.

*Type locality*: Northern Venezuela, San Julián, E. of La Guaira. (Type in United States National Museum N:o 105405. ♂.)

Apparently most closely allied to *O. mollipilosus*, but external characters about as in *O. l. magdalenae*. General colouration above a mixture of raw sienna and deep blackish brown. Ventral surface light grey, the hairs slaty at their bases.

#### *Oryzomys palmirae* J. Allen.

1912. *Oryzomys palmirae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 83.

*Type locality*: Central Colombia, Palmira. Alt. 6200 feet. (Type in Amer. Museum Nat. Hist. N:o 32224. ♀.)

Allied to *O. mollipilosus*, but smaller. General colouration above yellowish tawny olive, finely grizzled with blackish on the dorsal region and becoming more yellowish on the sides of the body. Ventral surface sharply defined ash white, the hairs with narrow dark grey bases.

#### *Oryzomys auriventer auriventer* Thomas.

1899. *Oryzomys auriventer* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 379.

*Type locality*: Eastern Ecuador, Mirador, Upper Rio Pastaza. Alt. 1500 m. (Type in Brit. Mus. N:o 99. 9. 9. 25. ♂.)

A large, dark species with a rich fulvous underside. Fur straight and fine. General colouration above coarsely lined fulvous and black, the sides of the body somewhat clearer dull fulvous. Ventral surface rich ochraceous fulvous, the hairs slaty grey at their bases. Skull with supraorbital edges sharply square and slightly ridged.

#### *Oryzomys auriventer nimbosus* Anthony.

1926. *Oryzomys auriventer nimbosus* Anth., Amer. Museum Novitates N:o 240, p. 4.

*Type locality*: Eastern Ecuador, San Antonio, Rio Ulva. Alt. 6700 feet. (Type in Amer. Museum Nat. Hist. N:o 67337. ♂.)

Essential characters as in *O. auriventer*, but fur longer and softer. Colouration less strongly ochraceous and with a small white gular patch. Skull slightly smaller than that of *O. auriventer*, with the palatine foramina shorter, subcordate in shape. (The present form is said to be intermediate in many respects between typical *O. albigularis* and true *O. auriventer*.)

#### *Oryzomys subflavus* Wagner.

1842. *Hesperomys subflavus* Wagn., Arch. für Naturgesch. (i) viii, p. 362.

*Type locality*: Brazil. (Type presumably in Zool. Museum, Munich.)

*Syn. Calomys laticeps* Winge (nec Lund), E Museo Lundii (i) iii, 1888, p. 51.

*Mus vulpinus* Lund (nec Brants), K. Danske Vidensk. Selsk. Afhandl., viii, 1841, p. 279.

*Mus vulpinoides* Schinz, Syn. Mamm., ii, 1845, p. 193.

General colouration above brownish yellow, strongly sprinkled with black along the dorsal region. Ventral surface whitish, the hairs slaty at their bases.

#### *Oryzomys mureliae* J. Allen.

1915. *Oryzomys mureliae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxiv, p. 630.

*Type locality*: Eastern Colombia, Muralla, Rio Bodoquera, Caquetá region. Alt. 600 feet. (Type in Amer. Museum Nat. Hist. N:o 33756. ♂.)

*Oryzomys incertus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, 1913, p. 598 (preoccupied).

Allied to *O. subflavus*. General colouration above deep ochraceous orange strongly varied with black on the dorsal region. Flanks deep orange, sharply defined from the white underparts, the hairs of which are deep plumbeous at their bases. Tail light brown, indistinctly bicolor at base.

#### *Oryzomys trinitatis* J. Allen & Chapman.

1893. *Oryzomys trinitatis* J. Allen & Chapm., Bull. Amer. Museum Nat. Hist., v, p. 213.

*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5943/4673. ♂.)

Fur soft and rather long. General colouration above bright yellowish rufous, darker and nearly chestnut as well as finely varied with black-tipped hairs along the mid-dorsal region, lighter and more yellowish along the sides of the body. Ventral surface greyish white, the hairs grey at their bases.

#### *Oryzomys palmarius* J. Allen.

1899. *Oryzomys palmarius* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 210.

*Type locality*: Northern Venezuela, Quebrada Secca, Cumana District. Alt. 3000 feet. (Type in Amer. Museum Nat. Hist. N:o 14733. ♂.)

Allied to *O. trinitatis*, but smaller and paler. General colouration above yellowish grey-brown varied with black and passing into fawn on the sides of the body. Head greyer. Ventral surface dull greyish white.

#### *Oryzomys flavicans flavicans* Thomas.

1894. *Oryzomys flavicans* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 351.

*Type locality*: Western Venezuela, Merida. (Type in Brit. Mus. N:o 94. 9. 25.14. ♂.)

A small species apparently most closely allied to *O. trinitatis*. General colouration above rich fulvous, lined with brown on the back and becoming more ochraceous buff on the sides of the body. Ventral surface pale yellowish buff, whiter on the chest. Belly hairs slaty grey at their extreme bases. Skull strongly built with broad interorbital region and short palatine foramina.

#### *Oryzomys flavicans subluteus* Thomas.

1898. *Oryzomys flavicans subluteus* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 268.

*Type locality*: Western Colombia, Cundinamarca District. (Type in Brit. Mus. N:o 98. 7. 3. 2.)

Similar to *O. flavicans* in size and general essentials, but ventral surface darker, the hairs slaty for their basal halves and deep yellowish buff terminally.

#### *Oryzomys trichurus* J. Allen.

1899. *Oryzomys trichurus* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 206.

*Type locality*: North-eastern Colombia, Bonda, Santa Marta District. Alt. 500 feet. (Type in Amer. Museum Nat. Hist. N:o 15328. ♂.)

General colouration above rich yellowish brown — almost ochraceous — although conspicuously lined with black. Ventral surface pure white, the hairs white to their roots. Tail heavily clothed with hairs. Possibly not an *Oryzomys*, and perhaps a *Rhipidomys*.

**Oryzomys fulviventer** J. Allen.

1899. *Oryzomys fulviventer* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 212.

*Type locality*: Northern Venezuela, Quebrada Secca, Cumana District. Alt. 3000 feet.  
(Type in Amer. Museum Nat. Hist. N:o 14735. ♀.)

General colouration above dark fulvous brown finely grizzled with black. Ventral surface strongly washed with fulvous except on chin and throat, which are whitish.

**Oryzomys helvolus** J. Allen.

1913. *Oryzomys helvolus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 597.

*Type locality*: Eastern Colombia, Villavicencio. Alt. 1600 feet. (Type in Amer. Museum Nat. Hist. N:o 34578. ♂.)

Closely allied to *O. fulviventer*, but slightly larger and paler. General colouration above ferruginous finely varied with black. Ventral surface yellowish white, sharply defined from the flanks, which are yellowish orange.<sup>1</sup>

**Oryzomys galapagensis** Waterhouse.

1839. *Mus galapagensis* Waterh., Zool. Voy. »Beagle», pt. II, Mamm., p. 65.

*Type locality*: Chatham Island, Galapagos Islands. (Type in Brit. Mus. N:o 55. 12. 24. 175.)

General colouration above brownish intermixed with black and pale yellow. Sides of the body more yellowish and with less abundant long black hairs. Ventral surface white, faintly tinged with yellowish, the hairs grey at their bases.

[**Oryzomys bauri** J. Allen.]

1892. *Oryzomys bauri* J. Allen, Bull. Amer. Museum Nat. Hist., iv, p. 48.

*Type locality*: Barrington Island, Galapagos Islands. (Type presumably in Amer. Mus. Nat. Hist. N:o ? ♂.)

Fur rather long. General colouration above dusky greyish brown faintly varied with pale yellowish brown. Muzzle strongly tinged with yellowish brown. Ventral surface white, the hairs plumbeous at their bases. According to OSGOOD hardly separable from *O. galapagensis*.

**Oryzomys xantheolus xantheolus** Thomas.

1894. *Oryzomys xantheolus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 354.

*Type locality*: North-western Peru, Tumbes, Piura District. (Type in Brit. Mus. N:o 85. 4. 1. 47.)

Allied to *O. galapagensis*, but fur shorter and harsher, tail longer and of a somewhat different colour. General colouration above coarsely grizzled yellow and black, becoming more buff on the sides of the body. Ventral surface sharply defined white, the hairs slaty at their bases. Skull with a short and broad muzzle. Supraorbital margins sharply edged and beaded.

<sup>1</sup> Mr. G. H. H. TATE suggests in a recent letter that *Oryzomys klagesi* J. ALLEN (cf. p. 50) may be identical with the present form. In case this is correct, *O. helvolus* will become a synonym.

[*Oryzomys xanthaolus baroni* J. Allen.]1897. *Oryzomys baroni* J. Allen, Bull. Amer. Museum Nat. Hist., ix, p. 117.*Type locality*: North-western Peru, Malca, Cajabamba District. Alt. 8000 feet. (Type in Amer. Museum Nat. Hist. N:o 11820/10112. ♀.)Said to differ from *O. xanthaolus* by being much larger and less yellow, but from all appearance identical with the typical form.*Oryzomys polius* Osgood.1913. *Oryzomys polius* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 9, p. 97.*Type locality*: Northern Peru, Tambo Carrizal, E. of Balsas Mountains. Alt. 5000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19765. ♀.)

A large, long-tailed species. General colouration above smoke-grey, tinged with fawn on the dorsal area and mixed with dusky. Ventral surface greyish white, the hairs slaty at their bases except on the chin where they are white to the roots. Skull rather elongate with a broad and heavy rostrum. Palatal foramina very large.

*Oryzomys pyrrhorhinus* Wied.1826. *Mus pyrrhorhinus* Wied, Beitr. Naturgesch. Bras., II, p. 418.*Type locality*: Eastern Brazil, Bahia Province. (Type presumably in Zool. Museum, Berlin.)

General colouration above blackish finely grizzled with yellow on the anterior portion of the back and with bright rufous posteriorly. Muzzle and ears rufous. Ventral surface pure white.

*Oryzomys angouya* Desmarest.1819. *Mus angouya* Desm., Nouv. Dict. d'Hist. Nat., 2:e édit., art Rat, esp. 22.*Type locality*: Paraguay. (Type apparently lost, as it is not now kept in the Paris Museum.)

General colouration above strongly grizzled with ochraceous buff and black, becoming clearer buff on the sides of the body. Ventral surface soiled greyish white with a pale buff wash, the hairs slaty at their bases.

*Oryzomys flavescens* Waterhouse.1837. *Mus flavescens* Waterh., Proc. Zool. Soc., London, p. 19.*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 162.)

Fur long and moderately soft. General colouration above bright brownish yellow intermixed with black hairs. Sides of the body brighter yellow and rump more orange. Ventral surface yellowish white, the hairs with their bases deep plumbeous. Tail long, bicolor.

*Oryzomys vicencianus* J. Allen.1913. *Oryzomys vicencianus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 598.*Type locality*: Eastern Colombia, Villavicencio. Alt. 1600 feet. (Type in Amer. Museum Nat. Hist. N:o 34584. ♂.)

A small species with long fur. General colouration above yellowish buff finely grizzled with black. Sides of the body chrome-yellow forming a lateral line of demarcation. Throat white. Remainder of ventral surface pale buff.

#### *Oryzomys chaparensis* Osgood.

1916. *Oryzomys chaparensis* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 14, p. 205.

*Type locality*: Eastern Bolivia, Todos Santos, Río Chaparé, Cochabamba District. Alt. 1200 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 21330. ♂.)

A medium-sized species with rather short fur. General colouration above ochraceous buff mixed with dusky, forming a general effect of wood brown. A rather indistinct ochraceous buff lateral line of demarcation. Ventral surface creamy, the hairs on belly and breast with dark bases. Tail about as long as the combined length of head and body. Skull slightly larger and more angular than that of *O. eliurus* and with broader nasals.

#### *Oryzomys speciosus* J. Allen & Chapman.

1893. *Oryzomys speciosus* J. Allen & Chapman, Bull. Amer. Museum Nat. Hist., v, p. 212.

*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5942/4672. ♀.)

Fur short, thick and soft. General colouration above yellowish rufous, becoming darker reddish brown and intermixed with some black hairs on the mid-dorsal region. Sides of the body paler, more yellowish. Ventral surface pure white to the bases of the hairs.

#### *Oryzomys wavrini* Thomas.

1921. *Oryzomys wavrini* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 177.

*Type locality*: Paraguay, Jesematatha, Northern Chaco. Alt. 100 m. (Type in Brit. Mus. N:o 20. 12. 18. 16. ♂.)

A medium-sized species with a proportionately short tail. Fur long and coarse. General colouration above heavily lined buffy brown, becoming clearer buffy on the flanks. Ventral surface dull whitish, slightly tinged with buffy, the hairs slaty at their bases. Skull slender, not heavily ridged. Interorbital region narrow with sharply square, but only scarcely ridged edges. Zygomatic plate strongly concave in front. Incisors rather opisthodont.

### Genus *Nesoryzomys* Heller.

1904. *Nesoryzomys* Heller, Proc. California Acad. Sci., (3) iii, p. 242. — *Type*: *Nesoryzomys narboroughi* Heller.

Form murine. Fur soft and dense. Tail relatively short. Hindfeet broad. Soles markedly granulated with plantar tubercles reduced.

Skull about as in *Oryzomys*, but with interorbital region much narrower, constricted and without marked ridges, the sides being evenly concave. Muzzle rather long and narrow. Palatine foramina reaching to the level of the first lamina

of the first upper molar. Mesopterygoid fossa rather wide. Lateral pits present, but reduced in size and depth.

Dentition as in *Oryzomys*.

#### *Nesoryzomys indefessus* Thomas.

1899. *Oryzomys indefessus* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 280.

*Type locality*: Indefatigable Island, Galapagos Islands. (Type in Brit. Mus. N:o 99. 8. 28. 1. ♂.)

Fur coarse and shaggy. General colouration above dull mouse-grey, heavily lined with black and slightly tinged with fawn on the posterior dorsal region. Ventral surface greyish white, the hairs slaty at their bases.

#### *Nesoryzomys narboroughi* Heller.

1904. *Nesoryzomys narboroughi* Heller, Proc. Calif. Acad. Sci. (3) iii, p. 242.

*Type locality*: Narborough Island, Mangrove Point, Galapagos Islands. (Type in Leland Stanford Junior University Zool. Coll. N:o 2470. ♂.)

Similar to *N. indefessus*, but larger and darker. General colouration above blackish strongly intermixed with rusty and yellowish brown, the sides of the body clearer yellowish brown. Ventral surface drab-grey, the hairs plumbeous at their bases. Skull with longer nasals and shorter palatal foramina.

#### *Nesoryzomys darwini* Osgood.

1929. *Nesoryzomys darwini* Osg., Field Museum Nat. Hist., Zool. ser., XVII, N:o 2, p. 23.

*Type locality*: Indefatigable Island, Academy Bay, Galapagos Islands. (Type in Field Museum Nat. Hist., Chicago. N:o 30830. ♀.)

Differs from *N. indefessus* and *N. narboroughi* by decidedly smaller size. Colouration bright fulvous both above and below. Upperparts intermixed with blackish hairs.

### Genus *Oligoryzomys* Bangs.

1900. *Oligoryzomys* Bangs, Proc. New England Zool. Club, i, p. 94. — *Type*: *Oligoryzomys (Oryzomys) navus* Bangs.

*Syn. Microroryzomys* Thomas, Proc. United States National Museum, 58, N:o 2333, 1920, p. 229. — *Type*: *Hesperomys minutus* Tomes.

Form slender, murine. Size very small. Fur thick, soft and woolly. Ears rather large. Tail longer than the combined length of head and body, finely haired but not pencilled terminally. Pollex with a rounded nail. Forefeet small. Hindfeet slender, less than 26 mm. in length. Claws of hindfeet longer and stronger than those of the forefeet. Palms and soles naked. Fifth hindtoe moderately long. Mammae: 2—2 = 8.

Skull small and delicately built. Interorbital region narrow, the constriction about equal to the width of the rostrum between the anteorbital foramina. Supra-orbital edges square, but not beaded. Anterior zygomatic plate slightly projecting forwards, but enough to be visible from above. Braincase smooth and rounded.

Nasals with a decided longitudinal concavity mesially. Interparietal large. Palate extending backwards some distance beyond the level of the last molars, with distinct lateral pits. Palatine foramina long, widely open and well penetrating between the first molars. Parapterygoid fossae broad, but comparatively shallow.

Incisors very narrow and delicate, ungrooved. Dentition weak. Molars very small, with small accessory cusps as in *Oryzomys*, but re-entrant angles usually broader. The upper molars are early exhibiting small, circular, central enamel islands. On the second upper molar the protocone and the hypocone are of about equal size, and the inner re-entrant angle shows a central position.

#### ***Oligoryzomys navus navus* Bangs.**

1899. *Oryzomys navus* Bangs, Proc. Biol. Soc., Washington, xiii, p. 9.

*Type locality*: North-eastern Colombia, Pueblo Viejo, Sierra Nevada de Santa Marta. Alt. 8000 feet. (Type in Museum of Comparative Zool., Cambridge, Mass. N:o 8107. ♂.)

General colouration above tawny ochraceous more or less lined with brownish black-tipped hairs, most numerous on crown and centre of back. Sides of the body paler and more buffy. Throat white. Remainder of ventral surface white, the hairs grey at their bases.

#### ***Oligoryzomys navus messorius* Thomas.**

1901. *Oryzomys navus messorius* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 151.

*Type locality*: British Guiana, Kanuku Mountains. (Type in Brit. Mus. N:o 1. 6. 4. 97. ♀.)

Allied to *O. navus*, but tail shorter. General colouration above grizzled greyish fawn, becoming more rufous on the rump. Ventral surface dull whitish, the hairs grey to their bases.

#### ***Oligoryzomys microtus* J. Allen.**

1916. *Oryzomys (Oligoryzomys) microtus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 525.

*Type locality*: Central Brazil, Lower Rio Solimoës. (Type in Amer. Museum Nat. Hist. N:o 37091. ♂.)

Size about as in *O. n. navus*, but much less rufous above. General colouration above dull yellowish brown finely lined with black-tipped hairs. Ventral surface nearly white.

#### ***Oligoryzomys griseolus* Osgood.**

1912. *Oryzomys griseolus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 5, p. 49.

*Type locality*: Western Venezuela, West of Paramo de Tama, Upper Rio Tachira. Alt. 6000—7000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 18635. ♂.)

General colouration above pale clay-colour strongly intermixed with black-tipped hairs, producing a grizzled effect most distinct on forehead and sides of face, where a grey colour predominates. Ventral surface buffy ochraceous, the hairs slaty at their bases. Centre of chin and throat whitish, the hairs white to their roots.

#### ***Oligoryzomys arenalis* Thomas.**

1913. *Oryzomys arenalis* Thos., Ann. & Mag. Nat. Hist. (8) xii, p. 571.

*Type locality*: North-western Peru, Eten. Alt, 10 m. (Type in Brit. Mus. N:o 0. 3. 1. 60. ♂.)

Size small. General colouration above near clay-colour, the underlying colour buffy, lined with dark brown. Sides of the body buffy. Ventral surface creamy white, slightly washed with buffy, the hairs slaty at their bases. Skull with anterior zygomatic plate well-developed.<sup>1</sup>

**Oligoryzomys delicatus** J. Allen & Chapman.

1897. *Oryzomys delicatus* J. Allen & Chapman, Bull. Amer. Museum Nat. Hist., ix, p. 19.

*Type locality*: Trinidad, Caparo. (Type in Amer. Museum Nat. Hist. N:o 7317/5925. ♂.)

Size small. General colouration above yellowish brown, mixed sparingly with black-tipped hairs and becoming darker and more rufous on mid-dorsal area. Rump clear yellowish rufous. Sides of the body paler, yellowish buff. Ventral surface clear buff.

**Oligoryzomys stolzmanni** Thomas.

1894. *Oryzomys Stolzmanni* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 357.

*Type locality*: Northern Peru, Huambo. Alt. 3700 feet. (Type in Brit. Mus. N:o 81. 9. 7. 11. ♀.)

Fur rather close and stiff. General colouration above dark rufous brown finely lined with black, greyer and less rufous on the crown. Chin white. Chest and remainder of underparts dull buffy yellow, the hairs slaty at their bases.

**Oligoryzomys tenuipes** J. Allen.

1904. *Oryzomys tenuipes* J. Allen, Bull. Amer. Museum Nat. Hist., xx, p. 328.

*Type locality*: Western Venezuela, Sierra de Merida. Alt. 1630 m. (Type in Amer. Museum Nat. Hist. N:o 21330. ♀.)

Allied to *O. stolzmanni*, but smaller, with narrower and slenderer feet and relatively shorter tail. General colouration above dark brown tinged with rufous, the sides of the body greyer and only slightly fulvous. Ventral surface buffy whitish. Skull with slenderer rostrum and shorter posterior nares.

**Oligoryzomys munchiquensis** J. Allen.

1912. *Oryzomys (Oligoryzomys) munchiquensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 85.

*Type locality*: Western Colombia, La Florida, Cauca District. Alt. 7700 feet. (Type in Amer. Museum Nat. Hist. N:o 32603. ♀.)

A miniature of *O. stolzmanni* with the head blackish varied with grey, instead of uniform with the remainder of the dorsal surface, which is pale ochraceous strongly grizzled with black. Ventral surface whitish washed with pale buff.

<sup>1</sup> Some authors have considered this form identical with *Mus peruvianus* Peale (Zool. Expl. Exp., Mamm., 1st. ed., p. 51, 1848). This form, however, appears to be *Mus musculus*, but as the type specimen apparently is lost, the question of its identity or not cannot be solved. In the second edition of the United States Expl. Expedition, vol. III, 1858, p. 43, *Mus peruvianus* Peale has already been considered a synonym of *Drymomys parvulus* Tschudi, which is = *Mus musculus*.

**Oligoryzomys andinus** Osgood.

1914. *Oryzomys andinus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 12, p. 156.

*Type locality*: Northern Peru, Hacienda Llagueda, Upper Rio Chicama. Alt. 6000 feet.

(Type in Field Museum Nat. Hist., Chicago. N:o 19430. ♂.)

A medium-sized form allied to *O. stolzmanni*, but feet much larger and tail very long. General colouration above pale ochraceous, finely lined with dusky. Sides of the body clearer ochraceous. Ventral surface creamy white, the hairs slaty at their bases. Skull about as in *O. stolzmanni*, but relatively narrower and with teeth and bullae smaller.

**Oligoryzomys utiaritensis** J. Allen.

1916. *Oryzomys (Oligoryzomys) utiaritensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 527.

*Type locality*: Southern Brazil, Utiarity, Rio Papagaio, Matto Grosso Province. Alt. 1500—2500 feet. (Type in Amer. Museum Nat. Hist. N:o 37541. ♀.)

Similar to *O. stolzmanni*, but paler, more yellowish above and somewhat smaller. General colouration above clay-colour finely lined with black, the sides of the body nearly pure clay-colour. Ventral surface greyish white, the hairs darker at their bases.

**Oligoryzomys mattogrossae** J. Allen.

1916. *Oryzomys (Oligoryzomys) mattogrossae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 528.

*Type locality*: Southern Brazil, Utiarity, Rio Papagaio, Matto Grosso Province. Alt. 1500—2500 feet. (Type in Amer. Museum Nat. Hist. N:o 37542. ♂.)

Allied to *O. utiaritensis*, but ventral surface strongly buffy instead of greyish white. Colouration above more rufous especially on the rump. Tail relatively longer.

**Oligoryzomys minutus minutus** Tomes.

1860. *Hesperomys minutus* Tomes, Proc. Zool. Soc., London, p. 215.

*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 7. l. 1. 112. imm.)

Fur very long and soft. General colouration above grizzled rufous brown slightly intermixed with black. Ventral surface only slightly paler.

**Oligoryzomys minutus maranonicus** Osgood.

1914. *Oryzomys stolzmanni maranonicus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 12, p. 155.

*Type locality*: Northern Peru, Hacienda Limon, Balsas, Rio Marañon. Alt. 3000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19449. ♂.)

General colouration above ochraceous finely lined with dusky, the sides of the body more ochraceous. Ventral surface sharply defined soiled whitish, the hairs slaty at their bases.

**Oligoryzomys fulvirostris** J. Allen.

1912. *Oryzomys (Oligoryzomys) fulvirostris* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 86.  
*Type locality*: Western Colombia, Munchique, Cauca District. Alt. 8325 feet. (Type in Amer. Museum Nat. Hist. N:o 32567. ♀.)

General colouration above rusty brown, strongly lined and grizzled with black and yellowish. Sides of the body more yellowish, though not sharply defined. A yellowish nose-spot. Ventral surface ochraceous buff, becoming greyish buff on chin and throat.

Probably a member of the genus *Thallomyscus*, if this is really worthy of separation from *Oligoryzomys*.

[Genus **Thallomyscus** Thomas.]

1926. *Thallomyscus* Thomas, Ann. & Mag. Nat. Hist. (9), xvii, p. 612. — *Type: Oryzomys dryas* Thos.

Form slender. Size very small. Fur thick, close and woolly. Ears of medium length. Tail considerably longer than the combined length of head and body, very finely scaled and thinly haired. Pollex with a nail. Hind-feet slender, less than 23 mm. in length. Palms and soles naked except just under the heel. Fifth hindtoe reaching to about the base of the second phalanx of the fourth toe.

Skull small and delicately built. Nasals with a longitudinal concavity along median line. Interorbital region narrow, square-edged, but not ridged. Brain-case smooth and rounded. Interparietal broad transversely, but narrow antero-posteriorly. Anterior zygomatic plate very narrow, almost vertical and not projecting forwards enough to be visible from above. Palate extending posteriorly a little beyond the plane of the last molars, with distinct lateral pits. Palatine foramina well open, but barely reaching to the front edge of the first upper molar. Mesopterygoid fossa almost parallel-sided. Parapterygoid fossae broad and shallow, not pointed anteriorly.

Incisors very narrow, ungrooved. Molars small and delicate, *Oryzomys*-like in pattern.

Most probably not distinct from *Oligoryzomys*, as the generic characters of »*Thallomyscus*» seem to be too vague for creating a separate genus.

**Thallomyscus dryas dryas** Thomas.

1898. *Oryzomys dryas* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 267.  
*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 59. 11. 1. 11.)

Size small. Fur thick, close and woolly. General colouration above rich fulvous rufous, lined with black on dorsal area and becoming clearer fulvous on the sides of the body and on the ventral surface, the hairs slaty at their bases. Skull delicately built and only slightly ridged. Teeth small.

**Thallomyscus dryas humilior** Thomas.1898. *Oryzomys dryas humilior* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 268.*Type locality*: Central Colombia, Bogotá region. Alt. 8750 feet. (Type in Brit. Mus. N:o 98. 7. 3. 3. ♂.)

Smaller and less rufous (almost dull brownish yellow) both above and below than *T. d. dryas*. Skull with supraorbital edges less sharply squared and with shorter palatine foramina.

**Thallomyscus aurillus** Thomas.1917. *Oryzomys (Microryzomys) aurillus* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 1.*Type locality*: Central Peru, Torontoy, Cuzco District. Alt. 9500 feet. (Type in United States National Museum. N:o 194795. ♀.)

Allied to *T. d. dryas*, but distinguished by duller colour and longer ears. General colouration above dull dark buffy. Ventral surface washed with dull buffy, the hairs dark slaty at their bases.

**Genus Melanomys** Thomas.1902. **Melanomys** Thomas, Ann. & Mag. Nat. Hist. (7) x, p. 248. — *Type*: *Oryzomys phaeopus* Thos.

Form robust, rather *Akodon*-like. Fur thick and generally soft. Colouration very dark, with the ventral surface not strongly contrasted. Ears of medium size. Tail short — about three-fourths the combined length of the head and body — and thinly haired. Pollex with a nail. Hindfeet scaly, comparatively broad and rather stout. Forefeet also scaly. Palms and soles naked. Mammae: 2—2 = 8.

Skull broad and short. Rostrum short and nearly straight. Interorbital region broad with distinctly beaded supraorbital edges. Braincase broad and rounded. Interparietal rather narrow antero-posteriorly. Zygomatic slender. Anterior zygomatic plate rather broad, nearly vertical or slightly concave, rounded above and very little projecting forwards when viewed from above. Palate broad and extending posteriorly beyond the plane of the last molars. Distinct lateral pits present. Palatine foramina short, not reaching to the level of the first molars. Parapterygoid fossae broad and relatively shallow. Bullae rather small.

Incisors thin and weak, ungrooved. Upper incisors nearly orthodont. Dentition about as in *Oryzomys*, but molars slightly hypsodont. First upper molar with oblique commisures on parastyle and protocone. Secondary parastyle rudimentary. Second lower molar with the paraconulid distinctly developed.

**Melanomys caliginosus caliginosus** Tomes.1860. *Hesperomys caliginosus* Tomes, Proc. Zool. Soc., London, p. 263.*Type locality*: Western Ecuador, «Esmeraldas». (Type in Brit. Mus. N:o 7. 1. 1. 128.)

General colouration above brown, washed with rather pale yellow and finely lined with black especially along the dorsal region. Ventral surface pale buffy

yellow, the hairs pale grey at their bases. Skull with unusually long rostrum. Palatal foramina longer than the length of the maxillary toothrow.

**Melanomys caliginosus oroensis J. Allen.**

1913. *Melanomys caliginosus oroensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 538.  
*Type locality*: Western Ecuador, Rio de Oro, Manavi Province. Alt. 1500 feet. (Type in Amer. Museum Nat. Hist. N:o 34380. ♀.)

Similar to *M. c. caliginosus*, but much darker. General colouration above dusky brown finely grizzled with ochraceous brown. Ventral surface dull brownish grey washed with pale buffy.

**Melanomys affinis affinis J. Allen.**

1912. *Oryzomys (Melanomys) obscurior affinis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 88.  
*Type locality*: Western Colombia, San José, Cauca District. Alt. 200 feet. (Type in Amer. Museum Nat. Hist. N:o 31690. ♂.)

A dark form. Upperparts of the body strongly washed with chestnut red. Ventral surface rufescent, but the hairs plumbeous at their bases. Skull with short rostrum and short palatal foramina.

**Melanomys affinis monticola J. Allen.**

1913. *Melanomys affinis monticola* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 540.  
*Type locality*: Western Colombia, Gallera, Cauca District. Alt. 5700 feet. (Type in Amer. Museum Nat. Hist. N:o 32392. ♂.)

Very similar to *M. a. affinis*, but the hair-tips rather yellower and less reddish. General colouration above dark brown strongly washed with orange ochraceous. Ventral surface ochraceous tawny, the hairs grey at their bases.

**Melanomys phaeopus phaeopus Thomas.**

1894. *Oryzomys phaeopus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 355.  
*Type locality*: Central Ecuador, Pallatanga. Alt. 7000 feet. (Type in Brit. Mus. N:o 59. 11. 1. 9. ♂.)

General colouration above coarsely grizzled fulvous and black. Ventral surface dirty buff, the hairs plumbeous at their bases. Skull with palatal foramina of about the same length as that of the maxillary toothrow.

**Melanomys phaeopus olivinus Thomas.**

1902. *Oryzomys phaeopus olivinus* Thos., Ann. & Mag. Nat. Hist. (7) x, p. 247.  
*Type locality*: South-eastern Ecuador, Zaruma. Alt. 1000 m. (Type in Brit. Mus. N:o 0. 2. 9. 44. ♀.)

Similar to *M. p. phaeopus*, but general colouration grizzled olivaceous and bistre. Feet dark grey.

**Melanomys phaeopus vallicola J. Allen.**

1913. *Melanomys phaeopus vallicola* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 544.  
*Type locality*: Central Colombia, Rio Frio, Cauca District. Alt. 3500 feet. (Type in Amer. Museum Nat. Hist. N:o 32903. ♂.)

Closely allied to *M. obscurior*, but differing by its much smaller size and paler colouration, especially on the ventral surface.

**Melanomys phaeopus tolimensis J. Allen.**

1913. *Melanomys phaeopus tolimensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 545.  
*Type locality*: Central Colombia, Rio Toché, Tolima District. Alt. 6800 feet. (Type in Amer. Museum Nat. Hist. N:o 32976. ♂.)

Larger and darker than *M. p. phaeopus*. Ventral surface paler and yellower. Feet, ears and tail dark brown.

**Melanomys lomitensis J. Allen.**

1913. *Melanomys lomitensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 545.  
*Type locality*: Western Colombia, Las Lomitas. Alt. 5000 feet. (Type in Amer. Museum Nat. Hist. N:o 32214. ♂.)

General colouration above ochraceous tawny minutely varied with black. Ventral surface yellowish tawny. Feet rusty brown. Tail unicolor. Size small. Skull with very short rostrum and unusually short nasals.

**Melanomys obscurior Thomas.**

1894. *Oryzomys phaeopus obscurior* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 356.  
*Type locality*: Central Colombia, Concordia, Medellin, Antioquia District. Alt. 3000 feet. (Type in Brit. Mus. N:o 73. 11. 5. 5.)

A very dark form. Fur on posterior portion of back nearly black with a few yellow-tipped hairs. Tail unicolor. Feet short and rather delicate.

**Melanomys buenavistae J. Allen.**

1913. *Melanomys buenavistae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 547.  
*Type locality*: Eastern Colombia, Buenavista. Alt. 4500 feet. (Type in Amer. Museum Nat. Hist. N:o 34567. ♂.)

Size large. Fur long and soft. General colouration above grizzled with ochraceous buff and black, darkest on back and more ochraceous on the sides of the body. Ventral surface dull pale tawny, the hairs plumbeous at their bases. Skull rather massive.

**Melanomys columbianus J. Allen.**

1899. *Akodon columbianus* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 203.  
*Type locality*: North-eastern Colombia, Manzanares, Santa Marta District. Alt. 3000 feet. (Type in Amer. Museum Nat. Hist. N:o 15336. ♂.)

A very large form. General colouration above dark brown, minutely grizzled with black and ochraceous. Ventral surface tawny, the hairs plumbeous at their bases.

**Melanomys robustulus** Thomas.1914. *Melanomys robustulus* Thos., Ann. & Mag. Nat. Hist. (8) xiv, p. 243.*Type locality*: Eastern Ecuador, Gualaquiza. Alt. 2500 feet. (Type in Brit. Mus. N:o 14. 4. 25.66. ♀.)

Size large. Fur close and crisp. General colouration above dark coppery brown. Ventral surface similar, but only slightly lighter. Skull with swollen braincase, short muzzle and a broad interorbital region with well-marked supraorbital edges.

**Genus Neacomys** Thomas.1900. *Neacomys* Thomas, Ann. & Mag. Nat. Hist. (7) v, p. 153. — *Type: Hesperomys (Calomys) spinosus* Thos.

Size small. Fur composed of flattened, grooved spines intermixed with slender hairs, the spines most numerous on the back, less so on the sides of the body and absent on the ventral surface. Tail distinctly scaled, but only thinly clothed with hairs except at the tip, where they form an inconspicuous pencil. Footpads small, but distinct. Soles smooth on proximal, but granulated on distal halves. Fifth hind toe barely reaching to the middle of the first phalanx of the fourth toe. Mammae: 1—2 = 6.

Skull low and broad. Interorbital region distinctly beaded. Interparietal comparatively large. Anterior zygomatic plate slightly projecting forwards. Bullae small. Palatine foramina short, but widely open. Mesopterygoid fossa rather wide, but not extending to between the last molars.

Dentition as in *Oryzomys*, but molars rather small in proportion to the general size of the skull.

**Neacomys spinosus spinosus** Thomas.1882. *Hesperomys (Calomys) spinosus* Thos., Proc. Zool. Soc., London, p. 105.*Type locality*: Northern Peru, Huambo. Alt. 3700 feet. (Type in Brit. Mus. N:o 81. 9. 7. 25. ♂.)

Fur of medium length, composed of flattened spines intermixed with fine hairs, the spines predominating on the back, becoming fewer on the sides and disappearing on the belly. General colouration above dark grizzled rufous and black, the spines with black tips and the hairs with rich orange tips. Sides of the body paler. Belly pale fulvous white, the hairs slaty at their bases. Skull with supraorbital ridges sharp and well-developed.

**Neacomys spinosus tenuipes** Thomas.1900. *Neacomys spinosus tenuipes* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 153.*Type locality*: Central Colombia, Guaquimay, Bogotá region. (Type in Brit. Mus. N:o 99. 10. 3. 74. ♀.)

Very similar to *N. spinosus*, but general tone of colouration rather less vivid, the back darker and the sides shading off into fulvous rather than rufous. Feet shorter and more slender.

**Neacomys spinosus amoenus** Thomas.

1903. *Neacomys spinosus amoenus* Thos., Proc. Zool. Soc., London, II, p. 239.

*Type locality*: Southern Brazil, Santa Anna de Chapada, Matto Grosso Province. Alt. 800 m. (Type in Brit. Mus. N:o 3. 7. 7. 84. ♂.)

Somewhat larger than typical *N. spinosus*. Colouration brighter. Ventral surface pure white, the hairs white to their roots. Tail rather longer.

**Neacomys guianae** Thomas.

1905. *Neacomys guianae* Thos., Ann. & Mag. Nat. Hist. (7) xvi, p. 310.

*Type locality*: British Guiana, Demerara River. Alt. 120 feet. (Type in Brit. Mus. N:o 5. 11. 1. 12. ♂.)

Very similar to *N. spinosus*, but much smaller. General colouration above dark fulvous heavily lined with blackish, darker on the head and brighter fulvous on the sides. Ventral surface pure sharply defined white, the hairs white to their bases. Skull as in *N. spinosus*, but smaller.

**Neacomys pusillus** J. Allen.

1912. *Neacomys pusillus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 81.

*Type locality*: Western Colombia, San José, Cauca District. Alt. 200 feet. (Type in Amer. Museum Nat. Hist. N:o 31695. ♂.)

Allied to *N. spinosus*, but distinguished by small size and less dark colour. General colouration above orange rufous finely grizzled with black-tipped hairs and blackish spines, especially on the lower back. Sides of the body lighter and more yellowish. A clear deep orange-yellow lateral line of demarcation separating the sides from the pure white underparts, the hairs of which are white to their roots.

**Genus Scolomys** Anthony.

1924. **Scolomys** Anthony, American Museum Novitates N:o 139, p. 1. — *Type: Scolomys melanops* Anth.

Externally very similar to a small *Neacomys*. Fur similarly composed of flattened spines intermixed with slender unmodified hairs. Tail short and finely haired. Ears moderate in size. Thumb vestigial in character and provided with a short broad and flat nail. Mammas: 1—2 = 6.

Skull quite different from that of *Neacomys*. Rostrum very short. Nasals extending proximally beyond the premaxillaries. Interorbital region comparatively broad, sharply edged but not beaded. Braincase round and inflated. Zygomatic plate with nearly vertical anterior margin and a shallow anteorbital notch. Bullae rounded and moderately inflated. Interparietal large. Palate extending as a broad shelf beyond the last molars and with well-developed lateral pits as in *Oryzomys*. Palatine foramina very short, but wide and almost heart-shaped in general outline.

Incisors slender and projecting forwards. Molar dentition apparently as in *Neacomys*, but molars much smaller in size.

**Scolomys melanops** Anthony.1924. *Scolomys melanops* Anth., Amer. Museum Novitates N:o 139, p. 2.*Type locality*: Eastern Ecuador, Mera. Alt. 3800 feet. (Type in Amer. Museum Nat. Hist. N:o 67524. ♀.)

General colouration above an impression of sooty black flecked with wood-brown. Ventral surface neutral grey. A small patch on throat without spines. Tail coloured as the back above, somewhat lighter below.

Genus **Aepeomys** Thomas.1898. **Aepeomys** Thomas, Ann. & Mag. Nat. Hist. (7) i, p. 452. — *Type: Oryzomys (?) lugens* Thos.

Form slender, murine. Fur soft, close and velvety. Ears comparatively small. Tail long, finely scaled and clothed with short hairs, the hairs slightly longer terminally. Hands and feet slender and thinly haired. Pollex with a nail. Claws of normal size and proportions. Palms and soles naked with six broad pads.

Skull with rounded braincase and rather long cylindrical muzzle. Interorbital region convex above. Supraorbital edges rounded and without any trace of ridges. Zygomata very slender and only slightly expanded. Anterior zygomatic plate narrow and slanted, but not projecting forwards. Palatine foramina extending backwards to about the level of the plane of the first molars.

Incisors orthodont, ungrooved, the lower ones long and slender. Molars with comparatively high crowns. Molar pattern *Oryzomys*-like. First lower molar with only five cusps, the anterior lamina being unicuspid.

**Aepeomys lugens** Thomas.1896. *Oryzomys (?) lugens* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 306.*Type locality*: Western Venezuela, La Loma del Morro, Merida. Alt. 3000 m. (Type in Brit. Mus. N:o 96. 11. 1. 5. ♀.)

Fur soft, close and velvety. General colouration above finely grizzled olive brown. Ventral surface only slightly lighter than the upper one. Tail long and slightly bicolor.

**Aepeomys vulcani** Thomas.1898. *Aepeomys vulcani* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 452.*Type locality*: Western Ecuador, Mt. Pichincha. Alt. 12000 feet. (Type in Brit. Mus. N:o 98. 5. 1. 10.)

Closely allied to *A. lugens*, but differing by having a longer fur and a much shorter tail. Fur very long, soft and woolly. General colouration above near clove-brown, intermixed with some long hairs, the tips of which are whitish. Hairs on ventral surface slaty grey at their bases, buffy at their extreme ends. Skull as in *A. lugens*, but nasals shorter and anterior zygoma-root broader.

**Aepeomys fuscatus** J. Allen.

1912. *Aepeomys fuscatus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 89.

*Type locality*: Western Colombia, San Antonio, Cauca District. Alt. 6800 feet. (Type in Amer. Museum Nat. Hist. N:o 32230. ♀.)

Allied to *A. vulcani*, but of somewhat different colour and with a relatively longer tail. Fur long, thick, soft and velvety. General colouration above blackish, almost clear black on mid-dorsal region and slightly washed with greyish brown on the sides of the body. Ventral surface slaty, the hairs pale drab-grey at their extreme ends. Skull smaller than that of *A. vulcani* and with the anterior edge of the zygomatic plate more produced. Palate also broader.

Genus **Chilomys** Thomas.

1897. **Chilomys** Thomas, Ann. & Mag. Nat. Hist. (6) xix, p. 500. — *Type: Oryzomys instans* Thos.

Form slender. Fur soft and straight. Ears of medium size. Tail long, slender and thinly haired. Hands and feet slender. Pollex extremely rudimentary. Fifth hind toe reaching to the base of the second phalanx of the fourth. Soles of hind-feet without imbrications, the subdigital pads relatively large with smooth inter-spaces and without scales.

Skull delicately built with a slender muzzle. Nasals narrow and evenly converging backwards. Braincase rounded and comparatively large. Interorbital region smooth, its edges showing a trace of squareness. Palatine foramina very short. A pair of swollen ridges on either side of the palatine foramina and in front of first upper molar. Interparietal distinct.

Upper incisors unusually thrown forwards (strongly proödont). Lower incisors very long and slender. Molars about as in *Oryzomys*. Outer side of second upper molar external to the outer side of the first and the third upper molars.

**Chilomys instans** Thomas.

1895. *Oryzomys instans* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 368.

*Type locality*: Central Colombia, La Selva Estate, Bogotá region. Alt. 4600 feet. (Type in Brit. Mus. N:o 95. 10) 14. 1.)

General colouration uniform dark grey with the extreme tips of the hairs whitish grey. Hands and feet brown. Tail long, uniformly brown.

[**Chilomys fumeus** Osgood.]

1912. *Chilomys fumeus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 5, p. 53.

*Type locality*: Eastern Colombia, Paramo de Tama, Upper Rio Tachira, Santander District. Alt. 6000—7000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 18690. ♂.)

Said to be similar to *C. instans*, but end of tail, digits of forefeet and distal phalanges of digits of hindfeet white. Size also slightly smaller. From all appearance identical with *C. instans*, as the characters mentioned by OSGOOD seem to be individual.

Genus *Rhagomys* Thomas.

1917. *Rhagomys* Thomas, Ann. & Mag. Nat. Hist. (8) xx, p. 192. — Type: *Hesperomys rufescens* Thos.

Form modified for arboreal life. General external appearance about as in *Oecomys*. Ears short. Tail of medium length, thinly clothed with hairs, the hairs longest at the tip where they form an inconspicuous pencil. Fifth hind toe reaching to the end of the second phalanx of the fourth toe. Palms and soles naked with large pads. Mammæ: 1—2 = 6.

Skull broad and low with a broad, smooth and rounded braincase. Supra-orbital edges square and unridged. Interorbital region broad. Anterior zygomatic plate slightly projecting forwards. Palatine foramina short and rather narrow. Mesopterygoid fossa not extending to between the last molars.

Upper incisors nearly orthodont, their front surface flattened and inclined inwards, rather deep antero-posteriorly. Lower incisors of corresponding form. Anteriorly their roots extend backwards much beyond the normal and form a prominent capsule outside the jaw. Position and number of molar cusps as in *Oryzomys*, but the various foldings and ridges between and connecting the cusps almost entirely obsolete. The teeth thus have a smooth glossy surface and simple conical cusps, which are evenly spaced and slightly slanted backwards. First upper molar with six, second upper molar with four and third upper molar with two cusps respectively. Lower molars similar, but with the cusps slanting forwards.

*Rhagomys rufescens* Thomas.

1886. *Hesperomys rufescens* Thos., Ann. & Mag. Nat. Hist. (5) xvii, p. 250.

Type locality: Eastern Brazil, Rio de Janeiro. (Type in Brit. Mus. N:o 86. 2. 8. 5. ♀.)

General colouration above and below rich orange rufous. Ventral surface slightly lighter, the hairs everywhere slaty blue at their bases. Tail unicolor.

Genus *Oecomys* Thomas.

1906. *Oecomys* Thomas, Ann. & Mag. Nat. Hist. (7) xviii, p. 444. — Type: *Rhipidomys benevolens* Thos.

Form modified for a more or less arboreal life. Tail with terminal portion well-haired and generally pencilled, but never as heavily as in *Rhipidomys*. Feet short and broad. Pollex with a nail. Fifth hind toe proportionally long. Palms and soles naked with six well-defined pads. Mammæ: 2—2 = 8.

Skull about as in *Oryzomys*, but the braincase generally larger, more rounded and *Rhipidomys*-like. Rostrum comparatively short. Nasals small and narrow. Interorbital region broad and flat. Supraorbital edges sharpened into ledges. Interparietal large. Anteorbital foramina large and widely open. Anterior zygomatic plate hardly projecting forwards enough to be plainly visible from above. Palate as in *Oryzomys*, the mesopterygoid fossa thus not produced

forwards to between the last molars. Between the last molars and the corner of the mesopterygoid fossa a small pit or pairs of pits, which are always readily perceptible. Palatine foramina comparatively short, but well open.

Dentition about as in *Oryzomys*.

#### *Oecomys bicolor* Tomes.

1860. *Hesperomys bicolor* Tomes, Proc. Zool. Soc., London, p. 217.

*Type locality*: South-western Ecuador, Guayaquil. (Type in Brit. Mus. N:o 7. 1. 1. 96. ♀.)

*Syn. Rhipidomys dryas* Thos., Ann. & Mag. Nat. Hist. (7) v, 1900, p. 271. — Northern Ecuador, Paramba. Alt. 1100 m. (Type in Brit. Mus. N:o 99. 12. 5. 4. ♀.)

Size small. General colouration above rich fulvous, somewhat intermixed with darker hairs along the mid-dorsal area. Sides of the body clearer fulvous. Ventral surface sharply defined white, the hairs white to their roots.

#### *Oecomys rosilla* Thomas.

1904. *Rhipidomys rosilla* Thos., Ann. & Mag. Nat. Hist. (7) xiv, p. 35.

*Type locality*: Eastern Venezuela, La Union, Lower Rio Orinoco. (Type in Brit. Mus. N:o 4. 5. 7. 37. ♂.)

A small species allied to *O. bicolor*. Fur close and crisp. General colouration above rich tawny, the crown and anterior portion of back more greyish and heavily lined with black. Throat and chest white. Remainder of ventral surface buffy ochraceous, somewhat paler mesially.

#### *Oecomys paricola* Thomas.

1904. *Rhipidomys paricola* Thos., Ann. & Mag. Nat. Hist. (7) xiv, p. 194.

*Type locality*: North-eastern Brazil, Igarapé-Assu, Pará. Alt. 50 m. (Type in Brit. Mus. N:o 4. 11. 4. 63. ♀.)

A very small species allied to *O. bicolor*. General colouration above dark rufous grey. Ventral surface dull creamy white, the hairs slaty at their bases except on throat and centre of chest.

#### *Oecomys nitedulus* Thomas.

1910. *Oecomys nitedulus* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 505.

*Type locality*: British Guiana, Lower Rio Essequibo, Demerara District. Alt. 40 feet. (Type in Brit. Mus. N:o 6. 4. 8. 31. ♀.)

A small species allied to *O. rosilla* and *O. paricola*. General colouration above rich greyish tawny, becoming more tawny on the rump. Ventral surface sharply defined white, the hairs white to their roots.

#### *Oecomys florenciae* J. Allen.

1916. *Oecomys florenciae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 524.

*Type locality*: Eastern Colombia, Florencia, Rio Caquetá. Alt. 675 feet. (Type in Amer. Museum Nat. Hist. N:o 33863. ♀.)

Very similar to *O. bicolor*, but slightly larger and with the ventral surface strongly suffused with pale buff. General colouration above cinnamon brown, darkened on the mid-dorsal region by black-tipped hairs. Crown paler and greyer than the back. A distinct golden fulvous lateral line.

***Oecomys rutilus* Anthony.**

1921. *Oecomys rutilus* Anth., Amer. Museum Novitates N:o 19, p. 4.

*Type locality*: British Guiana, Kartabo. (Type in Amer. Museum Nat. Hist. N:o 42910. ♀.)

A small species apparently allied to *O. rosilla* and with a very short tail. General colouration above between amber brown and hazel, darkest along dorsal area and on crown. Ventral surface pure white, the hairs white to their roots. Skull small and broad with a short rostrum and low supraorbital beading.

***Oecomys milleri* J. Allen.**

1916. *Oecomys milleri* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 523.

*Type locality*: Southern Brazil, Barao de Melgaço, Matto Grosso Province. (Type in Amer. Museum Nat. Hist. N:o 37117. ♂.)

Allied to *O. bicolor*, but slightly smaller. General colouration above uniform dark cinnamon brown finely lined with black. No fulvous lateral line as in *O. bicolor*. Ventral surface clear white instead of yellowish white.

***Oecomys benevolens* Thomas.**

1901. *Rhipidomys benevolens* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 369.

*Type locality*: Northern Bolivia, Chirimote, Upper Rio Beni. Alt. 700 m. (Type in Brit. Mus. N:o 1. 2. 1. 14. ♂.)

Allied to *O. bicolor* and of the same rich fulvous general colouration above, but size larger. Ventral surface also pure white, but less sharply defined. Skull with rather narrow nasals.

***Oecomys phaeotis* Thomas.**

1901. *Rhipidomys phaeotis* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 181.

*Type locality*: South-eastern Peru, Segrario, Rio Inambari. Alt. 1000 m. (Type in Brit. Mus. N:o 1. 1. 1. 23. ♂.)

A rather small species allied to *O. benevolens*. Fur close and fine. General colouration above fulvous, lined with black on the back and clearer fulvous on the sides of the body. Ventral surface sharply defined white.

***Oecomys roberti* Thomas.**

1903. *Rhipidomys roberti* Thos., Proc. Zool. Soc., London, II, p. 237.

*Type locality*: Southern Brazil, Santa Anna de Chapada, Matto Grosso Province. Alt. 800 m. (Type in Brit. Mus. N:o 3. 7. 7. 67. ♂.)

Allied to *O. phaeotis*. General colouration above dull fulvous, finely lined with black. Sides of the body clearer buffy and sharply defined from the pure white ventral surface. Skull about as in *O. benevolens*, but much larger and heavier.

**Oecomys marmosurus** Thomas.

1899. *Rhipidomys marmosurus* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 378.

*Type locality*: South-western Venezuela, Maipures, Upper Rio Orinoco. (Type in Brit. Mus. N:o 99. 9. 11. 38. ♂.)

A large species with close fur. General colouration above rich reddish fulvous, finely lined with black. Head paler and greyer. Sides of the body fulvous, gradually passing into the dull whitish ventral surface. Hairs on the middle line of chest and belly white to their bases.

**Oecomys tapajinus** Thomas.

1909. *Oecomys tapajinus* Thos., Ann. & Mag. Nat. Hist. (8) iii, p. 378.

*Type locality*: Central Brazil, Santa Rosa, Rio Jamauchim. (Type in Brit. Mus. N:o 9. 3. 9. 9. ♀.)

A large species allied to *O. marmosurus*. General colouration above rich tawny, becoming browner on the head and richer on the rump. All the hairs on the ventral surface are, however, completely white, except those just along the sides of the belly, but still there is a very sharply defined lateral line of demarcation. Skull similar to that of *O. roberti*, but rather more heavily built, the palatal foramina longer and the tooth-row shorter.

**Oecomys guianae** Thomas.

1910. *Oecomys guianae* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 187.

*Type locality*: British Guiana, Rio Supinaam, Demerara District. (Type in Brit. Mus. N:o 10. 5. 4. 23. ♀.)

A large species allied to *O. marmosurus* and *O. tapajinus*, but distinguished from both by having the hairs of the belly grey at their bases. General colouration above darker and more brownish than that of *O. marmosurus*. Ventral surface rather sharply defined dull buffy whitish.

**Oecomys caicarae** J. Allen.

1913. *Oecomys caicarae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 603.

*Type locality*: Central Venezuela, Caicara, Rio Orinoco. (Type in Amer. Museum Nat. Hist. N:o 29875. ♀.)

Somewhat allied to *O. marmosurus*, but general colouration above reddish fulvous, slightly lined with black along mid-dorsal area and clearer fulvous on head and flanks. Ventral surface sharply defined white, the hairs white to their bases.

**Oecomys mamorae** Thomas.

1906. *Oryzomys (Oecomys) mamorae* Thos., Ann. & Mag. Nat. Hist. (7) xviii, p. 445.

*Type locality*: North-eastern Bolivia, Mosetenes, Upper Rio Mamoré. (Type in Brit. Mus. N:o 0. 8. 3. 21. ♀.)

A large species of about the same size as *O. marmosurus*. General colouration above of the usual fulvous tone. Ventral surface pure sharply defined white, the hairs white to their bases. Skull with narrow interorbital region, less developed orbital ledges and longer palatal foramina.

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**Oecomys superans** Thomas.1911. *Oecomys superans* Thos., Ann. & Mag. Nat. Hist. (8) viii, p. 250.*Type locality*: Eastern Ecuador, Canelos, Rio Bobonaza. Alt. 2100 feet. (Type in Brit. Mus. N:o 11. 7. 19. 12. ♀.)*Syn.* *Oecomys palmeri* Thos., Ann. & Mag. Nat. Hist. (8) viii, 1911, p. 251. — Eastern Ecuador, Canelos, Rio Bobonaza. Alt. 2100 feet. (Type in Brit. Mus. N:o 11. 7. 19. 13. ♂.)

A very large species with a greyish belly. General colouration above greyish rufous. Skull with no postorbital projections and without heavily developed ridges. Molars large and heavy.

**Oecomys osgoodi** Thomas.1924. *Oecomys osgoodi* Thos., Ann. & Mag. Nat. Hist. (9) xiv, p. 287.*Type locality*: Northern Peru, Moyobamba. Alt. 2700 feet. (Type in Brit. Mus. N:o 24. 7. 11. 16. ♀.)

A medium-sized species allied to *O. superans*, but smaller. Fur close and fine. General colouration above warm brown finely ticked with buffy or ochraceous, the sides of the body becoming somewhat clearer. Ventral surface muddy-coloured, the hairs broadly slaty at their bases and narrowly tipped with buffy or soiled whitish. A white patch on the throat, the hairs white to their roots. Skull with zygomatic plate more projected forwards than usual, but not undercut.

**Oecomys catherinae** Thomas.1909. *Oecomys catherinae* Thos., Ann. & Mag. Nat. Hist. (8) iv, p. 234.*Type locality*: South-eastern Brazil, Joinville, Santa Catherina Province. (Type in Brit. Mus. N:o 9. 11. 19. 24. ♂.)

A very large species. Fur soft and thick. General colouration above fulvous. Ventral surface not sharply defined soiled whitish, the hairs slaty at their bases. Skull with well-developed supraorbital ridges and with the anterior zygomatic plate more developed than usual in the genus *Oecomys*, more as in *Oryzomys*.

**Oecomys rex** Thomas.1910. *Oecomys rex* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 504.*Type locality*: British Guiana, Rio Supinaam, Demerara District. (Type in Brit. Mus. N:o 10. 9. 29. 17. ♀.)

A large species. General colouration above rich tawny rufous, strongly blackened on the posterior back, but brighter on the flanks. Ventral surface dull whitish, the hairs pale slaty at their bases. Skull with strongly developed supraorbital ridges and narrow nasals. Anterior zygomatic plate rather more projected forwards than usual.

**Oecomys illectus** Bangs.1898. *Oryzomys flavicans illectus* Bangs, Proc. Biol. Soc., Washington, xii, p. 164.*Type locality*: North-eastern Colombia, Pueblo Viejo, Sierra Nevada de Santa Marta. Alt. 8100 feet. (Type in Museum of Comparative Zool., Cambridge, Mass. N:o 8101. ♂.)

General colouration above almost tawny ochraceous, intermixed with some dark brown hairs on crown and back. A small white spot on the throat. Remainder of ventral surface orange buff to the roots of the hairs.

#### *Oecomys mincae* J. Allen.

1913. *Oecomys mincae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 603.

*Type locality*: North-eastern Colombia, Minca, Santa Marta District. Alt. 2000 feet. (Type in Amer. Museum Nat. Hist. N:o 15332. ♀.)

Allied to *O. illectus*, but paler and yellower above. General colouration above fulvous, darker on the back and lighter on the sides. Ventral surface less strongly suffused with buff — more buffy white — than in *O. illectus*. Size also smaller and tail longer. Skull characters unknown.

#### *Oecomys emiliae* J. Allen.

1916. *Oecomys emiliae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 525.

*Type locality*: North-eastern Brazil, Rio Mojú, Pará. (Type in Amer. Museum Nat. Hist. N:o 37495. ♂.)

General colouration above pale buffy greyish brown, slightly mixed with black and passing into pale yellowish grey on the sides of the body. Ventral surface sharply defined pure white, the hairs white to their roots. No yellow lateral line of demarcation. Skull characters unknown.

#### *Oecomys melleus* Anthony.

1924. *Oecomys melleus* Anth., Amer. Museum Novitates N:o 139, p. 4.

*Type locality*: South-eastern Ecuador, Zamora. Alt. 3250 feet. (Type in Amer. Museum Nat. Hist. N:o 36560. ♀.)

Fur moderately long and soft. General colouration above between Prout's brown and tawny olive, slightly sprinkled with blackish hairs on the mid-dorsal area, the sides of the body clearer. Ventral surface strongly washed with cream buff.

### Genus *Rhipidomys* Tschudi.

1844. *Rhipidomys* Tschudi, Unters. ü. d. Fauna Peruana, i, p. 183. — *Type*: *Hesperomys leucodactylus* Tschudi.

Form modified for arboreal life. Ears rather small. Tail longer than the combined length of head and body, heavily pencilled terminally. Feet short and broad. Pollex with a nail. Claws short and strongly curved, their breadth at base equalling or exceeding their length on their concave edge. Palms and soles naked except just under the heel, with six broad, low and flattened pads. Mammæ: 1—2=6.

Skull with large rounded braincase. Interorbital region broad and flat. Supraorbital edges sharpened into ledges which are more or less overhanging the orbits, but not forming upwardly projecting beads. Interparietal large. Anteor-

bital foramina large and widely open. Anterior zygomatic plate not projecting forwards enough to be visible from above. Palate short, without lateral pits. Palatine foramina well open, much longer than the palatal bridge. Mesopterygoid fossa rather squarely open in front and extending to or even between the plane of the last molars.

Incisors ungrooved. Molars brachyodont. Molars with prominent cusps and well-marked styles, about as in *Oryzomys*, but the first upper molar has the protoconule (antero-internal cusp) somewhat reduced, but still never to such a degree as to affect the general oblong shape of the tooth.

#### **Rhipidomys leucodactylus** Tschudi.

1844. *Rhipidomys (Hesperomys) leucodactylus* Tsch., Unters. ü. d. Fauna Peruana, I, p. 183.  
*Type locality*: Eastern Peru. (Type in Musée d'Histoire Naturelle, Neuchatel.)

General colouration above yellowish brown intermixed with black hairs. Sides of the body clearer and more yellowish. Ventral surface whitish grey, becoming pure white down the centre of the belly. Metapodials mesially brown. Digits white.

#### **Rhipidomys equatoris** Thomas.

1915. *Rhipidomys equatoris* Thos., Ann. & Mag. Nat. Hist. (8) xvi, p. 312.  
*Type locality*: Western Ecuador, Santo Domingo. Alt. 1600 feet. (Type in Brit. Mus. N:o 15. 1. 1. 39. ♀.)

Closely allied to *R. leucodactylus*, but belly mixed with grey. Size large. Fur short and crisp. General colouration above lined greyish with a slight fulvous tinge. Ventral surface uniform bluish grey, the hairs slaty at their bases and dull whitish at their tips. Chin and throat white, the hairs white to their roots.

#### **Rhipidomys austrinus** Thomas.

1921. *Rhipidomys austrinus* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 183.  
*Type locality*: North-western Argentine, Sunchal, Sierra de Santa Barbara, S. E. Jujuy Province. Alt. 1200 m. (Type in Brit. Mus. N:o 21. 1. 1. 17. ♂.)

A large species allied to *R. leucodactylus*. Fur close and thick. General colouration above lined greyish buffy brown. Ventral surface greyish white, the hairs buffy at their bases. Metapodials mesially brown with digits and edges white. Skull as in *R. leucodactylus*, but smaller.

#### **Rhipidomys collinus** Thomas.

1925. *Rhipidomys collinus* Thos., Ann. & Mag. Nat. Hist. (9) xv, p. 578.  
*Type locality*: Southern Bolivia, Itan, Sierra Santa Rosa. Alt. 1000 m. (Type in Brit. Mus. N:o 25. 2. 1. 39. ♂.)

A pale species allied to *R. austrinus*, but much smaller. General colouration above dull lined clay colour, the sides of the body paler and rather more buffy. Ventral surface dull whitish, the hairs broadly slaty at their bases except on the chin and throat, where they are white to their roots. Skull as in *R. austrinus*, but smaller.

**Rhipidomys bovallii** Thomas.

1911. *Rhipidomys bovallii* Thos., Ann. & Mag. Nat. Hist. (8) vii, p. 114.

*Type locality*: British Guiana, Potaro Highlands. Alt. 2000 feet. (Type in Brit. Mus. N:o 7. 6. 10. 3. )

A very large species of the *R. leucodactylus*-group. Fur long and thick. General colouration above dull fulvous grey, darker along the mid-dorsal area and clearer along the sides of the body. Ventral surface dull creamy, the hairs slaty for about half their basal portions. Tail heavily pencilled at the tip.

**Rhipidomys lucullus** Thomas.

1911. *Rhipidomys lucullus* Thos., Ann. & Mag. Nat. Hist. (8) vii, p. 115.

*Type locality*: Central Peru, Garita del Sol, Vitoc Valley, Upper Rio Perené. Alt. 5700 feet. (Type in Brit. Mus. N:o 94. 10. 1. 11. ♀.)

A large species with the general external appearance very much as in *R. leucodactylus*, but with the hairs on the belly with grey bases. Skull with broad palate, very narrow nasals and supraorbital edges nearly parallel-sided.

**Rhipidomys modicus** Thomas.

1926. *Rhipidomys modicus* Thos., Ann. & Mag. Nat. Hist. (9) xviii, p. 161.

*Type locality*: Northern Peru, Puca Tambo, Chachapoyas. Alt. 5100 feet. (Type in Brit. Mus. N:o 26. 5. 3. 69. ♀.)

A medium-sized species with comparatively short fur. General colouration above dull buffy. Ventral surface white, the hairs with slaty bases. Hindfeet with upper side of metatarsus black.

**Rhipidomys rex** Thomas.

1927. *Rhipidomys rex* Thos., Ann. & Mag. Nat. Hist. (9) xx, p. 600.

*Type locality*: Central Peru, Chinchavita, Huanucu Province. Alt. 3000 feet. (Type in Brit. Mus. N:o 27. 11. 1. 125. ♀.)

A very large species with a long, well-haired, black, heavily pencilled tail. General colouration above grizzled tawny greyish buff. Ventral surface muddy greyish, the bases of the hairs slaty, their ends whitish on throat and inguinal region, dull buffy on the belly. Skull large and heavily built.

**Rhipidomys sclateri** Thomas.

1887. *Hesperomys (Rhipidomys) sclateri* Thos., Proc. Zool. Soc., London, p. 152.

*Type locality*: British Guiana, Maccasseema, Demerara District. (Type in Brit. Mus. N:o 87. 1. 28. 8. ♀.)

Fur short, close, very soft and velvety. General colouration above uniform dark ashy grey. Ventral surface whitish, the hairs slaty at their bases. Tail unicolor. Skull as in *R. leucodactylus*, but rather longer and narrower.

**Rhipidomys couesi** J. Allen & Chapman.1893. *Tylomys couesi* J. Allen & Chapm., Bull. Amer. Museum Nat. Hist., v, p. 211.*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5956/4685. ♂.)

General colouration above nearly uniform cinnamon brown, intermixed with longer black-tipped hairs. Ventral surface white with a slight yellow wash, the hairs white to their bases. Line of demarcation between upper- and underparts well-defined.

**Rhipidomys goodfellowi** Thomas.1900. *Rhipidomys goodfellowi* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 270.*Type locality*: Eastern Ecuador, Rio Napo at the mouth of Rio Coca. (Type in Brit. Mus. N:o 0. 6. 3. 7. ♀.)

Externally almost identical with *R. couesi*. Fur unusually short, close and straight. General colouration above brownish fawn, the sides of the body clearer greyish fawn. Ventral surface dull greyish with a buffy tinge, the hairs slaty at their bases. Skull as in *R. couesi*, but smaller and more delicately built with narrower muzzle and rather smaller palatal foramina.

**Rhipidomys macrurus** Gervais.1855. *Mus (Hesperomys) macrurus* Gervais in Castelnau: Exp. d. l'Amérique du Sud, vii, N:o 1, p. 111.*Type locality*: Brazil, Trixas.

General colouration above rich rufous. Ventral surface sharply defined white. Tail long.

**Rhipidomys venezuelae venezuelae** Thomas.1896. *Rhipidomys venezuelae* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 303.*Type locality*: Western Venezuela, Merida. Alt. 1630 m. (Type in Brit. Mus. N:o 96. 11. 1. 1. ♂.)

General colouration above rich rufous. Ventral surface sharply defined white. Tail long. Skull as in *R. macrurus*, but differing by its decidedly narrower interorbital region and its more slender muzzle.

**Rhipidomys venezuelae cumananus** Thomas.1900. *Rhipidomys venezuelae cumananus* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 271.*Type locality*: Northern Venezuela, Ipuré, Cumana District. Alt. 700 m. (Type in Brit. Mus. N:o 0. 5. 1. 10. ♀.)

Similar to *R. venezuelae*, but rather larger and more heavily built. General colouration above dull greyish fulvous. Ventral surface dull whitish. Feet broader and stouter. Skull with larger braincase and a broad and flat interorbital region.

**Rhipidomys venezuelae nitela** Thomas.1901. *Rhipidomys nitela* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 148.*Type locality*: British Guiana, Kwaimatta, Kanuku Mountains. Alt. 240 feet. (Type in Brit. Mus. N:o 1. 6. 4. 81. ♂.)

Very similar to *R. v. venezuelae*, but markedly smaller. General colouration above greyish fawn. Belly sharply defined white. Skull narrower and more delicately built, with the supraorbital edges square and the palatal foramina large and well-open.

***Rhipidomys venezuelae fervidus* Thomas.**

1904. *Rhipidomys venezuelae fervidus* Thos., Ann. & Mag. Nat. Hist. (7) xiv, p. 34.

*Type locality*: Eastern Venezuela, La Union, Lower Rio Orinoco. (Type in Brit. Mus. N:o 4. 5. 7. 39. ♂.)

Similar to *R. v. venezuelae*, but general colouration above tawny ochraceous. Ventral surface pure sharply defined white. Skull with longer palatal foramina and smaller teeth.

***Rhipidomys venezuelae cearanus* Thomas.**

1910. *Rhipidomys cearanus* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 501.

*Type locality*: North-eastern Brazil, Serra de Ibiapaba, Ceara Province. Alt. 900 m. (Type in Brit. Mus. N:o 11. 4. 25. 7. ♀.)

Very similar to *R. v. nitela*, but distinguished by having darker feet and by the different structure of its posterior narial region. Skull with the mesopterygoid fossa narrow, parallel-sided, not broadened anteriorly, penetrating the palate as far as the level of the front of  $m^3$ . Parapterygoid fossae flat, their outer border not raised and their floor not excavated as in *R. v. nitela*.

***Rhipidomys venezuelae yuruanus* J. Allen.**

1913. *Rhipidomys venezuelae yuruanus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 601.

*Type locality*: Eastern Venezuela, Rio Yuruan. (Type in Amer. Museum Nat. Hist. N:o 30735. ♂.)

Similar to *R. v. venezuelae*, but differing in having the upperparts darker and more rufous. Skull less heavily built and with the supraorbital ridges less strongly marked.

***Rhipidomys venezuelae milleri* J. Allen.**

1913. *Rhipidomys milleri* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 602.

*Type locality*: British Guiana, Minehaha Creek, Lower Rio Essequibo, Demerara District. Alt. 500 feet. (Type in Amer. Museum Nat. Hist. N:o 36332. ♂.)

A well-defined member of the *R. venezuelae*-group. Distinguished by small size and uniform mummy brown colouration above. Ventral surface pure white. Metapodials, anal region and inside of hind legs nearly black.

***Rhipidomys pictor* Thomas.**

1904. *Rhipidomys pictor* Thos., Ann. & Mag. Nat. Hist. (7) xiv, p. 193.

*Type locality*: North-western Ecuador, Rio Verde. Alt. 1000 m. (Type in Brit. Mus. N:o 1. 1. 6. 4. ♂.)

A medium-sized species allied to *R. venezuelae*. Fur close and crisp. General colouration above dark fulvous brown, becoming rather more rufous on the sides

of the body. Ventral surface white, although not sharply defined. Skull very similar to that of *R. venezuelae*, but smaller and with small bullae.

#### **Rhipidomys venustus** Thomas.

1900. *Rhipidomys venustus* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 152.

*Type locality*: Western Venezuela, Las Vegas del Chama, Merida. Alt. 1400 m. (Type in Brit. Mus. N:o 99. 12. 1. 1. ♀.)

Of about the same size as *R. venezuelae*, but the belly slate-mixed instead of pure white. General colouration darker rufous fulvous. Tail more bushy. Skull with interorbital space narrower and nasals narrowing more rapidly behind.

#### **Rhipidomys microtis** Thomas.

1896. *Rhipidomys microtis* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 304.

*Type locality*: Western Colombia, Salina del Vatan, Cundinamarca District. (Type in Brit. Mus. N:o 96. 11. 1. 2. ♂.)

A rather small form with a scarcely pencilled tail and very small ears. Fur close and soft. General colouration above fulvous, becoming darker on the back and clearer on the sides of the body. Ventral surface white. Skull with a short, narrow muzzle and sharp supraorbital ridges.

#### **Rhipidomys fulviventor fulviventor** Thomas.

1896. *Rhipidomys fulviventor* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 304.

*Type locality*: Western Colombia, Aqua Dulce, Cundinamarca District. Alt. 2400 feet. (Type in Brit. Mus. N:o 96. 11. 1. 3. ♀.)

Of about the same size as *R. microtis*. Fur very thick and soft. Ears rather small. General colouration above fulvous, thickly lined with black. Ventral surface fulvous, the hairs with slaty bases. Skull with a large rounded braincase, slender, narrow muzzle and square, but not heavily ridged supraorbital edges.

#### **Rhipidomys fulviventor elatturus** Osgood.

1914. *Rhipidomys fulviventor elatturus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 11, p. 140.

*Type locality*: Western Venezuela, W. of Paramo de Tama, Upper Rio Tachira. Alt. 7000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 18691. ♂.)

A rather small form. General colouration above almost uniform tawny ochraceous finely mixed with dusky, the sides of the body slightly clearer. Ventral surface paler than in *R. fulviventor*. Tail and hindfeet shorter.

#### **Rhipidomys mollissimus** J. Allen.

1912. *Rhipidomys mollissimus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 78.

*Type locality*: Central Colombia, Mira Florez, Cauca District. Alt. 6200 feet. (Type in Amer. Museum Nat. Hist. N:o 32243. ♀.)

Similar to *R. fulviventor*, but larger. Fur short and fine. General colouration above yellowish brown, inconspicuously grizzled with blackish. A well-defined deep buff lateral line. Underparts yellowish white.

**Rhipidomys quindianus J. Allen.**

1913. *Rhipidomys quindianus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 600.

*Type locality*: Central Colombia, El Roble, Bogotá region. Alt. 8100 feet. (Type in Amer. Museum Nat. Hist. N:o 32970. ♂.)

Allied to *R. fulviventor*, but with clear white underparts. Fur soft, short and woolly. General colouration above russet. Ears small.

**Rhipidomys caucensis J. Allen.**

1913. *Rhipidomys caucensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 601.

*Type locality*: Western Colombia, Munchique, Cauca District. Alt. 8225 feet. (Type in Amer. Museum Nat. Hist. N:o 32466. ♀.)

Differs from *R. quindianus* by having the general colouration above ochraceous orange finely varied with black. Ventral surface clear white, separated from the upperparts by a distinct ochraceous lateral line. Skull with narrower interorbital region, less arched braincase and weaker dentition.

**Rhipidomys latimanus Tomes.**

1860. *Hesperomys latimanus* Tomes, Proc. Zool. Soc., London, p. 213.

*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 7. 1. 1. 95. ♂.)

Fur very thick and soft. General colouration above brown, intermixed with darker hairs. Sides of the body more rufous. Ventral surface pure white, the hairs on the abdomen and inguinal region ashy grey at their bases. Line of demarcation between the upperparts and the ventral surface well-defined. A conspicuous white patch at root of whiskers.

**Rhipidomys cocalensis J. Allen.**

1912. *Rhipidomys cocalensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 79.

*Type locality*: Western Colombia, Cocal, Cauca District. Alt. 4000 feet. (Type in Amer. Museum Nat. Hist. N:o 32376. ♀.)

Allied to *R. latimanus*, but larger. General colouration above bright yellowish rufous, inconspicuously mixed with black. Ventral surface pure white, the hairs white to their roots.

**Rhipidomys mastacalis Lund.**

1841. *Mus mastacalis* Lund, K. Danske Vidensk. Selsk. Afhandl., viii, p. 240.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province. (Type in Zool. Museum, Copenhagen.)

General colouration above rather rich fulvous, becoming more cinnamon rufous on the crown and along the sides of the body. Ventral surface sharply defined pure white, the hairs white to their roots.

**Rhipidomys similis J. Allen.**

1912. *Rhipidomys similis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 79.

*Type locality*: Western Colombia, Cocal, Cauca District. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 32458. ♂.)

A member of the genus *Rhipidomys*, but with the general external appearance of a pale-bellied diminutive *Thomasomys aureus popayanus*. Tail, however, well-haired and heavily tufted. Ventral surface greyish white with a buffy wash.

#### *Rhipidomys ochrogaster* J. Allen.

1901. *Rhipidomys ochrogaster* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 43.

*Type locality*: South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 16481. ♀.)

A large species with the general colouration above dull yellowish brown minutely varied with black and becoming paler, more yellowish, on the sides of the body. Ventral surface pale ochraceous buff, the hairs with their extreme bases pale grey. Tail heavily pencilled.

#### *Rhipidomys* (?) *klagesi* J. Allen.

1904. *Oryzomys klagesi* J. Allen, Bull. Amer. Museum Nat. Hist., xx, p. 327.

*Type locality*: Central Venezuela, El Llqual. Alt. 100—500 feet. (Type in Amer. Museum Nat. Hist. N:o 16966. ♂.)

Fur long. General colouration above ochraceous rufous, slightly varied with black-tipped hairs on the dorsal region and becoming deep ochraceous on the sides of the body. Crown of head darker and less ochraceous. Ventral surface buffy white, the hairs grey at their bases. Skull of *Rhipidomys*-like structure, comparatively short, broad and flat. Supraorbital ledges heavy. Palatal foramina relatively long and narrow. Mr. G. H. H. TATE, who has at my request kindly re-examined the type, states that it is apparently a *Rhipidomys* «as indicated not only by the skull, but by the general appearance of the skin. The tip of the tail, however, is broken, and I am unable to state whether it had a brush of hairs.»

#### Genus *Thomasomys* Coues.

1884. *Thomasomys* Coues, American Naturalist, xviii, p. 1275. — *Type*: *Hesperomys* (*Rhipidomys*) *cinereus* Thos.

*Syn.* *Erioryzomys* Bangs, Proc. New Engl., Zool. Club, i, 1900, p. 96. — *Type*: *Oryzomys* (*Erioryzomys*) *monochromos* Bangs.

Form not specially modified. Tail long and well haired, but scales still distinctly visible. Feet of normal proportions with high, not broadened pads. Soles perfectly naked. Claws comparatively long, slender and narrow, not unusually curved. Mammae: 1—2=6.

Skull with practically no supraorbital ridges or overhanging ledges, though the interorbital region may sometimes be sharpened or raised, but never continued across the braincase, which is fairly large and wide. Interparietal well-developed. Anterior zygomatic plate never projecting forwards enough to be visible from above. Mesopterygoid fossa extending to between the last upper molars, thus further forwards than in f. i. *Oryzomys* and *Oligoryzomys*. It is — as a rule — rather more squarely open in front than in those genera. No lateral pits present.

Molars brachyodont and of a typical *Oryzomys*-like structure. First upper molar of normal oblong shape, its antero-internal cusp not or only slightly reduced.

**Thomasomys aureus aureus** Tomes.

1860. *Hesperomys aureus* Tomes, Proc. Zool. Soc., London, p. 219.

*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 7. 1. 1. 104.)

Fur long and thick, the hairs dark dusky at their bases. General colouration above bright yellowish brown, becoming brighter and more golden brown on the rump and intermixed with long blackish hairs on the centre of the back. Ventral surface paler and much duller than the upperparts.

**Thomasomys aureus popayanus** J. Allen.

1912. *Thomasomys popayanus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 81.

*Type locality*: Western Colombia, Popayan, Cauca District. Alt. 10340 feet. (Type in Amer. Museum Nat. Hist. N:o 32371. ♂.)

General colouration above yellowish rufous lined with black, especially on the mid-dorsal area. Ventral surface ochraceous buff, the hairs with their bases plumbeous. Allied to *T. aureus* from which it only seems doubtfully separable. Size as in *T.a. aureus*.

**Thomasomys aureus altorum** J. Allen.

1914. *Thomasomys aureus altorum* J. Allen, Bull. Amer. Museum Nat. Hist., xxxiii, p. 200.

*Type locality*: Western Ecuador, Mt. Pichincha. Alt. 11000 feet. (Type in Amer. Museum Nat. Hist. N:o 36280. ♂.)

Said to be similar to *T. aureus*, but much paler and yellower above. Also paler below. Skull as in *T. aureus*, but larger and with heavier dentition. Hardly separable from typical *T. aureus*.

**Thomasomys princeps** Thomas.

1895. *Oryzomys princeps* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 58.

*Type locality*: Central Colombia, Bogotá region. Alt. 8750 feet. (Type in Brit. Mus. N:o 95. 8. 1. 37. ♂.)

Similar to *T. aureus*, but larger. General colouration above rich orange rufous, darkened along the dorsal region. Skull with long, flattened muzzle. Molars very large. Bullae small.

**Thomasomys praetor** Thomas.

1900. *Oryzomys praetor* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 354.

*Type locality*: Northern Peru, San Pablo, Cajamarca District. Alt. 4000 m. (Type in Brit. Mus. N:o 0. 3. 15. 3. ♀.)

To judge by proportions and skull characters most closely allied to *T. aureus* and *T. princeps*, but wholly different in colour. Fur long, soft, close and thick. General colouration above olivaceous fawn-grey, much darkened on the dorsal region and on the posterior portion of the back. Ventral surface buffy white,

the hairs slaty at their bases. Skull as in *T. princeps*, but with broader and flatter braincase, narrower and more parallel-sided interorbital region and small bullae.

#### **Thomasomys nicefori** Thomas.

1921. *Thomasomys nicefori* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 355.

*Type locality*: Central Colombia, San Pedro, Medellin, Antioquia District. Alt. 5000 (?) feet.  
(Type in Brit. Mus. N:o 27. 7. 1. 20. ♂.)

Allied to *T. aureus*, but smaller and with smaller teeth. General colouration above buffy ochraceous, but head rather less rich fulvous. Ventral surface also washed with buff. Skull as in *T. aureus*, but smaller, with slender muzzle and narrow nasals. Interorbital region comparatively broad, less sharply defined and ridged.

#### **Thomasomys auricularis** Anthony.

1923. *Thomasomys auricularis* Anth., Amer. Museum Novitates N:o 55, p. 6.

*Type locality*: Southern Ecuador, Taraguacocha, Provincia del Oro. Alt 10250 feet.  
(Type in Amer. Museum Nat. Hist. N:o 47697. ♂.)

A large species allied to *T. aureus*, but with light-coloured feet, an ochraceous auricular patch and much larger bullae. General colouration above tawny olive strongly sprinkled with black on mid-dorsal region, becoming more distinctly tawny on the sides of the body. Ventral surface pinkish buff, the hairs plumbeous black at their bases. Skull about as in *T. aureus*, but smaller and with the braincase less inflated.

#### **Thomasomys pyrrhonotus** Thomas.

1886. *Hesperomys pyrrhonotus* Thos., Ann. & Mag. Nat. Hist. (5) xviii, p. 421.

*Type locality*: Northern Peru, Tambillo, Rio Malleta, Cajamarca District. Alt. 5800 feet  
(Type in Brit. Mus. N:o 81. 9. 7. 24.)

General colouration above rich rufous. Ventral surface pure white, the hairs black at their bases. Skull with a long, slender muzzle. Bullae very large, as large as those of *T. auricularis*.

#### **Thomasomys rosalinga** Thomas & St. Leger.

1926. *Thomasomys rosalinga* Thos. & St. Leger, Ann. & Mag. Nat. Hist. (9) xviii, p. 347.

*Type locality*: Northern Peru, Goncha, Peruvian Amazonas. Alt. 8500 feet. (Type in Brit. Mus. N:o 26. 8. 6. 31. ♂.)

Similar to *T. aureus*, but much smaller. Fur thick and woolly. General colouration above deep grey on the head and foreback, cinnamon on hindback. Ventral surface washed with buffy, paler on the throat and warmer on the inguinal region. Skull with supraorbital ridges angular and divergent. Bullae quite unenlarged.

#### **Thomasomys cinereus** Thomas.

1882. *Hesperomys (Rhipidomys) cinereus* Thos., Proc. Zool. Soc., London, p. 108.

*Type locality*: Northern Peru, Cutervo, Cajamarca District. Alt. 9200 feet. (Type in Brit. Mus. N:o 81. 9. 7. 29. ♀.)

Fur very long and soft. General colouration above grizzled ashy grey. Ventral surface greyish white, the hairs slaty at their bases. Tail bicolor.

**Thomasomys ischyru ischyru** Osgood.

1914. *Thomasomys cinereus ischyru* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 12, p. 162.  
*Type locality*: Northern Peru, Tambo Almirante, Uchco. Alt. 5000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19803. ♂.)

Allied to *T. cinereus*, but more richly coloured and with a longer tail. General colouration above rich burnt umber finely sprinkled with sooty. Ventral surface washed with fulvous brown and without any sooty admixture. Skull with remarkably narrow and pointed rostrum, elongated nasals and narrow zygomatic space. Interorbital region broader and more rounded than in *T. cinereus*.

**Thomasomys ischyru eleusis** Thomas.

1926. *Thomasomys ischyru eleusis* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 614.  
*Type locality*: Northern Peru, Tambo Jenes, East of Balsas, Cajamarca District. Alt. 12000 feet. (Type in Brit. Mus. N:o 26. 4. 1. 48. ♂.)

Darker grey than *T. cinereus* and without the warm buffy or ochraceous suffusion of *T. ischyru*. General colouration above dark grey. Ventral surface paler grey, the hairs dull whitish at their tips and with rarely a faint tinge of buffy.

**Thomasomys silvestris** Anthony.

1924. *Thomasomys silvestris* Anth., Amer. Museum Novitates N:o 114, p. 2.  
*Type locality*: Western Ecuador, Las Maquinas, W. of Mt. Corazon. Alt. 7000 feet. (Type in Amer. Museum Nat. Hist. N:o 66288. ♂.)

A long-tailed species apparently most nearly allied to *T. i. ischyru*. Fur long and soft. General colouration above uniform dark mummy-brown, the hairs slaty at their bases. Ventral surface lighter, the hairs tipped with hair-brown. Skull with slender rostrum and the margin of the anterior zygomatic plate straight. Molars proportionally small.

**Thomasomys kalinowskii** Thomas.

1894. *Oryzomys Kalinowskii* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 349.  
*Type locality*: Central Peru, Vitoc Valley. (Type in Brit. Mus. N:o 94. 10. 1. 2. ♂.)

A member of the *T. cinereus* section. Fur very long and soft. General colouration finely grizzled brownish grey. Fingers and toes silvery white. Ears very large. Skull thin and delicately built without supraorbital ridges, but muzzle long and slender.

**Thomasomys cinereiventer cinereiventer** J. Allen.

1912. *Thomasomys cinereiventer* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 80.  
*Type locality*: Western Colombia, Popayan, Cauca District. Alt. 10340 feet. (Type in Amer. Museum Nat. Hist. N:o 32436. ♂.)

Allied to *T. kalinowskii*, but with smaller ears and of a different colouration. General colour above very dark brown, the hairs tipped with broccoli brown. Ventral surface ashy grey very slightly washed with ecru-drab, the hairs slaty at their bases and tipped with soiled white.

**Thomasomys cinereiventer dispar** Anthony.

1925. *Thomasomys cinereiventer dispar* Anth., Amer. Museum Novitates N:o 178, p. 2.  
*Type locality*: Eastern Colombia, Andalucia, Huila District. Alt. 7000 feet. (Type in Amer. Museum Nat. Hist. N:o 33761. ♂.)

A long-tailed form slightly smaller than typical *T. cinereiventer*. General colouration above mummy brown, strongly washed with fuscous black on the dorsal region. Ventral surface between ivory yellow and cream buff, gradually passing into the darker colour of the flanks. Skull with long, slender rostrum. Zygomatic plate narrow and with the anterior margin very straight.

**Thomasomys cinereiventer contradictus** Anthony.

1925. *Thomasomys cinereiventer contradictus* Anth., Amer. Museum Novitates N:o 178, p. 3.  
*Type locality*: Central Colombia, Santa Isabel, Quindio Andes. Alt. 12700 feet. (Type in Amer. Museum Nat. Hist. N:o 32955. ♂.)

Very similar to true *T. cinereiventer*, but slightly smaller and with the colouration of the ventral surface between clay-colour and honey-yellow.

**Thomasomys rhoadsi rhoadsi** Stone.

1914. *Thomasomys rhoadsi* Stone, Proc. Acad. Nat. Sci., Philadelphia, lxvi, p. 12.  
*Type locality*: Western Ecuador, Hacienda Garzon, Mt. Pichincha. Alt. 10500 feet. (Type in Acad. Nat. Sci., Philadelphia. N:o 12709. ♂.)

A species of the *T. cinereus*-group. Fur long and soft. General colouration above nearly blackish bistre. Ventral surface grey, the hairs buffy at their tips.

**Thomasomys rhoadsi fumeus** Anthony.

1924. *Thomasomys rhoadsi fumeus* Anth., Amer. Museum Novitates N:o 139, p. 6.  
*Type locality*: Central Ecuador, Hacienda San Francisco, Ambato. Alt. 8000 feet. (Type in Amer. Museum Nat. Hist. N:o 67537. ♀.)

Size slightly smaller than in *T. rhoadsi*, with shorter hindfeet and somewhat greyer colour. General colouration above a mixture of dusky neutral grey and pale neutral grey, darkest on the back. Ventral surface pale neutral grey, the hairs everywhere plumbeous at their bases. Skull as in *T. rhoadsi*, but anterior margin of zygomatic plate less convex. Mesopterygoid fossa also narrower.

**Thomasomys ladewi** Anthony.

1926. *Thomasomys ladewi* Anth., Amer. Museum Novitates N:o 239, p. 1.  
*Type locality*: Western Bolivia, Rio Aceramarca, La Paz Province. Alt. 10800 feet. (Type in Amer. Museum Nat. Hist. N:o 72113. ♀.)

A rather large species superficially similar to *T. rhoadsi* and *T. cinereus*, but with a heavy skull. Fur very long and soft. General colouration above very finely grizzled fuscous and black. Ventral surface washed with drab grey. Skull with low supraorbital ridges, broad zygomatic arches, broad zygomatic plate and heavy rostrum.

**Thomasomys erro** Anthony.

1926. *Thomasomys erro* Anth., Amer. Museum Novitates N:o 240, p. 5.

*Type locality*: Eastern Ecuador, Mt. Sumaco. Alt. 8000—9000 feet. (Type in Amer. Museum Nat. Hist. N:o 68195. ♂.)

A rather large, dark-coloured species resembling *T. cinereiventer*. Fur long and lax. General colouration above a mixture of isabella colour and fuscous, the latter predominating on head and back. Ventral surface washed with cream buff. Skull with exceedingly narrow and straight-edged zygomatic plate, which only measures 1,7 mm.

**Thomasomys oenax** Thomas.

1928. *Thomasomys oenax* Thos., Ann. & Mag. Nat. Hist. (10) i, p. 154.

*Type locality*: Southern Brazil, San Lorenzo, Rio Grande do Sul Province. (Type in Brit. Mus. N:o 27. 11. 19. 44. ♀.)

A medium-sized species of the *T. cinereus*-section. General colouration above lined grey. Ventral surface light, whitish to the bases of the hairs on throat and inguinal regions, washed with buffy on the belly, the bases of the hairs deep slaty. Skull with unridged supraorbital edges, not unlike that of *T. taczanowskii*, but with rather longer facial portion. Incisors orthodont.

**Thomasomys caudivarius** Anthony.

1923. *Thomasomys caudivarius* Anth., Amer. Museum Novitates N:o 55, p. 4.

*Type locality*: Southern Ecuador, Taraguacochoa, Provincia del Oro. Alt. 10750 feet. (Type in Amer. Museum Nat. Hist. N:o 47668. ♂.)

A good-sized species of the *T. cinereus*-section. Fur soft. General colouration above near mummy brown. Ventral surface chamois, the hairs plumbeous at their bases. Tail with a white tip. Skull as in *T. cinereus*, but braincase less inflated. Bullae small and elongate with very little inflation.

**Thomasomys bombycinus** Anthony.

1925. *Thomasomys bombycinus* Anth., Amer. Museum Novitates N:o 178, p. 1.

*Type locality*: Western Colombia, Paramillo, Antioquia District. Alt. 12500 feet. (Type in Amer. Museum Nat. Hist. N:o 37740. ♀.)

Resembling *T. cinereus*, but smaller. Fur soft and silky. General colouration above between fuscous and clove-brown, lighter on the sides and intermixed with some black-tipped hairs on the back. Ventral surface cinnamon buff to tawny olive, the hairs plumbeous black at their bases. Skull about as in *T. cinereus*, but rostrum more slender, braincase less inflated and small bullae.

**Thomasomys paramorum** Thomas.

1898. *Thomasomys paramorum* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 453.

*Type locality*: Central Ecuador, Paramo South of Mt. Chimborazo. (Type in Brit. Mus. N:o 97. 11. 7. 82. ♀.)

Considerably smaller than *T. cinereus*. Fur long, soft and woolly. General colouration above dark rufous brown. Ventral surface not sharply defined dull

whitish. Skull slender, papery and delicately built with the interorbital region parallel-sided, narrow and with rounded edges. Bullae larger than those of *T. cinereus*.

**Thomasomys oreas** Anthony.

1926. *Thomasomys oreas* Anth., Amer. Museum Novitates N:o 239, p. 2.

*Type locality*: Western Bolivia, Cocopunco, La Paz Province. Alt. 10000 feet. (Type in Amer. Museum Nat. Hist. N:o 72130. ♂.)

Of about the same size as *T. paramorum*, but with longer ears and longer tail. Fur long and soft. General colouration above Prout's brown finely sprinkled with fuscous black on the dorsal region. Ventral surface warm pinkish buff over plumbeous black. Hindfeet with a longitudinal band of clove-brown from the ankles to the base of the toes. Skull as in *T. paramorum*, but bullae larger (5,6 × 5,1 mm.).

**Thomasomys taczanowskii** Thomas.

1882. *Hesperomys (Rhipidomys) taczanowskii* Thos., Proc. Zool. Soc., London, p. 109.

*Type locality*: Northern Peru, Tambillo, Rio Malleta, Cajamarca District. Alt. 5800 feet. (Type in Brit. Mus. N:o 81. 9. 7. 23. ♀.)

General colouration above greyish yellow, the hairs tipped with rufous yellow. Ventral surface greyish white.

**Thomasomys vestitus** Thomas.

1898. *Oryzomys vestitus* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 454.

*Type locality*: Western Venezuela, Rio Milla, Merida. Alt. 1630 m. (Type in Brit. Mus. N:o 98. 5. 15. 3. ♂.)

General colouration above grizzled fuscous grey. Ventral surface dirty greyish, the hairs washed terminally with dull buffy. Skull broad and flat.

**Thomasomys laniger laniger** Thomas.

1895. *Oryzomys laniger* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 59.

*Type locality*: Central Colombia, Bogotá region. Alt. 8750 feet. (Type in Brit. Mus. N:o 95. 8. 1. 39. ♀.)

General colouration above dull olivaceous grey. A light postauricular patch present. Ventral surface similar to the upperparts of the body, but paler. Feet brownish. Digits white. Skull rather thin and papery with unbeaded interorbital region, nearly parallel-sided mesopterygoid fossa and small bullae.

**Thomasomys laniger emeritus** Thomas.

1916. *Thomasomys laniger emeritus* Thos., Ann. & Mag. Nat. Hist. (8) xviii, p. 479.

*Type locality*: Western Venezuela, Montes de Escaguer, Merida. Alt. 2500 m. (Type in Brit. Mus. N:o 5. 1. 1. 4. ♂.)

Closely similar to *T. laniger*, but larger and with a longer skull. Mesopterygoid fossa broadened in front and narrowed posteriorly.

**Thomasomys niveipes** Thomas.

1896. *Oryzomys niveipes* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 305.

*Type locality*: Western Colombia, La Oya del Barro, Cundinamarca District. (Type in Brit. Mus. N:o 96. 11. 1. 4. ♂.)

Externally very similar to *T. laniger* from which it merely differs by having silvery white feet and a fulvous tone on the ventral surface. Fur very long, soft and fluffy. General colouration above dull olive fulvous, becoming darker on the back and clearer on the sides.

**Thomasomys monochromus** Bangs.

1900. *Oryzomys (Erioryzomys) monochromus* Bangs, Proc. New Engl., Zool. Club, I, p. 97.

*Type locality*: North-eastern Colombia, Macotama, Sierra Nevada de Santa Marta. Alt. 11000 feet. (Type in Museum Comp. Zool., Cambridge, Mass., N:o 8348. ♂.)

Similar to *T. laniger*, but with much smaller ears and whiter feet. General colouration above bistre, becoming more yellowish or raw umber on the sides of the body. Ventral surface dull yellowish wood-brown, the hairs slaty at their bases.

**Thomasomys hylophilus** Osgood.

1912. *Thomasomys hylophilus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 5, p. 50.

*Type locality*: Eastern Colombia, Paramo de Tama, Upper Rio Tachira, Santander District. Alt. 7500 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 18583. ♂.)

Allied to *T. laniger* and *T. monochromus*. General colouration above tawny olive mixed with black. Ventral surface cinnamon, the hairs slaty at their bases. Tail long, tipped with white.

**Thomasomys baeops** Thomas.

1899. *Oryzomys baeops* Thos., Ann. & Mag. Nat. Hist. (7) iii, p. 152.

*Type locality*: Western Ecuador, Rio Pita, Chillo Valley. Alt. 3500 m. (Type in Brit. Mus. N:o 96. 8. 1. 7. ♀.)

Most closely allied to *T. niveipes* from which it principally differs by its abnormally shortened muzzle. General colouration above dull greyish brown, becoming darker on the mid-dorsal region. Ventral surface silvery greyish.

**Thomasomys gracilis** Thomas.

1917. *Thomasomys gracilis* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 2.

*Type locality*: Central Peru, Machu Picchu, Cuzco District. Alt. 12000 feet. (Type in United States National Museum. N:o 194816. ♂.)

A very small species somewhat allied to *T. baeops*. General colouration above Dresden brown. Ventral surface not sharply defined soiled greyish buff, the hairs slaty at their bases. Skull with the interorbital region narrow, its edges just squared, but not ridged. Braincase smooth, rounded, slightly ridged. Palatal foramina well open, reaching back just past the anterior end of  $m^1$ . Bullae of normal size, much smaller than those in *T. taczanowskii*.

**Thomasomys hudsoni** Anthony.1923. *Thomasomys hudsoni* Anth., Amer. Museum Novitates N:o 55, p. 3.*Type locality*: South-eastern Ecuador, Bestion, Provincia del Azuay. Alt. 10100 feet. (Type in Amer. Museum Nat. Hist. N:o 47690. ♂.)

Essentially rather similar to *T. gracilis*. Fur long and soft. General colouration above between Dresden brown and mummy brown, darkest on the dorsal region. Ventral surface warm buff, the hairs plumbeous black at their bases. Skull with nasals slightly concave in dorsal outline and rounded to form a slender subcylindrical tube.

**Thomasomys cinnameus** Anthony.1924. *Thomasomys cinnameus* Anth., Amer. Museum Novitates N:o 139, p. 5.*Type locality*: Central Ecuador, Hacienda San Francisco, Ambato. Alt. 8000 feet. (Type in Amer. Museum Nat. Hist. N:o 67401. ♀.)

A richly coloured species allied to *T. gracilis*, but larger and with very slender hindfeet. Fur fairly long, very soft and silken. General colouration above between cinnamon brown and Brussels brown, becoming clay-colour on the sides of the body. Ventral surface cinnamon buff, the hairs plumbeous black at their bases.

**Thomasomys daphne daphne** Thomas.1917. *Thomasomys daphne* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 2.*Type locality*: Central Peru, Ocabamba Valley, Cuzco District. Alt. 9100 feet. (Type in United States National Museum. N:o 194902. ♀.)

A small, short-eared species with the incisors unusually proödont. Externally about as in *T. gracilis*, but colouration duller and more drabby, nearest to Saccardo's umber. Ventral surface slaty grey, broadly washed with buffy. Skull with interorbital region comparatively broad, but not ridged. Palatal foramina short, ending some way in front of  $m^1$  and narrow, not widely open, their medium septum broadened and flattened posteriorly. Muzzle short and bullae small.

**Thomasomys daphne australis** Anthony.1925. *Thomasomys daphne australis* Anth., Amer. Museum Novitates N:o 178, p. 4.*Type locality*: Central Bolivia, Incachaca, Cochabamba District. Alt. 7700 feet. (Type in Amer. Museum Nat. Hist. N:o 38550. ♂.)

Similar to *T. daphne* in principal characters, including the proödont incisors, but more cinnamon brown above. Feet darker. Fur soft and lax. Ventral surface cinnamon buff, the hairs slaty at their bases. Skull as in *T. daphne*, but with longer and more widely open palatine foramina which almost reach into the molar plane.

**Thomasomys macconnelli** de Winton.1900. *Rhipidomys Macconnelli* de Winton, Trans. Linn. Soc., London, viii, p. 52.*Type locality*: British Guiana, Mt. Roraima. Alt. 8700 feet. (Type in Brit. Mus. N:o 99. 3. 6. 1.)

Fur very soft. General colouration above rich golden brown intermixed with some long black hairs. Ventral surface dirty white, not sharply defined and

with the hairs dull black at their bases. Skull with large braincase, thin and weak zygomata and very small bullae.

#### **Thomasomys fraternus** Thomas.

1927. *Thomasomys fraternus* Thos., Ann. & Mag. Nat. Hist. (9) xx, p. 602.

*Type locality*: Central Peru, Alcas, N. E. of Cerro, Junin Province. Alt. 11500 feet. (Type in Brit. Mus. N:o 27. 11. 1. 169. ♂.)

A medium-sized species externally very similar to *T. ischyryus*, but smaller, with more proödont incisors and smaller molars. General colouration above warm brown. Ventral surface washed with buffy. Skull with long, narrow muzzle and narrow zygomatic plate.

#### **Thomasomys notatus** Thomas.

1917. *Thomasomys notatus* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 2.

*Type locality*: Central Peru, Torontoy, Cuzco District. Alt. 9500 feet. (Type in United States National Museum. N:o 194548. ♂.)

A medium-sized species with the general colouration above ochraceous tawny and with a dark dorsal stripe. Feet broad with well-marked metatarsal patches. Skull like a miniature *T. aureus*, but the zygomata not so convergent forwards. A rather aberrant member of the genus *Thomasomys*.

### Genus **Phaenomys** Thomas.

1917. **Phaenomys** Thomas, Ann. & Mag. Nat. Hist. (8) xx, p. 196. — *Type*: *Oryzomys ferrugineus* Thos.

Form normal. Fur thick and straight. Ears rather small, well-clothed. Tail very long and thinly haired. Claws slender and not specially curved. Fifth hind toe long, almost reaching to the middle of the second phalanx of the fourth toe. Mammae: 2—2=8.

Skull long and rather slender. Interorbital region slightly concave, its edges distinctly beaded, but without overhanging ledges, the beadings continued backwards across the parietals. Anterior zygomatic plate not projecting forwards enough to be visible from above. Mesopterygoid fossa extending to between the last upper molars. Interparietal large. Palatine foramina long and open.

Incisors rather broad and heavy. Molars broad and rounded. Cusps unusually high and prominent. First upper molar not evenly oblong, the antero-internal cusp reduced. Dentition otherwise as in *Oryzomys*, the crowns thus brachyödont.

#### **Phaenomys ferrugineus** Thomas.

1894. *Oryzomys ferrugineus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 352.

*Type locality*: Eastern Brazil, Rio de Janeiro. (Type in Brit. Mus. N:o 76. 12. 8. 3. ♀.)

Size rather large. General colouration above orange rufous. Ventral surface white, washed with yellowish on the belly and with the hairs white at their bases. Tail uniform dark brown.

Genus *Inomys* Thomas.

1917. *Inomys* Thomas, Ann. & Mag. Nat. Hist. (8) xx, p. 197. — *Type: Oryzomys incanus* Thos.

Form not specially modified. Tail rather long. Feet of normal proportions. Soles naked with high and distinct pads. Claws rather long. Fifth hind toe reaching to the end of the first phalanx of the fourth toe.

Skull with a long and narrow muzzle. Braincase broad, low and rounded. Interorbital region smoothly rounded. Interparietal of normal size.

Incisors small and delicate. Dentition slightly hypsodont. Molars rather narrow, their crowns higher than in *Rhipidomys*, *Thomasomys*, *Phacnomys* and *Delomys*. Structure of molars *Oryzomys*-like.

*Inomys incanus* Thomas.

1894. *Oryzomys incanus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 350.

*Type locality*: Central Peru, Vitoc Valley. (Type in Brit. Mus. N:o 94. 10. 1. 4. ♂.)

Size comparatively small. General colouration above finely grizzled brownish grey. Belly rather dirty fulvous.

Genus *Delomys* Thomas.

1917. *Delomys* Thomas, Ann. & Mag. Nat. Hist. (8) xx, p. 196. — *Type: Hesperomys dorsalis* Hensel.

Form murine, unmodified. Ears rather large. Tail long and very thinly clothed with short hairs, the annulations distinctly visible. Feet long and slender. Pollex with a nail. Claws of normal proportions. Palms and soles naked with large pads. Mammae: 2—2=8.

Skull long. Muzzle long and rather heavy. Braincase comparatively small. Interorbital region rather broad and smooth, its edges rounded or slightly squared, but not ridged or beaded. Anterior zygomatic plate projecting forwards enough to be visible from above. Interparietal well-developed. Palatine foramina rather long and widely open. Mesopterygoid fossa extending to a little in front of the posterior plane of the last molars.

Molars brachyodont, rather narrow but *Oryzomys*-like in structure. First upper molar of an evenly oblong shape.

*Delomys dorsalis dorsalis* Hensel.

1873. *Hesperomys dorsalis* Hensel, Abhandl. Kön. Akad. d. Wissensch., Berlin für 1872, p. 42.

*Type locality*: Southern Brazil, Rio Grande do Sul Province. (Type presumably in Zool. Museum, Berlin.)

General colouration above mouse-grey, strongly darkened and becoming almost black along the dorsal line. Ventral surface greyish white, the hairs dark slaty at their bases. Tail bicolor.

[*Delomys dorsalis lechei* Trouessart.]

1904. *Acodon dorsalis lechei* Trouess., Cat. Mammalium (Suppl.) p. 434. — New name for *Hesperomys dorsalis obscura* Leche 1886 (preoccupied).

*Type locality*: Southern Brazil, Taquara do Mundo Nova, Rio Grande do Sul Province. (Type in Zool. Museum, Copenhagen.)

Said to differ from the typical form in being nearly blackish above. From all appearance not different from *D. d. dorsalis*.

*Delomys dorsalis collinus* Thomas.

1917. *Delomys dorsalis collinus* Thos., Ann. & Mag. Nat. Hist. (8) xx, p. 197.

*Type locality*: Eastern Brazil, Itatiaya, Rio de Janeiro Province. Alt. 4800 feet. (Type in Brit. Mus. N:o 14. 2. 23. 12. ♂.)

Similar to *D. d. dorsalis*, but larger. Fur soft and rich. Ventral surface rather more whitish and less buffy. Tail less distinctly bicolor. Skull as in *D. d. dorsalis*, but tooth-row longer.

*Delomys sublineatus* Thomas.

1903. *Oryzomys sublineatus* Thos., Ann. & Mag. Nat. Hist. (7) xii, p. 240.

*Type locality*: Eastern Brazil, Engenheiro Reeve, Espiritu Santo Province. Alt. 500 m. (Type in Brit. Mus. N:o 3. 9. 4. 58. ♂.)

Differs from *D. dorsalis* by its harsher fur and certain cranial characters. General colouration above dull grizzled greyish, coarsely lined with buffy and becoming darker on the mid-dorsal region as well as slightly more buffy along the sides of the body. Ventral surface dull buffy whitish, the hairs slaty at their bases. Skull broader and flatter than that of *D. dorsalis*, with the interorbital region smooth. Anterior zygomatic plate concave on its front margin.

Genus *Tylomys* Peters.

1866. *Tylomys* Peters, Monatsber. K. Preuss. Akad. d. Wissensch., Berlin, p. 404. — *Type*: *Hesperomys (Tylomys) nudicaudus* Peters.

Form murine. Size large. Ears rather large, naked. Tail long, scaly, practically naked and with the skin on the terminal portion whitish flesh-coloured in contrast to the basal part. Pollex with a short, flattened nail. Claws of forefeet only about half as long as those of the hindfeet. Fifth hindtoe reaching beyond the basal phalanx of the fourth toe. Palms and soles naked, not scaled or granulated. Pads large, five in number.

Skull elongated, but with comparatively short nasals. Braincase low and rather flat. Interorbital region broad, the edges forming distinct shelves, continued as distinct beads along the parietals. Anterior zygomatic plate concave and not projecting forwards. Infraorbital foramina peculiarly shaped, only opening forwards and not upwards. Interparietal very large. Palate short. Palatine foramina long and well open, nearly reaching the level of the first molars. Mesopterygoid

fossa broad, its anterior end pointed. Parapterygoid fossae relatively shallow and not pointed anteriorly. Bullae of moderate size.

Incisors broad and strong, ungrooved. Molar dentition rather heavy. Length of molar series of about the same length as the palatine foramina. First upper molar evenly rectangular with six well-developed tubercles. There are two re-entrant angles on each side as well as three loops of enamel on the inner side and five on the outer. Second upper molar with only one re-entrant angle on each side and but two loops interiorly. Third upper molar with one re-entrant angle on each side, two loops of enamel on the inner side and only four on the outer. First lower molar with two re-entrant angles on each side. The second lower molar, which is the smallest, has only one on each side, and the third one on the outer and two on the inner side.

### *Tylomys mirae* Thomas.

1899. *Tylomys mirae* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 278.

*Type locality*: North-western Ecuador, Paramba, Rio Mira. Alt. 1100 m. (Type in Brit. Mus. N:o 99. 8. 25. 1. ♂.)

Fur close and thick. General colouration above dark cinereous grey, slightly tinged with fawn and becoming greyer and less fawn-coloured on the sides of the body. Ventral surface white, narrowing on the belly, some of the hairs with a slight greyish tinge at their bases. Skull with narrow nasals. Supraorbital ridges with a definite postorbital angle.

### Genus *Holochilus* Brandt.

1835. *Holochilus* Brandt, Mém. Acad. Imp. Sci., St Petersburg (6) iii, pt. 2, p. 428. — *Type*: *Mus (Holochilus) leucogaster* Brandt.

Form murine. Size large. Fur thick and soft. Muzzle obtuse. Upper lip not fully cleft. Ears comparatively small. Tail long, scaly and thinly haired. Pollex with a truncated nail. Forefeet relatively small. Hindfeet long. Toes partially webbed. Claws of hindfeet much longer and stronger than those of the forefeet. Palms and soles naked, but granulated between the pads.

Skull robust. Interorbital region rather narrow and compressed. Supraorbital edges distinctly beaded. Anterior zygomatic plate broad, more or less distinctly emarginated and with a small spinous process projecting forwards enough to be visible from above. Interparietal well-developed. Palate extending a little beyond the level of the last molars, more or less *Sigmodon*-like in appearance. Palatine foramina short but well open, not reaching posteriorly to the plane of the first molars. Mesopterygoid fossa comparatively narrow. Parapterygoid fossae moderately deep, but not distinctly pointed anteriorly. Bullae of medium size.

Incisors broad and flat, ungrooved. Molars short and broad. Second upper molar usually shorter than the remaining two teeth, but of similar form. Molar crowns flat, without cusps and longitudinal yoke, but with shallow indentations on their sides. Molar pattern with the enamel folds not alternating, but placed

opposite to each other and rather obliquely set. Second lower molar with two re-entrant loops on each side.

#### **Holochilus physodes physodes** Lichtenstein.

1827. *Mus physodes* Licht., in Brants: Het Geslacht d. Muizen, p. 139.

*Type locality*: Southern Brazil, Sao Paulo Province. (Type presumably in Zool. Museum, Berlin.)

Fur close and thick. General colouration above reddish brown, intermixed with longer blackish hairs on the dorsal region. Ventral surface sharply defined pure white.

#### **Holochilus physodes leucogaster** Brandt.

1835. *Mus (Holochilus) leucogaster* Brandt, Mém. Acad. Imp. Sci., St. Petersbourg, vi, N:o 1, p. 428.

*Type locality*: Brazil. (Type presumably in Zool. Museum, Leningrad.)

General colouration above a mixture of pale tawny and black. Ventral surface whitish, washed with light tawny.

#### **Holochilus russatus** Wagner.

1850. *Hesperomys russatus* Wagn., Abhandl. Akad. d. Wissensch. in München, V, p. 312.

*Type locality*: Southern Brazil, Ypanema, Sao Paulo Province. (Type presumably in Zool. Museum, Munich.)

Allied to *H. physodes*, but brighter-coloured and with a yellowish wash on the underparts. General colouration above bright golden orange somewhat sprinkled with black, becoming clearer on the nose and on the sides of the body. Ventral surface sharply defined yellowish white.

#### **Holochilus vulpinus** Lichtenstein.

1827. *Mus vulpinus* Licht., in Brants: Het Geslacht d. Muizen, p. 137.

*Type locality*: Uruguay, Maldonado. (Type presumably in Zool. Museum, Berlin.)

General colouration above cinnamon brown, strongly intermixed with long, glistening blackish brown hairs on the dorsal region. Sides of the body bright ochraceous buff. Ventral surface pure white, the hairs white to their roots.

#### **Holochilus chacarius** Thomas.

1906. *Holochilus chacarius* Thos., Ann. & Mag. Nat. Hist. (7) xviii, p. 446.

*Type locality*: Paraguay, Concepcion, Chaco. Alt. 500 feet. (Type in Brit. Mus. N:o 1. 3. 11. 2. ♀.)

Allied to *H. vulpinus*, which it resembles in colour, but with more slender feet and narrow teeth. General colouration above near raw umber, the sides of the body buffy, brightening to ochraceous buff along their lower edge. Throat, chest and inguinal region entirely white. Remainder of ventral surface buff, the hairs white basally. Skull lightly built with sharp, but not heavily ridged supra-orbital edges.  $M^3$  rather simple, its anterior lamina directly transverse, scarcely thickened internally and not connected with the second lamina.

**Holochilus balnearum** Thomas.1906. *Holochilus balnearum* Thos., Ann. & Mag. Nat. Hist. (7) xviii, p. 447.*Type locality*: North-western Argentine, Banado de San Felipe, Tucuman Province. Alt. 435 m. (Type in Brit. Mus. N:o 4. 10. 2. 5. ♀.)

A small species with short bicolor tail and large teeth. Fur long and fine. General colouration above rather greyer than that of *H. chacarius*, the sides of the body duller buff and the belly deeper buff. Skull short and thickly built. Molars broad, heavy and set with unusually oblique angle. Anterior lamina of  $m^3$  thickened internally and connected with the second lamina by an enamel band.

**Holochilus darwini** Thomas.1897. *Holochilus Darwini* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 496. — New name for *Mus braziliensis* Waterhouse, Zool. Voy. »Beagle», Mamm., 1839, p. 58, pl. xix.*Type locality*: South-eastern Argentine, Bahia Blanca, S. Buenos Aires Province. (Type in Brit. Mus. N:o 55. 12. 24. 155. ♀.)

Fur long and rather soft. General colouration above deep golden yellow, annulated with blackish and thickly intermixed with long black hairs. Ventral surface golden yellowish, the hairs pale grey at their bases. Throat and chest whitish, the hairs white to their roots.

**Holochilus simpsoni** Philippi.1900. *Mus Simpsoni* Phil., An. Museo Nacional de Chile, I, p. 29.*Type locality*: Chile, Santo Domingo Island, Western Patagonia. (Type in Museo Nacional de Santiago de Chile.)

Size large. General colouration above a suffusion of greyish brown and bright rusty, intermixed with blackish hairs on the dorsal region. Ventral surface white, the hairs grey at their bases.

**Holochilus sciureus** Wagner.1842. *Holochilus sciureus* Wagn., Arch. für Naturgesch. (1) viii, p. 17.*Type locality*: Eastern Brazil, Rio San Francisco. (Type presumably in Zool. Museum, Munich.)

General colouration above coarsely mixed brownish and rufous, darkest on the dorsal region, clearer and more ochraceous on the sides of the body. Ventral surface whitish, distinctly washed with light ochraceous, the hairs with narrow slaty grey bases.

**Holochilus nanus** Thomas.1897. *Holochilus nanus* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 495.*Type locality*: North-eastern Brazil, Source, Marajó Island. (Type in Brit. Mus. N:o 97. 4. 1. 2. ♀.)

A very small form with the general characters about as in *H. vulpinus* and *H. sciureus*. General colouration above coarsely mixed black and rufous, darkest on mid-dorsal region, clearer rufous on the sides of the body and becoming quite bright rufous along the edge of the belly. Ventral surface whitish, strongly washed

with rufous and with the hairs slaty grey at their bases. Skull as in *H. sciureus*, but much smaller and with the interorbital region more flat and less compressed.

#### *Holochilus guianae* Thomas.

1901. *Holochilus guianae* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 149.

*Type locality*: British Guiana, Kanuku Mountains. Alt. 500 feet. (Type in Brit. Mus. N:o 1. 6. 4. 87. ♂.)

A medium-sized species allied to *H. sciureus*, but darker. General colouration above grizzled greyish fawn, profusely mixed with blackish along the dorsal region and becoming clearer and more buffy cinnamon on the flanks. Ventral surface not sharply defined white and washed with cinnamon buff, the hairs slaty at their bases. Skull as in *H. sciureus*, but lighter and more delicately built, less heavily ridged and with narrower muzzle. Interorbital region flat with square edges.

#### *Holochilus venezuelae* J. Allen.

1904. *Holochilus venezuelae* J. Allen, Bull. Amer. Museum Nat. Hist., xx, p. 330.

*Type locality*: Central Venezuela, El Llagual. Alt. 100—500 feet. (Type in Amer. Museum Nat. Hist. N:o 16973. ♀ imm.)

Allied to *H. guianae*, but larger and more rufous. General colouration above reddish brown, strongly washed with black on mid-dorsal region, lighter and more fulvous on the sides. Ventral surface buffy grey, the hairs grey at their bases.

#### [*Holochilus amazonicus* Osgood.]

1915. *Holochilus amazonicus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 13, p. 188.

*Type locality*: Central Brazil, Itacoatiara, Rio Amazonas. (Type in Field Museum Nat. Hist., Chicago. N:o 20136. ♂.)

Described as allied to *H. sciureus*, but larger, with a heavier skull and with relatively weak dentition. General colouration above dull ochraceous buff, strongly mixed with dusky and becoming clearer, more ochraceous buff, on the sides of the body. Chest and abdomen washed with clear ochraceous buff, the hairs neutral grey at their bases. Most certainly identical with *H. sciureus* WAGNER.

#### *Holochilus incarum* Thomas.

1920. *Holochilus incarum* Thos., Proc. United States National Museum, lviii, N:o 2333, p. 226.

*Type locality*: Central Peru, Santa Ana, Cuzco District. Alt. 3480 feet. (Type in United States National Museum. N:o 194915. ♀ imm.)

A medium-sized species allied to *H. sciureus*, but less buffy on the flanks and with comparatively weak dentition. General colouration above umber brown. Ventral surface slaty washed with buff, the hairs slaty at their bases. Apparently only a slightly differentiated highland representative of *H. sciureus* WAGNER.

#### Genus *Nectomys* Peters.

1861. *Nectomys* Peters, Abhandl. K. Akad. d. Wissensch., Berlin für 1860, p. 151. — *Type*:

*Mus squamipes* Brants.

*Syn. Sigmodontomys* J. Allen, Bull. Amer. Museum Nat. Hist., ix, 1897, p. 38. — *Type*:

*Sigmodontomys alfari* J. Allen.

Form murine. Size large. Fur thick and soft. Tail long and scaly, thinly haired, the hairs longer and more stiff on the underside than above. Ears moderate in size. Pollex with a flattened nail. Forefeet relatively small. Hindfeet long. Toes partially webbed. Claws of hindfeet much longer than those of the forefeet. Palms and soles naked, but strongly scaled between the pads.

Skull robust, with the nasals more or less rapidly tapering posteriorly. Interorbital region somewhat flattened. Supraorbital edges heavily beaded. Anterior zygomatic plate very broad, with its upper edge rounded and projected forwards enough to be visible from above. Interparietal very large. Palate long, reaching backwards beyond the plane of the last molars and excavated on its posterior border, in which lateral pits are situated. Palatine foramina short but well open, not reaching posteriorly to the plane of the first upper molars. Mesopterygoid fossa broad and parallel-sided. Parapterygoid fossae more or less sharply pointed anteriorly. Bullae comparatively small.

Dentition very heavy. Incisors broad, ungrooved. Molars rather hypsodont. Molar pattern more complicated than in *Oryzomys*. Upper molars with very shallow outer re-entrant angles which almost close as age advances, but on the interior side they remain as deep enamel folds, which nearly extend to the middle line of the teeth. First upper molar with two interior enamel folds, second upper molar with only one, and on the third there is practically none. On the lower molars there are no re-entrant angles on the interior side, but on the outer side there are two on the first molar and one on the remaining two molars.

#### *Nectomys squamipes squamipes* Brants.

1827. *Mus squamipes* Brants, Het Geslacht der Muizen, p. 138.

*Type locality*: Southern Brazil, Sao Paulo Province. (Type presumably in Zool. Museum, Berlin.)

*Syn. Hesperomys robustus* Burm., Syst. Uebers. d. Thiere Brasiliens, I, 1854, p. 164. — Brazil.

General colouration above ochraceous brown strongly intermixed with black. Sides of the body paler, more yellowish buff. Ventral surface greyish washed with pale yellowish buff, the hairs slaty grey at their bases. Skull with mesopterygoid fossa rather narrow anteriorly and broadening backwards, the front border rounded.

#### *Nectomys squamipes mattensis* Thomas.

1903. *Nectomys squamipes mattensis* Thos., Proc. Zool. Soc., London, ii, p. 238.

*Type locality*: Southern Brazil, Santa Anna de Chapada, Matto Grosso Province. Alt. 800 m. (Type in Brit. Mus. N:o 3. 7. 71. ♂.)

Externally as in *N. s. squamipes*, but skull structure different. Mesopterygoid fossa broader anteriorly than posteriorly, its breadth in front greater than the length of  $m^1$ . Parapterygoid fossae proportionately narrow and sharply pointed anteriorly.

#### *Nectomys squamipes melanius* Thomas.

1910. *Nectomys squamipes melanius* Thos., Ann. & Mag. Nat. Hist. (8) vi, p. 185.

*Type locality*: British Guiana, Rio Essequibo, Demerara District. Alt. 40 feet. (Type in Brit. Mus. N:o 6. 4. 8. 32. ♂.)

Similar to *N. s. squamipes*, but of a darker, more blackish brown colouration above. Ventral surface soiled greyish, the hairs tipped with buff. Skull rather smaller than that of the typical form.

#### *Nectomys squamipes pollens* Hollister.

1914. *Nectomys squamipes pollens* Hollist., Proc. Biol. Soc., Washington, xxvii, p. 104.

*Type locality*: Paraguay, Sapucay. (Type in United States National Museum. N:o 121399. ♂.)

Larger than *N. s. squamipes*, *N. s. mattensis* or *N. garleppii*, with considerably longer tail and larger hindfoot, ears and skull. General colouration less reddish than in *N. squamipes*, more yellowish buff. Ventral surface also much less intensely coloured.

#### *Nectomys palmipes* J. Allen & Chapman.

1893. *Nectomys palmipes* J. Allen & Chapm., Bull. Amer. Museum Nat. Hist., v, p. 209.

*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5928/4658. ♂.)

Allied to *N. squamipes*, but nasals rather more abruptly narrowed posteriorly. Fur soft and glossy. General colouration above pale yellowish brown, darker and nearly blackish on mid-dorsal area, greyish buffy brown on the sides of the body. Ventral surface whitish, washed with pale buff, the hairs greyish plumbeous at their bases.

#### *Nectomys apicalis* Peters.

1861. *Nectomys apicalis* Peters, Abhandl. Kön. Akad. d. Wissensch., Berlin für 1860, p. 152.

*Type locality*: South-western Ecuador, Guayaquil. (Type presumably in Zool. Museum, Berlin.)

General colouration above glossy greyish brown. Skull with particularly long and narrow nasals, which are tapering behind to a long drawn-out point. Hindfeet large.

#### *Nectomys grandis* Thomas.

1897. *Nectomys grandis* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 498.

*Type locality*: Central Colombia, Concordia, Medellin, Antioquia District. Alt. 5807 feet. (Type in Brit. Mus. N:o 73. 11. 5. 3. ♂.)

Size large. General colouration above coarsely mixed black and dull yellow. Sides of the body dull brownish yellow, passing gradually into the yellowish buff of the ventral surface, the hairs of which are slaty grey basally. Skull large and heavily built. Nasals long, slightly constricted about the middle, evenly tapering backwards, but neither so long nor so narrow as in *N. apicalis*.

#### *Nectomys fulvinus* Thomas.

1897. *Nectomys fulvinus* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 499.

*Type locality*: «Western Ecuador, Quito». (Type in Brit. Mus. N:o 86. 7. 2. 7. ♂.)

Fur rather short. General colouration above rich fulvous, lined with brown on the centre of the back and becoming clearer on the sides of the body. Ventral surface paler fulvous. Skull with a much flattened interorbital region, the lateral ridges of which are straight and less divergent than usual. Posterior palatal margin square.

**Nectomys garleppii** Thomas.1899. *Nectomys Garleppii* Thos., Ann. & Mag. Nat. Hist. (7) iii, p. 41.*Type locality*: Central Peru, Ocabamba Valley, Cuzco District. Alt. 9100 feet. (Type in Brit. Mus. N:o 98. 11. 6. 21. ♀.)

Allied to *N. apicalis*. General colouration above glossy greyish brown, becoming more grizzled fulvous on the sides of the body. Ventral surface greyish white, washed with dull buffy. Hindfeet rather short. Skull broader than that of *N. apicalis*.

**Nectomys russulus** Thomas.1897. *Nectomys russulus* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 547.*Type locality*: Western Colombia, Valdivia, Cauca District. Alt. 1200 m. (Type in Brit. Mus. N:o 98. 10. 3. 13. ♀.)

Size about as in *N. grandis*. Fur thick and glossy. General colouration above dark russet brown with dark fulvous annulations. Sides of the body clearer. Ventral surface not sharply defined and slightly paler than the sides, the hairs slaty basally and dull buff terminally. Skull broad and heavy with large teeth.

**Nectomys hammondi** Thomas.1913. *Nectomys hammondi* Thos., Ann. & Mag. Nat. Hist. (8) xii, p. 570.*Type locality*: Western Ecuador, Mindo. Alt. 4213 feet. (Type in Brit. Mus. N:o 13. 10. 24. 58. ♀.)

A glossy brown species allied to *N. russulus*. General colouration above tawny olive, strongly lined and darkened with black. Flanks clearer tawny. Ventral surface not sharply defined dull greyish, the hairs dark slaty basally and dull whitish tawny terminally. Skull rather slender. Nasals broad anteriorly. Bullae small.

**Nectomys esmeraldorum** Thomas.1901. *Nectomys esmeraldorum* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 250.*Type locality*: North-western Ecuador, San Janvier. Alt. 20 m. (Type in Brit. Mus. N:o 1. 3. 19. 8. ♂.)

A small species allied to *N. russulus*. General colouration above rich shining rufous; becoming clearer on the sides of the body. Ventral surface soiled rufous, not sharply defined and with the hairs slaty grey at their bases. Skull broadly ridged.

**Nectomys saturatus** Thomas.1897. *Nectomys saturatus* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 546.*Type locality*: Northern Ecuador, Ibarra. Alt. 2225 m. (Type in Brit. Mus. N:o 97. 11. 7. 40. ♂.)

Size about as in *N. grandis*. General colouration above dark smoky greyish brown, becoming nearly black on the mid-dorsal area and clearer grey on the sides. Ventral surface pale buff, the hairs slaty at their bases. Skull very stout and heavily built with very large and heavy molars.

**Nectomys magdalenae** Thomas.

1897. *Nectomys magdalenae* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 499.  
*Type locality:* Western Colombia, Rio Magdalena, Cundinamarca District. (Type in Brit. Mus. N:o 97. 3. 17. 1.)

External characters unknown. Skull with fairly broad and slightly compressed nasals. The skull is furthermore much more rounded both on forehead and braincase than usual.

Genus **Reithrodontomys** Giglioli.

1873. **Reithrodontomys** Giglioli, Ricerche intorno alla Distrib. Geog. Gener. (Bol. Soc. Geog. Ital.), p. 160. — *Type: Reithrodon megalotis* Baird.

Form murine. Tail rather long and slender, scaly and thinly haired. Ears comparatively large. Mammæ: 1—2=6.

Skull with smoothly rounded and more or less inflated braincase. Interorbital region without ridges. Interparietal well-developed. Anterior zygomatic plate not projecting forwards enough to be visible from above. Bullae more or less inflated, longer than broad. Palatine foramina relatively large and extending backwards nearly to the plane of the first upper molars. Pterygoids nearly parallel-sided. Posterior border of palate square. Mesopterygoid fossa terminating at plane of posterior border of last molar.

Upper incisors with a deep longitudinal groove near the middle of the teeth. Molars brachyodont. Upper molars (in South American species) with well-developed subsidiary enamel loops in the outer primary re-entrant angles, appearing as prominent accessory tubercles, when viewed in profile.

**Reithrodontomys söderströmi** Thomas.

1898. *Reithrodontomys Söderströmi* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 451.  
*Type locality:* Western Ecuador, Quito. (Type in Brit. Mus. N:o 98. 5. 1. 9.)

General colouration above mixed blackish brown and ochraceous. Ventral surface whitish, tinged with pale ochraceous. A brighter lateral line of demarcation only slightly developed.

**Reithrodontomys milleri** J. Allen.

1912. *Reithrodontomys milleri* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 77.  
*Type locality:* Western Colombia, Munchique, Cauca District. Alt. 8325 feet. (Type in Amer. Museum Nat. Hist. N:o 32596. ♂.)

Allied to *R. söderströmi*, but with a well-marked orange-buff lateral line of demarcation. General colouration above yellowish brown, darker mesially and lighter, more fulvous, on the sides of the body. Ventral surface white or greyish white, the hairs grey at their bases.

Genus *Eligmodontia* F. Cuvier.

1837. *Eligmodontia* F. Cuvier, Ann. Sci. Naturelles, Zool. (2) vii, p. 168. — *Type: Eligmodontia typus* F. Cuv.

Size small. Form delicate. Tail of medium length, well clothed with hairs and slightly pencilled terminally. Pollex with a nail. Palms and soles hairy. Normal foot-pads greatly reduced. On the centre of the distal portion of the granulated sole a large hairy cushion, the posterior sole-pad being obsolete. On the palms, the outer portion is occupied by two large hairy cushions, the anterior of which bears the two outer digital pads, and the posterior one — which is the largest and most distinct — the outer carpal pad as quite inconspicuous smooth places. Mammariae: 2—2=8.

Skull small and delicate. Interorbital region unridged. Interparietal of moderate size. Anterior zygomatic plate with the front edge somewhat emarginated and with a slight forward projection, extending forwards enough to be visible from above. Palate continued as a very broad shelf beyond the last molars. Palatine foramina very long and reaching from between the first lamina of the first upper molar almost to the incisors. Mesopterygoid fossa rather narrow. Parapterygoid fossae broad and shallow. Bullae rather large.

Incisors comparatively slender and ungrooved. Molars brachyodont. Anterior lamina of first upper molar with a median notch. First molar with two folds of enamel on each side, the second with two on the outer and one on the inner side. Third molar with only one fold of enamel on each side.

*Eligmodontia typus* F. Cuvier.

1837. *Eligmodontia typus* F. Cuv., Ann. Sci. Naturelles, Zool. (2) vii, p. 169.

*Type locality*: Eastern Argentine, Corrientes.<sup>1</sup> (Type apparently lost, as it is not now kept in the Paris Museum.)

Fur long and soft. General colouration above brownish grey, becoming pale ochraceous on the sides of the body and on the thighs. Ventral surface pure white, the hairs grey at their bases except those on throat and chest, which are white to their roots.

*Eligmodontia elegans* Waterhouse.

1837. *Mus elegans* Waterh., Proc. Zool. Soc., London, p. 19.

*Type locality*: South-eastern Argentine, Bahia Blanca, S. Buenos Aires Province. (Type in Brit. Mus. N:o 55. 12. 24. 173.)

*Syn. Eligmodontia morgani* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, 1901, p. 409. — Patagonia, Basaltic Canons S. E. of Lake Buenos Aires. Alt. 3000 feet. (Type in Amer. Museum Nat. Hist. N:o 127 Colburn Collection. ♀.)

*Eligmodontia morgani pamparum* Thos., Ann. & Mag. Nat. Hist. (8) xii, 1913, p. 572. — Southern Argentine, Bahia Blanca. (Type in Brit. Mus. N:o 13. 11. 1.6. ♀.)

Fur very long. General colouration above pale brownish yellow, becoming paler ochraceous on the sides of the body. Throat and chest white, the hairs white to their roots. Remainder of ventral surface whitish, the hairs grey at their bases.

<sup>1</sup> Cf. d'Orb. & Gervais, Voyage Amer. Merid., iv, Mamm., 1847, p. 24.

**Eligmodontia moreni** Thomas.

1896. *Eligmodon Moreni* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 307.

*Type locality*: Western Argentine, Chilecito, Rioja Province. Alt. 1200 m. (Type in Brit. Mus. N:o 96. 10. 7. 15. ♂.)

Most closely allied to *E. elegans*, but larger and with longer feet. General colouration above coarsely mixed fawn and brown, becoming clearer fawn on the sides of the body. Ventral surface pure white or yellowish white. Tail rather long, bicolor. Skull strongly built with a heavy muzzle and flat interorbital region, the edges of which are square.

**Eligmodontia hirtipes hirtipes** Thomas.

1902. *Phyllotis hirtipes* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 225.

*Type locality*: Western Bolivia, Challapata, Lake Poopo. Alt. 3750 m. (Type in Brit. Mus. N:o 2. 2. 2. 43. ♂.)

A small species of a sandy buff colouration above. Ventral surface pure white, the hairs white to their bases. Tail hairy, finely pencilled and almost whitish throughout.

**Eligmodontia hirtipes jucunda** Thomas.

1919. *Eligmodontia hirtipes jucunda* Thos., Ann. & Mag. Nat. Hist. (9) iv, p. 131.

*Type locality*: North-western Argentine, Abrapampa, Jujuy Province. Alt. 3500 m. (Type in Brit. Mus. N:o 19. 8. 1. 29. ♂.)

Similar to *E. hirtipes*, but colouration above much less bright and nearest to drabby buff.

**Eligmodontia marica** Thomas.

1918. *Eligmodontia marica* Thos., Ann. & Mag. Nat. Hist. (9) ii, p. 483.

*Type locality*: North-western Argentine, Chumbicha, Catamarca Province. Alt. 600 m. (Type in Brit. Mus. N:o 18. 11. 11. 1. ♂.)

The smallest species hitherto known. Fur soft and fine. General colouration above pale sandy buff, becoming darker along dorsal area and paler — more pinkish buff — on the sides of the body. Ventral surface pure sharply defined white, the hairs white to their roots.

**Genus Paralomys** Thomas.

1926. **Paralomys** Thomas, Ann. & Mag. Nat. Hist. (9) xvii, p. 315. — *Type*: *Phyllotis gerbillus* Thos.

Size small. Fur soft, sleek and shiny. Colouration Gerbil-like. Tail comparatively well-haired and faintly pencilled on the terminal portion. Ears proportionally large. Palms and soles naked with the exception of a few minute scattered hairs. Feet with the normal six pads clearly defined. Mammae: 2—2=8.<sup>1</sup>

<sup>1</sup> THOMAS has given the number of mammae to 1—2=6, but in a female specimen examined by the present author, the number is as stated above.

Skull small and delicate, almost as in *Eligmodontia*, but front edge of zygomatic plate slightly less concave and practically without a forward projection on its upper border, which is rounded.

Incisors slender and ungrooved. Molar dentition as in *Eligmodontia*.

#### **Paralomys gerbillus** Thomas.

1900. *Phyllotis gerbillus* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 151.

*Type locality*: North-western Peru, Piura. Alt. 30 m. (Type in Brit. Mus. N:o 0. 1. 1. 30. ♀.)

General colouration above clear sandy fawn. Ventral surface sharply defined pure white, the hairs white to their roots. Fore- and hind limbs pure white.

### Genus **Hesperomys** Waterhouse.

1839. **Hesperomys** Waterhouse, Zool. Voy. »Beagle», Mamm., p. 75. — *Type*: *Mus bimaculatus* Waterh.

Form murine, generally delicate. Size medium or small. Fur moderate and soft. Tail short, only rarely as long as the combined length of head and body. Ears short. Feet rather slender. Palms and soles generally naked, but sometimes clothed with hairs. Pads five or six in number, naked. Mammae variable in number.

Skull rather delicate and usually lightly built. Supraorbital edges square in old specimens, divergent and slightly ridged in the larger forms. Anterior zygomatic plate not cut back and always projecting forwards enough to be visible from above. Interparietal large. Palate continued as a rather broad shelf beyond the last molars, with well-developed lateral pits. Palatine foramina long, extending backwards to the posterior border of the first lamina of the first molar. Mesopterygoid fossa not produced forwards to the plane of the last molars. Parapterygoid fossae rather broad, but comparatively shallow.

Incisors ungrooved. Molars small, brachyodont. First lamina of first upper molar with an anterior distinct notch.

#### **Hesperomys bimaculatus** Waterhouse.

1837. *Mus bimaculatus* Waterh., Proc. Zool. Soc., London, p. 18.

*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 172.)

General colouration above pale ochraceous, intermixed with long black hairs. Cheeks and sides of the body pale yellow. Ventral surface pure white. Behind the ears conspicuous white patches. Skull with ridged supraorbital edges.

#### **Hesperomys callosus callosus** Rengger.

1830. *Mus Callosus* Rengger, Säugetiere von Paraguay, p. 231.

*Type locality*: Paraguay, Rio Paraguay, North of Villa Real.

General colouration above greyish, washed with reddish on the dorsal region and on the sides of the body. Ventral surface greyish. Skull with evenly divergent, well-marked supraorbital ridges and long palatal foramina.

**Hesperomys callosus boliviae** Thomas.

1901. *Eligmodontia callosa boliviae* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 253.

*Type locality*: Central Bolivia, Rio Solocame. Alt. 1200 m. (Type in Brit. Mus. N:o 1. 6. 7. 43. ♂.)

General colouration above mouse-grey, more or less washed with dull yellowish especially on the rump. Sides of the body more buffy. Ventral surface uniform pale buffy, the hairs slaty at their bases. Skull as in *H. callosus*, but teeth smaller.

**Hesperomys laucha laucha** Desmarest.

1819. *Mus laucha* Desm., Nouv. Dict. d'Hist. Nat., 2:e édit., art. Rat, esp. 27.

*Type locality*: Eastern Argentine, Buenos Aires. (Type apparently lost, as it is not now kept in the Paris Museum.)

General colouration above mouse-grey with well-marked white postorbital patches. Ventral surface whitish. Skull with unbeaded supraorbital edges.

**Hesperomys laucha musculus** Thomas.

1913. *Eligmodontia laucha musculus* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 138.

*Type locality*: North-western Argentine, Maimara, Central Jujuy Province. Alt. 2230 m. (Type in Brit. Mus. N:o 12. 12. 12. 9. ♂.)

Similar to *H. laucha*, but larger and with the general colouration above rather paler drab-grey. Ventral surface greyish white with only a very slight drabby tinge. Mammae: 5—2=14. Skull about as in *H. laucha* with unbeaded supraorbital edges, but larger.

**Hesperomys laucha cortensis** Thomas.

1920. *Hesperomys musculus cortensis* Thos., Ann. & Mag. Nat. Hist. (9) v, p. 190.

*Type locality*: North-western Argentine, Jujuy City, Jujuy Province. Alt. 1258 m. (Type in Brit. Mus. N:o 20. 1. 7. 46. ♂.)

Size rather smaller than in *H. l. musculus*. Feet and tail averaging shorter. General colouration above slightly browner. Ventral surface also more dull pale drabby. Mammae: 5—2=14.

**Hesperomys gracilipes** Waterhouse.

1837. *Mus gracilipes* Waterh., Proc. Zool. Soc., London, p. 19.

*Type locality*: South-eastern Argentine, Bahia Blanca, S. Buenos Aires Province. (Topotype in Brit. Mus. N:o 0. 8. 5. 2.)

Allied to *H. laucha*. General colouration above grizzled black and pale fawn. Ventral surface pure white, the hairs deep greyish at their bases. Tail short and slender.

**Hesperomys lepidus** Thomas.

1884. *Hesperomys (Calomys) bimaculatus* var. *lepidus* Thos., Proc. Zool. Soc., London, p. 454.

*Type locality*: Central Peru, Junin, Lima District. (Type in Brit. Mus. N:o 85. 4. 1. 43.)

Fur long, soft and silky. General colouration above dull fawn, becoming slightly darker and more intermixed with black on the mid-dorsal region. Ventral surface

whitish, the hairs slaty at their bases. Skull delicately built with the supraorbital edges square, not ridged.

#### **Hesperomys sorella** Thomas.

1900. *Eligmodontia sorella* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 297.

*Type locality*: North-western Peru, south of Huamachuca. Alt. 3500 m. (Type in Brit. Mus. N:o 0. 6. 6. 29. ♀.)

Allied to *H. laucha*. Fur long and soft. General colouration above sandy fawn, closely lined with black on dorsal region and with the tips of the longer hairs shining silvery. Sides of the body clearer fawn, forming a distinct line of demarcation. Ventral surface white, the hairs slaty grey at their bases. Tail of medium length, bicolor. Skull elongated.

#### **Hesperomys ducilla** Thomas.

1901. *Eligmodontia ducilla* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 182.

*Type locality*: South-eastern Peru, San Antonio, Lake Titicaca. Alt. 3800 m. (Type in Brit. Mus. N:o 1. 1. 1. 1. ♀.)

A small-sized species allied to *H. lepidus* and *H. sorella*. General colouration above pale greyish fawn, finely grizzled with brown. Sides of nose and a rather inconspicuous lateral line pale sandy fawn. Ventral surface white, the hairs grey at their bases. Skull with interorbital region more parallel-sided than in *H. laucha*.

#### **Hesperomys carillus carillus** Thomas.

1902. *Eligmodontia carilla* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 133.

*Type locality*: Central Bolivia, Choro, Rio Securé. Alt. 3500 m. (Type in Brit. Mus. N:o 2. 1. 1. 55. ♂.)

Allied to *H. sorella*, but general colouration slightly paler and tail much shorter. Skull more like that of *H. ducilla*, the braincase thus short and broad. Supraorbital edges square, not ridged.

#### **Hesperomys carillus marcarum** Thomas.

1917. *Hesperomys carillus marcarum* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 1.

*Type locality*: Central Peru, Lauramarca, Cuzco District. (Type in Brit. Mus. N:o 3. 2. 9. 8.)

Described as being duller and greyer as well as less suffused with buffy than *H. c. carillus*. Tail white above. Palms and soles considerably more hairy than in that form.

#### **Hesperomys carillus argurus** Thomas.

1919. *Hesperomys carillus argurus* Thos., Ann. & Mag. Nat. Hist. (9) iv, p. 130.

*Type locality*: North-western Argentine, Abrapampa, Jujuy Province. Alt. 3500 m. (Type in Brit. Mus. N:o 19. 8. 1. 21. ♀.)

Allied to *H. c. carillus*, but much paler. General colouration above pale drabby buff varying to greyish buff, the sides of the body clearer. Ventral surface greyish white, the hairs broadly slaty at their bases. A whitish postauricular patch present.

**Hesperomys murillus murillus** Thomas.

1916. *Hesperomys murillus* Thos., Ann. & Mag. Nat. Hist. (8) xvii, p. 183.

*Type locality*: Eastern Argentine, La Plata City, Buenos Aires Province. Alt. Sea-level.  
(Type in Brit. Mus. N:o 6. 4. 6. 26. ♂.)

General colouration above mouse-grey. Ventral surface greyish white, the hairs slaty at their bases. Size about as in *H. laucha*, but with a longer tail. Skull without marked supraorbital ridges.

**Hesperomys murillus cordovensis** Thomas.

1916. *Hesperomys murillus cordovensis* Thos., Ann. & Mag. Nat. Hist. (8) xvii, p. 184.

*Type locality*: Central Argentine, Yacanto, Sierra de Villa Dolores, Cordova Province.  
Alt. 900 m. (Type in Brit. Mus. N:o 16. 1. 6. 24. ♂.)

Paler and less saturate than *H. murillus* and with the sides of the body rather more buffy. Ventral surface more strongly washed with buffy whitish.

**Hesperomys expulsus** Lund.

1841. *Mus expulsus* Lund, K. Danske Vidensk. Selsk. Afhandl., viii, p. 280.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province.  
(Type in Zool. Museum, Copenhagen.)

100194  
Fur soft and rather close. General colouration above brownish drab, somewhat intermixed with dark brown on the mid-dorsal region and becoming clearer and more sandy buff along the sides of the body. Ventral surface whitish or light isabella, the hairs dark slaty grey at their bases.

**Hesperomys tener** Winge.

1888. *Hesperomys tener* Winge, E Museo Lundii, I, N:o 3, p. 15.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province.  
(Type in Zool. Museum, Copenhagen. N:o 252. ♀.)

Size comparatively small. General colouration above yellowish brown, darkest on mid-dorsal region and becoming clearer and more yellowish along the sides of the body. Ventral surface greyish white, the hairs brownish slaty at their bases. Mammae: 2—2=8. Skull lightly built, but with rather sharply marked supra-orbital edges.

**Hesperomys venustus venustus** Thomas.

1894. *Oryzomys* (?) *venustus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 359.

*Type locality*: Central Argentine, Cosquin, Cordova Province. (Type in Brit. Mus. N:o 83. 4. 16. 1. ♂.)

General colouration above soft drab, lightening to sandy buff on the sides of the body. Ventral surface pale buffy white, the hairs slaty blue at their bases. Mammae: 3—2=10. Skull strongly built with broad muzzle and flat interorbital region, the edges of which are sharply marked and angular.

**Hesperomys venustus callidus** Thomas.

1916. *Hesperomys venustus callidus* Thos., Ann. & Mag. Nat. Hist. (8) xvii, p. 182.  
*Type locality*: Eastern Argentine, Goya, Corrientes Province. Alt. 600 feet. (Type in Brit. Mus. N:o 98. 12. 3. 12. ♂.)

Differs from *H. venustus* by darker, less drabby colour, shorter fur and apparently rather longer ears. General colouration above greyish. Ventral surface pale grey, the hairs slaty at their bases.

**Hesperomys fecundus** Thomas. (*Calomys bolivae*)

1926. *Hesperomys fecundus* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 321.  
*Type locality*: Southern Bolivia, Tablada, Tarija District. Alt. 2000 m. (Type in Brit. Mus. N:o 16. 1. 1. 33. ♀.)

L.C.C. 124  
 Allied to *H. venustus*, but with a different mammary formula. General colouration above drabby grey, becoming clearer and more buffy on the sides of the body. Belly grey-mixed. Mammae: 5—2 = 14.

**Hesperomys muriculus** Thomas.

1921. *Hesperomys muriculus* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 623.  
*Type locality*: South-eastern Bolivia, San Antonio, Rio Parapiti. Alt. 600 m. (Type in Brit. Mus. N:o 21. 11. 6. 12. ♂.)

A comparatively large, dark species, superficially rather similar to *Mus musculus*. General colouration above dark mouse-grey, the hairs inconspicuously tipped with buffy. Ventral surface soiled greyish.

**Hesperomys frida frida** Thomas.

1917. *Hesperomys frida* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 1.  
*Type locality*: Central Peru, Chospoyoc, Cuzco District. Alt. 10000 feet. (Type in United States National Museum. N:o 194779. ♀.)

A large species with a comparatively long tail. General colouration above greyish drab. Sides of the body lighter and more buffy, sharply defined from the grey underparts. Ears rather large. Mammae: 2—2=8. Skull with interorbital region flat and square-edged and with the supraorbital ridges only slightly divergent.

**Hesperomys frida miurus** Thomas.

1926. *Hesperomys frida miurus* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 314.  
*Type locality*: Central Peru, Yana Mayo, Rio Tarma, Junin District. Alt. 8500 feet. (Type in Brit. Mus. N:o 26. 2. 1. 26. ♂.)

Similar to typical *H. frida*, but with a shorter tail. Mammae: 2—2 = 8.

Genus **Reithrodon** Waterhouse.

1837. **Reithrodon** Waterhouse, Proc. Zool. Soc., London, p. 29. — *Type*: *Reithrodon typicus* Waterh.

Size rather large. Form stout. Fur long and soft. Eyes large. Ears moderate in size and densely clothed with hairs. Tail of moderate length, distinctly hairy.

Hinder portion of soles hairy. Pad region mostly naked, but sometimes there are a certain number of hairs between the pads. Fifth toe short, barely reaching to the end of the fourth metacarpal. Claws short and weak. Mammae: 2—2 = 8.

Skull with a large rostrum. Interorbital region narrow, its edges distinctly beaded. Interparietal well-developed. Anterior zygomatic plate deeply emarginated in front and projecting forwards enough to be distinctly visible from above. Palate long, ending much behind the last molars and with a median ridge between lateral paired deep excavations. Mesopterygoid fossa deep, the bones very closely approximated to each other anteriorly. Parapterygoid fossae broad and deep. Palatine foramina very long, reaching backwards to between the first molars and nearly extending to the incisors.

Upper incisors with a longitudinal groove. Lower incisors long and slender. Molars hypsodont. Enamel pattern with transverse folds and with the outer and inner loops thus alternating. The folds of enamel penetrate deeply into the crowns, so that those from one side are in contact with those of the other, and are each nearly opposed to the salient angles of the opposite side.

#### **Reithrodon typicus typicus** Waterhouse.

1837. *Reithrodon typicus* Waterh., Proc. Zool. Soc., London, p. 30.

*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 191. ♀.)

General colouration above brown, the hairs broadly annulated with yellow and becoming more blackish on the crown and more rich yellowish on the sides of the body. Ventral surface yellowish white, the hairs grey at their bases. Pad region naked.

#### **Reithrodon typicus currentium** Thomas.

1920. *Reithrodon typicus currentium* Thos., Ann. & Mag. Nat. Hist. (9) v, p. 475.

*Type locality*: Eastern Argentine, Goya, Corrientes Province. Alt. 600 feet. (Type in Brit. Mus. N:o 98. 12. 3. 4. ♂.)

Similar to *R. typicus*, but with the colours more brightly contrasted. Dorsal region mixed buffy grey. Sides of the body and ventral surface strongly washed with buff. Tail almost white.

#### **Reithrodon cuculoides cuculoides** Waterhouse.

1837. *Reithrodon cuculoides* Waterh., Proc. Zool. Soc., London, p. 30.

*Type locality*: Eastern Patagonia, Santa Cruz. (Type in Brit. Mus. N:o 55. 12. 24. 188.)

*Syn.* ? *Mus pachycephalus* Philippi, An. Mus. Nacion. d. Chile, I, 1900, p. 42. — Straits of Magellan.

Fur long and very soft. General colouration above greyish brown, strongly mixed with yellow. Sides of the body greyish, tinged with yellow. Ventral surface white, the hairs grey at their bases. Behind each ear a patch of yellowish white hairs. Plantar hairs coming forwards to the anterior pair of the sole-pads.

#### **Reithrodon cuculoides obscurus** J. Allen.

1903. *Reithrodon cuculoides obscurus* J. Allen, Bull. Amer. Museum Nat. Hist., xix, p. 190.

*Type locality*: Southern Chile, Punta Arenas, Straits of Magellan. (Type in Amer. Museum Nat. Hist. N:o 3. Colburn Collection. ♂.)

Similar to *R. c. cuniculoides*, but larger and darker throughout. General colouration above dark brown varied with black and suffused with fulvous. Sides of the body yellowish. Ventral surface brownish ochraceous.

**Reithrodon cuniculoides flammarum** Thomas.

1912. *Reithrodon cuniculoides flammarum* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 411.

*Type locality*: Northern Tierra del Fuego, Spring Hill. (Type in Brit. Mus. N:o 9. 9. 10. 1. ♂.)

A large, pale race of *R. cuniculoides*. Posterior portion of back suffused with buffy. Flanks and ventral surface bright buff. Skull longer and more bowed than that of *R. c. cuniculoides*. Plantar hairs as in that form.

**Reithrodon cuniculoides evae** Thomas.

1927. *Reithrodon cuniculoides evae* Thos., Ann. & Mag. Nat. Hist. (9) xix, p. 652.

*Type locality*: Western Argentine, Zapala, Neuquen Territory. Alt. 1062 m. (Type in Brit. Mus. N:o 26. 10. 11. 38. ♂.)

A pale form. General colouration above pale buffy grey. Sides of the body pale buff or whitish buff. Ventral surface whitish, washed with pale buffy.

[**Reithrodon cuniculoides hatcheri** J. Allen.]

1903. *Reithrodon hatcheri* J. Allen, Bull. Amer. Museum Nat. Hist., xix, p. 191.

*Type locality*: Western Patagonia, Upper Rio Chico de Santa Cruz. (Type in United States National Museum. N:o 84210. ♂.)

Said to be similar in size to *R. cuniculoides*, but much darker. General colouration above dark greyish brown varied with black and only faintly suffused with fulvous.

According to THOMAS most certainly identical with *R. c. cuniculoides*.

**Reithrodon auritus auritus** Desmarest.

1819. *Mus auritus* Desm., Nouv. Dict. d'Hist. Nat., 2:e édit., art. Rat, esp. 25.

*Type locality*: Eastern Argentine, Pampas south of Buenos Aires City. (Type apparently lost, as it is not now kept in the Paris Museum.)

*Syn. Reithrodon cuniculoides pampanus* Thos., Ann. & Mag. Nat. Hist. (8) xviii, 1916, p. 305. — Argentine, Southern Buenos Aires Province. (Type in Brit. Mus. N:o 13. 11. 1. 1. ♂.)

General colouration above dark mouse-grey. Ventral surface whitish with a cinnamon wash on the breast and belly. Thighs white in front. Main mass of hairs ceasing at the posterior portion of the pads, but with a certain number of hairs between the pads.

**Reithrodon auritus marinus** Thomas.

1920. *Reithrodon auritus marinus* Thos., Ann. & Mag. Nat. Hist. (9) v, p. 474.

*Type locality*: Eastern Argentine, Mar del Plata, South-eastern Sea coast of Buenos Aires Province. Alt. Sea-level. (Type in Brit. Mus. N:o 12. 12. 11. 1. ♀.)

Essential characters as in *R. a. auritus*, but duller throughout, less buffy, the ears almost uniform dark without bright buffy metentote. Ventral surface wholly dull greyish washed with buffy, the inguinal region and front of thighs not white as in *R. a. auritus*.

#### **Reithrodon caurinus** Thomas.

1920. *Reithrodon caurinus* Thos., Ann. & Mag. Nat. Hist. (9) v, p. 473.

*Type locality*: North-western Argentine, Otro Cerro, Catamarca Province. Alt. 3000 m.

(Type in Brit. Mus. N:o 26. 3. 17. 23. ♂.)

General colouration more strongly buffy than usual. Back clay-coloured, heavily lined with the black ends of the longer hairs. Sides of the body buffy. Rump more or less ochraceous buff. Ventral surface not sharply defined whitish, the sternal region only dull buffy, the hairs slaty at their bases except on the inguinal region, where they are white to the roots. A strongly marked buffy supraorbital line as well as distinct buff patches at the bases of the ears.

#### Genus **Sigmodon** Say & Ord.

1825. **Sigmodon** Say & Ord, Journ. Acad. Nat. Sci., Philadelphia, iv, pt. 2, p. 352. — *Type*: *Sigmodon hispidus* Say & Ord.

Form robust. Fur coarse and somewhat hispid. Ears moderate in size, thickly haired. Tail usually shorter than the body, thinly haired, rather thick at base and rapidly tapering to the tip. Pollex with a small flattened nail. Forefeet relatively small. Hindfeet long, first and fifth toes subequal, the latter scarcely reaching beyond the basal phalanx of the fourth toe. Claws comparatively weak. Palms and soles naked with the ordinary number of pads. Mammae: 3—2 = 10.

Skull with short, swollen rostrum and widely divergent zygomata. Anterior zygomatic plate concave in front and with a well-marked spinous process projecting forwards from the upper edge of the outer wall of the anteorbital foramen. Interorbital region somewhat flattened. Supraorbital edges distinctly beaded, the beads continued obliquely outwards on the parietals. Interparietal very distinct. Palate ending a little behind the posterior level of the last molars, with a slight emargination divided by a mesial ridge and excavated on each side of the ridge, in which excavations small lateral pits are situated. Palatine foramina long and well open, extending posteriorly to a little beyond the level of the first molars. Mesopterygoid fossa deep, but narrow. Parapterygoid fossae unusually deep. Bullae comparatively small.

Incisors broad, heavy and ungrooved. Upper molars with two deep re-entrant enamel folds that almost reach across the surface of the teeth. First upper molar with two similar internal folds, while the remaining upper molars have only one internal fold. In the first upper molar, the anterior external loop borders the posterior internal loop, while in the second and third upper molars the anterior external loop joins the internal one. In  $m^1$ ,  $m^2$  and  $m^3$ , the posterior external loop joins the postero-internal angle of the general enamel wall. The first lower

molar has three internal and two external re-entrant folds of enamel, which are alternating with each other. The remaining lower molars are similar to each other and usually have only one perfect re-entrant loop on each side, the loops alternating and forming an S-like appearance.

**Sigmodon hirsutus** Burmeister.

1854. *Lasiomys hirsutus* Burm., Sitzungsber. Naturf. Ges., Halle, p. 16.  
*Type locality*: North-western Venezuela, Maracaibo.

Fur long and shaggy. General colouration above greyish brown, the hairs broadly ringed with bright yellow. Ventral surface similar, but duller and more greyish in tone.

**Sigmodon peruanus** J. Allen.

1897. *Sigmodon peruanus* J. Allen, Bull. Amer. Museum Nat. Hist., ix, p. 118.  
*Type locality*: North-western Peru, Trujillo, Cajabamba District. Alt. 200 feet. (Type in Amer. Museum Nat. Hist. N:o 11818/10110. ♀.)

General colouration above pale ashy grey grizzled with darker. Cheeks pale buffy. Ventral surface pale yellowish grey, the hairs plumbeous at their bases. Ears large. Tail very short. Skull massive, short and broad and with the zygomatica widely spreading.

**Sigmodon simonsi** J. Allen.

1901. *Sigmodon simonsi* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 40.  
*Type locality*: North-western Peru, Eten. Alt. 10—15 m. (Type in Brit. Mus. N:o 0. 3. 1. 102. ♂.)

A species of a pale desert-like colour with the ventral surface buff. General colouration above pale buffy grey varied with black-tipped hairs. Eye-rings clear buff. Skull as in *S. peruanus*, but less broad.

**Sigmodon puna** J. Allen.

1903. *Sigmodon puna* J. Allen, Bull. Amer. Museum Nat. Hist., xix, p. 99.  
*Type locality*: Western Ecuador, Puna, Puna Island. Alt. 10 m. (Type in Brit. Mus. N:o 98. 8. 1. 61. ♀.)

Similar to *S. simonsi*, but less suffused with buffy especially on the ventral surface. Skull with shorter rostrum, much broader anteorbital foramen and more swollen bullae.

**Sigmodon chonensis** J. Allen.

1913. *Sigmodon chonensis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 479.  
*Type locality*: Western Ecuador, Chone, Manavi Province. Alt. 65 feet. (Type in Amer. Museum Nat. Hist. N:o 34290. ♀.)

Smaller than *S. simonsi*. General colouration above warm buff finely lined with black. Ventral surface buffy grey, the hairs dark grey at their bases.

**Sigmodon sanctaemartae** Bangs.

1898. *Sigmodon sanctaemartae* Bangs, Proc. Biol. Soc., Washington, xii, p. 189.

*Type locality*: North-eastern Colombia, Pueblo Viejo, Sierra Nevada de Santa Marta. Alt. 8000 feet. (Type in Museum of Comparative Zool., Cambridge, Mass. N:o 8105. ♂.)

Fur rather long and hispid. General colouration above dull tawny ochraceous, darker and more russet on rump and lined with black-tipped hairs on the back. Ventral surface dull wood-brown to whitish, the hairs plumbeous at their bases. Tail bicolor and rather hairy. Skull with broad nasals and large palatal foramina.

**Sigmodon bogotensis** J. Allen.

1897. *Sigmodon bogotensis* J. Allen, Bull. Amer. Museum Nat. Hist., ix, p. 121.

*Type locality*: Western Colombia, Quebrada Seco, Rio Magdalena. (Type in Brit. Mus. N:o 97. 7. 2. 3. ♀.)

General colouration above yellowish brown, strongly grizzled with blackish. Sides of the body more strongly yellowish brown. Ventral surface pale buffy grey. Apparently most nearly allied to *S. borucae* J. Allen from Costa Rica, but darker and larger. Skull with broader nasals and interorbital region, but with shorter palatine foramina.

**Sigmodon lönnbergi** Thomas.

1921. *Sigmodon lönnbergi* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 448.

*Type locality*: South-western Ecuador, Quevedo, Rio Palenque. Alt. 800 feet. (Type in Brit. Mus. N:o 21. 2. 15. 1. ♂.)

A large, very dark-coloured species with short, crisp fur. General colouration above cinnamon brown, the hairs finely ringed with black and ochraceous buff. Strongly marked ochraceous buff eye-rings present. Ventral surface muddy greyish, the hairs washed terminally with drabby. Skull stout and heavy with well-developed ridges, very large bullae and unusually broad and stout incisors.

**Sigmodon inopinatus** Anthony.

1924. *Sigmodon inopinatus* Anth., Amer. Museum Novitates N:o 114, p. 3.

*Type locality*: Central Ecuador, Urbina, Mt. Chimborazo. Alt. 11400 feet. (Type in Amer. Museum Nat. Hist. N:o 66310. ♀.)

A fair-sized species. General colouration above clay-colour, somewhat grizzled with black. Ventral surface grey, the hairs slaty at their bases. Skull proportionally broad with extreme interorbital constriction, small bullae and subparallel toothrow.

Genus **Sigmomys** Thomas.

1901. **Sigmomys** Thomas, Ann. & Mag. Nat. Hist. (7) viii, p. 150. — *Type*: *Reithrodon alstoni* Thos.

General external appearance *Sigmodon*-like. Form rather slender. Tail of medium length, comparatively well-haired. Ears rather short. Fifth toe short, barely reaching to the end of the fourth metacarpal. Palms and soles naked. Claws comparatively strong. Mammae: 3—2 = 10.

Skull *Sigmodon*-like with evenly tapering outline. Interorbital region rather flat. Supraorbital edges slightly ridged. Frontals with a marked concavity just behind the orbital constriction. Anterior zygomatic plate concave in front and projecting forwards enough to be visible from above. Interparietal rather well-developed. Palatine foramina ending a little behind the plane of the first molars. Palate ending just behind the plane of the last molars, less ridged and excavated than in *Reithrodon*. Mesopterygoid fossa well-defined, not narrowed by the approximation of the bones. Parapterygoid fossae deep and distinct. Bullae rather large.

Upper incisors with a deep and well-marked groove down the centre of their front surface. Lower incisors rather broad. Dentition *Sigmodon*-like. Molars, however, short and broad. Second upper molar distinctly broader than long.

#### *Sigmomys alstoni* Thomas.

1880. *Reithrodon alstoni* Thos., Proc. Zool. Soc., London, p. 691.

*Type locality*: Northern Venezuela, Cumana District. (Type in Brit. Mus. N:o 47. 6. 23. 7. ♂.)

Size comparatively large. General colouration above coarsely grizzled black and buffy, becoming more yellowish on the sides of the body. Ventral surface white, the hairs slaty at their bases. Molars comparatively large.

#### *Sigmomys savannarum* Thomas.

1901. *Sigmomys savannarum* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 150.

*Type locality*: British Guiana, base of Kanuku Mountains. Alt. 240 feet. (Type in Brit. Mus. N:o 1. 6. 4. 100. ♂.)

Allied to *S. alstoni*, but paler and with shorter feet. Fur straight and sparse. General colouration above heavily lined and mottled with brown and greyish buff. A buffy spot on the nose. Eye-rings white. Ventral surface soiled greyish, the hairs slaty at their bases. Throat white, the hairs white to their roots. Skull shorter than that of *S. alstoni*. Molars rather small.

#### *Sigmomys venester* Thomas.

1914. *Sigmomys venester* Thos., Ann. & Mag. Nat. Hist. (8) xiv, p. 412.

*Type locality*: Northern Venezuela, El Trompillo, Lake Valencia. Alt. 1300 feet. (Type in Brit. Mus. N:o 14. 9. 1. 63. ♀ imm.)

Similar to *S. alstoni*, but smaller. General colouration above coarsely grizzled black and buffy. Ventral surface grey, washed with whitish and becoming more buffy on the chest. Hairs on chin and throat white to their bases. Skull with proportionally small bullae and molars.

### Genus *Neotomys* Thomas.

1894. *Neotomys* Thomas, Ann. & Mag. Nat. Hist. (6) xiv, p. 348. — Type: *Neotomys ebriosus* Thomas.

General form much as in *Sigmodon*. Fur long and very thick. Ears broad

and rounded. Tail short and well-clothed. Forefeet rather short. Palms and soles naked. Pollex with a nail. Mammae: 2—2 = 8.

Skull with evenly tapering outline. Nasals strongly expanded anteriorly. Interorbital region very narrow, almost parallel-sided and narrower than the muzzle. Supraorbital edges square, but not beaded. Interparietal broad and ribbon-like, its antero-posterior diameter about one third of its transverse one. Anterior zygomatic plate with its front edge cut back underneath a distinct projecting point and distinctly visible from above. Palatine foramina very large, extending backwards a little behind the plane of the first molars and nearly reaching to the incisors. Dividing septum of palatine foramina unusually large and nearly filling them up. Posterior portion of palate with two deep excavations between the second and the third upper molars, divided by a distinct mesial ridge. Mesopterygoid fossa comparatively broad. Parapterygoid fossae also broad, but shallow. Lower jaw very short and high, with the coronoid processes reduced to low, blunt, triangular elevations.

Upper incisors extremely broad, smooth and slightly concave in front so far as the internal 5/6 of their surface is concerned. Along their outer edge, however, there is a sharply cut groove. The inner border of this groove forms an anteriorly projecting ridge, internal to which the face of the tooth gradually curves inwards to meet its fellow of the opposite side. Lower incisors broad and flat in front, very rapidly curving upwards so as to form a very short diastema. Molars rather like those of *Sigmodon*, but even more compressed antero-posteriorly. Grinding surfaces somewhat similar to those of *Microtus*, with separated enamel loops and islands. On the whole, the loops correspond to those of *Sigmodon*, but the last upper molar is more lengthened and has four projecting angles on its outer side, instead of only three.

#### *Neotomys ebriosus* Thomas.

1894. *Neotomys ebriosus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 348.

*Type locality*: Central Peru, Vitoc Valley. (Type in Brit. Mus. N:o 94. 10. 1. 1. ♂.)

General colouration above grizzled greyish brown. Tip and sides of muzzle bright cinnamon rufous. Chest dirty brownish. Remainder of ventral surface whitish, the hairs plumbeous at their bases.

#### *Neotomys vulturinus* Thomas.

1921. *Neotomys vulturinus* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 612.

*Type locality*: North-western Argentine, Sierra de Zenta, Jujuy Province. Alt. 4500 m. (Type in Brit. Mus. N:o 21. 11. 1. 34. ♀.)

Distinguished from *N. ebriosus* by paler colouration and by having a rather longer tail. General colouration above finely grizzled grey and buffy. Tip and sides of muzzle, as well as a distinct patch at the base of the tail, rich ochraceous. Ventral surface slaty grey, somewhat washed with whitish.

Genus *Irenomys* Thomas.

1919. *Irenomys* Thomas, Ann. & Mag. Nat. Hist. (9) iii, p. 201. — *Type: Reithrodon longicaudatus* Philippi.

Form slender and *Oryzomys*-like. Ears relatively large. Tail comparatively long. Feet slender.

Skull somewhat similar to that of *Phyllotis*. Braincase comparatively large. Interorbital region rather parallel-sided, its edges not ridged. Interparietal of normal size. Zygomatic plate of average breadth, only slightly projected forwards and not undercut. Palatine foramina long and well-open, extending backwards to between the first lamina of the first molar. Mesopterygoid fossa of medium breadth, extending forwards to between the last molars. Internal pterygoids unusually thickened, flattened and turned outwards above. Bullae of medium size.

Upper incisors opisthodont with a sharply defined longitudinal groove. Lower incisors comparatively long and rather slender. Molars hypsodont and laminate, with three laminae to the first upper molar and two to the second and the third molars. Lower molars with a similar number of laminae. The laminae of the upper molars are very much as if the re-entrant angles of each side in the teeth of *Phyllotis* penetrated further into the teeth, so as to cut connection between the dentine spaces of each lamina, while still leaving the laminae lozenge-shaped and just touching each other at these median points.

*Irenomys longicaudatus* Philippi.

1900. *Reithrodon longicaudatus* Phil., An. Museo Nacional de Chile (1) xiv, p. 64.

*Type locality*: Chile, Coast region of Western Patagonia. (Type in Museo Nacional de Santiago de Chile.)

General colouration above greyish brown varied with yellowish and passing into whitish washed with dirty yellowish on the ventral surface. Tail brown, somewhat more whitish below.

*Irenomys mochae* Philippi.

1900. *Mus Mochae* Phil., An. Museo Nacional de Chile (1) xiv, p. 42.

*Type locality*: Western Chile, Mocha Island. (Type in Brit. Mus. N:o 11. 11. 17.6. pull.)

General colouration above greyish brown, becoming yellowish on the ventral surface, the hairs everywhere ashy grey at their bases. Tail light brown, unicolor.

Apparently belonging to the genus *Irenomys*, although the type specimen is too immature for exact determination as the first molar is the only one developed. It, however, shows the lozenge-shaped laminae characteristic of *Irenomys*.

Genus *Phyllotis* Waterhouse.

1837. *Phyllotis* Waterhouse, Proc. Zool. Soc., London, p. 28. — *Type: Mus (Phyllotis) Darwinii* Waterh.

Size various. Form slender and graceful. Fur long, soft and silky. Ears large. Tail generally longer than the combined length of head and body, thinly haired

and not pencilled at the tip. Feet slender. Fore legs small and delicate. Pads small, but well-defined. Belly hairs with tips more or less drabby or brownish. Mammae: 2—2=8.

Skull comparatively long and narrow. Interorbital region more or less parallel-sided, its edges generally not broadly divergent posteriorly and always without supraorbital ridges. Interparietal well-developed. Front edge of zygomatic plate straight or sometimes slightly concave, but never distinctly undercut. Anterior zygomatic plate projecting forwards enough to be visible from above. Palate long, ending much behind the plane of the last molars. Palatine foramina long and widely open, extending backwards to about the plane of the first lamina of the first molars. Mesopterygoid fossa rather squarely open in front. Parapterygoid fossae broad and shallow. Bullae comparatively small.

Incisors comparatively slender, ungrooved. Molars semihypsodont or brachydont. Molars with the folds of enamel rather deeply penetrating into the teeth, so that the crowns are divided into transverse, lozenge-shaped lobes. In the first upper molar the enamel enters the body of the tooth twice, both on the outer and on the inner sides. In the first lower molar, however, the enamel enters three times internally and twice externally. In the second and third molars of the upper as well as of the lower jaw, the enamel penetrates but once both externally and internally.

**Phyllotis darwinii darwinii** Waterhouse. = *Attondon molichinus dolichonyx*  
per Cabrera 1901.938

1837. *Mus (Phyllotis) Darwinii* Waterh., Proc. Zool. Soc., London, p. 28.

*Type locality*: Central Chile, Coquimbo. (Type in Brit. Mus. N:o 55. 12. 24. 183.)

*Syn. Mus griseoflavus* Philippi, An. Mus. Nac. d. Chile, 1900, p. 55. — Chile, Coquimbo Prov.

*Mus dolichonyx* Philippi, » » » » » » p. 58. — Chile, Atacama Prov.

*Mus melanonotus* Philippi, Arch. f. Naturgesch., xxiv, i, 1858, p. 78. — Chile, Santiago, Prov.

*Mus campestris* Philippi, An. Mus. Nac. d. Chile, 1900, p. 38. — Chile, Choapa.

*Mus dichrous* Philippi, » » » » » » p. 14. — Chile, Peine, Santiago Prov.

*Mus mollis* Philippi, » » » » » » p. 23. — Chile, Santiago Prov.

*Mus illapelinus* Philippi, » » » » » » p. 28. — Chile, Illapel, O'Higgins Prov.

*Mus segethi* Philippi, » » » » » » p. 30. — Chile, Peine, Santiago Prov.

General colouration above pale cinnamon yellow, richer yellow on the rump and browner on the back. Ventral surface pure white, the hairs deep grey at their bases. Ears very large.

**Phyllotis darwinii posticalis** Thomas.

1912. *Phyllotis darwinii posticalis* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 406.

*Type locality*: Central Peru, Galéra, S. W. of Oroya, Junin District. Alt. 4800 m. (Type in Brit. Mus. N:o 0. 7. 7. 38. ♀.)

A dark-coloured, well-haired mountain race of *P. darwinii*. Skull with slightly larger teeth.

**Phyllotis darwini limatus** Thomas.1912. *Phyllotis darwini limatus* Thos., Ann. & Mag. Nat. Hist. (8), x, p. 407.*Type locality*: Western Peru, Chosica, Lima District. Alt. 850 m. (Type in Brit. Mus. N:o 0. 5. 7. 43. ♂.)

A pale race of *P. darwini*. Fur fine and soft. General colouration above pale greyish drab, more or less suffused with buffy especially on the sides of the body. Tail rather long.

**Phyllotis darwini vaccarum** Thomas.1912. *Phyllotis darwini vaccarum* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 408.*Type locality*: Western Argentine, Los Vacas, Mendoza Province. Alt. 2500 m. (Type in Brit. Mus. N:o 2. 2. 5. 51. ♂.)

A mountain race with long fur and of a rather pale colouration, suffused with buffy especially on the rump. Skull with the interorbital region narrow, sharply edged and concave mesially.

**Phyllotis wolffsohni** Thomas.1902. *Phyllotis Wolffsohni* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 131.*Type locality*: Northern Bolivia, Tapacarí. Alt. 3000 m. (Type in Brit. Mus. N:o 2. 1. 1. 59. ♀.)

A soft haired, long-tailed member of the *P. darwini*-group. General colouration above dull greyish fulvous. Skull with longer, narrower braincase and the posterior interorbital region much more expanded.

**Phyllotis magister** Thomas.1912. *Phyllotis magister* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 406.*Type locality*: Southern Peru, Arequipa. Alt. 2300 m. (Type in Brit. Mus. N:o 0. 10. 1. 31. ♂.)

Essential characters as in *P. darwini*, but distinguished by large size, large molars and heavy rat-like feet. General colouration above grizzled drab grey, slightly suffused with buff.

**Phyllotis nogalaris** Thomas.1921. *Phyllotis nogalaris* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 611.*Type locality*: North-western Argentine, Higuera, Valle Grande Department, Jujuy Province. Alt. 2000 m. (Type in Brit. Mus. N:o 21. 11. 1. 22. ♂.)

A large species — though smaller than *P. magister* — of a rather dark colouration. Ventral surface dull whitish, slightly tinged with buffy. Skull with the interorbital region very narrow, with well-marked vertically projecting edges.

**Phyllotis abrocodon** Thomas.1926. *Phyllotis abrocodon* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 316.*Type locality*: Central Peru, Oroya, Lake Junin. Alt. 12000 feet. (Type in Brit. Mus. N:o 26 2. 1. 39. ♂.)

A large-eared member of the *P. darwini*-group. General colouration above greyish, more brownish on the rump. Sides of the body clearer, dull buffy. Ventral

surface soiled greyish, the hairs slaty at their bases. Skull with light-coloured narrow incisors.

**Phyllotis haggardi** Thomas.

1898. *Phyllotis Haggardi* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 270.

*Type locality*: Western Ecuador, Mt. Pichincha. Alt. 4000 m. (Type in Brit. Mus. N:o 98. 5. 1. 11.)

Very similar to *P. darwinii* in colouration and other essential characters, but much smaller and with the ears only about half as large.

**Phyllotis lutescens** Thomas.

1902. *Phyllotis lutescens* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 131.

*Type locality*: Central Bolivia, Choro, Rio Securé. Alt. 3000 m. (Type in Brit. Mus. N:o 2. 1. 1. 65. ♀.)

Allied to *P. haggardi* from which it differs in certain cranial characters and by having stouter incisors. General colouration above dull greyish tawny, heavily lined with black and becoming dull buffy along the sides of the body. Skull low and smoothly rounded. Interorbital region parallel-sided, but not beaded. Molars small.

**Phyllotis arenarius** Thomas.

1902. *Phyllotis arenarius* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 224.

*Type locality*: Central Bolivia, Uyuni, Potosi. Alt. 3670 m. (Type in Brit. Mus. N:o 2. 2. 2. 34. ♂.)

A desert-like coloured member of the *P. haggardi-lutescens* group. General colouration above pale fawn, lined with dark brown on the back and becoming clearer buff on the sides of the body. Ventral surface whitish.

**Phyllotis tucumanus** Thomas.

1912. *Phyllotis darwinii tucumanus* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 408.

*Type locality*: North-western Argentine, Cumbre de Mala-mala, Sierra de Tucuman, Tucuman Province. Alt. 3300 m. (Type in Brit. Mus. N:o 4. 10. 2. 6. ♀.)

Allied to *P. lutescens*, but colouration darker. Ventral surface dull soiled greyish buff. Skull with narrow nasals and narrow interorbital region, the edges of which are less sharply angular than usual.

**Phyllotis ricardulus** Thomas.

1919. *Phyllotis ricardulus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 493.

*Type locality*: North-western Argentine, Otro Cerro, Catamarca Province. Alt. 3000 m. (Type in Brit. Mus. N:o 19. 2. 7. 27. ♀.)

Allied to *P. tucumanus*, but with longer ears and a longer, more tufted tail. General colouration above olive grey suffused with buffy. Sides of the body with a well-marked buffy line of demarcation. Ventral surface soiled grey, the hairs dark slaty at their bases. Hands and feet pure white. Skull with comparatively large bullae, and with the nasals not so markedly narrowed behind as in *P. tucumanus*.

**Phyllotis andium andium** Thomas.1912. *Phyllotis andium* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 400.*Type locality*: Central Ecuador, Cañar Province. Alt. 2100 feet. (Type in Brit. Mus. N:o 99. 9. 9. 68. ♂.)Allied to *P. haggardi*, but distinguished by having a much longer tail. Ventral surface dull greyish white slightly washed with buffy.**[Phyllotis andium stenops** Osgood.]1914. *Phyllotis andium stenops* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 12, p. 165.*Type locality*: Northern Peru, Rio Utcubamba, Chachapoyas. Alt. 7500 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19840. ♂.)Said to resemble *P. andium*, but with nasals and rostral portion of skull decidedly narrower.THOMAS considers these characters not constant, and therefore makes it a synonym to typical *P. andium*.**Phyllotis andium tamborum** Osgood.1914. *Phyllotis tamborum* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 12, p. 165.*Type locality*: Northern Peru, Tambo Carrizal, E. of Balsas. Alt. 5000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19838. ♀.)

A relatively small form with rather long tail, small ears and a slender, elongate skull. General colouration above pale clay-colour mixed with dusky. Ventral surface dull white tinged with creamy.

**Phyllotis melanius** Thomas.1913. *Phyllotis melanius* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 407.*Type locality*: Central Ecuador, Porvenir, Bolivar Province. Alt. 1800 m. (Type in Brit. Mus. N:o 99. 9. 9. 107. ♂.)Allied to *P. andium*, but ears and tail much shorter. Fur fine and rather crisp. General colouration above dark sepia or bistre. Punctulation of fur fine. Ventral surface soiled buffy greyish. Skull similar to that of *P. andium*, but rather larger and with the supraorbital edges sharply square.**Phyllotis fruticicolus** Anthony.1922. *Phyllotis fruticicolus* Anth., Amer. Museum Novitates N:o 32, p. 1.*Type locality*: Southern Ecuador, Guachanamá. Alt. 9050 feet. (Type in Amer. Museum Nat. Hist. N:o 47674. ♂.)Allied to *P. haggardi*, but with smaller ears, longer tail and a more greyish colour. General colouration above a mixture of warm buff and blackish. Ventral surface soiled white, the hairs slaty at their bases. Skull with very short nasals.**Phyllotis fuscus** Anthony.1924. *Phyllotis fuscus* Anth., Amer. Museum Novitates N:o 114, p. 1.*Type locality*: Southern Ecuador, Contrayerbas, Azuay Province. Alt. 11000 feet. (Type in Amer. Museum Nat. Hist. N:o 62050. ♀.)

Fur long, soft and silky. Superficially somewhat similar to *P. haggardi*, but noticeably darker. General colouration above clay-colour to tawny olive, strongly washed with fuscous and clove-brown. Ventral surface whitish, the hairs slaty at their bases. Skull with rostrum much longer than that of *P. haggardi*. Molar pattern with wider external and internal re-entrant angles.

**Phyllotis xanthopygus** Waterhouse.

1837. *Mus (Phyllotis) xanthopygus* Waterh., Proc. Zool. Soc., London, p. 28.

*Type locality*: Southern Patagonia, Santa Cruz. (Type in Brit. Mus. N:o 55. 12. 24. 185.)

Fur long and very soft. General colouration above pale yellowish intermixed with brownish. Ventral surface white, the hairs grey at their bases. Incisors narrow.

**Phyllotis amicus amicus** Thomas.

1900. *Phyllotis amicus* Thos., Ann. & Mag. Nat. Hist. (7) v, p. 355.

*Type locality*: North-western Peru, Tolon, Cajamarca District. Alt. 100 m. (Type in Brit. Mus. N:o 0. 3. 1. 94. ♂)

A fawn-grey species intermediate in colour between *P. haggardi* and *Paralomys gerbillus*. Fur fine, soft and sleek. General colouration above fawn-grey, finely lined with black. A bright sandy yellow lateral line of demarcation. Ventral surface white, the hairs slaty at their bases. A somewhat aberrant member of the genus *Phyllotis*, showing affinities with *Graomys*. Skull with posterior portion of the interorbital region much broader than the anterior one.

**Phyllotis amicus maritimus** Thomas.

1900. *Phyllotis amicus maritimus* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 296.

*Type locality*: North-western Peru, Eten. Alt. 20 m. (Type in Brit. Mus. N:o 0. 3. 1. 62. ♂.)

Size small. Colouration paler and more sandy than in *P. a. amicus*, especially posteriorly.

**Phyllotis amicus montanus** Thomas.

1900. *Phyllotis amicus montanus* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 297.

*Type locality*: North-western Peru, Rio Ustihe, Uramarca. Alt. 1200 m. (Type in Brit. Mus. N:o 0. 6. 6. 28. ♀.)

Size comparatively large. Colouration as in *P. a. amicus* or slightly paler.

**Phyllotis osilae** J. Allen.

1901. *Phyllotis osilae* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 44.

*Type locality*: Southern Peru, Osila. Alt. 12000 feet. (Type in Amer. Museum, Nat. Hist. N:o 16503. ♀.)

Resembles *P. a. montanus*, but size larger, tail longer, ears dusky brown and of a darker colour. General colouration above fulvous grey intermixed with black-tipped hairs especially along the mid-dorsal region. Sides of the body cream buff, sharply defined from the white ventral surface, the hairs of which are plumbeous at their bases.

**Phyllotis elegantulus** Thomas.1913. *Phyllotis elegantulus* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 139.*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 7. 1. 1. 113. ♂.)

A small species allied to *P. amicus*, but with a shorter tail. General colouration above drabby grey. Ventral surface white, the hairs slaty at their bases. Skull as in *P. amicus*, but interorbital region more evenly contrasted. Supraorbital edges smoothly square, not beaded.

**Phyllotis oreigenus** Cabrera.1926. *Phyllotis oreigenus* Cabr., Rev. Chilena de Hist. Nat., xxx, p. 319.*Type locality*: North-western Argentine, Laguna Blanca, Catamarca Province. Alt. 3100 m. (Type in Museo de La Plata, Buenos Aires. N:o 5682. ♂.)

Allied to *P. amicus*, but colouration brighter and with the tail longer than head and body. General colouration above near avellaneus, but somewhat darkened by the narrow dark slaty bases of the hairs. Ventral surface whitish. Skull with supraorbital ledges distinct.

**Phyllotis definitus** Osgood.1915. *Phyllotis definitus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 13, p. 189.*Type locality*: Western Peru, Macate, N. E. of Chimbote. Alt. 9000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 21125. ♂.)

A large species with long fur and of a relatively deep rich colouration. General colouration above cinnamon brown mixed with dusky. Nose, forehead and sides of face decidedly greyish. Ventral surface buffy ochraceous, paler and more whitish on throat and inguinal region, all the hairs dark slaty at their bases. Skull stoutly built with broad nasals, heavy zygomata and broad molars.

**Genus Graomys** Thomas.1916. **Graomys** Thomas, Ann. & Mag. Nat. Hist. (8) xvii, p. 141. — *Type*: *Mus (Phyllotis) griseo-flavus* Waterh.

Size comparatively large. Form graceful. Fur long and fine. Ears long. Tail longer than the combined length of head and body, well-haired and pencilled terminally. Feet of normal proportions. Pads small, though well-defined, and with the spaces between them coarsely granulated. Belly hairs always with definitely white tips. Mammae: 2—2 = 8.

Skull generally like that of *Phyllotis*, but supraorbital edges always ridged and divergent. Interparietal well-developed. Anterior edge of zygomatic plate concave, distinctly undercut and projecting forwards enough to be visible from above. Palate and palatine foramina about as in *Phyllotis*. Mesopterygoid fossa broadly square anteriorly. Bullae rather large.

Dentition as in *Phyllotis*. Incisors opisthodont.

**Graomys griseoflavus griseoflavus** Waterhouse.

1837. *Mus (Phyllotis) griseoflavus* Waterh., Proc. Zool. Soc., London, p. 28.

*Type locality:* Northern Patagonia, Mouth of Rio Negro. (Type in Brit. Mus. N:o 55. 12. 24. 184. ♂.)

Fur long and very soft. General colouration above greyish, washed with brownish yellow and becoming clearer yellowish on the sides of the body. Ventral surface pure white, the hairs grey at their bases except those on the throat, which are white to their roots.

**Graomys griseoflavus chacoënsis** J. Allen.

1901. *Phyllotis chacoënsis* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 408.

*Type locality:* Paraguay, Waikthlatingwayalwa, Northern Chaco. (Type in Brit. Mus. N:o 98. 5. 14. 2. ♀.)

Differs from *G. griseoflavus* by its brighter, more buffy colouration. Ventral surface pure white, the hairs white to their bases.

**Graomys griseoflavus cachinus** J. Allen.

1901. *Phyllotis cachinus* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 409.

*Type locality:* North-western Argentine, Upper Rio Cachi, Salta Province. (Type in Brit. Mus. N:o 97. 5. 5. 19. ♀.)

Similar to *G. g. griseoflavus*, but hairs on ventral surface pale greyish at their bases. Skull broader and dentition heavier.

**Graomys griseoflavus domorum** Thomas.

1902. *Eligmodontia domorum* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 132.

*Type locality:* Northern Bolivia, Tapacari. Alt. 3000 m. (Type in Brit. Mus. N:o 2. 1. 1. 47. ♂.)

Distinguished from its allies by less bushy tail and smaller bullae.

**Graomys griseoflavus centralis** Thomas.

1902. *Eligmodontia griseoflavus centralis* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 240.

*Type locality:* Central Argentine, Cruz del Eje, Cordova Province. Alt. 600 m. (Type in Brit. Mus. N:o 2. 2. 5. 13. ♀.)

Allied to *G. g. domorum* and with equally small bullae, but with very small molars. General colouration above greyish drab, clearer on the sides and becoming more buffy on the rump. Ventral surface pure white.

**Graomys medius** Thomas.

1919. *Graomys medius* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 494.

*Type locality:* North-western Argentine, Chumbicha, Catamarca Province. Alt. 600 m. (Type in Brit. Mus. N:o 18. 11. 11. 23. ♂.)

Allied to *G. g. cachinus*, but smaller and less buffy along the sides of the body. Ventral surface white. Tail shorter and less tufted. Skull as in *G. g. cachinus*, but smaller and with the supraorbital edges less distinctly beaded.

**Graomys edithae** Thomas.1919. *Graomys edithae* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 495.*Type locality*: North-western Argentine, Otro Cerro, Catamarca Province. Alt. 3000 m.

(Type in Brit. Mus. N:o 19. 2. 7. 34. ♂.)

A small species. General colouration as in *G. medius*, but practically without the buffy wash on the sides of the body. Tail shorter and less heavily haired. Skull as in *G. medius*, but smaller.

**Graomys lockwoodi** Thomas.1918. *Graomys lockwoodi* Thos., Ann. & Mag. Nat. Hist. (9) i, p. 187.*Type locality*: North-western Argentine, Manuel Elordi, Vermejo, Salta Province. Alt. 500

m. (Type in Brit. Mus. N:o 18. 1. 1. 6. ♂.)

Most closely allied to *G. g. domorum* with which it agrees in size and general colouration. Hairs on chin and throat white to their bases. Tail distinctly bicolor. Skull as in *G. g. domorum*, but with larger bullae. Incisors also more opisthodont than usual.

**Graomys taterona** Thomas.1926. *Graomys taterona* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 320.*Type locality*: Southern Bolivia, Tablada, Tarija District. Alt. 2000 m. (Type in Brit.

Mus. N:o 26. 1. 1. 16. ♂.)

A large, pale-coloured species allied to *G. lockwoodi*. General colouration above pale buff, the head greyer than the back. Sides of the body clear pale buff. Ventral surface white, the hairs slaty at their bases except those on chin and throat. Skull large and robust, with strongly developed ridges and long palatine foramina.

Genus **Euneomys** Coues.1874. **Euneomys** Coues, Proc. Acad. Nat. Sci., Philadelphia, xxvi, p. 185. — *Type*: *Reithrodon chinchilloides* Waterh.

Form comparatively stout, more or less Microtine. Fur long and soft. Tail of moderate length, well clothed with hairs especially at the tip. Feet stout and dumpy, generally heavily fringed. Fifth hindtoe long, reaching to the end of the first phalanx of the fourth toe. Palms and soles completely naked. Pads large and low, more or less filling up the surface of the palms and soles. Mammae: 2—2=8.

Skull comparatively short and stout. Premaxillo-maxillary suture bowed forwards below. Interorbital region rather narrow, without beading. Interparietal well-developed. Zygomata widely expanded. Anterior zygomatic plate nearly straight in front, not undercut, and projecting forwards enough to be visible from above. Palate short and ending just opposite to the plane of the last molars, slightly ridged and only a little excavated. A pair of depressions on the posterior third of the palatal surface. Mesopterygoid fossa comparatively shallow, but rather squarely open in front. Parapterygoid fossae nearly on the same plane as the palate, broad but shallow. Palatine foramina comparatively short.

Upper incisors strongly and distinctly grooved longitudinally. Molars brachydont. Enamel pattern with folds oblique, with one less fold in each of the last two upper molars and in the first two lower teeth.

#### **Euneomys chinchilloides** Waterhouse.

1839. *Reithrodon chinchilloides* Waterh., Zool. Voyage »Beagle», pt. 2, Mamm., p. 72.  
*Type locality*: Northern Tierra del Fuego. (Type in Brit. Mus. N:o 55. 12. 26. 111.)  
*Syn.* *Euneomys petersoni* J. Allen, Bull. Amer. Museum Nat. Hist., xix, 1903, p. 193. — South-western Patagonia, Upper Rio Chico, Santa Cruz. (Type in United States National Museum. N:o 84198. ♀.)

Fur long and extremely soft. General colouration above ashy brown, grizzled with pale yellowish white and intermixed with black. Sides of the body delicate yellowish. Ventral surface creamy, strongly tinged with buff.

#### **Euneomys ultimus** Thomas.

1916. *Euneomys ultimus* Thos., Ann. & Mag. Nat. Hist. (8) xvii, p. 185.  
*Type locality*: Hermite Island, St. Martin's Cove, Cape Horn. (Type in Brit. Mus. N:o 43. 11. 16. 26. ♂.)

Allied to *E. chinchilloides*, but larger and with heavier dentition. Fur long and soft. General colouration above dull greyish fawn. Ventral surface drab, the hairs slaty at their bases. Tail short and markedly bicolor. Skull as in *E. chinchilloides*, but larger and heavier.

#### **Euneomys mordax** Thomas.

1912. *Euneomys mordax* Thos., Ann. & Mag. Nat. Hist. (8) x, p. 410.  
*Type locality*: Western Argentine, Fort San Rafael, Mendoza Province. (Type in Brit. Mus. N:o 55. 12. 24. 199. ♀.)

Size large. Fur long, thick and woolly. General colouration above dull greyish. Ventral surface lighter greyish, not sharply defined and broadly washed with cream buff. Skull larger and more stoutly built than that of *E. ultimus*.

#### **Euneomys dabbeni** Thomas.

1919. *Euneomys dabbeni* Thos., Ann. & Mag. Nat. Hist. (9) iv, p. 127.  
*Type locality*: Southern Patagonia, Lago Viedma, Santa Cruz Territory. Alt. 200 m. (Type in Brit. Mus. N:o 19. 6. 26. 1. ♂.)

General colouration above pale neutral grey, the hairs tinged with buffy brown at their tips. Ventral surface greyish white, the bases of the hairs deep slaty and the tips faintly tinged with buff or cream. Skull smaller than that of *E. chinchilloides*, but broader and shorter. Interorbital region with sharply square, but unbeaded edges.

#### Genus **Auliscomys** Osgood.

1915. **Auliscomys** Osgood, Field Museum Nat. Hist., Zool. ser., X, N:o 13, p. 190. — *Type*: *Reithrodon pictus* Thos.

Form comparatively stout. Fur very long and soft. Ears large. Tail of medium

length or rather short, well-clothed with hairs especially at the tip which is pencilled. Feet stout, generally heavily fringed. Fifth hindtoe long, reaching to the end of the first phalanx of the fourth toe. Palms and soles naked with six large, but low pads. Mammae: 2—2=8.

Skull somewhat intermediate between that of *Euneomys* and *Phyllotis*. Premaxillo-maxillary suture in front of infraorbital foramen nearly vertical as in *Phyllotis*, not decidedly bowed forwards as in *Euneomys*. Interorbital region narrow, the supraorbital edges smooth and rounded without ridges or beads. Interparietal distinct. Zygomata rather widely expanded. Anterior zygomatic plate well visible from above, slightly concave in front but not undercut. Palate ending at or slightly beyond the plane of the last molars, but slightly ridged. A pair of slight depressions on the posterior portion of the palatal surface. Mesopterygoid fossa squarely open in front. Parapterygoid fossae broad and shallow. Palatal foramina comparatively long, reaching to the plane of the first lamina of the first molars, rather widely open and with the dividing septum fairly large. Bullae rather small.

Upper incisors faintly or not grooved at all. Molars slightly more hypsodont than those of *Phyllotis*. Enamel pattern of molars with angles much less oblique than in *Euneomys*. Second upper and lower molars generally with three outer angles instead of two.

#### *Auliscomys pictus* Thomas.

1884. *Reithrodon pictus* Thos., Proc. Zool. Soc., London, p. 457.

*Type locality*: Central Peru, Junin, Lima District. (Type in Brit. Mus. N:o 85. 4. 1. 34. ♂.)

Fur long, soft and silky. Crown and neck grey, the hairs tipped with black. The greyish colouration becomes darker and more grizzled on the shoulders and more rufous chestnut on the rump. Ventral surface white, the hairs slaty at their bases. Tail sharply bicolor.

#### *Auliscomys decoloratus* Osgood.

1915. *Phyllotis (Auliscomys) decoloratus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 13, p. 191.

*Type locality*: South-eastern Peru, Tirapata, Puno District. Alt. 15000 feet. (Type in Amer. Museum Nat. Hist. N:o 16500. ♀.)

Similar to *A. pictus*, but smaller and paler. Rump inclining to buffy. Feet entirely white. Skull as in *A. pictus*, but smaller and narrower.

#### *Auliscomys boliviensis boliviensis* Waterhouse.

1846. *Hesperomys boliviensis* Waterh., Ann. & Mag. Nat. Hist. (1) xvii, p. 483.

*Type locality*: Central Bolivia, Potosi. (Type in Brit. Mus. N:o 45. 11. 18. 9.)

Fur long and soft. General colouration above grizzled ochraceous yellow and brown, intermixed with black hairs and becoming obscurely tinged with rufous on the rump. Sides of the body clearer ochraceous. Ventral surface white, the hairs deep slaty grey at their bases. Tail faintly bicolor, upperside brownish buff, underside white.

**Auliscomys boliviensis flavidioides** Thomas.

1902. *Phyllotis boliviensis flavidioides* Thos., Ann. & Mag. Nat. Hist. (7) x, p. 248.

*Type locality*: Southern Peru, Bateas, Caylloma. Alt. 4500 m. (Type in Brit. Mus. N:o 2. 7. 2. 5. ♀.)

Allied to *A. b. boliviensis*, but colouration brighter and more strongly suffused with yellow. General colour above buffy grey, the hairs on the back broadly tipped with dark brown. Flanks with a marked yellow edging to the buffy white ventral surface, the hairs of which are slaty at their bases. Yellow patches at anterior base of ears strongly developed. Tail wholly or partly dull yellowish.

**Auliscomys micropus micropus** Waterhouse.

1837. *Mus micropus* Waterh., Proc. Zool. Soc., London, p. 17.

*Type locality*: Southern Patagonia, Santa Cruz. (Type in Brit. Mus. N:o 55. 12. 24. 179.)

Fur very long. General colouration above brown, grizzled with brownish yellow and intermixed with dusky black. Ventral surface greyish white faintly tinged with yellow, the hairs deep grey at their bases.

**Auliscomys micropus alsus** Thomas.

1919. *Euneomys micropus alsus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 202.

*Type locality*: North-western Patagonia, Maiten, Chubut Territory. Alt. 700 m. (Type in Brit. Mus. N:o 18. 12. 2. 13. ♂.)

Similar to *A. m. micropus*, but almost without the strong buffy suffusion, the general tone being more slaty greyish. Ventral surface also clearer greyish with only a slight buffy wash.

**Auliscomys sublimis** Thomas.

1900. *Phyllotis sublimis* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 467.

*Type locality*: Southern Peru, Rinconado Malo Pass, Caylloma. Alt. 5500 m. (Type in Brit. Mus. N:o 0. 10. 1. 60. ♀.)

A vole-like species of medium size with a short tail. Fur very long, soft and fine. General colouration above dull pale greyish fawn, becoming more distinctly fawn on the sides of the body as well as on the rump and browner on the mid-dorsal region. Ventral surface not sharply defined white, the hairs slaty at their bases. Skull with small bullae.

**Auliscomys leucurus** Thomas.

1919. *Euneomys (Auliscomys) leucurus* Thos., Ann. & Mag. Nat. Hist. (9) iv, p. 129.

*Type locality*: North-western Argentine, La Lagunita, Maimara, Jujuy Province. Alt. 4500 m. (Type in Brit. Mus. N:o 19. 7. 10. 3. ♀.)

Allied to *A. sublimis*, but larger. General colouration above about as in that form, but more drabby or greyish. Hairs of ventral surface slaty, broadly washed with pale buff. Skull considerably larger than that of *A. sublimis*, but similarly built, not so broad and stout as in *A. boliviensis* and *A. pictus*. Anterior zygomatic plate rather narrow. Palatal foramina rather long. Bullae small.

Genus *Galenomys* Thomas.

1916. *Galenomys* Thomas, Ann. & Mag. Nat. Hist. (8) xvii, p. 143. — Type: *Phyllotis* (?) *Garleppii* Thos.

Form not particularly stout. Fur close and thick. Ears fairly large. Tail very short, barely  $1\frac{1}{2}$  times the length of the hindfoot, closely haired throughout. Feet of normal proportions. Palms and soles hairy for their posterior two thirds. Mammae: 2—2=8.

Skull with frontal profile very convex. Nasals long, hiding the incisors when viewed from above. Naso-frontal region flattened. Supraorbital edges square, but not ridged. Zygomata especially widely expanded anteriorly. Anterior zygomatic plate much slanted and running up to a very high level on the skull, so that the forehead does not project above the anterior zygoma-root. Palatine foramina long and well open, extending backwards to about the middle of the first upper molar.

Incisors very slender, ungrooved, more proödont than usual. Their narrow anterior faces pale yellow.

*Galenomys garleppii* Thomas.

1898. *Phyllotis* (?) *Garleppii* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 279.

Type locality: Central Bolivia, Esperanza, near Mt. Sahama. Alt. 4000 m. (Type in Brit. Mus. N:o 98. 3. 16. 5. ♂.)

General colouration above greyish buff, finely lined with black and becoming clear buff on the rump and along the sides of the body. Ventral surface sharply defined white, the hairs slaty at their bases except on the chest where they are white to their roots. Tail white throughout.

Genus *Chelemyscus* Thomas.

1925. *Chelemyscus* Thomas, Ann. & Mag. Nat. Hist. (9) xv, p. 585. — Type: *Reithrodon fossor* Thos.

Form highly modified for fossorial life. Fur soft. Ears short. Tail comparatively short, but well clothed with hairs. Pollex with a stout claw. Fifth hindtoe — without claw — reaching to the middle of the first phalanx of the fourth toe. Claws of fingers greatly developed, those of the toes also unusually large, but far smaller than those of the fingers.

Skull about as in *Euneomys*, but the nasals decidedly expanded anteriorly. Supraorbital edges square, but not ridged. Their anterior end is marked by a slight projection. Anterior zygomatic plate with a slight concavity on its front edge and projecting forwards enough to be visible from above. Interparietal broad, with its anterior edge slightly concave forwards. Palate ending just behind the last molar. Palatine foramina widely open anteriorly, extending backwards to the level of the front of the first molar. Parapterygoid fossae shallow, but rather broad.

Upper incisors very broad and deeply grooved. Lower incisors also very broad. Molar dentition broad and powerful.

**Chelemyscus fossor** Thomas.1899. *Reithrodon fossor* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 280.*Type locality*: North-western Argentine, Salta. (Type in Brit. Mus. No: 99. 2. 22. 25.)

General colouration above soft fawn grey. Ventral surface greyish white, the hairs slaty at their bases. Tail pale fawn above, white below and on the sides.

Genus **Andinomys** Thomas.1902. **Andinomys** Thomas, Proc. Zool. Soc., London, i, p. 116. — *Type*: *Andinomys edax* Thos.

Size rather large. Form murine. Fur long, fine and soft. Ears fairly large. Tail well clothed with hairs, but not pencilled terminally. Pollex with a broad nail. Fifth hindtoe — without claw — reaching to the middle of the second phalanx of the fourth toe. Palms and soles naked. Pads large, rounded and prominent. Mammae: 2—2 = 8.

Skull rat-like with a long, broad and heavy rostrum. Nasals long and decidedly expanded anteriorly. Interorbital region narrow, almost parallel-sided, concave in the middle line. The concavity is bordered by low inconspicuous ridges, which do not overhang the orbit or run back on to the parietals. Interparietal large and broad. Anterior zygomatic plate concave on its front margin and with an overhanging point on its upper border. Palate ending at the plane of the last molars, with a well-marked mesial ridge. Palatine foramina large, well open, with very sharply defined edges and extending backwards to about the level of the anterior lamina of the first molars. Mesopterygoid fossa well-defined and almost parallel-sided. Parapterygoid fossae broad, but shallow. Bullae comparatively small.

Incisors broad, heavy and smooth anteriorly. Molars very large and highly hypsodont. Molar pattern about as in *Phyllotis*, but in youth much more complicated and almost microtine in appearance. The spaces are more or less altered, and the pattern — especially of the first lower molar — becomes less complicated with age owing to the wearing-out of the accessory columns and the spaces either are or gradually become isolated from each other. The lateral angles are much more acute in youth, but become comparatively blunt in old age.

**Andinomys edax** Thomas.1902. *Andinomys edax* Thos., Proc. Zool. Soc., London, I, p. 116.*Type locality*: Central Bolivia, El Cabrado, between Potosi and Sucre. Alt. 3700 m. (Type in Brit. Mus. N:o 2. 2. 15. ♀.)

Fur long, fine and soft, but not woolly. General colouration above dull buffy or fulvous buffy lined with black. Sides of the body clearer, sandy buff. Ventral surface not sharply defined of a buffy white colour, the hairs slaty at their bases. Skull with large nasals that are very broad anteriorly.

Genus **Scapteromys** Waterhouse.

1837. **Scapteromys** Waterhouse, Proc. Zool. Soc., London, p. 20. — *Type: Mus tumidus* Waterh.

Form murine, robust. Size large. Fur thick and soft. Ears moderate in size. Tail long and heavily haired, the hairs below longer than those above, forming a swimming fringe. Pollex with a curved, pointed claw. Forefeet comparatively large. Hindfeet long and rather broad. Claws of both fore- and hindfeet elongated and slightly curved, fossorial. Palms and soles naked, with rather prominent pads. Mammae: 2—2 = 8.

Skull with rather short muzzle. Interorbital region fairly narrow. Supra-orbital edges rounded or slightly square, without ridges or beads. Braincase comparatively narrow. Interparietal well-developed. Anterior zygomatic plate broad, more or less deeply emarginated and projecting forwards enough to be visible from above. Palate extending a little beyond the plane of the last molars. Palatine foramina long and well open, reaching backwards to about the posterior plane of the first lamina of the first molar. Mesopterygoid fossa comparatively narrow and nearly parallel-sided. Parapterygoid fossae rather broad, but fairly shallow. Bullae of medium size.

Incisors ungrooved. Molars hypsodont. Cusps high and closely thrown together, but separated by deep grooves. First upper molar with an anterior notch. First lower molar with two lateral angles on the outer margin and three on the inner side. Second and third lower molars with one lateral angle on the outer and two on the inner margin.

**Scapteromys tumidus** Waterhouse.

1837. *Mus tumidus* Waterh., Proc. Zool. Soc., London, p. 15.

*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 18. ♀.)

General colouration above brown, grizzled with yellow and intermixed with long black hairs. Sides of the body greyish with a yellowish wash. Ventral surface white, the hairs grey at their bases.

**Scapteromys tomentosus** Lichtenstein.

1829. *Mus tomentosus* Licht., Darstellung Neuer Säuget., vii, pl. xxxiii, fig. 1.

*Type locality*: Uruguay, Maldonado. (Type presumably in Zool. Museum Berlin.)

General colouration above glistening blackish grey, some hairs minutely ticked with whitish. Centre of belly dull ashy grey, the hairs blackish grey at their bases.

**Scapteromys aquaticus** Thomas.

1920. *Scapteromys aquaticus* Thos., Ann. & Mag. Nat. Hist. (9) v, p. 477.

*Type locality*: Eastern Argentine, Isla Ella, Paraná Delta, Buenos Aires Province. Alt. 1 m. (Type in Brit. Mus. N:o 17. 6. 1. 6. ♂.)

General colouration above slaty blackish, becoming blackish on the crown and somewhat browner on the rump. Sides of the body dark slaty grey, abruptly

changing halfway down to the greyish white ventral surface, the hairs of which are slaty greyish at their bases.

#### **Scapteromys chacoënsis** Gyldenstolpe.

1932. *Scapteromys chacoënsis* Gyld., Arkiv för Zoologi, Bd. 24 B, N:o 1, p. 1.

*Type locality*: Northern Argentine, Rio de Oro, Chaco Austral. (Type in R. Nat. Hist. Museum in Stockholm. N:o 26. ♂.)

Size large. Fur long and moderately soft. Upperparts with a glistening greenish sheen visible in certain lights. General colouration above heavily lined ochraceous tawny and strongly intermixed with longer black hairs especially on the centre of the back. Crown darker and less ochraceous tawny. Sides of head and sides of the body intermixed with greyish hairs. Ventral surface not sharply defined greyish white, the hairs broadly deep neutral grey at their bases. Tail unicolor. Skull about as in the subfossil *S. principalis* LUND, but molars much smaller and of about the same size as in the subfossil *S. fronto* WINGE.

#### **Scapteromys gnambiquarae** Ribeiro.

1914. *Scapteromys gnambiquarae* Ribeiro, Comm. Linhas Telegr. de Matto Grosso, (Rio de Janeiro), Annex N:o 5, p. 37.

*Type locality*: Southern Brazil, Ultimo Acampamento, Chapada, Matto Grosso Province. (Type in Museo Nacional de Rio de Janeiro?)

Pelage long and shaggy. Size large. Upperparts of the body more or less distinctly lined with whitish and black, intermixed with longer hairs which are cinereous at base, black at the middle and whitish at the tips. The shorter and finer hairs are slaty at base, rather indistinctly annulated with black and tipped with whitish. Sides of the body and ventral surface more whitish than the upperparts. Muzzle, tail and feet darker and more blackish. Apparently most closely allied to *S. principalis* LUND from Lagoa Santa, Rio das Velhas, Minas Geraes Province. Skull about as in that species and with equally large molars, but with the posterior profile less elevated and with the intermaxillare and the nasals longer.

#### Genus **Chinchillula** Thomas.

1898. **Chinchillula** Thomas, Ann. & Mag. Nat. Hist. (7) i, p. 280. — *Type*: *Chinchillula sahamae* Thos.

Form comparatively large. Fur very long, soft and silky. Ears very large. Tail of medium length, well-clothed with rather long hairs and rather distinctly pencilled terminally. Pollex with a rather elongated nail. Feet rather broad. Palms and soles naked except just under the heel. Pads five or six in number, large, rounded and prominent.

Skull somewhat recalling that of a large member of the genus *Phyllotis*, though broader in proportion to its length. Nasals long and decidedly expanded anteriorly. Interorbital region narrow, almost parallel-sided, concave in the middle, this concavity bordered on each side by a low — though rather conspicuous

—ridge, the ridges neither overhanging the orbits nor extending backwards on the parietals. Interparietal very large and broad. Anterior zygomatic plate evenly slanting forwards and only a little projecting. Palate rather long, ending behind the plane of the last molars. Palatine foramina long and widely open, extending backwards to about the level of the first lamina of the first molar. Mesopterygoid fossa well-defined and almost parallel-sided. Parapterygoid fossae broad. Bullae comparatively large.

Upper incisors rather narrow, ungrooved and opisthodont. Lower incisors long and slender. Molars very heavy and highly hypsodont. Molar pattern remarkably simple and practically alike in youth and age, with opposite and connected enamel spaces. Posterior lamina of first upper molar simply transverse and not tending to be constricted into two loops. Second and third upper molars without anterior supplementary cusps, the posterior lamina of the last upper molar much narrower than the anterior. Lower molars similarly modified, without posterior supplementary cusps. Last lower molar consisting of two simple laminae connected mesially, the posterior much smaller than the anterior one.

#### *Chinchillula sahamae* Thomas.

1898. *Chinchillula sahamae* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 280.

*Type locality*: Central Bolivia, Esperanza, near Mt. Sahama. Alt. 4000 m. (Type in Brit. Mus. N:o 98. 3. 16. 6. ♂.)

General colouration above cinereous grey, washed with blackish and intermixed with very long hairs, which are black-tipped on the back and white-tipped on the rump. Ventral surface snowy white, the hairs slaty at their bases. Outer side of hips with a whitish projection running up from the belly-colour into that of the back, succeeded behind by a blacker area on the back of the hams, this again succeeded by a white area round the base of the tail.

#### Genus *Akodon* Meyen.

1833. *Akodon* Meyen, Verh. Kaiserl. Leopold. Carol. Akad. d. Wissensch., xvi, pt. ii, p. 599. —

*Type*: *Akodon boliviensis* Meyen.

Form unmodified. Fur normal. Colouration grey, pale brown or olivaceous without special markings. Eyes normal, not reduced in size. Tail of moderate length. Claws normal, but rather variable in size. Mammae: 2—2=8.

Skull of normal shape and rather lightly built. Interorbital region fairly narrow. Supraorbital edges more or less squared, but not or only scarcely beaded and always without overhanging ledges. Braincase rather narrow. Anterior zygomatic plate vertical, not undercut but projecting forwards enough to be visible from above. Palate ending at about the level of the last molars. Palatine foramina rather long, usually narrowed behind and extending far between the first molars. Bullae comparatively small. Base of each pterygoid as broad as the fossa between the two bones.

Upper incisors ungrooved. Lower incisors rather long and slender. Molars hypsodont. First upper molar generally with a more or less well-defined notch between the cusps of the anterior lamina.

**Akodon boliviensis** Meyen. ✓

1833. *Akodon boliviense* Meyen, Nova Acta Acad. Leopold, xvi, N:o 2, p. 600.

*Type locality*: Central Peru, Pichu Pichun, Mt. Misti, Arequipa Department. Alt. 14000 feet. (imm.)

General colouration above grizzled greyish yellow intermixed with longer black hairs. Ventral surface greyish white. Tail bicolor.

**Akodon pusillus** Philippi. ✓

1858. *Mus pusillus* Phil., Arch. für Naturgesch., xxiv, N:o 1, p. 79.

*Type locality*: Western Chile, Coast region near Valparaiso. (Type in Museo Nacional de Santiago de Chile.)

General colouration above pale cinereous. Ventral surface whitish. Tail bicolor.

**Akodon lutescens** J. Allen. ✓

1901. *Akodon lutescens* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 46.

*Type locality*: Northern Peru, Tirapata. Alt. 15000 feet. (Type in Amer. Museum Nat. Hist. N:o 16507. ♀.)

General colouration above fulvous grey-brown, slightly intermixed with dusky and becoming dull pale fulvous grey on the sides of the body. Ventral surface pale buffy grey. Tail bicolor.

**Akodon arviculoides arviculoides** Wagner. ✓

1842. *Hesperomys arviculoides* Wagn., Arch. für Naturgesch. (1) viii, p. 361.

*Type locality*: Eastern Brazil, Bahia. (Type in Naturhist. Museum, Vienna N:o 424.)

*Syn. Hesperomys orobinus* Wagner, Arch. für Naturgesch. (1) viii, 1842, p. 361. — Eastern Brazil, Ypanema, Sao Paulo Province. (Type presumably in Zool. Museum, Munich.)

General colouration above grizzled pale olive brown intermixed with black. Ventral surface not sharply defined soiled grey, slightly tinged with yellowish, the hairs dark slaty at their bases.

**Akodon arviculoides cursor** Winge. ✓

1888. *Habrothrix cursor* Winge, E Museo Lundii, I, N:o 3, p. 25.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province. (Type in Zool. Museum, Copenhagen.)

Similar to *A. arviculoides*, but darker. General colouration above grizzled buffy brown intermixed with blackish on the back. Sides of the body more distinctly buffy. Ventral surface pale buffy, the hairs slaty at their bases. Skull rather lightly built, about as in *A. a. montensis* but with a rather more rounded braincase.

**Akodon arviculoides montensis** Thomas.1913. *Akodon arviculoides montensis* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 405.*Type locality*: Paraguay, Sapucay. (Type in Brit. Mus. N:o 4. 1. 5. 35. ♂.)

Similar to *A. a. arviculoides*, but slightly smaller. General colouration above grizzled olive grey, paler and more buffy than in *A. arviculoides*. Rump and sides of the body distinctly buffy or clay-coloured. Ventral surface pale buffy, the hairs slaty at their bases. Skull as in *A. arviculoides*, but more lightly built and with a slightly narrower braincase.

**Akodon dayi** Osgood.1916. *Akodon dayi* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 14, p. 208.*Type locality*: Eastern Bolivia, Todos Santos, Rio Chaparé. Alt. 1200 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 21329. ♂.)

A medium-sized species of a dark, rich brown colouration. Ventral surface rich rufous. Somewhat allied to *A. a. cursor*, but very much darker, with longer hindfeet and a heavier and decidedly deeper skull.

**Akodon varius varius** Thomas. ✓1902. *Akodon varius* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 134.*Type locality*: Central Bolivia, Cochabamba. Alt. 2400 m. (Type in Brit. Mus. N:o 2. 1. 1. 67. ♀.)

Fur coarse and shaggy. General colouration above coarsely lined greyish, mixed with slaty or fulvous. Ventral surface soiled whitish, the hairs slaty at their bases. Tail bicolor. Skull with upper outline strongly bowed. Interorbital region flat transversely, convex longitudinally and sharply square-edged, but not ridged.

**Akodon varius simulator** Thomas. ✓1916. *Akodon simulator* Thos., Ann. & Mag. Nat. Hist. (8) xviii, p. 335.*Type locality*: North-western Argentine, Villa Nouges, San Pablo, Tucuman Province. Alt. 1200 m. (Type in Brit. Mus. N:o 2. 1. 5. 8. ♂.)

Size fairly large. Fur long. General colouration above dark greyish, strongly suffused with clay-colour on the back. Head, shoulders, flanks and hips slaty or purplish grey. Ventral surface washed with buffy or drabby whitish, the bases of the hairs dark slaty.  $M^1 + \text{half } m^2 = 3,2 \text{ mm.}$

**Akodon varius glaucinus** Thomas.1919. *Akodon glaucinus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 116.*Type locality*: North-western Argentine, Chumbicha, Catamarca Province. Alt. 600 m. (Type in Brit. Mus. N:o 18. 11. 11. 57. ♂.)

Closely allied to *A. v. varius* and *A. v. simulator*, but general colouration paler, the buff of the dorsal area less intense and almost absent on the crown. Incisors orthodont.

**Akodon varius neocenus** Thomas.1919. *Akodon neocenus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 213.*Type locality*: Western Patagonia, Rio Limay, Upper Rio Negro, Neuquen Territory.  
(Type in Brit. Mus. N:o 11. 11. 19. 12. ♂.)

A shaggy-grey member of the *A. varius*-group. Fur rather long and thick. General colouration above greyer than in *A. v. varius*, with less buffy, although the essential mixture of grey and buff, varied by the dark tips to the hairs, is similar. On the back, there are some longer bristle-like hairs intermixed with the others. Skull as in *A. v. varius*, but nasals narrower and incisors more proödont.  $M^1$  with a faint anterior groove. Teeth rather more hypsodont than usual. This form is furthermore greyer than any hitherto known members of the *obscurus-lenguarum* group.

**Akodon tartareus** Thomas.1919. *Akodon tartareus* Thos., Ann. & Mag. Nat. Hist. (9) iv, p. 155.*Type locality*: North-western Argentine, Tartagal, Salta Province. Alt. 600 m. (Type in Brit. Mus. N:o 19. 7 25. 2. ♂)

A large species differing from *A. v. varius* by larger size and by having a buffy or cinnamon wash on the ventral surface.  $M^1$  without anterior groove.

**Akodon toba** Thomas.1921. *Akodon toba* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 178.*Type locality*: Paraguay, Jesematathla, Northern Chaco. Alt. 100 m. (Type in Brit. Mus. N:o 20. 12. 18. 20. ♀.)

A large olivaceous species with *whitish* belly. General colouration above finely thicked olivaceous grey as in *A. a. montensis*, but general effect greyer. Skull with interorbital region broad, the edges sharply angular.

**Akodon arenicola arenicola** Waterhouse.1837. *Mus arenicola* Waterh., Proc. Zool. Soc., London, p. 18.*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 159.)

Fur long and moderately soft. General colouration above deep brown grizzled with yellowish brown, the sides of the body obscurely washed with yellowish. Ventral surface dirty grey with a faint yellowish tinge.

**Akodon arenicola hunteri** Thomas.1917. *Akodon arenicola hunteri* Thos., Ann. & Mag. Nat. Hist. (8) xx, p. 97.*Type locality*: Eastern Argentine, Isla Ella, Paraná Delta, Buenos Aires Province. Alt. 1 m.  
(Type in Brit. Mus. N:o 17. 6. 1. 28. ♂.)

Similar to *A. arenicola*, but larger and with longer hindfeet.

**Akodon arenicola beatus** Thomas.1919. *Akodon beatus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 204*Type locality*: North-western Patagonia, Beatriz, Lake Nahuel Huapi, Neuquen Territory.  
Alt. 800 m. (Type in Brit. Mus. N:o 19. 1. 1. 34. ♂.)

A rather large member of the *A. arenicola*-group. Fur close and woolly. General colouration above dark olivaceous. Ventral surface greyish white, the hairs slaty at their bases, almost without the drabby or buffy wash of *A. a. arenicola*. Hands silvery white. Tail rather distinctly bicolor. Skull larger than that of *A. a. arenicola*, with a large rounded braincase and proportionally narrow interorbital region.  $M^1$  without anterior notch.

**Akodon sylvanus sylvanus** Thomas.

1921. *Akodon sylvanus* Thos., Ann. & Mag. Nat. Hist. (9) vii, p. 184.

*Type locality*: North-western Argentine, Sunchal, Sierra de Santa Barbara, S. E. Jujuy Province. Alt. 1200 m. (Type in Brit. Mus. N:o 21. 1. 1. 27. ♂.)

A large species apparently allied to *A. arenicola* and *A. tartareus*. General colouration above finely ticked with brown. Ventral surface dull fuscous, the hairs dull greyish at their tips. Skull large, smooth and rounded. Molars inclined to be hypsodont.  $M^1$  rather complicated and with an anterior groove.

**Akodon sylvanus pervalens** Thomas.

1925. *Akodon sylvanus pervalens* Thos., Ann. & Mag. Nat. Hist. (9) xv, p. 579.

*Type locality*: Southern Bolivia, Carapari, Yacuiba, Cochabamba District. Alt. 1000 m. (Type in Brit. Mus. N:o 25. 2. 1. 55. ♂.)

Similar to *A. sylvanus*, but larger and with a longer tail. General colouration also conspicuously less obscure. Skull without supraorbital ridges.

**Akodon serrensis serrensis** Thomas.

1902. *Akodon serrensis* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 61.

*Type locality*: Southern Brazil, Roca Nova, Serra do Mar, Eastern Paraná. Alt. 1000 m. (Type in Brit. Mus. N:o 3. 7. 1. 69. ♂.)

A medium-sized species larger than *A. arenicola*, but smaller than *A. cursor*. General colouration above uniform finely grizzled olivaceous. Ventral surface ochraceous, becoming rich ochraceous on the inguinal region, the hairs slaty at their bases. Molars proportionally very large.

**Akodon serrensis leucogula** Ribeiro.

1905. *Akodon serrensis* var. *leucogula* Ribeiro, Arch. Mus. Nacional do Rio de Janeiro, xiii, p. 188.

*Type locality*: Eastern Brazil, Retiro de Ramos, Serra do Itatiaya, Rio Janeiro Province. Alt. 2200 m. (Type in Museo Nacional de Rio de Janeiro.)

Similar to *A. serrensis*, but more distinctly olive-coloured above. Ventral surface ochraceous yellow with a rather narrow, though distinct, white stripe running from the chin to the throat.

**Akodon spegazzinii** Thomas.

1897. *Akodon spegazzinii* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 216.

*Type locality*: North-western Argentine, Lower Rio Cachi, Salta Province. (Type in Brit. Mus. N:o 97. 5. 5. 14. ♀.)

A medium-sized species. General colouration above and below dull grizzled fulvous rufous, the hairs slaty at their bases. Anal region brighter fulvous. Tail rather long, finely haired and bicolor. Skull strongly built and with a very small interparietal.

#### Akodon alterus Thomas.

1919. *Akodon alterus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 496.

Type locality: North-western Argentine, Otro Cerro, Catamarca Province. Alt. 3000 m. (Type in Brit. Mus. N:o 19. 2. 7. 44. ♂.)

Allied to *A. spegazzinii*. General colouration above between buffy brown and Saccardo's umber. Ventral surface dull soiled buffy, the hairs broadly slaty at their bases and tipped with ochraceous on the inguinal region. Skull comparatively narrow as in *A. spegazzinii*.

#### Akodon jucundus Thomas.

1913. *Akodon jucundus* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 140.

Type locality: North-western Argentine, Cerro de Lagunita, Maimara, Jujuy Province. Alt. 4500 m. (Type in Brit. Mus. N:o 12. 12. 12. 12. ♀.)

Fur comparatively long. General colouration above pale buffy clay-colour, palest on the crown and richest on the back. Sides of the body and ventral surface paler clay-colour, the hairs slaty at their bases. Skull low, smooth and rounded with broad, unbeaded interorbital region. Teeth very small.

#### Akodon gossei Thomas.

1920. *Akodon gossei* Thos., Ann. & Mag. Nat. Hist. (9) vi, p. 418.

Type locality: Western Argentine, Puente del Inca, Andes of Mendoza Province. Alt. 10000 feet. (Type in Brit. Mus. N:o 98. 3. 21. 5. ♀.)

A small species superficially very like a pale *Evotomys*. Fur rather thin. General colouration above greyish, washed with cinnamon buff on the back. Head and sides of the body more greyish. Ventral surface washed with pale buff, the hairs slaty at their bases. A whitish patch on and behind the bases of the ears. Skull somewhat similar to that of *A. jucundus*, but with larger teeth.

#### Akodon olivaceus Waterhouse.

1837. *Mus olivaceus* Waterh., Proc. Zool. Soc., London, p. 16.

Type locality: Western Chile, Valparaiso. (Type in Brit. Mus. N:o 55. 12. 24. 200.)

Syn. *Mus Renggeri* Waterh., Zool. Voy. «Beagle», Mamm., p. 51, 1839. — Chile, Valparaiso.

*Mus lepturus* Philippi, An. Mus. Nac. d. Chile, 1900, p. 17. — Chile, Peine, Santiago Prov.

*Mus ruficaudus* Philippi, » » » » » » p. 40. — Chile.

*Mus trichotis* Philippi, » » » » » » p. 18. — Chile, Andes of Santiago Prov.

*Mus vinealis* Philippi, » » » » » » p. 24. — Chile, Valdivia.

*Mus Germaini* Philippi, » » » » » » p. 32. — Chile, Santiago Prov.

*Mus nasica* Philippi, » » » » » » p. 38. — ?

*Mus (Oxymycterus) senilis* Philippi, » » » » » » p. 27. — Chile, Andes of Santiago Prov.

General colouration above grey washed with yellow, the hairs finely grizzled with yellowish and dusky. Ventral surface whitish grey, the hairs deep slaty at their bases.

**Akodon mollis mollis** Thomas.

1894. *Akodon mollis* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 363.

*Type locality*: North-western Peru, Tumbes, Piura District. (Type in Brit. Mus. N:o 85. 4. 1. 49.)

Closely similar to *A. olivaceus*, but with a longer tail. General colouration above between wood-brown and broccoli-brown. Feet greyish. Skull with the inter-orbital space broader than the muzzle. Supraorbital edges rounded. Zygomatic plate somewhat projecting.

**Akodon mollis fumeus** Thomas.

1902. *Akodon fumeus* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 137.

*Type locality*: Central Bolivia, Choro, Rio Securé. Alt. 3500 m. (Type in Brit. Mus. N:o 2. 1. 1. 80. ♀.)

A dark-coloured form of *A. mollis*. General colouration above dark olivaceous, only slightly paler below. Skull as in *A. mollis*.

**Akodon mollis altorum** Thomas.

1913. *Akodon mollis altorum* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 404.

*Type locality*: Central Ecuador, Cañar Province. Alt. 2600 m. (Type in Brit. Mus. N:o 99. 9. 9. 99. ♂.)

Similar to *A. mollis*, but fur longer and colouration much darker, almost olive above. Ventral surface greyish washed with dull buffy. Hands and feet darker greyish than in *A. mollis*. Tail bicolor.

**Akodon mollis orophilus** Osgood.

1913. *Akodon mollis orophilus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 9, p. 98.

*Type locality*: Northern Peru, Leimabamba, Upper Rio Utcubamba. Alt. 8000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19724. ♂.)

Externally very similar to *A. m. altorum*, but slightly more fulvous. Eyes small. Feet greyish. Tail bicolor. Skull with a longer and more slender rostrum. Nasals slender and elongate. Zygomatic plate short, somewhat slanting and with convex front edge.

**Akodon mollis orientalis** Osgood.

1913. *Akodon mollis orientalis* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 9, p. 99.

*Type locality*: Northern Peru, Poco Tambo, Chachapoyas District. Alt. 6000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 19855. ♀.)

Nearest allied to *A. m. orophilus*, but larger and with a longer tail. General colouration above deep mummy brown grizzled with dark umber and blackish. Ventral surface strongly washed with tawny russet. Feet blackish. Tail unicolor. Skull as in *A. m. orophilus*, but with a slightly broader braincase.

**Akodon pacificus** Thomas.1902. *Akodon pacificus* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 135.*Type locality*: Western Bolivia, La Paz. Alt. 4000 m. (Type in Brit. Mus. N:o 2. 1. 1. 75. ♂.)

General external appearance as in *A. olivaceus* and *A. mollis*. Skull, however, more angular than usual. Interorbital region narrow, nearly square-edged. Braincase low and narrow. Palatal foramina extending nearly to the middle of  $m^1$ . Palate ending level with the back of  $m^3$ . An anterior notch on  $m^1$ .

**Akodon surdus** Thomas.1917. *Akodon surdus* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 2.*Type locality*: Central Peru, Huadquina. Alt. 5000 feet. (Type in United States National Museum. N:o 194663. ♂.)

A large, dark-coloured species allied to *A. mollis*. General colouration above dark olivaceous grey. Ventral surface soiled greyish, the hairs drab terminally and slaty basally. Eyes large. Skull with thick and heavy muzzle. Interorbital region broad and with square edges. Zygomatic plate projecting forwards.

**Akodon xanthorhinus** Waterhouse.1837. *Mus xanthorhinus* Waterh., Proc. Zool. Soc., London, p. 17.*Type locality*: Southern Tierra del Fuego, Hardy Peninsula. (Type in Brit. Mus. N:o 55. 12. 24. 156. imm.)*Syn. Mus canescens* Waterh., Proc. Zool. Soc., London, 1837, p. 17. — Port Desire, Santa Cruz. (Type in Brit. Mus. N:o 55. 12. 24. 157.)*Hesperomys (Habrothrix) olivaceus* Thomas (nec Waterhouse), 1891.*Mus infans* Philippi, An. Mus. Nac. d. Chile, 1900, p. 41. — Central Chile?

General colouration above grey, washed with yellowish and becoming clearer yellow on the sides of the body. Muzzle rich yellow. Ventral surface white, the hairs deep grey at their bases.

**Akodon tucumanensis** J. Allen.1901. *Akodon tucumanensis* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 410.*Type locality*: North-western Argentine, Tucuman. Alt. 450 m. (Type in Brit. Mus. N:o 0. 7. 9. 13. ♀.)

Allied to, but smaller than, *A. olivaceus* and *A. xanthorhinus*. General colouration above dull ruddy brown minutely grizzled with black. Ventral surface buffy grey varying to strong buff. Combined length of  $m^1$  and  $m^2 = 3,2$  mm.

**Akodon puer** Thomas.1902. *Akodon puer* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 136.*Type locality*: Central Bolivia, Choquecamate, Rio Securé. Alt. 4000 m. (Type in Brit. Mus. N:o 2. 1. 1. 78. ♀.)

A small, olive-coloured species with a thick and soft fur. General colouration above pale olive grey lined with blackish. Sides of the body tawny olive passing into dull soiled isabella on the belly. Yellow rings round the eyes. Skull small, slender and delicate with very small teeth.

**Akodon caenosus** Thomas.1918. *Akodon puer caenosus* Thos., Ann. & Mag. Nat. Hist. (9) i, p. 189.*Type locality*: North-western Argentine, Leon, Jujuy Province. Alt. 1500 m. (Type in Brit. Mus. N:o 18. 1. 1. 38. ♂.)

Allied to *A. puer*, but darker and less suffused with buffy or tawny. General colouration above brownish olive, the sides of the body only slightly more buffy. Ventral surface not sharply defined, the terminal half of the hairs dull pinkish buff. Skull larger than in *A. puer*, with more angular supraorbital ridges and more hypsodont molars. Combined length of  $m^1$ ,  $m^2$  and  $m^3 = 3,2$  mm., the teeth thus small.

**Akodon iniscatus iniscatus** Thomas.1919. *Akodon iniscatus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 205.*Type locality*: Western Patagonia, Valle del Lago Blanco, Koslowsky region, S. Chubut Territory. Alt. 100 m. (Type in Brit. Mus. N:o 3. 7. 9. 64. ♂.)

Size about as in *A. xanthorhinus* from which it differs by its coarsely lined brown colouration, especially below. Skull heavier, with broader interorbital region and broader zygomatic plate as well as shorter muzzle.  $M^1$  with an anterior notch.

**Akodon iniscatus collinus** Thomas.1919. *Akodon iniscatus collinus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 206.*Type locality*: North-western Patagonia, Maiten, Chubut Territory. Alt. 700 m. (Type in Brit. Mus. N:o 18. 12. 2. 31. ♀.)

A more blackish race of *A. iniscatus*. Tail short and strongly bicolor. General colouration above dark grizzled olivaceous brown, the hairs ticked with black and dull buffy, the sides rather more buffy. Ventral surface soiled greyish buff, the hairs slaty at their bases. Chin white. Skull bowed, smooth and unridged with square interorbital edges.  $M^1$  with a well-marked anterior median notch.

**Akodon obscurus** Waterhouse.1837. *Mus obscurus* Waterh., Proc. Zool. Soc., London, p. 16.*Type locality*: Uruguay, Maldonado. (Cotype in Brit. Mus. N:o 55. 12. 24. 161.)

Fur rather long and somewhat glossy. General colouration above blackish brown narrowly annulated with dark yellow. Ventral surface dirty yellowish white, the hairs lead coloured at their bases. Round the eyes deep yellow rings. Incisors proödont. Skull about as in *A. dolores*.

**Akodon lenguarum** Thomas.1898. *Akodon lenguarum* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 271.*Type locality*: Paraguay, Waikthlatingwayalwa, Northern Chaco. (Type in Brit. Mus. N:o 98. 5. 14. 4.)

Closely allied to *A. obscurus*, but lighter in general colouration, less heavily lined on the back and without the dark yellowish suffusion of the upperparts and the ventral surface. Incisors proödont.

**Akodon dolores** Thomas.

1916. *Akodon dolores* Thos., Ann. & Mag. Nat. Hist. (8) xviii, p. 334.

*Type locality*: Central Argentine, Yacanto, Sierra de Villa Dolores, Cordova Province.

Alt. 900 m. (Type in Brit. Mus. N:o 16. 1. 6. 38. ♂.)

A rather large species allied to *A. obscurus* and *A. lenguarum*. General colouration above uniform pale olive brown, rather coarsely lined on the back with the ends of the darker hairs. Ventral surface washed with pale drabby whitish, the hairs slaty at their bases. Eyes with narrow buffy rims. Tail bicolor. Skull similarly built as that of *A. obscurus*, thus stout, rather strongly bowed and with broad interorbital region, the edges of which are square and not beaded or ridged. Incisors less proödont than in *A. obscurus* or *A. lenguarum*.

**Akodon benefactus** Thomas.

1919. *Akodon benefactus* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 214.

*Type locality*: Eastern Argentine, Bonifacio, S. W. Buenos Aires Province. Alt. 50 m. (Type in Brit. Mus. N:o 16. 10. 3. 35. ♂.)

Allied to *A. lenguarum*, but smaller. General colouration above coarsely and heavily lined with black and dull buffy. Ventral surface soiled grey, the hairs slaty basally and greyish white terminally, varying to pale drabby along the middle line. Eyes surrounded by buffy rims. Tail bicolor. Skull smaller than that of *A. lenguarum* and with hardly any traces of supraorbital ridges. Incisors distinctly proödont.

**Akodon nucus** Thomas.

1926. *Akodon nucus* Thos., Ann. & Mag. Nat. Hist. (9) xviii, p. 636.

*Type locality*: North-western Patagonia, Chos Malal, Neuquen Territory. Alt. 805 m. (Type in Brit. Mus. N:o 26. 10. 11. 42. ♂.)

A medium-sized brown species without marked characteristics. General colouration above finely lined brown. Ventral surface buffy whitish, becoming white on the chin. Incisors orthodont.  $M^1$  with anterior groove.

**Akodon chacoensis** Shamel.

1931. *Akodon chacoensis* Shamel, Journ. Washington Acad. Sci., xxi, N:o 17, p. 427.

*Type locality*: Northern Argentine, Las Palmas, Chaco Territory. (Type in United States National Museum. N:o 236239. ♂.)

General colouration above olivaceous, almost black on dorsal region and tinged with buff about the eyes, on the sides of the head and along the sides of the body. Ventral surface whitish, slightly tinged with buff and with the hairs dark slate at their bases. Feet clothed with short hairs that are brown at base and tipped with white. Skull with short rostrum and broad braincase. Palatal foramina long, extending from the middle of  $m^1$  nearly to the incisors, which are strongly opisthodont. Enamel folds on inside of upper molars folded backwards on one and with the re-entrant angles directed forwards and closed. A rather aberrant form, the exact status of which seems rather uncertain.

Subgenus *Chalcomys* Thomas.

1916. *Chalcomys* Thomas, Ann. & Mag. Nat. Hist. (8) xviii, p. 338. — *Type: Akodon aerosus* Thos.

Form unmodified. Fur fine and velvety. Colouration dark brown or coppery, the ventral surface only slightly lighter than the upperparts. Eyes normal in size, not reduced. Tail of medium length, clothed with short hairs through which the annulations are clearly visible. Claws normal. Palms and soles entirely naked. Pollex with a nail.

Skull with upper profile evenly convex. Interorbital region broad and smooth. Supraorbital edges unbeaded. Braincase large and rounded. Anterior edge of zygomatic plate slightly concave, somewhat projecting on its upper portion. Interparietal present, but rather narrow antero-posteriorly. Palate ending at about the level of the last molars. Palatine foramina long, well open, not narrowed posteriorly and with smoothly rounded edges, extending backwards well between the first molars. Mesopterygoid fossa rather broad. Parapterygoid fossae also comparatively broad, but relatively shallow. Bullae not enlarged.

Incisors ungrooved, the lower ones long and slender. Molars hypsodont. Dentition *Akodon*-like.

*Chalcomys aerosus aerosus* Thomas.

1913. *Akodon aerosus* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 406.

*Type locality:* South-eastern Ecuador, Mirador, Upper Rio Pastaza. Alt. 1500 m. (Type in Brit. Mus. N:o 99. 9. 9. 105. ♂.)

A large dark-coloured species externally very similar to *Melanomys caliginosus*. General colouration above dark bistre, only slightly paler on the ventral surface. Ears, hands, feet and tail blackish brown.

*Chalcomys aerosus baliolus* Osgood.

1915. *Akodon aerosus baliolus* Osg., Field Museum Nat. Hist., Zool. ser., X, N:o 13, p. 192.

*Type locality:* South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 20108. ♂.)

Similar to *C. aerosus*, but darker and more blackish. General colouration above blackish bistre, becoming more blackish on the rump. Ventral surface also darker and less contrasted. Skull rather shorter, with broader braincase and shorter nasals.

*Chalcomys urichi* J. Allen.

1897. *Akodon urichi* J. Allen, Bull. Amer. Museum Nat. Hist., ix, p. 19.

*Type locality:* Trinidad, Caparo. (Type in Amer. Museum Nat. Hist., N:o 7725/6110 ♀.)

General colouration above dark rusty chestnut finely punctulated with black. Ventral surface paler, more yellowish and with a greyish wash.

*Chalcomys venezuelensis* J. Allen.

1899. *Akodon venezuelensis* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 203.

*Type locality:* Northern Venezuela, Quebrada Secca, Cumana District. Alt. 3000 feet. (Type in Amer. Museum Nat. Hist. N:o 14724. ♂.)

Allied to *C. urichi*, but smaller. General colouration above minutely grizzled with yellowish brown and blackish. Ventral surface lighter greyish and washed with pale ochraceous.

#### *Chalcomys meridensis* J. Allen.

1904. *Akodon meridensis* J. Allen, Bull. Amer. Museum Nat. Hist., xx, p. 329.

*Type locality*: Western Venezuela, Merida. Alt. 1630 m. (Type in Amer. Museum Nat. Hist. N:o 21328. ♀.)

General colouration above finely grizzled black and fulvous, becoming more yellowish on front and sides of head. Ventral surface dingy blackish grey strongly washed with deep buff. Skull with palatal foramina reaching to the middle of  $m^1$ .

#### *Chalcomys tolimae* J. Allen.

1913. *Akodon tolimae* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 480.

*Type locality*: Central Colombia, Rio Toché, Quindio Andes, Tolima District. Alt. 6800 feet. (Type in Amer. Museum Nat. Hist. N:o 33009. ♂.)

Said to be allied to *C. aerosus*, but much smaller, less fulvous and darker above. Ventral surface dark grey with barely a trace of fulvous.

#### *Chalcomys chapmani* J. Allen.

1913. *Akodon chapmani* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 600.

*Type locality*: Central Colombia, Chipaque, Bogotá region. Alt. 8500 feet. (Type in Amer. Museum Nat. Hist. N:o 34573. ♂.)

Nearly allied to *C. meridensis* and *C. tolimae*, but smaller, paler and more olivaceous. General colouration above finely grizzled dark brown and olivaceous. Ventral surface grey, slightly washed with olivaceous but becoming fulvous on the anal region.

#### Genus *Zygodontomys* J. Allen.

1897. *Zygodontomys* J. Allen, Bull. Amer. Museum Nat. Hist., ix, p. 38. — *Type*: *Oryzomys cherriei* J. Allen.

Form normal, unmodified. Size medium. Fur rather coarse. Colouration coarsely and heavily lined brown. Ears rather large. Eyes not reduced in size. Tail of medium length and moderately hairy. Feet and claws of normal proportions. Pollex with a nail. Palms and soles naked except just under the heel. Mammae: 2—2 = 8.

Skull relatively strong with evenly bowed outline. Interorbital region fairly broad. Supraorbital edges square, distinctly beaded but without overhanging ledges, the beads running back across the parietals. Interparietal well-developed. Anteorbital foramina nearly circular above. Anterior zygomatic plate more or less distinctly concave and projecting forwards enough to be plainly visible from

above. Palate generally rather long and produced posteriorly beyond plane of last molars, between which and the corner of the mesopterygoid fossa small lateral pits are present. Palatine foramina usually rather long and extending backwards beyond the level of the first molars, scarcely or not narrowed behind. Parapterygoid fossae comparatively shallow. Bullae of normal size, not enlarged.

Incisors opisthodont, ungrooved. Molars less hypsodont than in *Akodon*. Molar pattern comparatively simple. There is thus no transverse crest running outwards from the prominent longitudinal commissure between the pairs of cusps. First upper molar without a notch on its anterior surface.

#### *Zygodontomys brevicauda brevicauda* J. Allen & Chapman.

1893. *Oryzomys brevicauda* J. Allen & Chapman, Bull. Amer. Museum Nat. Hist., v, p. 215.  
*Type locality*: Trinidad, Princetown. (Type in Amer. Museum Nat. Hist. N:o 5981/4708 ♂.)  
*Syn. Akodon frustrator* J. Allen & Chapman, Bull. Amer. Museum Nat. Hist., ix, 1897, p. 20.  
 — Trinidad, Caparo. (Type in Amer. Museum Nat. Hist. N:o 7559/6125 imm.)<sup>1</sup>

General colouration above yellowish brown, darker and strongly varied with black-tipped hairs on mid-dorsal area, lighter and more buffy yellow on the sides. Ventral surface grey, slightly washed with buffy and with the hairs dusky plumbeous at their bases.

#### *Zygodontomys brevicauda brunneus* Thomas.

1898. *Zygodontomys brunneus* Thos., Ann. & Mag. Nat. Hist. (7) ii, p. 269.  
*Type locality*: Western Colombia, El Saibal, Cundinamarca District. (Type in Brit. Mus. N:o 98. 7. 3. 4. ♀.)

A mainland representative of *Z. brevicauda*, from which it differs by its longer, softer fur and its uniform finely grizzled brown upperparts. Ventral surface dirty greyish.

#### *Zygodontomys griseus* J. Allen.

1913. *Zygodontomys griseus* J. Allen, Bull. Amer. Museum Nat. Hist. xxxii, p. 599.  
*Type locality*: Western Colombia, El Triunfo, Magdalena Valley. Alt. 600 feet. (Type in Amer. Museum Nat. Hist. N:o 34592. ♂.)

Similar in general appearance to *Z. b. brunneus*, but upperparts of the body grey suffused with pale yellowish and finely varied with dusky-tipped hairs. Ventral surface greyish white. Size much smaller than in *Z. b. brunneus*.

#### *Zygodontomys fraterculus* J. Allen.

1913. *Zygodontomys fraterculus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxii, p. 599.  
*Type locality*: Central Colombia, Chicoral, Río Coëllo, Tolima District. Alt. 1800 feet. (Type in Amer. Museum Nat. Hist. N:o 32920. ♀.)

<sup>1</sup> According to a kind communication from Mr. G. H. H. TATE, *Akodon frustrator* J. Allen & Chapman is based on an immature specimen of *Zygodontomys b. brevicauda* J. Allen & Chapman.

Size smaller than *Z. griseus*. General colouration above grey suffused with fulvous, most strongly on the head and shoulders. Ventral surface dingy grey.

#### *Zygodontomys stellae* Thomas.

1899. *Zygodontomys stellae* Thos., Ann. & Mag. Nat. Hist. (7) iv, p. 380.

*Type locality*: South-western Venezuela, Maipures, Upper Rio Orinoco. (Type in Brit. Mus. N:o 99. 9. 11.39. ♂.)

Similar to *Z. b. brevicauda*, but much smaller, less rufous in colouration and with whiter feet. General colouration above uniform grizzled black and fawn. Ventral surface greyish, the hairs slaty at their bases. Skull smooth, rounded and considerably bowed.

#### *Zygodontomys sanctaemartae* J. Allen.

1899. *Oryzomys sanctaemartae* J. Allen, Bull. Amer. Museum Nat. Hist., xii, p. 207.

*Type locality*: North-eastern Colombia, Bonda, Santa Marta District. Alt. 200 feet. (Type in Amer. Museum Nat. Hist. N:o 15312. ♀.)

General colouration above almost tawny-olive, lined with black and becoming paler and greyer on the sides of the body and on the cheeks. Ventral surface clear whitish grey, the hairs plumbeous at their bases. Tail short.

#### *Zygodontomys thomasi* J. Allen.

1901. *Zygodontomys thomasi* J. Allen, Bull. Amer. Museum Nat. Hist., xiv, p. 39.

*Type locality*: Northern Venezuela, Campo Alegre, Cumana District. Alt. 1625 feet. (Type in Brit. Mus. N:o 0. 5. 1.89. ♀.)

Allied to *Z. brevicauda*, but much smaller and very much paler. General colouration above pale yellowish brown, somewhat darker on the mid-dorsal region. Ventral surface whitish grey.

#### *Zygodontomys lasiurus* Lund.

1841. *Mus lasiurus* Lund, K. Danske Vidensk. Selsk. Afhandl., viii, pp. 50, 280.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province. (Type in Zool. Museum, Copenhagen.)

General colouration above dark yellowish brown, becoming clearer and more ochraceous tawny on the rump and along the sides of the body. A cinnamon ring round the eyes. Ventral surface pale buffy, the hairs slaty at their bases.

#### *Zygodontomys fuscinus* Thomas.

1897. *Akodon fuscinus* Thos., Ann. & Mag. Nat. Hist. (6) xix, p. 496.

*Type locality*: North-eastern Brazil, Source, Marajó Island. (Type in Brit. Mus. N:o 97. 4. 1. 3. ♂.)

Closely allied to *Z. lasiurus*, but smaller. Fur straight and close. General colouration above coarsely lined black and dark yellowish. Ventral surface paler and washed with dirty buff, the hairs slaty at their bases. Skull as in *Z. lasiurus*, but smaller.

**Zygodontomys microtinus** Thomas.

1894. *Oryzomys microtinus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 358.  
*Type locality*: Surinam. (Type in Brit. Mus. N:o 66. 8. 11. 16. ♀.)

Size rather small. Fur short, straight and harsh. General colouration above coarsely grizzled brown and intermixed with black hairs. Tail short.

**Zygodontomys punctulatus** Thomas.

1894. *Akodon punctulatus* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 361.  
*Type locality*: Central Ecuador, Pallatanga. Alt. 4950 feet. (Type in Brit. Mus. N:o 59. 11. 1. 8.)

Fur comparatively short and crisp. General colouration above finely grizzled with grey, black and yellowish. Rump more tawny olive. Ventral surface dirty yellowish white, the hairs slaty at their bases.

**Zygodontomys obtusirostris** J. Allen.

1900. *Oryzomys obtusirostris* J. Allen, Bull. Amer. Museum Nat. Hist., xiii, p. 225.  
*Type locality*: South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 15811. ♀.)

A rather aberrant member of the genus. Tail long. General colouration above blackish brown with a faint yellowish wash, most distinct on the sides of the body. Ventral surface dull buffy plumbeous.

**Zygodontomys tapirapoanus** J. Allen.

1916. *Zygodontomys tapirapoanus* J. Allen, Bull. Amer. Museum Nat. Hist., xxxv, p. 528.  
*Type locality*: Southern Brazil, Tapirapoan, Rio Sepotuba, Matto Grosso Province. (Type in Amer. Museum Nat. Hist. N:o 37518. ♀.)

Feet dark brown. General colouration above yellowish brown minutely speckled with black. Sides of the body paler and unspckled. Ventral surface dull grey with a yellowish wash.

Allied to *Z. cherriei* J. Allen from Costa Rica, but smaller and with the underparts strongly washed with fulvous yellow, instead of nearly pure grey.

Genus **Thalpomys** Thomas.

1916. **Thalpomys** Thomas, Ann. & Mag. Nat. Hist. (8) xviii, p. 339. — *Type*: *Mus lasiotis* Lund.

Size comparatively small. Form normal, unmodified. Fur rather crisp. Eyes of normal size, not reduced. Ears relatively large. Tail of medium length. Palms and soles naked, finely granulated between the pads. Claws of normal size and proportions.

Skull about as in *Akodon*, but rostrum rather short. Interorbital region broad, the supraorbital edges square with a distinct overhanging ledge on each side, continued as well-marked beads on the sides of the parietals. Anterior zygo-

matic plate with its upper border rounded and its edge nearly vertical. Interparietal large. Palate extending backwards to about the posterior level of the last molars. Palatine foramina long and strongly narrowed posteriorly, reaching backwards to about level with the anterior lamina of the first molar. Mesopterygoid fossa almost square in front. Parapterygoid fossae broad, but shallow. Bullae fairly large.

Upper incisors rather flat in front, ungrooved. Lower incisors long and slender. Dentition as in *Akodon*, but molars less hypsodont. First upper molar with a distinct notch on its anterior face.

#### **Thalpomys lasiotis** Lund.

1841. *Mus lasiotis* Lund, K. Danske Vidensk. Selsk., Afhandl., viii, p. 280.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province.  
(Type in Zool. Museum, Copenhagen.)

General colouration above warm ochraceous or rufous, finely and narrowly intermixed or grizzled with blackish hairs. Sides of the body paler and more buff. Round the eyes clear cinnamon rings. Ventral surface greyish white, the hairs slaty at their bases.

#### Genus **Deltamys** Thomas.

1917. *Deltamys* Thomas, Ann. & Mag. Nat. Hist. (8) xx, p. 98. — *Type*: *Deltamys kemp*i Thos.

General external appearance *Akodon*-like, but form rather more slender. Fur normal. Eyes rather small. Ears short and well haired. Tail thinly haired and finely scaled. Palms and soles naked. Pads of normal proportions. Pollex with a nail. Claws of normal length.

Skull remarkably narrow, with only slightly expanded zygomata. Zygomatic width less than half the condylo-incisive length. Anterior zygomatic plate narrow and only a little projected forwards. Interorbital region smooth, convex and unridged. Supraorbital edges only slightly squared. Interparietal a mere strip. Palatine foramina long, well open and comparatively broad posteriorly. Mesopterygoid fossa rather broad, twice as wide at its anterior end as the base of the narrow pterygoids on each side of it. Bullae rather small.

Incisors comparatively slender and rather proödont. Molars light and slender, rather simple in their structure. First upper molar with an anterior notch. Second upper molar with the small antero-external cross-ridge practically obsolete.

#### **Deltamys kemp**i Thomas.

1917. *Deltamys kemp*i Thos., Ann. & Mag. Nat. Hist. (8) xx, p. 98.

*Type locality*: Eastern Argentine, Isla Ella, Paraná Delta, Buenos Aires Province. Alt. 1 m.  
(Type in Brit. Mus. N:o 17. 6. 1. 35. ♀.)

General colouration above blackish brown, inconspicuously washed on head, foreback and sides with drabby or olivaceous, nearly unmixed blackish on the centre of the hindback. Ventral surface dull brownish grey, the hairs slaty basally and tipped with brownish on the belly. Chin with a small whitish patch.

Genus *Hypsimys* Thomas.

1918. *Hypsimys* Thomas, Ann. & Mag. Nat. Hist. (9) i, p. 190. — Type: *Hypsimys budini* Thos.

General external appearance strongly *Akodon*-like. Fur fine and soft. Eyes small. Ears rather short. Tail comparatively well-haired. Palms and soles naked except under the heel. Claws rather long, the anterior about as long as or rather longer than the posterior ones.

Skull of about the same form as in *Akodon*, but a little narrower and with a narrow muzzle. Interorbital region smooth and rounded. Supraorbital edges slightly squared posteriorly, but not ridged. Braincase smooth and unridged. Interparietal very small. Anterior zygomatic plate comparatively broad and slanted forwards. Palate ending a little behind the plane of the last molars. Palatine foramina very long and well open, broad and rounded posteriorly. Mesopterygoid fossa broad, nearly parallel-sided and squarely open anteriorly. Parapterygoid fossae small and shallow. Bullae small.

Incisors nearly orthodont, slender, narrow and flat in front. Molars highly hypsodont, high and narrow, with the vertical grooves extending far down towards the roots. Molar pattern simple. First upper molar with three lobes, the front one circular. Second upper molar pandurate. Third upper molar subtriangular. The molars have long, laterally flattened roots. Alveolar holes forming deep narrow slits. First upper molar with one long anterior root, one long internal one, and a postero-external more cylindrical (the usual median external one being practically obsolete). Second upper molar with three roots, and the third upper one with only two.

*Hypsimys budini* Thomas.

1918. *Hypsimys budini* Thos., Ann. & Mag. Nat. Hist. (9) i, p. 191.

Type locality: North-western Argentine, Leon, Jujuy Province. Alt. 1500 m. (Type in Brit. Mus. N:o 18. 1. 1. 44. ♂.)

General colouration above dark olivaceous, becoming warmer and browner on the rump. Ventral surface dark greyish, washed with whitish or buffy. Tail distinctly bicolor. Externally very similar to *Akodon mollis fumeus*.

*Hypsimys deceptor* Thomas.

1921. *Hypsimys deceptor* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 613.

Type locality: North-western Argentine, Higuera, Valle Grande Dept., Jujuy Province. Alt. 2000 m. (Type in Brit. Mus. N:o 21. 11. 1. 66. ♂.)

Size larger than in *H. budini*. General colouration above dark finely grizzled olivaceous. Ventral surface dull olivaceous grey, the hairs slaty at their bases. Chin distinctly white, the hairs white to their roots. Externally very like *Akodon sylvanus sylvanus*.

Genus *Thaptomys* Thomas.

1916. *Thaptomys* Thomas, Ann. & Mag. Nat. Hist. (8) xviii, p. 339. — *Type: Hesperomys subterraneus* Hensel.

Form modified for subterranean life. Fur velvety and comparatively short. Eyes very small. Tail relatively short and very thinly haired on its terminal portion. Pollex with a fairly large nail. Forefeet with well-developed claws, those of hindfeet of about equal size. Palms and soles naked with prominent pads. Mammae: 2—2 = 8.

Skull rather strongly built, but with a short rostrum. Interorbital region very broad with square supraorbital edges. Braincase smooth and rounded. Interparietal small. Anterior zygomatic plate rather broad and almost vertical, only scarcely projecting forwards. Palatine foramina comparatively short, extending backwards to about level with the anterior lamina of the first molar. Bullae small.

Incisors ungrooved. Molars hypsodont. First upper molar with a notch on its anterior face.

*Thaptomys subterraneus* Hensel.

1873. *Hesperomys subterraneus* Hensel, Abhandl. K. Akad. d. Wissensch., Berlin, für 1872, p. 44. *Type locality*: Southern Brazil, Rio Grande do Sul Province. (Type in Zool. Museum, Berlin. N:o 24632.)

*Syn. Hesperomys subterraneus* var. *henseli* Leche, Zool. Jahrb., i, 1886, p. 697. — Taquara do Mundo Nova, Rio Grande do Sul Province, Southern Brazil. (Type in Zool. Museum, Copenhagen.)

General colouration above dark brown finely grizzled with ochraceous brown. Ventral surface dull brownish grey washed with buff, the hairs dark slaty at their bases.

*Thaptomys nigrita* Lichtenstein.

1829. *Mus nigrita* Licht., Darstellung Neuer Säuget., vii, pl. xxxv, fig. 1. *Type locality*: Eastern Brazil, Rio de Janeiro Province. (Type presumably in Zool. Museum, Berlin. ♂.)

*Syn. Hesperomys fuliginosus* Wagner, Arch. für Naturgesch., xi, N:o 1, 1845, p. 148. — Eastern Brazil, Ypanema. (Type in Naturhist. Museum, Vienna N:o 421. ♀.)

General colouration above glistening olive brown, finely grizzled with ochraceous and intermixed with some longer blackish brown hairs. Ventral surface dull ochraceous washed with yellowish, the hairs dark slaty at their bases.

Genus *Bolomys* Thomas.

1916. *Bolomys* Thomas, Ann. & Mag. Nat. Hist. (8) xviii, p. 339. — *Type: Akodon amoenus* Thos.

Form slightly modified for subfossorial habits. Fur normal or rather coarse. Ears rather short. Tail well clothed with hairs, slightly pencilled terminally. Hindfeet broad and rather heavy. Palms and soles naked with six rather elevated pads. Fifth hindtoe without claw barely reaching to the base of the fourth toe. Claws elongated, the fore claws nearly as long as the hind claws. Mammae: 2—2 = 8.

Skull stout and rather strongly built. Interorbital region broad with square supraorbital edges. Interparietal small. Anterior zygomatic plate projecting forwards enough to be visible from above. Palatine foramina long and well open, usually narrowed behind, and extending backwards to about the level of the second lamina of the first molar. Bullae very large.

Incisors rather slender, ungrooved. Molars hypsodont. First upper molar with a notch on its anterior face.

#### **Bolomys albiventer** Thomas.

1897. *Akodon albiventer* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 217.

*Type locality*: North-western Argentine, Lower Cachi, Salta Province. (Type in Brit. Mus. N:o 97. 5. 5. 17. ♀.)

A medium-sized species with the general colouration above pale grizzled greyish. Ventral surface snowy white, the bases of the hairs slaty grey. Tail bicolor.

#### [**Bolomys negrito** Thomas.]

1926. *Bolomys negrito* Thos., Ann. & Mag. Nat. Hist. (9) xvii, p. 312.

*Type locality*: North-western Argentine, Las Paras, Aconquija, Tucuman Province. Alt. 4000 m. (Type in Brit. Mus. N:o 25. 12. 13. 39. ♂.)

Described as a very dark-coloured fossorial species of the same size as *B. albiventer*, but apparently only a dark or semi-melanoid variety of that form. Incisors proödont.

#### **Bolomys berlepschii** Thomas.

1898. *Akodon Berlepschii* Thos., Ann. & Mag. Nat. Hist. (7) i, p. 281.

*Type locality*: Central Bolivia, Esperanza, Mt. Sahama region. Alt. 4000 m. (Type in Brit. Mus. N:o 98. 3. 16. 7.)

Fur thick and close. General colouration above dark cinereous grey, becoming blacker on the mid-dorsal area. Underparts of the body sharply defined snowy white, the hairs slaty at their bases. Skull with very minute interparietal.

#### **Bolomys amoenus** Thomas.

1900. *Akodon amoenus* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 468.

*Type locality*: Southern Peru, Calalla, Rio Colca. Alt. 3500 m. (Type in Brit. Mus. N:o 0. 10. 1. 77. ♂.)

A medium-sized species with close fur and sharp-edged supraorbital region. General colouration above dull yellowish, becoming deeper buffy yellow on muzzle, cheeks, round the eyes and at base of ears. Ventral surface fairly well-defined dull whitish, the hairs with plumbeous bases except on the chin where they are wholly white.

#### **Bolomys lactens** Thomas.

1918. *Akodon lactens* Thos., Ann. & Mag. Nat. Hist. (9) i, p. 188.

*Type locality*: North-western Argentine, Leon, Jujuy Province. Alt. 1500 m. (Type in Brit. Mus. N:o 18. 1. 1. 37. ♀.)

General colouration above mixed blackish and buffy, becoming greyer on the head and more buffy on the rump. Chin white. Sides of the body and ventral surface distinctly more buffy. Incisors proödont.

**Bolomys orbis** Thomas.

1919. *Akodon orbis* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 497.  
*Type locality*: North-western Argentine, Otro Cerro, Catamarca Province. Alt. 3000 m.  
 (Type in Brit. Mus. N:o 19. 2. 7. 45. ♀.)

Allied to *B. lactens* which it resembles superficially. Colouration, however, slightly duller and more drabby and without the white patch on the chin. Skull more lightly built and with narrower muzzle. Incisors light-coloured and proödont.

**Bolomys (?) leucolimnaneus** Cabrera.

1926. *Akodon leucolimnaneus* Cabr., Rev. Chilena de Hist. Nat., xxx, p. 320.  
*Type locality*: North-western Argentine, Laguna Blanca, Catamarca Province. Alt. 3100 m.  
 (Type in Museo de La Plata, Buenos Aires. N:o 5684. ♂.)

Said to be allied to *B. lactens* and *B. orbis*. General colouration above dark earthy brown, more or less washed with buff especially on the sides of the body. Ventral surface strongly washed with ochraceous. No trace of white colour on the chin. Incisors slender, pale-coloured and less proödont than in *B. lactens* and *B. orbis*.

Genus **Abrothrix** Waterhouse.

1837. **Abrothrix** Waterhouse, Proc. Zool. Soc., London, p. 21. — *Type*: *Mus longipilis* Waterh.

Fur long and soft. Colouration generally slaty grey and suffused with buff on the dorsal region. Snout elongated. Tail comparatively short and well clothed with hairs. Pollex with a short, rounded nail. Feet rather large. Palms and soles naked. Claws of forefeet not lengthened, about as long as those of the hindfeet.

Skull with long muzzle and rounded braincase. Interorbital region of medium breadth. Supraorbital edges smoothly rounded. Interparietal present, but small. Anterior zygomatic plate evenly rounded and projecting forwards enough to be slightly visible from above. Palate ending some distance behind the plane of the last molars. Palatine foramina long and well open, reaching backwards to about the level of the first lamina of the first upper molar. Mesopterygoid fossa relatively broad and squarely open in front. Parapterygoid fossae rather deep. Bullae of normal size, not enlarged.

Incisors fairly broad, ungrooved. Molars hypsodont. First upper molar without anterior notch.

**Abrothrix longipilis** Waterhouse.

1837. *Mus longipilis* Waterh., Proc. Zool. Soc., London, p. 16.  
*Type locality*: Central Chile, Coquimbo. (Type in Brit. Mus. N:o 55. 12. 24. 177.)  
*Syn.* *Mus dumetorum* Philippi, An. Mus. Nac. d. Chile, 1900, p. 14. — Chile, Valdivia Prov.  
*Mus brachytarsus* Philippi, » » » » » » p. 37. — Chile, Santiago Prov.  
*Mus fusco-ater* Philippi, » » » » » » p. 45. — ?  
*Mus nemoralis* Philippi, » » » » » » p. 49. — Chile, Valdivia.  
*Mus melampus* Philippi, » » » » » » p. 49. — Chile, Valparaiso Prov.

General colouration above grey, washed with yellow on the terminal portions of the hairs and intermixed with long greyish black hairs. Ventral surface deep dull grey.

**Abrothrix hirta hirta** Thomas.

1895. *Acodon hirtus* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 370.

*Type locality*: Western Argentine, Fort San Rafael, Mendoza Province. (Type in Brit. Mus. N:o 60. 1. 5. 15.)

Allied to *A. longipilis*, but fur shorter, coarser and shaggier. Tail markedly bicolor. Colouration also paler grey with only a slight buffy wash on the back. Skull with less elongated muzzle. Anteorbital plate rather broad (2,1 mm.).

**Abrothrix hirta suffusa** Thomas.

1903. *Akodon suffusus* Thos., Ann. & Mag. Nat. Hist. (7) xii, p. 241.

*Type locality*: North-western Patagonia, Valle del Lago Blanco, Southern Chubut Territory. Alt. 100 m. (Type in Brit. Mus. N:o 3. 7. 9. 68. ♂.)

*Syn.* *Abrothrix suffusus modestior* Thos., Ann. & Mag. Nat. Hist. (9) iii, 1919, p. 202. — North-western Patagonia, Maiten, Chubut Territory. (Type in Brit. Mus. N:o 18. 12. 2. 22. ♂.)

Closely allied to *A. hirta*, but general colouration stronger, belly lighter. General colouration above grizzled olivaceous yellow. Cheeks and sides of the body cinereous grey. Underparts whitish. Skull as in *A. hirta*, but lower and flatter, the interorbital region less rounded and concave. Anteorbital plate narrow (1,7 mm.).

**Abrothrix hirta moerens** Thomas.

1919. *Abrothrix hirta moerens* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 203.

*Type locality*: North-western Patagonia, Beatriz, Lake Nahuel Huapi, Neuquen Territory. Alt. 800 m. (Type in Brit. Mus. N:o 19. 1. 1. 22. ♀.)

A dark, almost blackish grey species. General colouration above much darker than in *A. h. suffusa*, the back dark brown, almost without buffy. Ventral surface deep dull grey. Tail less markedly bicolor. Skull as in *A. h. suffusa*.

**Abrothrix hirta nubila** Thomas.

1929. *Abrothrix hirta nubila* Thos., Ann. & Mag. Nat. Hist. (10) iv, p. 40.

*Type locality*: Southern Patagonia, Estancia Alta Vista, Lago Argentino. Alt. 600 m. (Type in Brit. Mus. N:o 28. 12. 11. 76. ♀.)

General colouration above dull drabby grey, only very slightly washed with buff on the back. Sides of the body dull greyish. Ventral surface not sharply defined and washed with greyish. Skull as in *A. h. suffusa*.

**Abrothrix francei** Thomas.

1908. *Akodon francei* Thos., Ann. & Mag. Nat. Hist. (8) ii, p. 497.

*Type locality*: Tierra del Fuego, Santa Maria. (Type in Brit. Mus. N:o 8. 11. 19. 1. ♂.)

A dark-coloured species most closely allied to *A. h. suffusa*. Fur close and fine. General colouration above slaty grey, the mid-dorsal region slightly tinged with

buffy. Ventral surface rather sharply defined white, the hairs slaty at their bases. Skull with very minute interparietal.

#### **Abrothrix brachiotis** Waterhouse.

1837. *Mus brachiotis* Waterh., Proc. Zool. Soc., London, p. 17.

*Type locality*: South-western Chile, Chonos Archipelago, Midship Bay. (Type in Brit. Mus. N:o 55. 12. 24. 167.)

Fur dense, soft and very long. General colouration above brownish black finely grizzled with deep yellowish. Ventral surface greyish white, the hairs pale grey at their bases.

#### **Abrothrix illutea** Thomas.

1925. *Abrothrix illutea* Thos., Ann. & Mag. Nat. Hist. (9) xv, p. 582.

*Type locality*: North-western Argentine, »Aconquija», Tucuman Province. Alt. 3000—4000 m. (Type in Brit. Mus. N:o 25. 3. 1. 13. ♀.)

A medium-sized species with exceedingly fine and soft fur. General colouration above uniform finely ticked dark hair-brown, quite without any buffy tinge on back. Sides of the body slightly lighter. Ventral surface lighter, the hairs washed with dull whitish. Chin white, the hairs white to their roots. Skull larger than that of *A. hirta*, smaller than in *A. longipilis*.

Originally said to have been obtained at Concepcion, but according to THOMAS [Ann. & Mag. Nat. Hist. (10) iv, 1929, p. 41] not occurring there.

#### Genus **Chraeomys** Thomas.

1916. **Chraeomys** Thomas, Ann. & Mag. Nat. Hist. (8) xviii, p. 340. — *Type*: *Akodon pulcherrimus* Thos.

Fur long, soft and fine. Colouration very striking with well contrasted patches of white or ochraceous. Ears large. Tail of moderate length and well clothed with hairs. Palms and soles naked with large and distinct pads. Pollex with a nail. Fifth hind toe — without claw — reaching to about the middle of the first phalanx of the fourth toe. Claws elongated, the anterior distinctly longer than the posterior. Mammae: 2—2 = 8.

Skull with large, rounded braincase. Rostrum not elongated. Interorbital region with smoothly rounded supraorbital edges. Interparietal well-developed. Anterior zygomatic plate scarcely projecting forwards enough to be visible from above. Palate ending at about the plane of the last molars. Palatine foramina comparatively long and extending backwards to about the level of the second lamina of the first molar. Mesopterygoid fossa rather deep and squarely open in front. Parapterygoid fossae fairly shallow. Bullae very large.

Upper incisors unusually slender, ungrooved and with their front surfaces comparatively pale yellow. Molars hypsodont, *Akodon*-like. First upper molar without anterior notch.

**Chraeomys pulcherrimus pulcherrimus** Thomas.1897. *Akodon pulcherrimus* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 549.*Type locality*: South-eastern Peru, Puno. Alt. 4000 m. (Type in Brit. Mus. N:o 97. 10. 3. 33. ♀.)

A rather large species. General colouration above mummy brown. A small bright fulvous patch on the sides of the muzzle. Ventral surface pure white, the hairs with slaty bases, sharply defined, the sides of the body not darkening laterally. Prominent white ear-patches present.

[**Chraeomys pulcherrimus cayllomae** Thomas.]1901. *Akodon pulcherrimus cayllomae* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 185.*Type locality*: Southern Peru, Caylloma. Alt. 4300 m. (Type in Brit. Mus. N:o 0. 10. 1. 74. ♀.)

As in the typical form, but sides darkening instead of lightening towards the white ventral surface, so that an indistinct blackish line of demarcation is formed.

[**Chraeomys pulcherrimus inambarii** Thomas.]1901. *Akodon pulcherrimus inambarii* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 185.*Type locality*: Southern Peru, Limbane, Upper Madre de Dios, Rio Inambari. Alt. 3400 m. (Type in Brit. Mus. N:o 1. 1. 1. 41. ♀.)

Like the typical form, but light ear-patches much reduced and with a broad black line of demarcation between the colour of the upper- and the underparts of the body.

**Chraeomys pulcherrimus cruceri** Thomas.1901. *Akodon pulcherrimus cruceri* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 186.*Type locality*: South-eastern Peru, Crucero. Alt. 4550 m. (Type in Brit. Mus. N:o 1. 1. 1 42. ♂.)

General colouration above olivaceous. White auricular patch small.

**Chraeomys inornatus** Thomas.1917. *Chraeomys inornatus* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 2.*Type locality*: Central Peru, Ollantaytambo, Cuzco District. Alt. 13000 feet. (Type in United States National Museum N:o 194685. ♀.)

Allied to *C. p. cruceri*, but general colouration above duller olivaceous grey. Crown and mid-dorsal area suffused with dark cinnamon buff, becoming more greyish on the sides of the body and rich ochraceous on forehead and muzzle. Ventral surface grey, the hairs broadly slaty basally and dull whitish terminally. Ears smaller, and with the white postauricular markings reduced. Skull as in *C. p. cruceri*, but bullae smaller.

**Chraeomys bacchante bacchante** Thomas.1902. *Akodon bacchante* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 138.*Type locality*: Central Bolivia, Choro, Rio Securé. Alt. 3500 m. (Type in Brit. Mus. N:o 2. 1. 1. 66. ♂.)

General colouration above olivaceous grey with a bistre tone. Muzzle, ears,

metacarpals, hindfeet and upperside of tail bright fulvous. White postauricular patches well-defined. Ventral surface sharply defined white, the hairs dark slate at their bases.

#### *Chraeomys bacchante sodalis* Thomas.

1913. *Akodon bacchante sodalis* Thos., Ann. & Mag. Nat. Hist. (8) xi, p. 141.

*Type locality*: North-western Argentine, Cerro de Lagunita, E. of Maimara, Jujuy Province  
Alt. 4500 m. (Type in Brit. Mus. N:o 12. 12. 12. 19. ♂.)

Similar to *C. b. bacchante*, but rather paler. General colouration above olive grey without the bistre tone of *C. bacchante*. Ventral surface more distinctly white, becoming snowy white on the inguinal region.

#### *Chraeomys scalops* Gay.

1847. *Oxymycterus scalops* Gay, Hist. Nat. de Chile, Mamm., I, p. 108.

*Type locality*: Central Chile.

General colouration above dark cinnamon brown, becoming cinnamon rufous on muzzle, tail and feet. Ventral surface dirty brown with a wash of cinnamon.

#### *Chraeomys jelskii jelskii* Thomas.

1894. *Acodon Jelskii* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 360.

*Type locality*: Central Peru, Junin, Lima District. (Type in Brit. Mus. N:o 85. 4. 1. 44. ♂.)

Fur soft. Tail bicolor. General colouration above dark grey tinged with chestnut on the back. Muzzle, face, inner side of ears, metapodials and underside of tail rich rufous. Ventral surface dull grey. Allied to *C. scalops*, but tail much longer and skull with longer palatal foramina.

#### [*Chraeomys jelskii pyrrhotis* Thomas.]

1894. *Acodon Jelskii pyrrhotis* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 361.

*Type locality*: Central Peru, Maraynioc, Rio Aynamayo. (Type in Brit. Mus. N:o 94. 10. 7. 4. ♂.)

Described as being similar to *C. j. jelskii*, but differing in having the whole ears, tail and feet rich chestnut rufous. Probably not valid as a subspecies, and THOMAS himself (1926) considers it to be merely an age-stage of the typical *C. jelskii*.

#### Genus *Notiomys* Thomas.

1890. *Notiomys* Thomas, in Milne-Edwards: Mission Sci. du Cap Horn 1882—1883, vi, Mamm., p. 23. — *Type*: *Hesperomys (Notiomys) Edwardsii* Thos.

Form modified for subfossorial habits. Ears very minute, mere rudimentary lappets. Tail short, well clothed with short, close hairs that conceal the annulations. Pollex with a claw. Hindfeet rather short, armed with long and strong claws. Claws of forefeet also long and stout. Palms and soles naked except on the heel. Pads six in number, smooth and rounded. Fifth hindtoe reaching to the middle of the first phalanx of the fourth toe.

Skull short and broad, rather heavy in shape. Muzzle broad, short and conical. Interorbital region broad with sharply squared supraorbital edges. Anterior zygomatic plate narrow, vertical and not projecting forwards enough to be visible from above. Anteorbital foramina widely splayed. Interparietal very small and narrow. Palatine foramina broad and short, ending considerably in front of the plane of the first molars.

Molars very minute, brachyodont.

#### *Notiomys edwardsii* Thomas.

1890. *Hesperomys (Notiomys) Edwardsii* Thos., in Milne-Edwards: Mission Sci. du Cap Horn 1882—1883, vi, Mamm., p. 24.

*Type locality*: Southern Patagonia, South of Santa Cruz. (Type in Brit. Mus. N:o 18. 12. 21. 1.)

General colouration above greyish fawn. Ventral surface white, the hairs everywhere slaty at their bases. Ears clothed with pure white hairs. Tail bicolor, pale fawn above and whitish below.

#### Genus *Geoxus* Thomas.

1919. *Geoxus* Thomas, Ann. & Mag. Nat. Hist. (9) iii, p. 209. — *Type*: *Geoxus fossor* Thos.

Form highly modified for subfossorial habits. Fur velvety. Ears very short and nearly hidden in the fur. Tail short and very thickly clothed with hairs that conceal the annulations. Pollex with a long claw. Claws of forefeet very long and powerful, those of hindfeet much shorter. Palms and soles naked. Pads smooth and rounded.

Skull slender and rather delicately built. Muzzle long and narrow. Brain-case papery. Interorbital region smooth and rounded, the supraorbital edges not square-shaped. Interparietal present, but rather narrow. Anterior zygomatic plate narrow and slanting, but not projecting forwards enough to be visible from above. Palate extending backwards some distance behind the level of the last molars. Palatine foramina rather long, reaching backwards to about the plane of the middle lamina of the first molar. Mesopterygoid fossa squarely open in front and nearly parallel-sided. Parapterygoid fossae shallow. Bullae comparatively small.

Incisors very slender, ungrooved. Dentition very weak. Molars small and simple, brachyodont, narrow and contracted.

#### *Geoxus valdivianus valdivianus* Philippi.

1858. *Oxymycterus valdivianus* Phil., Arch. für Naturgesch. (i) xxiv, p. 303.

*Type locality*: Western Chile, Valdivia Province. (Type in Museo Nacional de Santiago de Chile. N:o 117. 239.)

Size rather small. General colouration above blackish brown. Ventral surface dark slaty grey, only slightly lighter than the upperparts. Tail unicolor. Skull with zygomatic plate slanting. Palatal foramina extending backwards to the level of the back of the first lamina on  $m^1$ . Teeth small.

**Geoxus valdivianus araucanus** Osgood.

1925. *Notiomys valdivianus araucanus* Osg., Field Museum Nat. Hist., Zool. ser., XII, N:o 9, p. 117.

*Type locality*: Central Chile, Tolhuaca, Malleco Province. (Type in Field Museum Nat. Hist., Chicago. N:o 22498. ♀.)

Similar to *G. valdivianus*, but paler. General colouration above sepia to bistre brown. Ventral surface slightly paler, mixed greyish and brownish. Tail indistinctly bicolor. Hindfeet larger. Skull as in *G. valdivianus*, but narrower and with a slightly more produced rostrum.

**Geoxus valdivianus chiloensis** Osgood.

1925. *Notiomys valdivianus chiloensis* Osg., Field Museum Nat. Hist., Zool. ser., XII, N:o 9, p. 117.

*Type locality*: Western Chile, Quellon, Chiloe Island. (Type in Field Museum Nat. Hist., Chicago. N:o 22521. ♀.)

Similar to *G. valdivianus*, but averaging slightly darker and smaller. General colouration above deep slaty blackish. Skull very slender with narrow braincase, compressed zygomata and elongate rostrum. Molars and bullae noticeably smaller than in *G. valdivianus*.

**Geoxus michaelsoni** Matschie.

1898. *Hesperomys (Acodon) michaelsoni* Matschie, Hamburger Magalhaen Reise, Säuget., p. 5.

*Type locality*: Southern Chile, Punta Arenas, Straits of Magellan.

*Syn. Oxymycterus microtis* J. Allen, Bull. Amer. Museum Nat. Hist., xix, 1903, p. 189. — South-western Patagonia, Upper Rio Chico, Santa Cruz. (Type in United States National Museum. N:o 84234. ♂.)

Fur short, thick and soft. General colouration above about as in *G. valdivianus*, but more brownish (nearest to warm sepia). Ventral surface buffy or cinnamonous slightly mixed with greyish. Tail indistinctly bicolor. Skull about as in *G. valdivianus*, but with longer nasals.

**Geoxus fossor** Thomas.

1919. *Geoxus fossor* Thos., Ann. & Mag. Nat. Hist. (9) iii, p. 209.

*Type locality*: North-western Patagonia, Maiten, Chubut Territory. Alt. 700 m. (Type in Brit. Mus. N:o 18. 12. 2. 37. ♂.)

Size about as in *G. michaelsoni*. Fur thick and velvety. General colouration above deep mouse grey. Ventral surface rather lighter grey and with a slight drabby suffusion, the hairs broadly slaty at their bases, grey terminally.

Genus **Chelemys** Thomas.

1903. **Chelemys** Thomas, Ann. & Mag. Nat. Hist. (7) xii, p. 242. — *Type: Hesperomys megalonyx* Waterh.

Form highly modified for fossorial habits. Fur thick and soft. Ears short and only slightly projecting above the fur. Tail short and very thickly clothed with hairs that completely conceal the annulations. Pollex with a distinct claw

Forefeet strong, provided with long and distinctly pointed claws. Hindfeet short and broad, also furnished with strong claws, which, however, are shorter than those of the forefeet. Palms and soles naked. Pads six in number, large, rounded and prominent. Fifth hindtoe — without claw — reaching to about the middle of the first phalanx of the fourth toe.

Skull generally robust and broadly built. Muzzle fairly short and broad. Braincase solid. Interorbital region smooth and rounded, with the supraorbital edges not square-shaped. Interparietal comparatively well-developed, though rather narrow. Anterior zygomatic plate rather broad, nearly vertical or slightly slanting forwards, but not projected forwards enough to be visible from above. Palate extending backwards to about level with the plane of the last molars. Palatine foramina long and reaching backwards to about the level of the middle lamina of the first molar. Mesopterygoid fossa broad and somewhat rounded in front. Parapterygoid fossae comparatively deep. Bullae rather small.

Incisors fairly thick and robust, ungrooved. Molars more or less hypsodont, rather large and with their pattern more complicated than in *Geoxus*.

= A. andinus *Cebus* 1861 p. 438

#### **Chelemys megalonyx** Waterhouse.

1844. *Hesperomys megalonyx* Waterh., Proc. Zool. Soc., London, p. 154.

*Type locality*: Western Chile, Lake Quintero, Valparaiso Province. (Type in Brit. Mus. N:o 45. 12. 8. 12. ♂.)

*Syn. Oxymycterus niger* Philippi, Zeitsch. gesammt. Naturwiss., Berlin, Neue Folge, (6) 1872, p. 445. — Central Chile, Peine, Santiago Prov.

? *Mus andinus* Philippi, Arch. für Naturgesch., xxiv, N:o 1, 1858, p. 77. — Chile, Andes of Santiago Province.

Fur very soft. General colouration above nearly uniform greyish brown, the hairs annulated with pale brown. Ventral surface greyish white, the hairs deep grey at their bases. Chest with a brownish mark. Tail unicolor. Skull with comparatively small molars and with anteriorly compressed zygomata. Anterior zygomatic plate slightly slanting forwards.

#### **Chelemys macronyx** Thomas.

1894. *Akodon macronyx* Thos., Ann. & Mag. Nat. Hist. (6) xiv, p. 362.

*Type locality*: Western Argentine, Fort San Rafael, Mendoza Province. (Type in Brit. Mus. N:o 60. 1. 5. 14. ♀.)

A comparatively large species. Fur rather short. General colouration above nearest to hair-brown. Ventral surface whitish. Tail indistinctly bicolor. Skull angular with comparatively heavy molar dentition.

#### **Chelemys vestitus vestitus** Thomas.

1903. *Akodon (Chelemys) vestitus* Thos., Ann. & Mag. Nat. Hist. (7) xii, p. 242.

*Type locality*: North-western Patagonia, Valle del Lago Blanco, Southern Chubut Territory. Alt. 100 m. (Type in Brit. Mus. N:o 3. 7. 9. 44. ♂.)

A large form with very long, close and woolly fur. General colouration above sepia, becoming broccoli brown on the sides of the body. Ventral surface sharply

defined dull white, the hairs slaty at their bases. Metacarpals white. Skull angular, broader and more flattened than that of *C. macronyx*. Dentition heavy.

#### ***Chelemys vestitus alleni* Osgood.**

1925. *Notiomys vestitus alleni* Osg., Field Museum Nat. Hist., Zool. ser., XII, N:o 9, p. 124.

*Type locality*: South-western Patagonia, Upper Rio Chico, Santa Cruz Territory. (Type in United States National Museum. N:o 84227. ♂.)

Paler than *C. vestitus*. General colouration above Dresden brown. Ventral surface creamy white, the hairs plumbeous at their bases. Skull as in *C. vestitus*, but anterior zygomatic plate averaging less in its antero-posterior diameter.

#### ***Chelemys vestitus fumosus* Thomas.**

1927. *Chelemys vestitus fumosus* Thos., Ann. & Mag. Nat. Hist. (9) xix, p. 654.

*Type locality*: North-western Patagonia, Sierra de Pilpil, Neuquen Territory. Alt. 2000 m. (Type in Brit. Mus. N:o 27. 5. 1. 81. ♂.)

A dark form of *C. vestitus*. General colouration above dark brownish mouse-grey, the distinctly drabby tone of *C. vestitus* almost obsolete owing to a reduction of the drabby rings on the hairs. Flanks similarly coloured as the back. Ventral surface greyer, less broadly washed with white. Metacarpals dark greyish brown. Tail distinctly bicolor.

#### ***Chelemys connectens* Osgood.**

1925. *Notiomys connectens* Osg., Field Museum Nat. Hist., Zool. ser., XII, N:o 9, p. 120.

*Type locality*: Central Chile, Villa Portales, Cautin Province. Alt. 3300 feet. (Type in Field Museum Nat. Hist., Chicago. N:o 22508. ♂.)

General colouration above olive brown, formed by a mixture of dark buffy brown and blackish and becoming slightly darker on the mid-dorsal region. Ventral surface sharply defined whitish grey. Tail bicolor. Skull long and narrow, nasals and rostrum very long. Braincase rather narrow. Zygomata somewhat compressed anteriorly. Interparietal very small. Bullae even smaller than those of *G. valdivianus*, but teeth comparatively large, nearly equalling those of *C. megalonyx*.

#### ***Chelemys angustus* Thomas.**

1927. *Chelemys angustus* Thos., Ann. & Mag. Nat. Hist. (9) xix, p. 654.

*Type locality*: North-western Patagonia, Bariloche, Lake Nahuel Huapi, Neuquen Territory. Alt. 800 m. (Type in Brit. Mus. N:o 27. 2. 16. 1.)

External characters unknown, but probably as in *C. vestitus*. Skull like that of *G. fossor*, but rather more robust with stouter muzzle and a more vertical front edge of the zygoma-root. Supraorbital edges more square. Braincase not so smoothly rounded and papery. Skull smaller than that of *C. vestitus* and more slenderly built. Palatal foramina long, well-open, with rounded edges. Incisors thick and robust. Molars hypsodont. Agreeing with *Chelemys* in its teeth, but the shape of the skull reminds very much of that of *Geoxus*.

**Chelemys (?) delfini** Cabrera.1905. *Oxymycterus Delfini* Cabr., Rev. Chilena d. Hist. Nat., ix, p. 15.*Type locality*: Southern Chile, Punta Arenas, Straits of Magellan. (Type in Museo Nacional de Santiago de Chile?)

Fur long and soft. General colouration above uniform blackish brown. Ventral surface only slightly paler than the upperparts of the body. Individual hairs slaty grey at their bases.

Genus **Oxymycterus** Waterhouse.1837. **Oxymycterus** Waterhouse, Proc. Zool. Soc., London, p. 21. — *Type*: *Mus nasutus* Waterh.

Form modified for fossorial habits. Fur long and fairly soft. Ears rather small. Tail comparatively short and moderately hairy, the annulations clearly visible. Snout long and mobile. Pollex with a narrow and pointed claw. Forefeet strong and furnished with long and distinctly pointed claws. Claws of hindfeet also long and curved, but shorter than those of the forefeet. Palms and soles naked except on the heel. Pads prominent.

Skull with a long and narrow rostrum. Nasals more or less distinctly produced forwards and expanded anteriorly, the opening generally trumpet-shaped. Interorbital region relatively narrow and with the supraorbital edges evenly rounded. Braincase large, smooth and rounded. Interparietal rather well-developed. Anterior zygomatic plate narrow and slanting forwards enough to be distinctly visible from above, its superior border rounded. Palate short. Palatine foramina long and well open, extending backwards to about the plane of the second lamina of the first molar. Mesopterygoid fossa broad and almost parallel-sided. Parapterygoid fossae comparatively narrow, but fairly deep. Bullae rather small.

Incisors weak, slender and ungrooved. Molar dentition weak, the molars relatively long, but narrow. The teeth have high, conical crowns. The enamel folds, however, soon wear out and leave a simple indented surface.

**Oxymycterus nasutus** Waterhouse.1837. *Mus nasutus* Waterh., Proc. Zool. Soc., London, p. 16.*Type locality*: Uruguay, Maldonado. (Type in Brit. Mus. N:o 55. 12. 24. 176. imm.)

General colouration above yellowish brown, the hairs blackish terminally and broadly annulated with deep golden yellow. Sides of the body clearer yellow. Ventral surface pale yellow, whitish on chin, throat and chest.

**Oxymycterus rostellatus** Wagner.1842. *Hesperomys (Oxymycterus) rostellatus* Wagn., Arch. für Naturgesch. (1) viii, p. 362.*Type locality*: Eastern Brazil, Bahia. (Type in Naturhist. Museum, Vienna. N:o 420. ♀.)

Similar to *O. nasutus*, but darker and larger. General colouration above brownish, grizzled with rusty-yellow and intermixed with longer, glistening black hairs. Ventral surface pale rusty-yellow. Skull with the mesopterygoid fossa extending to about the posterior portion of the second molar.

**Oxymycterus rufus** Desmarest.1819. *Mus rufus* Desm., Nouv. Dict. d'Hist. Nat., 2:e édit., art. Rat, esp. 23.*Type locality*: Paraguay. (Type apparently lost, as it is not now kept in the Paris Museum.)

General colouration above dark reddish fawn, becoming greyish on crown and mid-dorsal region and clearer — more buffy — on the sides of the body. Ventral surface yellowish, slightly tinged with fawn.

**Oxymycterus platensis** Thomas.1914. *Oxymycterus platensis* Thos., Ann. & Mag. Nat. Hist. (8) xiv, p. 244.*Type locality*: Eastern Argentine, Ensenada, La Plata. Alt. Sea-level. (Type in Brit. Mus. N:o 99. 10. 4. 1. ♂.)

Closely allied to *O. rufus*, but fur longer. Colouration also darker and deeper rufous, distinctly marked along crown, nape and mid-dorsal area by blackish. Skull shorter than that of *O. rufus* and with shorter molars.

**Oxymycterus inca** Thomas.1900. *Oxymycterus inca* Thos., Ann. & Mag. Nat. Hist. (7) vi, p. 298.*Type locality*: Central Peru, Perené, Junin Province. Alt. 800 m. (Type in Brit. Mus. N:o 0. 7. 7. 45. ♂.)

General colouration above rufous chestnut, more grizzled into black along centre of face and on the dorsal area. Ventral surface rich ochraceous rufous, the hairs indistinctly plumbeous at their bases. Size rather larger than *O. rufus*. Skull with the braincase oblong and parallel-sided.

**Oxymycterus iris** Thomas.1900. *Oxymycterus iris* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 183.*Type locality*: Central Bolivia, Sao Ernesto, Mapiri. Alt. 1000 m. (Type in Brit. Mus. N:o 1. 1. 1. 76. ♂.)

Allied to *O. inca*. General colouration above rufous, heavily lined with black especially on the middle back, the sides of the body clearer fulvous rufous. Dorsal hairs black-tipped and with a greenish iridescence. Ventral surface ochraceous rufous. Skull as in *O. inca*, but nasals more pointed and less trumpet-shaped anteriorly, more rounded posteriorly.

**Oxymycterus juliacae** J. Allen.1900. *Oxymycterus juliacae* J. Allen, Bull. Amer. Museum Nat. Hist., xiii, p. 223.*Type locality*: South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 15804. ♂.)

Evidently closely allied to *O. inca* with which it agrees in size and proportions. General colouration above dark chestnut brown, grizzled with black. Dorsal hairs not iridescent. Ventral surface dull brownish grey, faintly tinged with buff and sharply defined from the colour of the sides of the body. Skull with rostral portion broad. Interparietal very small.

**Oxymycterus roberti** Thomas.1901. *Oxymycterus Roberti* Thos., Ann. & Mag. Nat. Hist. (7) viii, p. 530.*Type locality*: Eastern Brazil, Paranahyba, Rio Jordão, S. W. Minas Geraes Province. Alt. 700—900 m. (Type in Brit. Mus. N:o 1. 11. 3. 51. ♂.)

A member of the large, long-snouted group. Fur close, but not hispid. General colouration above heavily lined fulvous grey, more fulvous on the dorsal region. Ventral surface dull greyish buff, the tips of the hairs washed with paler yellowish buff. Skull about as in *O. nasutus*, but upper incisors very narrow.

**Oxymycterus paramensis paramensis** Thomas.1902. *Oxymycterus paramensis* Thos., Ann. & Mag. Nat. Hist. (7) ix, p. 139.*Type locality*: Central Bolivia, Choquecamate, Rio Securé. Alt. 4000 m. (Type in Brit. Mus. N:o 2. 1. 1. 90. ♂.)

General colouration above black-lined broccoli brown and mars brown intermixed with longer shining whitish hairs posteriorly. Ventral surface dull soiled buffy. Skull with long, slightly trumpet-shaped nasals and comparatively narrow, square-edged interorbital region. Most closely allied to *O. roberti*.

**Oxymycterus paramensis jacentior** Thomas.1925. *Oxymycterus paramensis jacentior* Thos., Ann. & Mag. Nat. Hist. (9) xv, p. 580.*Type locality*: Southern Bolivia, Carapari, Yacuiba, Cochabamba District. Alt. 1000 m. (Type in Brit. Mus. N:o 25. 2. 1. 49. ♂.)

Similar to *O. paramensis*, but somewhat paler and slightly larger. Fur thinner, coarser and shorter. Skull rather larger and heavier and with the zygomatic plate broader.

**Oxymycterus doris** Thomas.1916. *Oxymycterus doris* Thos., Ann. & Mag. Nat. Hist. (8) xviii, p. 478.*Type locality*: Southern Bolivia, Charuplaya, Upper Rio Mamoré. Alt. 1350 m. (Type in Brit. Mus. N:o 2. 1. 1. 95. ♂.)

A dark brown form allied to *O. juliacae*, but with no red either on back or sides. Size about as in *O. inca*. Fur thin and straight, but not shaggy. General colouration above brown, finely ticked with buffy. Ventral surface soiled grey, the hairs washed with buffy at their tips. Skull with a long, heavy muzzle.

**Oxymycterus akodontius** Thomas.1921. *Oxymycterus akodontius* Thos., Ann. & Mag. Nat. Hist. (9) viii, p. 615.*Type locality*: North-western Argentina, Higuera, Valle Grande Dept., Jujuy Province. Alt. 2000 m. (Type in Brit. Mus. N:o 21. 11. 1. 72. ♂.)

A dark-coloured species superficially very similar to a large blackish *Akodon*. General colouration above dark blackish brown finely ticked with buffy, the sides of the body slightly lighter. Ventral surface dark slaty brown washed with buffy. Skull similar to that of *O. paramensis*, but with larger braincase and a more slender muzzle.

**Oxymycterus hispidus** Pictet.1843. *Oxymycterus hispidus* Pictet, Mém. Soc. Phys. et d'Hist. Nat. de Genève, X, p. 212.*Type locality*: Eastern Brazil, Bahia. (Type in Musée d'Hist. Nat. de Genève. N:o 275/47. ♂.)

General colouration above reddish brown, the hairs annulated with brown and tipped with red. Ventral surface, except the chin which is whitish, greyish washed with yellowish. Skull with the anterior margin of the zygomatic plate almost straight.

**Oxymycterus angularis** Thomas.1909. *Oxymycterus angularis* Thos., Ann. & Mag. Nat. Hist. (8) iv, p. 237.*Type locality*: Eastern Brazil, Sao Lorenzo, Pernambuco Province. Alt. 30 m. (Type in Brit. Mus. N:o 3. 10. 1. 56. ♂.)

Allied to *O. hispidus*, but tail shorter. General colouration above dull bistre brown, the hairs annulated with buffy. Posterior back warmer brown, the hairs annulated with ochraceous. Ventral surface dark greyish, the tips of the hairs buffy. Skull as in *O. hispidus*, but the front edge of the zygomatic plate curved and almost angular.

**Oxymycterus questor** Thomas.1903. *Oxymycterus questor* Thos., Ann. & Mag. Nat. Hist. (7) xi, p. 226.*Type locality*: Southern Brazil, Roca Nova, Serra do Mar, Eastern Paraná. Alt. 1000 m. (Type in Brit. Mus. N:o 3. 7. 1. 80. ♀.)

A large form allied to *O. hispidus*, but smaller. General colouration above yellowish tawny, heavily lined with black and gradually passing into deep reddish tawny on sides and rump and from that again on the belly into rich ochraceous, the hairs slaty at their bases. Skull long and narrow, with the braincase narrower than that of *O. hispidus*.

**Oxymycterus judex** Thomas.1909. *Oxymycterus judex* Thos., Ann. & Mag. Nat. Hist. (8) iv, p. 258.*Type locality*: Southern Brazil, Joinville, Santa Catherina Province. (Type in Brit. Mus. N:o 9. 11. 19. 23. ♂.)

A large dark rufous species most closely allied to *O. questor*. General colouration above dark coppery rufous, becoming more black on the back and more rufous on the sides of the body. Ventral surface dull tawny rufous, the hairs slaty at their bases. Skull with larger braincase and with the nasals broadened and raised anteriorly.

**Oxymycterus misionalis** Sanborn.1931. *Oxymycterus misionalis* Sanb., Proc. Biol. Soc., Washington, 44, p. 1.*Type locality*: North-eastern Argentine, Caraguatay, Rio Paranay, Misiones Province. (Type in Field Museum Nat. Hist., Chicago. N:o 26756. ♀.)

Allied to *O. judex*, but larger and lighter. General colouration above fuscous brown, becoming warm yellow brown on the sides of the body and almost russet on the rump. Mid-dorsal region blackened, the dorsal hairs, however, tipped with ochraceous tawny. Ventral surface buffy grey with a warm brown wash on the

centre of the belly. Tail rather long. Skull as in *O. judex*, but averaging longer, interorbital region narrower and palatal foramina longer.

#### **Oxymycterus delator** Thomas.

1903. *Oxymycterus delator* Thos., Ann. & Mag. Nat. Hist. (7) xi, p. 489.

*Type locality*: Paraguay, Sapucay. (Type in Brit. Mus. N:o 3. 4. 7. 18. ♂.)

A large species, but smaller than *O. misionalis*. Fur close and straight. General colouration above almost clove-brown with a purplish sheen in certain lights. Ventral surface dull cream buff, the hairs slaty at their bases. Skull with unusually narrow, high and rounded braincase. Zygomatic arches only slightly expanded.

#### Genus **Podoxymys** Anthony.

1929. **Podoxymys** Anthony, American Museum Novitates N:o 383, p. 4. — *Type*: *Podoxymys roraimae* Anth.

Form *Akodon*-like. Fur long and lax. Ears of fair size, partially hidden in the pelage. Eyes rather small. Tail very scantily haired. Claws of forefeet long and slender, strongly compressed laterally and slightly curved. Claws of hindfeet similar, but slightly shorter.

Skull long and slender, rather *Oxymycterus*-like. Rostrum elongate. Nasals long and extending anteriorly beyond the plane of the incisors. Interorbital region approximately parallel-sided, rounded and without supraorbital beading. Braincase proportionally rather small and evenly rounded. Zygomatic arches scarcely flaring beyond plane of braincase, weak and thread-like at mid-point. Anterior zygomatic plate narrow and sloping backwards. Interparietal greatly reduced to a mere slip. Palatine foramina very long and narrow, extending almost the entire length of the diastema, and with their posterior termination reaching well beyond the plane of the first molars. Mesopterygoid fossa broad. Bullae of moderate size, slightly inflated.

Dentition about as in *Oxymycterus*. First upper molar without notch on its anterior face.

#### **Podoxymys roraimae** Anthony.

1929. *Podoxymys roraimae* Anth., Amer. Museum Novitates N:o 383, p. 4.

*Type locality*: British Guiana, Mt. Roraima. Alt. 8600 feet. (Type in Amer. Museum Nat. Hist. N:o 75586. ♀.)

General colouration above finely mixed clay-colour and blackish. Sides of head and ventral surface slightly lighter than the colour of the back. Hands and feet clove-brown above.

#### Genus **Microxus** Thomas.

1909. **Microxus** Thomas, Ann. & Mag. Nat. Hist. (8) iv, p. 237. — *Type*: *Oxymycterus mimus* Thos.

Form normal and rather *Akodon*-like, without elongate snout. Fur long, fine and silky. Eyes very small. Ears short and well-haired. Tail comparatively

short, thinly haired and very finely scaled. Pollex with a small, not pointed nail-like claw. Forefeet normal, not fossorial, and with small claws. Fifth hindtoe reaching to about the end of the first phalanx of the fourth toe.

Skull thin and papery. Muzzle narrow and evenly tapering forwards, not trumpet-shaped anteriorly. Interorbital region broad with smoothly rounded, not ridged, supraorbital edges. Braincase broad and flattened. Anterior zygomatic plate very narrow, bar-like and slanting forwards. Interparietal minute or absent. Palatine foramina long and well open. Bullae fairly large.

Incisors narrow and slender, of a rather paler yellow than usual and always ungrooved. Molar dentition absolutely as in *Akodon*.

#### **Microxus bogotensis** Thomas.

1895. *Acodon bogotensis* Thos., Ann. & Mag. Nat. Hist. (6) xvi, p. 369.

*Type locality*: Central Colombia, Bogotá region. Alt. 8750 feet. (Type in Brit. Mus. N:o 95. 10. 14. 2. ♂.)

General colouration above uniformly finely grizzled backish brown. Ventral surface scarcely lighter than the upperparts.

#### **Microxus mimus** Thomas.

1901. *Oxymycterus mimus* Thos., Ann. & Mag. Nat. Hist. (7) vii, p. 183.

*Type locality*: South-eastern Peru, Limbani, Puno Department. Alt. 2600 m. (Type in Brit. Mus. N:o 1. 1. 1. 48. ♀.)

Allied to *M. bogotensis*. General colouration above very finely speckled dark olivaceous grey. Ventral surface brownish grey. Skull very thin and papery and with very small interparietal.

#### **Microxus lanosus** Thomas.

1897. *Oxymycterus lanosus* Thos., Ann. & Mag. Nat. Hist. (6) xx, p. 218.

*Type locality*: Southern Patagonia, Straits of Magellan, Monteith Bay. (Type in Brit. Mus. N:o 80. 7. 28. 11. ♂.)

Fur very soft, thick and woolly. General colouration above deep yellowish olive, becoming brighter yellow on the sides of the body. Ventral surface slaty grey, the hairs tipped with buffy white. Skull with a narrow, slender muzzle and a very broad, flattened and rounded braincase. Interparietal absent.

#### **Microxus latebricola** Anthony.

1924. *Microxus latebricola* Anth., Amer. Museum Novitates N:o 139, p. 3.

*Type locality*: Central Ecuador, Hacienda San Francisco, Rio Cusutagua, Ambato. Alt. 8000 feet. (Type in Amer. Museum Nat. Hist. N:o 67506. ♂.)

Size small. General colouration above and below intense black. Skull with long and slender rostrum. Nasals extending posteriorly beyond the premaxillare.

**Microxus (?) iheringi** Thomas.1896. *Oxymycterus Iheringi* Thos., Ann. & Mag. Nat. Hist. (6) xviii, p. 308.*Type locality*: Southern Brazil, Taquara do Mundo Novo, Rio dos Linos, Rio Grande do Sul Province. (Type in Brit. Mus. N:o 86. 9. 16. 8. ♀.)*Syn. Hesperomys nasutus* Hensel (nec Waterhouse), 1872.*Hesperomys nasutus* Leche (nec Waterhouse), 1886.

Fur soft and thick. General colouration above uniform grizzled grey, scarcely paler below. Skull with a somewhat elongated, but not trumpet-shaped, muzzle. Interparietal present. Mammae: 1—2 = 6.

**Microxus (?) affinis** J. Allen.1912. *Microxus affinis* J. Allen, Bull. Amer. Museum Nat. Hist., xxxi, p. 89.*Type locality*: Western Colombia, San Antonio, Cauca District. Alt. 8000 feet. (Type in Amer. Museum Nat. Hist. N:o 32235. ♂.)

General colouration above uniform dusky brown, grizzled with yellowish. Ventral surface dark greyish brown, the hairs olivaceous at their tips. Not a typical member of the genus *Microxus*. *Anthony* (Amer. Museum Novitates, N:o 139, 1924, p. 4) suspects that it belongs to the genus *Akodon*.

**Microxus (?) torques** Thomas.1917. *Microxus torques* Thos., Smiths. Misc. Coll., lxxviii, N:o 4, p. 3.*Type locality*: Central Peru, Machu Picchu, Cuzco District. Alt. 10000 feet. (Type in United States National Museum. N:o 194607. ♂.)

Fur close, soft and woolly. General colouration above smoky or olivaceous grey. Ventral surface only slightly lighter. Tail rather long. Skull rather similar to that of *M. mimus*, but the anterior zygomatic plate not so strongly narrowed and slanting. Perhaps a member of the genus *Akodon*.

Genus **Lenoxus** Thomas.1909. **Lenoxus** Thomas, Ann. & Mag. Nat. Hist. (8) iv, p. 236. — *Type: Oxymycterus apicalis* J. Allen.

Form normal, rat-like, not modified for fossorial habits. Size rather large. Snout not specially elongated. Ears thinly haired. Tail very long and very thinly haired, the annulations distinctly visible. Forefeet normal, not fossorial, and with claws of moderate size. Pollex with a non-pointed nail.

Skull with a long, broad and heavy muzzle which evenly tapers distally. Nasals very long, not expanded anteriorly but extending posteriorly behind the front edge of the orbit. Interorbital region smoothly rounded and somewhat swollen. Braincase small in proportion to the muzzle. Anterior zygomatic plate narrow, almost vertical and strongly rounded on its antero-superior border. Interparietal well-developed. Palate extending a little beyond the plane of the last molars. Palatine foramina very large and well open, especially posteriorly. Mesopterygoid fossa broad.

**Lenoxus apicalis** J. Allen.

1900. *Oxymycterus apicalis* J. Allen, Bull. Amer. Museum Nat. Hist., xiii, p. 224.

*Type locality*: South-eastern Peru, Inca Mines, Rio Inambari. Alt. 6000 feet. (Type in Amer. Museum Nat. Hist. N:o 16064. ♂.)

General colouration above dull blackish, washed with grey and becoming darker on the dorsal region and lighter on the sides of the body, the hairs minutely tipped with grey. Ventral surface greyish brown with a slight buffy tinge. Tail tipped with white.

Genus **Blarinomys** Thomas.

1896. **Blarinomys** Thomas, Ann. & Mag. Nat. Hist. (6) xviii, p. 310. — *Type*: *Oxymycterus breviceps* Winge.

Form talpine or soricine, highly modified for fossorial habits. Fur short, velvety, crisp and almost semispinous. Head short and conical. Eyes minute, hidden in the fur. Ears small but thickly clothed with hairs. Tail short and thinly haired. Feet proportionally broad. Pollex with a distinct claw. Claws of forefeet long and distinctly pointed, those of the hindfeet also long and curved but shorter. Palms and soles naked except the heel, which is hairy and provided with five pads in front and six behind, the latter very small.

Skull with several characteristics of *Oxymycterus*, but considerably shortened, blunt and conical in the facial region and distinctly broadened posteriorly. The zygomatic breadth thus barely exceeds the posterior cranial one. Interparietal totally absent.

Dentition rather weak. Molars in structure similar to those of *Oxymycterus*.

**Blarinomys breviceps** Winge.

1888. *Oxymycterus breviceps* Winge, E Museo Lundii, I, N:o 3, p. 34.

*Type locality*: Eastern Brazil, Lagoa Santa, Rio des Velhas, S. W. Minas Geraes Province. (Type skull in Zool. Museum, Copenhagen.)

General colouration above and below uniform dark slaty grey, the hairs tipped with brown. Dorsal region markedly iridescent with ruby colour. Tail unicolor.

Measurements of the type-specimens of the genera *Ichthyomys*, *Anotomys*, *Daptomys*, *Rheomys*, *Neusticomys* and *Oryzomys*.<sup>1</sup>

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Diastema	Palatal foramina	Length of upper molars
<i>Ichthyomys stoltzmanni</i> . . . . .	♂	146	148	36,0	34,0	16,0	11,0	5,0	—	8,9	6,5	4,4
» <i>söderströmi</i> . . . . .	♂	180	150	31,5	31,5	16,0	12,0	—	—	8,5	5,5	4,3
» <i>caurinus</i> . . . . .	—	—	—	35,0	33,2	16,3	13,0	—	—	—	6,6	4,5
» <i>tweedii</i> . . . . .	♂	—	150	36,0	35,3	18,8	12,5	4,3	15,0	9,3	6,4 × 2,0	5,0
» <i>orientalis</i> . . . . .	—	—	185	38,7	35,6	17,5	11,5	4,2	—	8,4	6,7	4,3
» <i>hydrobates</i> . . . . .	♂	143	145	31,7	—	—	11,0	4,7	13,8	—	5,5	4,3
» <i>nicefori</i> . . . . .	♂	—	—	33,0	33,5	16,5	12,0	5,0	15,0	—	6,8	4,3
<i>Anotomys leander</i> . . . . .	♂	128	125	32,0	27,5	14,8	9,0	3,9	13,8	6,7	4,9 × 2,3	4,6
<i>Daptomys venezuelae</i> . . . . .	♂	131	105	23,0	28,5	13,6	10,2	5,4	12,9	—	4,7 × 2,0	4,0
<i>Rheomys trichotis</i> . . . . .	—	130	114	28,5	—	—	—	—	—	—	—	4,8
<i>Neusticomys monticolus</i> . . . . .	♀	—	111	25,0	26,0	12,4	9,4	4,8	12,5	6,0	4,7 × 2,3	4,3
<i>Oryzomys longicaudatus</i> . . . . .	—	75	140	29,0	25,0	13,7	—	—	—	—	—	—
» <i>magellanicus</i> . . . . .	—	108	106	27,5	26,5	13,5	11,0	4,0	12,0	—	6,0	4,0
» <i>destructor</i> . . . . .	—	78	72	22,9	—	13,2	10,0	4,0	11,5	6,5	4,0 × 1,7	3,9
» <i>mizurus</i> . . . . .	♂	100	131	29,0	27,5	—	—	3,3	—	—	—	3,8
» <i>delticola</i> . . . . .	♂	105	125	28,0	27,5	14,4	10,2	4,0	12,5	—	6,0	4,0
» <i>coppingeri</i> . . . . .	♂	106	155	29,2	30,5	13,3	10,2	3,1	—	—	—	—
» <i>balneator</i> . . . . .	♂	92	117	26,0	26,0	14,0	9,2	4,3	13,0	—	4,0 × 2,0	3,6
» <i>hesperus</i> . . . . .	♂	94	127	27,0	24,5	12,9	8,9	4,5	11,2	—	3,8	3,2
» <i>intectus</i> . . . . .	♂	100	91	22,0	26,2	14,2	10,3	5,0	12,2	—	4,2	4,2
» <i>eliurus</i> . . . . .	♂	102	130	22,0	—	—	—	4,0	—	—	—	4,5
» <i>ratticeps</i> . . . . .	♂	155	210	34,0	31,0	—	14,4	5,0	—	—	8,0	6,0
» <i>tropicius</i> . . . . .	♂	165	205	35,0	39,5	20,5	15,5	5,2	16,5	—	8,5	5,8
» <i>paraganus</i> . . . . .	♀	197	216	39,0	42,2	22,0	16,0	6,0	15,7	—	8,5	6,2
» <i>albigularis</i> . . . . .	—	121	140	32,8	32,3	—	11,6	—	—	—	—	6,3
» <i>maculiventer</i> . . . . .	♂	—	170	29,0	34,4	18,0	7,6	5,0	—	—	5,5	5,5
» <i>moerex</i> . . . . .	♂	140	162	34,0	34,8	18,0	12,5	5,0	14,0	—	4,6	5,7
» <i>keaysi</i> . . . . .	♂	158	197	35,8	38,3	19,0	15,0	6,0	—	—	6,5 × 3,0	6,0
» <i>levipes</i> . . . . .	♂	130	160	31,0	35,7	18,5	13,2	5,0	14,2	—	6,5 × 3,3	6,0
» <i>velutinus</i> . . . . .	♂	135	118	28,0	—	17,0	12,7	5,0	—	—	—	4,5
» <i>tenuicauda</i> . . . . .	♂	88	128	20,5	27,0	15,0	8,0	5,0	—	—	4,3	4,3
» <i>modestus</i> . . . . .	♂	120	100	25,0	—	16,0	12,0	5,0	—	—	5,0	4,5
» <i>meridensis</i> . . . . .	—	139	143	30,7	—	18,7	13,6	5,4	—	—	5,9	5,5
» <i>childi</i> . . . . .	♂	131	143	31,0	—	16,8	12,0	5,0	—	—	5,6 × 2,4	5,5
» <i>villosus</i> . . . . .	—	—	148	26,0	32,6	17,5	11,0	5,5	—	—	5,0	5,4
» <i>pectoralis</i> . . . . .	♂	155	162	36,0	36,0	18,5	12,0	5,2	15,0	—	5,5	5,3
» <i>o'connelli</i> . . . . .	♂	149	153	38,0	36,0	18,3	12,0	5,6	14,0	—	5,2	5,4
» <i>caraculus</i> . . . . .	♂	131	144	31,0	33,2	17,0	12,5	5,0	14,0	—	6,2	5,0
» <i>bolivaris</i> . . . . .	♂	125	100	29,0	30,2	15,2	12,0	—	—	—	6,0	4,5
» <i>rivularis</i> . . . . .	♂	111	127	32,0	32,0	15,0	7,0	—	—	—	4,0	4,6
» <i>barbacoas</i> . . . . .	♂	140	160	35,0	36,0	20,0	—	6,3	14,0	—	4,0 × 2,0	5,5
» <i>ochrinus</i> . . . . .	♂	—	—	33,0	34,8	18,0	13,3	5,9	—	—	5,0	5,7

<sup>1</sup> All measurements in millimeters.

Measurements of the type-specimens of the genus *Oryzomys* (contin.).

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Basal length	Palatal foramina	Length of upper molars
<i>Oryzomys</i> laticeps . . . . .	—	142	131	33,8 <sup>1</sup>	36,0 <sup>1</sup>	—	15,0 <sup>1</sup>	—	—	—	7,5 <sup>1</sup>	5,2 <sup>1</sup>
» nitidus . . . . .	♂	123	149	30,5	31,7	16,5	15,0	5,0	13,2	—	4,5	5,0
» intermedius . . . . .	—	131	145	—	35,0	18,0	13,2	6,0	—	—	5,7	5,4
» magdalenae . . . . .	—	—	144	33,0	31,5	15,0	12,0	5,3	—	—	3,4	4,3
» perenensis . . . . .	—	125	112	31,0	34,0	—	13,0	—	—	—	5,0	5,0
» goeldi . . . . .	♀	96	104	26,0	—	14,5	11,8	5,0	—	—	4,6	4,5
» boliviae . . . . .	♂	148	150	34,0	34,5	17,8	14,0	5,0	—	—	6,5 × 2,8	4,6
» lamia . . . . .	—	145	153	33,0	36,0	19,5	15,0	6,1	—	—	6,3 × 2,3	5,5
» castaneus . . . . .	—	118	105	27,0	30,0	14,4	11,2	—	—	—	4,0	4,0
» yunganus . . . . .	—	125	128	28,0	31,3	16,5	12,1	4,5	—	—	5,0 × 2,4	4,9
» oniscus . . . . .	—	140	145	31,0	36,3	18,5	13,7	5,6	—	—	5,1 × 2,6	5,0
» macconnelli . . . . .	—	145	159	35,0	36,3	17,3	14,6	5,7	13,7	—	6,1	5,3
» legatus . . . . .	—	140	164	33,5	36,5	18,5	14,6	6,0	—	—	5,6	5,2
» gracilis . . . . .	—	106	105	24,6	—	—	10,4	5,0	—	—	4,5	3,8
» mollipilosus . . . . .	—	—	110	25,5	30,0	14,0	10,0	5,0	—	—	3,8	4,3
» sylvaticus . . . . .	—	112	118	29,0	30,5	15,0	12,0	4,9	—	—	4,3	4,5
» medius . . . . .	—	—	138	31,0	30,4	14,2	12,0	5,0	—	—	4,0	4,6
» palmirae . . . . .	♂	105	110	26,0	27,0	15,0	10,0	5,0	12,0	—	5,0	4,5
» auriventer . . . . .	♂	147	160	35,0	38,0 <sup>2</sup>	19,6 <sup>2</sup>	13,0 <sup>2</sup>	5,6 <sup>2</sup>	—	—	5,6 × 2,5 <sup>2</sup>	6,3 <sup>2</sup>
» nimbosus . . . . .	♂	140	164	34,0	35,5	17,9	13,2	6,0	15,3	—	5,0 × 2,8	5,7
» subflavus . . . . .	—	157	157	29,4	—	—	—	—	—	—	—	—
» mureliae . . . . .	—	120	150	34,0	—	—	—	—	—	—	—	—
» trinitatis . . . . .	—	123	148	25,0	32,5	17,8	11,4	6,1	—	27,2	6,4 × 2,0	4,5
» palmarius . . . . .	—	119	150	21,5	31,0	16,6	11,0	5,3	—	—	6,5	5,0
» flavicans . . . . .	—	116	129	23,8	—	16,5	11,0	5,2	—	—	4,8 × 2,1	4,8
» subluteus . . . . .	—	120	127	26,0	30,3	16,0	—	—	—	—	5,0 × 2,2	4,8
» trichurus . . . . .	—	—	160	23,0	30,0	15,0	10,5	5,0	—	—	5,0	4,0
» fulviventor . . . . .	—	131	139	25,0	32,0	17,0	11,0	5,1	—	—	5,7	5,0
» helvolus . . . . .	—	134	143	27,0	34,0	17,0	12,0	6,0	13,0	—	6,5	6,2
» galapagensis . . . . .	—	152	120	29,6	31,8	17,2	—	—	—	—	—	—
» bauri . . . . .	—	132	147	32,5	37,4	18,3	13,5	5,6	—	27,5	—	—
» xanthaeolus . . . . .	—	121	139	30,0	—	16,0	12,7	5,1	—	—	5,5 × 2,5	5,0
» baroni . . . . .	—	130	160	30,0	35,0	17,5	13,5	—	—	—	7,0	5,3
» polius . . . . .	—	157	180	30,0	34,7	17,8	14,2	5,2	—	—	8,3 × 3,0	5,6
» pyrrhorhinus . . . . .	—	118	203	—	—	—	—	—	—	—	—	—
» angouya . . . . .	—	135	144	30,5	36,3 <sup>3</sup>	18,6 <sup>3</sup>	12,7 <sup>3</sup>	7,0 <sup>3</sup>	14,5 <sup>3</sup>	—	6,8 × 2,5 <sup>3</sup>	5,1 <sup>3</sup>
» speciosus . . . . .	—	124	137	24,0	30,5	17,3	11,0	5,6	—	—	5,6 × 2,8	4,5
» wavrini . . . . .	—	106	106	25,0	29,0	15,5	11,5	3,8	—	—	6,1	4,8
» flavescens . . . . .	—	95	105	26,5	—	—	—	—	—	—	—	—
» vicencianus . . . . .	—	120	130	—	29,0	13,2	10,0	5,5	13,0	—	5,0	4,5
» chaparensis . . . . .	—	104	111	26,0	26,8	13,5	10,5	4,0	11,2	—	4,4 × 1,9	3,6

<sup>1</sup> Cotype in Copenhagen Zool. Museum.<sup>2</sup> Cotype ♂ Eastern Ecuador, Mirador. (Brit. Mus.)<sup>3</sup> ♂ Paraguay, Sapucay. (Stockholm Mus. N:o 949.)

Measurements of the type-specimens of the genera *Nesoryzomys*, *Oligoryzomys*, *Thallomyscus*, *Melanomys*, *Neacomys* and *Scolomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Diastema	Palatal foramina	Length of upper molars
<i>Nesoryzomys indefessus</i> . . .	♂	135	97	30,0	35,3	18,0	14,5	4,3	—	—	6,5 × 2,4	5,3
» <i>narboroughi</i> . . .	♂	—	131	33,0	41,5	20,0	17,0	4,0	—	—	7,0	5,5
» <i>darwini</i> . . .	♂	—	91	25,0	30,0	14,6	12,6	4,3	12,2	—	—	4,8
<i>Oligoryzomys navus</i> . . .	♂	—	115	20,0	—	11,6	7,0	3,8	—	—	—	3,2
» <i>messorius</i> . . .	♂	82	95	21,0	22,5	12,0	8,0	3,6	—	—	4,1 × 2,0	3,1
» <i>microtus</i> . . .	♂	93	90	20,0	23,0	11,5	—	3,7	15,0	—	4,0 × 1,3	3,0
» <i>griseolus</i> . . .	♂	—	—	—	23,0	12,3	—	3,6	—	—	4,1	3,2
» <i>arenalis</i> . . .	♂	80	100	21,0	22,5	11,4	7,8	3,0	10,5	—	4,1	3,0
» <i>delicatus</i> . . .	♂	—	—	21,0	23,0	—	8,0	—	15,0	—	—	3,0
» <i>stolzmanni</i> . . .	♂	82	137	22,5	25,5	—	9,2	3,7	—	—	4,3 × 1,5	3,5
» <i>tenuipes</i> . . .	♂	80	100	22,0	22,5	11,4	7,2	3,5	10,0	—	4,0 × 1,3	3,0
» <i>munchiquensis</i> . . .	♂	81	110	21,0	23,0	12,0	8,0	2,8	11,0	—	3,4	3,0
» <i>andinus</i> . . .	♂	104	149	26,0	26,4	14,0	10,0	3,8	—	—	4,8 × 1,4	3,4
» <i>utiaritensis</i> . . .	♂	100	120	22,0	24,0	12,0	9,0	—	11,0	—	4,0 × 1,5	3,5
» <i>matogrossae</i> . . .	♂	95	115	20,0	24,0	12,2	9,0	—	11,0	—	4,0 × 1,3	3,0
» <i>minutus</i> . . .	imm.	—	76	20,1	21,1	10,6	—	—	—	—	—	—
» <i>maranonicus</i> . . .	♂	92	123	24,0	—	12,6	—	3,8	11,4	—	4,4 × 1,7	3,7
» <i>fulvirostris</i> . . .	♂	188	130	23,5	23,0	12,0	9,0	3,2	11,0	—	3,0	3,0
» <i>Thallomyscus dryas</i> . . .	♂	87	109	23,0	24,5	12,4	8,7	3,2	10,8	—	4,5 × 2,0	3,1
» <i>humilior</i> . . .	♂	90	122	20,0	26,0	12,1	8,5	3,2	10,5	—	4,0 × 1,7	3,0
» <i>aurillus</i> . . .	♂	83	134	22,5	23,5	13,0	8,2	3,2	11,0	—	4,2	3,0
<i>Melanomys caliginosus</i> . . .	♂	127	76	25,4	29,0	15,5	11,0	6,0	12,5	—	4,2	4,5
» <i>oroensis</i> . . .	♂	120	100	27,0	28,0	15,7	11,4	5,8	13,0	—	5,0	5,0
» <i>affinis</i> . . .	♂	135	90	27,0	30,5	15,8	—	—	—	—	—	—
» <i>monticola</i> . . .	♂	123	99	26,0	30,0	16,0	10,2	7,0	13,0	—	4,5	4,3
» <i>phaeopus</i> . . .	♂	112	98	24,0	—	15,0	12,0	5,5	—	7,7	4,8 × 2,1	4,6
» <i>olivinus</i> . . .	♂	135	90 <sup>1</sup>	25,0	30,5	16,0	11,8	5,9	—	—	5,6 × 2,2	4,8
» <i>vallicola</i> . . .	♂	114	79	25,0	27,0	14,6	10,5	5,6	12,0	—	4,2	4,6
» <i>tolimensis</i> . . .	♂	117	85	26,5	30,0	16,0	10,0	5,6	13,3	—	4,8	4,8
» <i>lomitensis</i> . . .	♂	120	90	26,0	25,0	14,0	9,0	5,0	13,0	—	4,2	4,5
» <i>obscurior</i> . . .	♂	111	89	22,4	—	15,0	10,5	5,9	—	7,4	4,5 × 2,1	4,5
» <i>buenavistae</i> . . .	♂	117	106	27,0	31,0	17,0	11,5	6,0	13,5	—	4,8	4,8
» <i>columbianus</i> . . .	♂	128	102	27,0	30,0	16,0	10,5	6,5	13,0	—	4,6	4,8
» <i>robustus</i> . . .	♂	122	—	27,0	31,4	16,2	12,0	6,8	14,0	—	5,1	5,0
<i>Neacomys spinosus</i> . . .	♂	75	95	22,0	19,3	10,8	—	4,0	—	4,7	—	2,8
» <i>tenuipes</i> . . .	♂	76	93	20,0	—	—	—	—	—	—	—	—
» <i>amoenus</i> . . .	♂	90	102	23,0	24,6	12,7	—	4,3	—	—	4,0	3,1
» <i>guianae</i> . . .	♂	64	67	18,5	20,0	—	7,0	4,0	10,0	5,5	3,0	2,5
» <i>pusillus</i> . . .	♂	75	70	20,0	19,0	10,0	7,5	—	10,3	4,0	—	2,5
<i>Scolomys melanops</i> . . .	♂	90	68	20,0	21,9	12,8	7,6	4,8	10,9	5,5	3,7 × 2,0	2,6

<sup>1</sup> Cotype in Brit. Mus.

Measurements of the type-specimens of the genera *Aepeomys*, *Chilomys*, *Rhagomys*, *Oecomys*, *Phaenomys*, *Inomys*, *Delomys* and *Tylomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter-orbital breadth	Width of braincase	Diastema	Palatal foramina	Length of upper molars
<i>Aepeomys lugens</i>	♂	114	118	27,0	—	14,8	12,2	6,0	—	8,3	5,9 × 2,6	4,8
» <i>vulcani</i>	—	111	84	25,0	—	—	10,1	6,0	—	7,5	5,5 × 2,1	—
» <i>fuscatus</i>	♂	110	110	25,0	26,3	15,0	10,5	5,0	—	7,0	4,0	4,2
<i>Chilomys instans</i>	—	99	130	22,7	—	13,6	8,6	4,6	—	7,1	3,5 × 1,9	3,7
» <i>fumeus</i>	♂	90	121	22,0	23,8	13,2	—	4,6	—	6,7	—	3,1
<i>Rhagomys rufescens</i>	♂	94	93	20,0	—	16,8	9,0	5,1	—	8,0	4,3	4,9
<i>Oecomys bicolor</i>	♂	95	90	20,1	27,5	14,7	8,5	5,3	—	—	—	4,2
» <i>dryas</i>	♂	100	120	22,0	27,0	15,0	9,3	5,2	12,2	—	4,6 × 2,2	3,8
» <i>rosilla</i>	♂	109	101	20,5	28,0	15,5	9,0	5,0	12,8	—	5,4	3,8
» <i>paricola</i>	♂	100	100	22,0	25,0	—	—	4,7	—	—	4,0 × 2,1	4,2
» <i>nitedulus</i>	♂	118	125	23,0	29,0	—	—	—	13,3	—	5,2	3,7
» <i>florenciae</i>	♂	100	100	22,0	—	—	—	—	—	—	—	—
» <i>rutilus</i>	♂	—	94	20,0	24,2	13,5	7,7	4,4	11,0	—	3,7 × 2,2	3,4
» <i>milleri</i>	♂	95	90	20,0	24,0	—	—	—	—	—	—	3,5
» <i>benevolens</i>	♂	110	112	20,0	29,0	15,5	10,5	4,5	12,5	—	5,0 × 2,3	4,0
» <i>phaeotis</i>	♂	112	—	23,5	30,2	16,3	9,8	5,3	14,0	—	5,0	4,2
» <i>roberti</i>	♂	110	145	25,0	32,0	16,0	11,0	5,6	14,0	—	5,0 × 3,1	4,8
» <i>marmosurus</i>	♂	124	157	26,0	34,2	17,5	11,4	5,8	—	—	5,2	5,2
» <i>tapajinus</i>	♂	126	158	25,0	—	16,0	11,8	5,9	—	—	5,8 × 3,0	4,7
» <i>guianae</i>	♂	115	155	26,0	32,7	17,7	—	—	—	—	5,7	4,9
» <i>caicarae</i>	♂	122	152	25,0	30,2	13,6	11,0	5,0	13,0	—	6,0	5,0
» <i>mamorae</i>	♂	130	161	27,0	33,5	17,5	—	5,2	—	—	5,7	5,3
» <i>superans</i>	♂	150	199	31,0	37,3	18,7	13,8	6,2	15,0	—	6,3 × 3,2	6,2
» <i>palmeri</i>	♂	131	156	30,0	33,4	17,0	11,1	6,0	14,0	—	6,2 × 2,4	5,6
» <i>osgoodi</i>	♂	120	140	25,0	31,7	16,6	11,0	5,5	—	—	5,5	5,2
» <i>catherinae</i>	♂	132	166	30,0	34,0	—	—	—	—	—	—	5,2
» <i>rex</i>	♂	152	158	26,0	33,0	—	11,0	6,0	15,5	—	6,4	5,5
» <i>illectus</i>	♂	—	160	25,0	—	—	—	—	—	—	—	—
» <i>mincae</i>	♂	126	160	25,0	—	—	—	—	—	—	—	—
» <i>emiliae</i>	♂	135	165	28,0	—	—	—	—	—	—	—	—
» <i>melleus</i>	♂	140	150	28,0	33,5	17,8	10,7	5,5	13,7	—	6,0	5,4
<i>Phaenomys ferrugineus</i>	—	148	187	32,5	—	19,0	14,0	5,0	—	—	7,8 × 2,9	5,9
<i>Inomys incanus</i>	♂	104	115	25,0	30,7	14,7	12,6	5,2	—	—	6,1	4,4
<i>Delomys dorsalis</i>	—	135	124	27,0	25,5	—	13,3	5,3	—	—	6,0	4,5
» <i>lechei</i>	—	123	119	—	33,8	17,0	13,0	5,7	—	—	—	5,1
» <i>collinus</i>	♂	130	132	30,0	33,8	16,3	—	5,0	—	—	6,8	5,0
» <i>sublineatus</i>	♂	140	111	27,0	—	18,0	13,0	5,1	—	—	7,2 × 3,1	4,8
<i>Tylomys mirae</i>	♂	230	266	41,0	54,0	28,0	19,0	11,0	—	—	—	8,8

Measurements of the type-specimens of the genus *Rhipidomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomatic breadth	Length of nasals	Least inter-orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Rhipidomys leucodactylus</i>	—	163	177	31,5	41,7 <sup>1</sup>	—	22,5 <sup>1</sup>	14,5	6,0	16,7	8,3 × 3,5	6,8
» <i>equatoris</i>	♂	175	220	32,0	40,0	—	21,1	14,4	6,1	15,8	8,4	7,0
» <i>austrinus</i>	♂	154	180	31,4	36,5	—	20,0	13,0	5,6	—	8,0 × 3,2	6,2
» <i>collinus</i>	♂	135	167	29,0	33,7	—	18,0	12,0	5,0	—	7,0 × 3,4	5,7
» <i>bovallii</i>	♂	180	198	33,0	—	—	—	15,0	5,6	—	8,6	6,8
» <i>lucullus</i>	♂	180	220	34,0	41,5	—	23,3	8,2	5,7	17,3	8,3	6,8
» <i>modicus</i>	♂	131	176	28,0	35,5	—	18,4	12,0	6,1	—	7,0	5,6
» <i>rex</i>	♂	211	266	39,0	46,0	—	25,0	16,5	7,0	—	9,5 × 4,0	7,1
» <i>sclateri</i>	♂	133	172	33,0	—	31,5	19,0	12,8	6,3	—	8,0	6,4
» <i>couesi</i>	♂	208	252	35,0	44,5	38,0	23,4	16,5	6,4	—	—	6,6
» <i>goodfellowi</i>	♂	186	191	29,0	39,0	—	20,0	14,6	6,1	—	8,1 × 3,3	6,0
» <i>macrurus</i>	♂	110	130	—	—	—	—	—	—	—	—	—
» <i>venezuelae</i>	♂	155	160	—	—	31,2	19,5	12,0	5,2	—	7,6 × 3,0	5,1
» <i>cumananus</i>	♂	150	176	29,0	—	—	20,0	12,5	5,3	15,0	8,0 × 3,6	6,0
» <i>nitela</i>	♂	133	140	25,0	32,0	—	16,6	10,8	4,5	—	6,8 × 2,5	4,4
» <i>fervidus</i>	♂	130	135	27,0	32,5	—	—	—	5,5	—	7,0	4,5
» <i>cearanus</i>	♂	101	128	26,0	29,5	—	—	9,6	4,8	13,6	6,3 × 2,7	4,9
» <i>yuruanus</i>	♂	147	163	26,0	34,0	—	18,0	10,0	5,0	9,5	7,0	4,7
» <i>milleri</i>	♂	140	155	25,0	30,0	—	17,0	9,5	5,0	13,5	7,0	5,0
» <i>pictor</i>	♂	112	151	25,0	32,0	—	17,0	10,7	5,6	15,0	6,3 × 2,4	4,7
» <i>venustus</i>	♂	121	151	24,8	33,5	—	18,2	12,0	4,3	17,5	6,6 × 2,5	5,0
» <i>microtis</i>	♂	109	136	25,0	—	—	—	9,6	4,8	—	6,0 × 2,6	4,7
» <i>fulviventris</i>	♂	113	141	24,0	—	25,7	16,6	10,5	4,3	—	6,2 × 2,2	4,7
» <i>elatturus</i>	♂	108	117	24,0	28,2	—	15,6	11,3	4,3	—	5,7 × 2,0	4,5
» <i>mollissimus</i>	♂	123	156	—	32,0	—	17,0	11,0	5,0	14,0	—	5,0
» <i>quindianus</i>	♂	79	129	—	28,0	—	14,0	9,0	5,0	13,0	4,8	4,8
» <i>caucensis</i>	♂	103	133	22,0	27,0	—	14,0	9,0	4,0	13,0	5,0	4,0
» <i>latimanus</i>	♂	116	157	27,5	31,0	—	16,0	11,0	5,0	14,0	6,5	5,0
» <i>cocalensis</i>	♂	161	199	28,0	35,0	—	18,0	12,0	5,3	15,0	7,0	5,0
» <i>mastacalis</i>	♂	131	183	28,0	35,0 <sup>2</sup>	—	18,6 <sup>2</sup>	10,5 <sup>2</sup>	6,0 <sup>2</sup>	15,0 <sup>2</sup>	6,5 <sup>2</sup>	5,0 <sup>2</sup>
» <i>similis</i>	♂	165	185	31,0	34,0	—	18,5	12,0	5,0	15,2	6,4	5,1
» <i>ochrogaster</i>	♂	154	228	35,0	37,0	—	19,5	14,0	6,0	—	8,0 × 3,0	6,0
» <i>klagesi</i>	♂	127	—	23,0	32,0	—	17,0	10,0	5,6	14,0	6,0 × 2,0	5,0

<sup>1</sup> ♂ Peru, Ocobamba. (Brit. Mus. N:o 98. 11. 6. 19.)<sup>2</sup> Cotype in Copenhagen Zool. Museum. N:o L. 16.

Measurements of the type-specimens of the genus *Thomasomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomatic breadth	Length of nasals	Least inter-orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Thomasomys aureus</i> . . . . .	—	165	229	33,9	39,0 <sup>1</sup>	—	20,6 <sup>1</sup>	15,0 <sup>1</sup>	5,4 <sup>1</sup>	15,5 <sup>1</sup>	7,8 × 2,6 <sup>1</sup>	7,6 <sup>1</sup>
» <i>popayanus</i> . . . . .	—	156	218	35,0	39,0	—	20,0	15,0	5,0	17,0	7,0	7,0
» <i>altorum</i> . . . . .	♂	160	200	34,0	40,5	—	20,4	14,8	5,0	16,0	10,0	7,0
» <i>princeps</i> . . . . .	♂	181	226	35,0	—	—	21,8	15,6	5,2	—	8,2 × 3,5	7,5
» <i>praetor</i> . . . . .	♂	168	180	35,0	40,0	—	22,3	15,6	4,2	—	9,2 × 3,2	7,6
» <i>nicefori</i> . . . . .	♂	150	187	32,0	36,5	—	19,0	13,2	5,3	—	8,2	6,0
» <i>auricularis</i> . . . . .	♂	—	190	32,0	37,1	—	19,7	13,4	4,4	—	7,7	6,6
» <i>pyrrhonotus</i> . . . . .	—	147	195	31,0	—	31,5	20,0	14,0	4,2	—	7,5	7,0
» <i>rosalinda</i> . . . . .	—	135	170	27,5	35,0	—	18,5	12,3	4,0	14,5	7,8	6,5
» <i>cinereus</i> . . . . .	—	120	127	28,0	30,0	—	15,4	—	4,1	—	—	4,7
» <i>ischyrus</i> . . . . .	—	137	154	31,0	33,0	—	17,1	13,9	6,4	—	6,7 × 2,3	5,1
» <i>eleusis</i> . . . . .	—	126	141	28,5	33,0	—	16,0	13,6	5,5	14,2	—	5,2
» <i>silvestris</i> . . . . .	—	—	151	30,0	29,3	—	15,5	11,4	5,0	13,5	5,5	5,0
» <i>kalinowskii</i> . . . . .	—	140	155	32,8	36,0	—	18,5	14,7	5,2	—	7,0	4,9
» <i>cinereiventer</i> . . . . .	—	161	159	36,0	36,5	—	18,5	15,0	6,0	15,0	6,0	5,5
» <i>dispar</i> . . . . .	—	98	182	31,0	32,5	—	15,5	12,5	5,8	14,3	5,5	5,3
» <i>contradictus</i> . . . . .	—	119	148	31,0	30,3	—	15,9	12,3	5,0	13,5	5,3	5,0
» <i>rhoadsi</i> . . . . .	—	—	110	31,5	35,0	—	18,0	—	6,0	—	—	7,0
» <i>fumeus</i> . . . . .	—	115	105	27,0	30,7	—	15,2	11,7	5,3	13,3	—	4,6
» <i>ladewi</i> . . . . .	—	136	158	33,0	33,3	—	18,7	12,2	5,2	15,6	6,8 × 2,7	6,0
» <i>erro</i> . . . . .	—	152	178	30,0	32,0	—	15,2	12,2	5,9	—	5,2	5,1
» <i>oenax</i> . . . . .	—	110	181	29,0	31,0	—	16,5	11,0	4,0	14,0	7,0	5,5
» <i>caudivarius</i> . . . . .	—	—	161	30,0	31,9	—	16,9	11,3	5,2	14,2	6,0	5,1
» <i>bombycinus</i> . . . . .	—	111	125	27,0	28,6	—	15,3	11,3	5,2	13,0	5,5	5,3
» <i>paramorum</i> . . . . .	—	96	130	24,5	—	23,5	13,8	10,0	4,5	12,7	5,6	4,2
» <i>oreas</i> . . . . .	—	108	136	25,0	29,0	—	15,8	10,5	4,1	13,4	5,6 × 2,2	4,3
» <i>taczanowskii</i> . . . . .	—	87	133	21,0	25,7	—	13,0	9,0	4,0	12,4	5,0	4,1
» <i>vestitus</i> . . . . .	—	138	166	33,3	36,2	—	19,3	12,7	4,9	16,0	6,6 × 3,0	6,2
» <i>laniger</i> . . . . .	—	117	123	21,8	—	24,0	15,4	10,3	5,0	—	5,5 × 2,4	4,7
» <i>emeritus</i> . . . . .	—	—	132	23,0	29,7	—	15,3	10,6	4,7	—	5,8	4,7
» <i>niveipes</i> . . . . .	—	113	140	26,0	—	26,8	16,0	12,4	4,0	—	7,0 × 2,4	5,0
» <i>monochromus</i> . . . . .	—	—	110	25,0	29,0	—	—	11,0	4,8	—	—	4,6
» <i>hylophilus</i> . . . . .	—	126	147	26,5	30,5	—	16,3	10,8	4,7	—	6,1 × 2,5	5,1
» <i>baeops</i> . . . . .	—	118	148	23,0	—	—	14,6	8,8	3,5	—	5,1 × 1,9	4,7
» <i>gracilis</i> . . . . .	—	82	120	21,5	26,1	—	13,6	9,0	3,7	12,0	5,5	3,6
» <i>hudsoni</i> . . . . .	—	—	120	23,0	25,2	—	13,3	8,7	4,2	12,1	4,4	3,5
» <i>cinnameus</i> . . . . .	—	90	120	24,0	26,4	—	—	9,3	4,0	12,7	5,0 × 1,8	4,0
» <i>daphne</i> . . . . .	—	92	133	23,5	27,7	—	14,2	8,5	4,7	13,0	5,3	4,2
» <i>australis</i> . . . . .	—	89	138	25,0	27,3	—	14,0	8,7	4,6	12,6	5,8	4,0
» <i>macconnelli</i> . . . . .	—	95	147	24,5	26,5	—	14,5	9,1	4,6	12,7	5,9 × 2,5	5,0
» <i>fraternus</i> . . . . .	—	174	125	25,5	31,4	—	15,0	13,0	5,2	14,0	6,2	5,0
» <i>notatus</i> . . . . .	—	128	155	27,0	33,0	—	17,4	12,0	4,2	14,0	7,1	4,6

<sup>1</sup> ♀ Western Ecuador, above Quito. (Stockholm Museum. N:o 62.)

Measurements of the type-specimens of the genera *Holochilus*, *Nectomys*,  
*Reithrodontomys*, *Eligmodontia* and *Paralomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Diastema	Palatal foramina	Length of upper molars
<i>Holochilus physodes</i>	—	183	157	37,1	—	—	—	—	—	—	—	—
» <i>leucogaster</i>	—	157	183	41,4	—	—	—	—	—	—	—	—
» <i>russatus</i>	—	166	150	37,1	—	—	—	—	—	—	—	—
» <i>vulpinus</i>	—	—	168	—	42,2 <sup>1</sup>	24,6 <sup>1</sup>	16,0 <sup>1</sup>	5,5 <sup>1</sup>	16,0 <sup>1</sup>	12,1 <sup>1</sup>	7,6 × 2,4 <sup>1</sup>	7,8 <sup>1</sup>
» <i>chacarius</i>	—	175	164	38,0	36,7	19,5	14,0	4,5	—	10,6	7,5 × 2,5	6,9
» <i>balnearum</i>	+H	132	133	35,5	35,0	20,0	13,3	4,3	—	10,0	7,3	7,5
» <i>darwini</i>	+H	215	192	50,0	—	—	12,0	5,0	—	—	8,0	—
» <i>simpsoni</i>	—	192	125	35,0	—	—	—	—	—	—	—	—
» <i>sciureus</i>	—	—	164	37,1	38,5 <sup>2</sup>	22,2 <sup>2</sup>	15,0 <sup>2</sup>	5,3 <sup>2</sup>	15,0 <sup>2</sup>	11,5 <sup>2</sup>	7,0 × 3,2 <sup>2</sup>	7,5 <sup>2</sup>
» <i>nanus</i>	+H	122	112	32,0	—	19,0	12,5	4,6	—	9,7	6,7 × 2,3	6,5
» <i>guianae</i>	+H	178	159	38,5	37,0	20,6	14,5	5,0	—	—	7,5 × 2,6	6,9
» <i>venezuelae</i>	+H	203 <sup>3</sup>	206 <sup>3</sup>	—	—	—	—	—	—	—	—	—
» <i>amazonicus</i>	+H	201	188	—	41,2	—	16,3	4,8	—	12,5	8,7 × 3,0	7,4
» <i>incarnum</i>	+H	128	132	34,0	34,0	—	14,0	—	—	—	6,2	7,2
<i>Nectomys squamipes</i>	—	194	222	45,0	43,5	23,1	17,4	6,7	—	—	7,4 × 3,2	7,0
» <i>mattensis</i>	♂	200	200	47,0	43,0	22,2	—	7,0	—	—	7,5 × 3,2	6,3
» <i>melanius</i>	♂	244	200	46,0	45,0	24,0	17,7	7,4	—	—	8,6	6,2
» <i>pollens</i>	♂	252	245	49,0	46,0	26,0	18,0	7,7	—	—	8,3 × 4,0	7,1
» <i>apicalis</i>	♂	225	245	—	46,0	25,0	—	—	—	—	7,0	7,0
» <i>palmipes</i>	♂	—	—	—	47,0	24,0	18,3	3,6	—	11,9	—	6,9
» <i>grandis</i>	♂	290	270	56,0	—	26,0	19,8	7,2	—	13,2	7,3 × 3,1	7,6
» <i>fulvinus</i>	♂	231	207	48,0	—	25,0	18,0	7,1	—	13,2	7,5 × 3,2	7,1
» <i>garleppii</i>	+H	205	200	45,0	—	23,7	18,8	7,8	—	13,0	7,2 × 3,1	6,9
» <i>russulus</i>	+H	150	180	35,0	36,0	19,7	14,6	6,6	—	10,4	6,0 × 2,6	6,0
» <i>hammondi</i>	+H	203	251	32,0	43,0	21,5	16,0	7,7	—	12,0	6,7 × 4,0	6,8
» <i>esmeraldorum</i>	♂	141	149	33,0	34,0	18,2	14,0	5,9	—	10,0	5,4	5,3
» <i>saturatus</i>	♂	150	180	35,0	47,5	26,0	18,5	9,0	—	12,5	8,2 × 3,4	8,7
» <i>magdalanae</i>	—	—	—	—	—	25,0	18,2	7,8	—	12,6	7,4 × 3,4	7,1
<i>Reithrodontomys söderströmi</i>	—	72	83	19,0	—	11,5	8,9	3,7	—	5,9	4,1 × 1,6	3,8
» <i>milleri</i>	♂	78	107	19,0	23,0	11,5	8,0	4,0	11,0	5,0	—	4,0
<i>Eligmodontia typus</i>	—	65	87	19,6	23,5	14,0	9,0	3,8	—	—	5,0	3,8
» <i>elegans</i>	—	91	95	21,1	23,3	12,3 <sup>4</sup>	8,6 <sup>4</sup>	4,1 <sup>4</sup>	11,5 <sup>4</sup>	5,2 <sup>4</sup>	4,2 <sup>4</sup>	3,9 <sup>4</sup>
» <i>morgani</i>	+H	85	80	23,0	24,0	12,0	10,0	4,0	—	—	5,0 × 2,0	4,0
» <i>pamparum</i>	+H	75	80	20,0	23,4	—	—	—	—	—	—	3,6
» <i>moreni</i>	♂	80	91	23,0	—	12,4	10,0	4,0	—	—	5,4 × 1,6	3,6
» <i>hirtipes</i>	♂	90	97	24,0	25,3	13,5	9,8	4,0	12,0	—	5,9	3,8
» <i>jucunda</i>	♂	85	80	22,0	25,0	13,2	—	—	—	—	5,7	4,0
» <i>marica</i>	♂	65	93	20,0	21,4	12,0	8,0	3,8	11,0	—	4,8	3,5
<i>Paralomys gerbillus</i>	♀	82	90	20,0	24,0	12,3	9,5	4,0	—	—	5,6	3,5

<sup>1</sup> ♂ Goya, Argentine. (Brit. Mus. N:o 98. 12. 3. 1.)<sup>2</sup> Brazil, Bahia. (Brit. Mus. N:o 41. 587.)<sup>3</sup> ♂ Venezuela, El Llagual. (Amer. Mus. Nat. Hist. N:o 16964.)<sup>4</sup> ♀ Patagonia, Las Lajas, Neuquen Terr. (Stockholm Mus. N:o 2516.)

Measurements of the type-specimens of the genera *Hesperomys*, *Reithrodon* and *Sigmodon*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Diastema	Palatal foramina	Length of upper molars
<i>Hesperomys bimaculatus</i>	—	78	49	16,8	21,3	11,6	8,4	—	—	—	—	—
» <i>callosus</i>	—	114	93	—	—	—	—	—	—	—	—	—
» <i>boliviae</i>	— C <sub>3</sub>	106	82	21,0	28,8	14,6	11,8	3,6	—	—	6,6 × 2,2	4,1
» <i>laucha</i>	—	70	50	15,0	—	—	—	—	—	—	—	—
» <i>musculus</i>	— C <sub>3</sub> C <sub>4</sub>	100	98	21,0	26,0	13,8	11,3	4,0	11,1	—	5,9	3,6
» <i>cortensis</i>	— C <sub>3</sub> C <sub>4</sub>	94	83	19,0	24,5	13,4	9,0	3,8	—	—	5,6	3,5
» <i>gracilipes</i>	—	91	110	26,5	28,6	12,2	7,0 <sup>1</sup>	3,5 <sup>1</sup>	9,0 <sup>1</sup>	—	4,0 <sup>1</sup>	4,0 <sup>1</sup>
» <i>lepidus</i>	—	76	34	17,0	23,9	13,5	—	4,0	—	—	5,0	3,6
» <i>sorella</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	72	62	18,0	22,7	10,7	8,8	3,7	11,0	—	5,5 × 2,0	3,5
» <i>ducilla</i>	—	73	30	17,0	21,7	12,0	8,0	3,5	10,4	—	5,0	3,7
» <i>carillus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	74	49	17,0	21,5	11,4	8,5	3,1	10,0	—	5,2	3,4
» <i>marcarum</i>	—	82	46	17,7	—	—	9,0	3,9	—	—	5,0	3,7
» <i>argurus</i>	—	79	45	16,5	22,0	12,0	8,5	3,3	—	—	5,0	3,4
» <i>murillus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	72	72	16,5	21,0	11,3	—	3,3	—	—	4,3	3,4
» <i>cordovens</i>	— C <sub>3</sub> C <sub>4</sub>	85	74	16,0	23,2	—	—	—	10,8	—	—	3,3
» <i>expulsus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	124	85	19,2 <sup>2</sup>	26,7 <sup>2</sup>	14,3 <sup>2</sup>	11,0 <sup>2</sup>	4,5 <sup>2</sup>	11,4 <sup>2</sup>	6,8 <sup>2</sup>	5,0 <sup>2</sup>	4,0 <sup>2</sup>
» <i>tener</i>	—	95	67	16,5	19,7	—	8,4	3,7	—	—	5,3	3,5
» <i>venustus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	94	72	21,0	—	14,5	10,5	4,5	—	—	5,7 × 1,8	4,3
» <i>callidus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	115	77	21,0	29,2	16,0	11,6	4,5	13,0	—	6,5	4,5
» <i>fecundus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	124	90	21,0	29,0	15,5	12,3	4,7	—	—	6,9	4,6
» <i>muriculus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	89	69	20,0	25,3	13,2	10,0	4,2	10,0	—	6,0	4,1
» <i>frida</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	102	91	19,0	26,7	14,0	10,7	3,8	11,6	—	5,7	3,9
» <i>miurus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	86	76	19,0	26,6	—	—	—	11,2	—	—	3,6
<i>Reithrodon typicus</i>	— C <sub>3</sub> C <sub>4</sub>	152	—	30,7	—	—	15,5	—	—	—	6,5	6,5
» <i>currentium</i>	— C <sub>3</sub> C <sub>4</sub>	139	—	31,0	36,5	19,0	—	—	—	—	—	7,6
» <i>cuniculoides</i>	— C <sub>3</sub> C <sub>4</sub>	163	84	34,9	33,9	21,2	14,8	—	—	—	10,1	7,9
» <i>obscurus</i>	— C <sub>3</sub> C <sub>4</sub>	130	65	34,0	—	—	15,5	—	—	—	10,0	6,0
» <i>flammarum</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	169	100	34,0	37,4	21,0	16,7	4,4	—	—	11,0	6,4
» <i>evae</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	130	91	32,3	34,5	—	—	—	—	—	—	—
» <i>hatcheri</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	—	78	34,0	35,7	20,5	16,0	4,0	—	—	9,0	6,4
» <i>auritus</i>	—	118	78	—	—	—	—	—	—	—	—	—
» <i>marinus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	155	104	32,0	37,5	21,0	—	—	—	—	—	7,2
» <i>pampanus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	145	85	29,0	35,5	19,8	15,0	—	—	—	9,0	6,7
» <i>caurinus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	139	99	30,5	36,8	19,7	16,6	—	15,6	—	9,8	6,8
<i>Sigmodon hirsutus</i>	—	—	100	34,8	—	—	—	—	—	—	—	—
» <i>peruanus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	150	95	31,0	36,0	23,0	12,5	6,3	—	—	7,4	6,5
» <i>simonsi</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	155	100	29,0	35,7	20,3	12,4	6,0	—	—	7,0 × 2,0	7,0
» <i>puna</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	145	98	29,0	34,0	20,0	12,0	5,0	—	—	—	7,0
» <i>chonensis</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	180	80	30,0	36,0	20,0	—	6,0	—	9,0	7,0	6,5
» <i>sanctaemartae</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	—	115	32,0	36,4	19,2	13,2	5,6	—	—	—	—
» <i>bogotensis</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	173 <sup>3</sup>	100 <sup>3</sup>	33,0 <sup>3</sup>	36,0	21,0	14,0	6,1	—	—	8,0	6,1
» <i>lönnerbergi</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	170	100	32,0	37,0	21,5	13,6	6,0	—	—	7,8	6,5
» <i>inopinatus</i>	— C <sub>3</sub> C <sub>4</sub> C <sub>5</sub>	—	99	31,0	35,6	21,5	12,8	4,5	—	—	7,3	6,8

<sup>1</sup> Topotype (imm.) in Brit. Mus. N:o 0. 8. 5. 2.<sup>2</sup> Cotype in Copenhagen Zool. Museum. N:o 245. ♀.<sup>3</sup> Approximate (apud J. Allen.)

Measurements of the type-specimens of the genera *Sigmomys*, *Neotomys*, *Irenomys*, *Phyllotis* and *Graomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Basilar length	Palatal foramina	Length of upper molars
<i>Sigmomys alstoni</i>	♂	135	88	25,0	33,0	—	—	—	—	—	—	—
» <i>savannarum</i>	♂	133	95	25,0	32,0	19,0	11,5	4,5	—	—	7,0 × 2,4	5,3
» <i>venester</i>	♀	115	80	25,0	29,0	17,0	10,3	4,7	—	—	6,4	5,0
<i>Neotomys ebriosus</i>	♂	100	61	21,5	—	15,7	12,8	3,4	—	—	5,5	5,2
» <i>vulturinus</i>	♀	155	73	22,5	30,0	17,0	12,2	3,1	—	—	6,9	6,0
<i>Irenomys longicaudatus</i>	—	169	160	31,0	25,0 <sup>1</sup>	13,2 <sup>1</sup>	—	4,1 <sup>1</sup>	13,0 <sup>1</sup>	—	5,5 × 2,0 <sup>1</sup>	5,0 <sup>1</sup>
» <i>mochae</i>	pull.	70	70	17,0	—	—	—	—	—	—	—	—
<i>Phyllotis darwini</i>	—	152	121	28,6	—	—	13,2	4,5	—	—	7,5	5,0
» <i>posticalis</i>	♀	117	122	25,0	30,7	—	—	4,0	—	—	7,2	5,3
» <i>limatus</i>	♂	115	150	25,0	31,4	16,0	—	4,4	—	—	—	4,8
» <i>vaccarum</i>	♂	130	140	28,0	34,0	17,5	13,7	4,0	—	—	8,4	5,8
» <i>wolffsohni</i>	♀	125	144	28,0	32,0	16,0	13,4	4,4	13,1	—	8,0 × 2,7	5,4
» <i>magister</i>	♂	152	158	32,0	36,8	18,5	15,3	4,5	—	—	9,0	6,0
» <i>nogalaris</i>	♂	147	164	30,0	35,0	19,0	14,5	—	15,0	—	8,5	5,0
» <i>abrocodon</i>	♂	122	137	28,0	31,5	16,3	13,0	4,0	14,0	—	7,5	5,2
» <i>haggardi</i>	—	97	86	23,0	—	13,5	11,3	4,6	—	—	—	4,4
» <i>lutescens</i>	♂	118	138	25,0	29,0	15,5	12,6	4,0	13,5	—	7,0 × 2,3	4,6
» <i>arenarius</i>	♂	118	114	26,0	30,0	14,5	13,0	3,7	12,8	—	7,5 × 2,5	4,9
» <i>tucumanus</i>	♀	107	110	24,0	31,0	15,8	13,5	4,0	—	—	7,8	5,2
» <i>ricardulus</i>	♀	112	145	26,0	30,0	15,8	12,5	4,2	14,0	—	7,2	5,0
» <i>andium</i>	♂	115	119	25,0	28,7	15,2	11,3	4,3	—	—	7,0	4,4
» <i>stenops</i>	♂	117	132	26,5	29,2	14,4	11,3	4,0	—	—	7,6	4,5
» <i>tamborum</i>	♂	99	118	24,0	25,6	12,8	10,3	3,8	—	—	7,0	4,1
» <i>melanius</i>	♂	105	78	22,0	28,5	15,0	10,8	4,0	13,1	—	7,0	4,3
» <i>fruticicolus</i>	—	—	102	24,0	24,7	12,4	8,9	3,9	11,8	—	—	4,2
» <i>fuscus</i>	♀	—	85	27,0	29,5	15,0	12,6	4,2	13,1	—	6,7	4,2
» <i>xanthopygus</i>	—	133	83	27,5	28,0	14,5	12,0	4,1	13,0	—	4,5	5,0
» <i>amicus</i>	♂	82	105	23,0	24,4	12,7	9,8	4,0	—	—	5,0 × 1,7	3,8
» <i>maritimus</i>	♂	80	100	22,0	—	—	—	—	—	17,1	—	—
» <i>montanus</i>	♀	93	122	24,0	—	—	—	—	—	19,3	—	—
» <i>osilae</i>	♂	99	133	25,0	28,0	15,0	11,5	4,0	—	—	6,0 × 2,0	5,7
» <i>elegantulus</i>	♂	92	70	21,0	27,0	12,5	11,0	4,0	—	—	6,4	4,0
» <i>oreigenus</i>	♂	88	99	24,8	—	13,0	11,6	4,0	13,2	—	5,5	5,2
» <i>definitus</i>	♂	131	132	28,0	31,6	17,0	12,4	—	—	—	7,6 × 2,2	5,6
<i>Graomys griseoflavus</i>	♂	169	140	30,7	33,0	—	14,8	5,5	15,0	—	7,5	5,5
» <i>chacoënsis</i>	♀	142	185	31,0	38,0	18,0	16,0	6,0	—	—	8,0 × 2,5	5,0
» <i>cachinus</i>	♂	137	159	29,0	35,0	17,0	15,5	5,0	—	—	7,2 × 2,5	5,4
» <i>domorum</i>	♂	140	146	31,0	35,4	18,4	15,0	5,6	—	—	7,6 × 2,5	5,1
» <i>centralis</i>	♀	130	156	27,0	33,5	17,0	14,0	5,4	13,5	—	—	4,5
» <i>medius</i>	♂	124	150	27,0	31,2	16,1	11,8	5,2	14,2	—	7,0	5,2
» <i>edithae</i>	♂	108	127	25,0	28,5	15,0	10,5	4,5	13,5	—	6,7	4,7
» <i>lockwoodi</i>	♂	131	158	32,0	35,0	18,0	14,7	—	15,0	—	7,3	5,4
» <i>taterona</i>	♂	152	161	30,0	38,0	19,0	15,5	7,0	—	—	7,7	5,4

<sup>1</sup> ♂ Beatriz, Lake Nahuel Huapi, Patagonia. (Brit. Mus. N:o 19. 1. 1. 9.)

Measurements of the type-specimens of the genera *Euneomys*, *Auliscomys*, *Galenomys*, *Chelemyscus*, *Andinomys*, *Scapteromys*, and *Chinchillula*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Euneomys chinchilloides</i>	—	127	59	25,4	29,6	—	18,0	13,4	—	—	8,5	5,8
» <i>petersoni</i>	—	60	26,0	30,5	—	17,5	14,0	3,5	14,0	8,0	5,2	
» <i>ultimus</i>	♂	129	90	30,0	33,0 <sup>1</sup>	—	20,3 <sup>1</sup>	14,0 <sup>1</sup>	3,8 <sup>1</sup>	14,0 <sup>1</sup>	8,5 <sup>1</sup>	6,0
» <i>mordax</i>	♂	147	78	28,0	—	—	20,0	—	4,7	16,0	7,6	6,1
» <i>dabbeni</i>	♂	90	53	22,0	25,2	—	15,6	10,5	3,5	13,1	6,8	5,3
<i>Auliscomys pictus</i>	♂	100	75	24,1	28,0	—	17,0	—	4,1	—	4,1	5,6
» <i>decoloratus</i>	♂	95	83	23,0	26,6	—	15,4	10,4	4,2	12,6	6,4 × 2,0	5,1
» <i>boliviensis</i>	—	133	87	28,6	—	—	—	13,3	—	—	7,5	5,6
» <i>flavidior</i>	♂	126	95	24,0	30,5	—	16,8	12,2	4,0	—	7,2 × 3,1	5,6
» <i>micropus</i>	—	150	92	27,9	—	—	—	12,5	—	—	—	5,5
» <i>alsus</i>	♂	123	117	27,0	31,3	—	18,0	—	—	—	7,8	5,7
» <i>sublimis</i>	♂	105	54	21,5	25,3	—	14,5	10,0	3,7	12,5	6,0	4,7
» <i>leucurus</i>	♂	102	58	21,3	30,5	—	16,3	11,7	4,0	12,8	7,7	5,7
<i>Galenomys garleppii</i>	♂	123	38	25,0	17,8	—	—	13,4	3,7	—	7,2 × 2,5	5,1
<i>Chelemyscus fossor</i>	—	119	53	22,0	35,0	—	20,5	16,0	4,4	—	8,5	6,5
<i>Andinomys edax</i>	♀	160	145	29,0	37,0	—	—	15,2	4,0	14,0	9,6 × 3,2	7,0
<i>Scapteromys tumidus</i>	♀	171	135	38,1	37,3 <sup>2</sup>	—	18,8 <sup>2</sup>	14,0 <sup>2</sup>	5,8 <sup>2</sup>	15,5 <sup>2</sup>	7,2 × 2,0 <sup>2</sup>	6,2 <sup>2</sup>
» <i>tomentosus</i>	—	—	157	—	—	—	—	—	—	—	—	—
» <i>aquaticus</i>	♂	168	154	36,0	39,0	—	19,0	19,0	6,0	16,0	8,8	6,4
» <i>chacoënsis</i>	♂	225	—	41,0	—	—	23,0	17,0	7,0	16,6	10,0 × 2,6	7,8
» <i>gnambiquaræ</i>	—	197	160	—	55,0	—	—	20,5	10,0	—	12,0	11,5
<i>Chinchillula sahamae</i>	♂	122	59	26,5	—	25,0	16,5	10,7	4,8	—	6,3 × 2,6	7,2

<sup>1</sup> Adult specimen in the Paris Museum (apud THOMAS).

<sup>2</sup> ♂ Soriano, Uruguay. (Brit. Mus. N:o 24. 9. 1. 52.)

Measurements of the type-specimens of the genus *Akodon*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Akodon boliviensis</i>	imm.	48	32	—	—	—	—	—	—	—	—
» <i>pusillus</i>	—	78	57	20,7	—	—	—	—	—	—	—
» <i>lutescens</i>	+O	76	64	19,0	24,0	12,0	—	4,0	—	—	4,0
» <i>arviculoides</i>	—	—	70	22,8	—	—	—	—	—	—	—
» <i>cursor</i>	—	108	—	24,0	31,5	16,0	12,0	5,7	—	7,0	5,0
» <i>montensis</i>	O <sub>3</sub>	128	97	24,0	31,0	15,0	12,5	5,0	12,4	7,0	4,1
» <i>dayi</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	—	—	—	30,8	15,6	11,7	5,6	—	7,4 × 2,8	4,9
» <i>varius</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub> +O	100	80	23,0	29,0	15,0	11,0	5,0	12,4	6,8	5,0
» <i>simulator</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	98	79	24,0	28,5	14,7	10,2	4,6	12,2	7,0	4,9
» <i>glaucinus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	98	75	22,0	27,5	14,3	10,0	5,0	12,0	7,0	4,8
» <i>neocenus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	108	85	23,5	29,2	14,8	11,0	5,2	13,0	7,0	4,8
» <i>tartareus</i>	—	134	94	25,0	31,5	16,6	12,0	5,2	13,5	7,2	4,6
» <i>toba</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	105	78	24,0	29,0	15,0	10,0	5,0	—	7,0	4,7
» <i>arenicola</i>	—	106	69	19,0	24,3	13,1	—	—	—	—	—
» <i>hunteri</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	101	81	21,5	27,7	13,6	—	—	—	6,7	4,5
» <i>beatus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	87	79	22,0	25,7	12,6	9,8	4,1	12,0	6,0	3,7
» <i>sylvanus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	102	77	21,5	27,0	13,7	10,3	4,4	12,0	6,9	4,4
» <i>pervalens</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	116	93	24,6	30,0	16,0	12,3	5,2	12,8	7,6	4,7
» <i>serrensis</i>	—	88	78	22,0	27,0	13,5	11,5	5,3	12,5	6,0	4,6
» <i>leucogula</i>	—	105	73	24,0	—	—	—	—	—	—	—
» <i>spgazzinii</i>	+O	92	71	20,0	—	—	9,6	4,5	—	5,8 × 2,1	4,3
» <i>alterus</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	83	68	20,0	25,0	12,6	9,4	4,6	11,0	6,3	4,3
» <i>jucundus</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	90	62	20,0	23,8	12,3	9,5	4,1	11,3	5,6	3,3
» <i>gossei</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	92	66	19,0	24,0	12,5	8,4	4,2	11,7	5,2	3,8
» <i>olivaceus</i>	—	139	67	23,3	26,5	14,0	11,0	4,2	12,5	6,5	4,1
» <i>mollis</i>	—	100	85	22,0	27,0 <sup>1</sup>	14,0 <sup>1</sup>	9,3 <sup>1</sup>	5,1 <sup>1</sup>	—	6,0 × 2,4 <sup>1</sup>	4,2 <sup>1</sup>
» <i>fumeus</i>	+O	100	84	21,0	26,0	12,7	10,0	5,2	12,0	6,2	4,0
» <i>altorum</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	110	70	22,0	28,0	—	—	4,7	—	6,7	4,3
» <i>orophilus</i>	—	107	85	23,0	26,8	13,3	10,8	4,9	—	5,8	4,4
» <i>orientalis</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	116	85	24,0	—	13,8	10,6	5,5	13,0	5,7	4,6
» <i>pacificus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	105	78	23,0	26,5	14,2	10,0	4,4	11,6	5,8	4,2
» <i>surdus</i>	—	110	80	22,5	28,0	14,3	10,4	5,0	—	6,6	4,9
» <i>xanthorhinus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	102	51	19,0	22,0	9,5	9,0	4,5	11,0	—	3,6
» <i>canescens</i>	—	85	72	19,0	27,0	15,4	10,0	5,0	—	—	—
» <i>tucumanensis</i>	+O	81	59	17,5	24,0	12,0	8,0	5,2	11,2	5,5	4,0
» <i>puer</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	78	65	19,0	24,2	11,7	8,5	4,5	10,9	5,4 × 1,9	3,4
» <i>caenosus</i>	—	82	72	20,0	—	11,3	9,0	4,6	—	6,0	3,6
» <i>iniscatus</i>	+O O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	92	53	19,0	23,7	12,4	—	4,0	11,0	5,4	3,5
» <i>collinus</i>	—	85	56	18,0	24,5	12,6	9,0	4,0	11,3	5,8	4,0
» <i>obscurus</i>	—	133	66	24,3	26,0	—	8,5	4,3	12,5	5,6	4,5
» <i>lenguarum</i>	—	115	76	21,0	28,5	16,0	9,7	4,9	—	6,2 × 2,0	4,7
» <i>dolores</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	116	89	23,0	29,0	15,2	10,7	5,1	12,2	7,2	4,8
» <i>benefactus</i>	—	99	65	19,0	27,0	14,3	9,0	4,3	—	5,7	4,5
» <i>nucus</i>	O <sub>3</sub> O <sub>4</sub> O <sub>5</sub>	104	77	23,0	27,2	—	10,0	4,5	12,2	6,5	4,1
» <i>chacoensis</i>	—	—	66	22,5	25,0	12,2	8,4	4,5	12,6	—	4,0

<sup>1</sup> ♂ Cotype in Brit. Museum.

Measurements of the type-specimens of the genera *Chalcomys*, *Zygodontomys*, *Thalpomys*, *Deltamys*, *Hypsimys*, *Thaptomys* and *Bolomys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomat- ic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Chalcomys aereus</i>	♂	108	75	24,0	29,3	—	15,0	11,0	6,0	13,0	6,6	4,9
» <i>baliolus</i>	♂	—	83	25,0	28,0	—	14,7	9,8	5,7	13,4	5,9 × 2,2	4,8
» <i>urichi</i>	♂	—	68	24,0	30,0	—	15,0	11,5	—	—	—	5,0
» <i>venezuelensis</i>	♂	—	60	21,5	34,5	—	19,6	10,0	6,0	—	6,5	5,0
» <i>meridensis</i>	♂	100	80	23,0	26,0	—	13,5	9,0	5,1	—	5,0 × 2,0	4,4
» <i>frustrator</i>	imm.	—	65	26,0	26,0	20,5	13,0	9,0	5,0	11,0	—	4,5
» <i>tolimae</i>	♂	89	76	20,5	25,5	—	13,5	10,0	5,5	12,0	5,6	4,6
» <i>chapmani</i>	♂	103	68	23,0	26,0	—	14,0	10,0	5,0	13,0	6,0	4,6
<i>Zygodontomys brevicauda</i>	♂	—	—	—	32,5	28,7	17,3	13,5	5,8	—	6,9	4,5
» <i>brunneus</i>	♂	152	117	25,0	34,0 <sup>1</sup>	—	17,7 <sup>1</sup>	—	5,0 <sup>1</sup>	—	7,2 × 3,0 <sup>1</sup>	5,0 <sup>1</sup>
» <i>griseus</i>	♂	133	101	26,0	28,5	—	14,0	11,4	5,0	12,0	6,3	4,2
» <i>fraterculus</i>	♂	115	83	26,0	28,0	—	13,5	12,0	4,8	11,3	5,0	4,0
» <i>stellae</i>	♂	110	38	20,6	30,0	—	15,0	11,6	5,0	—	6,1 × 2,5	4,2
» <i>sanctaemartae</i>	♂	—	100	24,5	31,0	—	16,0	13,0	5,0	—	6,2	4,4
» <i>thomasi</i>	♂	125	99	23,0	—	—	16,0	12,0	5,0	—	6,2 × 2,2	4,0
» <i>lasiurus</i>	♂	122	74	21,0	27,0 <sup>2</sup>	—	—	10,0 <sup>2</sup>	5,0 <sup>2</sup>	—	6,0 <sup>2</sup>	4,8 <sup>2</sup>
» <i>fuscinus</i>	♂	98	64	19,0	—	—	14,9	—	4,7	—	6,1 × 2,1	4,5
» <i>microtinus</i>	♂	115	84	24,5	29,7	—	16,0	13,0	4,7	—	6,3 × 3,0	4,1
» <i>punctulatus</i>	♂	132	71	22,0	29,6	—	15,0	10,5	4,8	—	7,0	4,2
» <i>obtusirostris</i>	♂	100	127	25,0	30,0	—	16,0	10,0	5,3	—	4,7 × 2,5	6,0
» <i>tapirapoanus</i>	♂	130	80	25,0	29,5	—	15,8	9,5	5,5	12,0	7,0 × 2,0	5,0
<i>Thalpomys lasiotis</i>	♂	65	39	16,0	23,2 <sup>3</sup>	19,3 <sup>3</sup>	12,3 <sup>3</sup>	8,0 <sup>3</sup>	4,8 <sup>3</sup>	11,2 <sup>3</sup>	5,0 <sup>3</sup>	4,0 <sup>3</sup>
<i>Deltamys kempii</i>	♀	89	85	22,0	25,6	—	11,7	9,2	4,4	10,8	5,7	4,0
<i>Hypsimys budini</i>	♂	89	68	21,0	27,5	—	14,0	10,0	4,2	12,2	6,8	4,9
» <i>deceptor</i>	♂	114	86	24,0	30,0	—	15,0	11,3	4,6	13,2	7,3	5,0
<i>Thaptomys subterraneus</i>	♂	77	41	17,0	—	18,4	—	7,0	—	—	4,8	4,0
» <i>henseli</i>	♂	—	—	—	23,0	—	13,5	9,0	5,0	11,1	—	3,7
» <i>nigrita</i>	♂	116	35	17,4	—	—	—	—	—	—	—	—
<i>Bolomys albiventer</i>	♂	87	67	19,2	—	21,6	12,5	8,6	4,6	—	5,4 × 1,8	4,3
» <i>negrito</i>	♂	120	70	23,5	—	—	14,0	9,0	5,0	—	6,8	5,5
» <i>berlepschii</i>	♂	104	75	20,0	—	—	13,3	13,6	5,0	—	6,0 × 2,1	4,1
» <i>amoenus</i>	♂	100	75	19,5	26,5	—	—	8,5	4,9	11,4	—	4,2
» <i>lactens</i>	♂	101	67	22,0	27,2	—	15,5	9,0	5,0	12,3	6,6	5,0
» <i>orbis</i>	♂	97	59	21,0	26,4	—	14,6	9,0	5,0	12,0	6,4	4,8
» <i>leucolimnaneus</i>	♂	86	58	20,0	23,7	—	12,8	8,3	4,7	12,0	4,7	4,2

<sup>1</sup> Cotype in Brit. Museum.

<sup>2</sup> Cotype in Copenhagen Zool. Museum.

<sup>3</sup> Cotype in Copenhagen Zool. Museum. N:o 387. ♂.

Measurements of the type-specimens of the genera *Abrothrix*, *Chraeomys*, *Notiomys*, *Geoxus* and *Chelemys*.

Species	Sex	Head and body	Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braimcase	Palatal foramina	Length of upper molars
<i>Abrothrix longipilis</i>	—	135	78	26,5	—	—	—	12,0	5,1	—	7,0	5,0
» <i>hirta</i>	—	113	84	23,0	—	24,5	14,0	—	5,0	—	6,3	4,0
» <i>suffusa</i>	♂	110	77	22,0	27,5	—	14,0	11,0	4,8	12,2	6,1	3,4
» <i>modestior</i>	♂	97	68	23,5	29,0	—	14,2	—	4,8	13,0	6,6	4,1
» <i>moerens</i>	♂	110	72	22,5	29,0	—	14,0	—	5,0	12,4	6,6	4,2
» <i>nubila</i>	♂	112	77	23,3	28,7	—	—	11,5	—	12,8	6,0	4,0
» <i>francei</i>	♂	116	80	24,0	30,3	—	13,6	11,5	5,2	12,5	6,4	4,1
» <i>brachiotis</i>	♂	121	68	23,3	27,3	—	—	12,0	5,0	11,5	—	4,2
» <i>illutea</i>	♂	122	78	26,0	30,0	—	14,0	11,0	4,8	13,5	7,5	4,5
<i>Chraeomys pulcherrimus</i>	♂	110	80	23,0	—	24,0	13,6	11,1	4,7	—	6,6 × 2,2	4,1
» <i>cayllomae</i>	♂	94	82	23,0	27,0 <sup>1</sup>	—	14,0 <sup>1</sup>	10,0 <sup>1</sup>	5,3 <sup>1</sup>	13,0 <sup>1</sup>	6,0 <sup>1</sup>	4,0 <sup>1</sup>
» <i>inambarii</i>	♂	110	80	24,0	—	—	—	—	—	—	—	—
» <i>cruceri</i>	♂	100	87	23,0	—	—	—	—	—	—	—	—
» <i>inornatus</i>	♂	122	80	24,5	30,0	—	15,6	12,4	5,0	—	6,9	4,3
» <i>bacchante</i>	♂	102	85	25,0	—	—	—	12,0	5,0	—	6,9 × 2,3	4,2
» <i>sodalis</i>	♂	115	85	25,0	29,5	—	14,5	12,3	4,7	—	7,0	4,3
» <i>scalops</i>	♂	127	51	—	—	—	—	—	—	—	—	—
» <i>jelskii</i>	♂	93	67	21,8	28,1	26,0	14,0	—	4,6	—	6,1	3,8
» <i>pyrrhotis</i>	♂	92	71	21,8	—	—	—	—	—	—	—	—
<i>Notiomys edwardsii</i>	—	78	42	17,4	—	20,0	13,0	9,7	5,4	—	5,0	3,2
<i>Geoxus valdivianus</i>	♂	102	39	21,0	26,9	—	13,5	9,6	5,2	12,9	—	—
» <i>araucanus</i>	♂	—	—	—	27,0	—	13,1	9,4	5,0	12,4	—	3,7
» <i>chiloensis</i>	♂	—	—	—	25,9	—	12,1	10,0	5,0	11,8	—	3,2
» <i>michaelseni</i>	♂	97	45	21,0	27,6	—	13,4	12,2	4,8	—	—	3,5
» <i>microtis</i>	♂	—	28	21,0	27,6	—	12,5	10,5	5,0	12,0	5,0	3,5
» <i>fossor</i>	♂	104	44	20,0	28,0	—	13,7	10,0	5,2	12,8	6,0	3,5
<i>Chelemys megalonyx</i>	♂	110	38	23,9	—	—	—	11,5	5,0	—	5,0	4,5
» <i>macronyx</i>	♂	118	47	24,5	30,0	—	16,3	—	—	—	—	5,1
» <i>vestitus</i>	♂	127	57	23,0	30,0	—	17,0	11,1	4,7	14,0	7,0	5,3
» <i>alleni</i>	♂	—	—	—	30,8	—	18,3	10,5	5,2	—	—	5,4
» <i>fumosus</i>	♂	130	55	24,0	31,5	—	16,8	11,6	4,5	14,0	7,2	5,2
» <i>connectens</i>	♂	—	53	25,0	29,8	—	14,1	12,3	5,1	12,2	7,1	4,2
» <i>angustus</i>	♂	—	—	—	27,0	—	13,5	10,6	5,1	12,4	6,0	3,9
» <i>delfini</i>	♀	106	63	22,0	30,0	—	—	—	—	—	—	4,5
» <i>andinus</i>	—	105	52	23,0	—	—	—	—	—	—	—	—

<sup>1</sup> ♀ Peru, Caylloma. (Brit. Mus. N:o 0. 10. 1. 75.)

Measurements of the type-specimens of the genera *Oxymycterus*, *Podoxymys*, *Microxus*, *Lenoxus* and *Blarinomys*.

Species	Sex	Head and body		Tail	Hindfoot	Skull. Greatest length	Basal length	Zygomatic breadth	Length of nasals	Least inter- orbital breadth	Width of braincase	Palatal foramina	Length of upper molars
<i>Oxymycterus nasutus</i>	—	131	68	26,5	33,0	—	—	12,0	7,0	14,0	—	—	
» <i>rostellatus</i>	♀	163	100	30,5	—	—	—	—	—	—	—	—	
» <i>rufus</i>	—	155	106	—	—	—	—	—	—	—	—	—	
» <i>platensis</i>	♂	140	111	28,0	36,0	—	17,2	13,0	6,2	14,4	8,0	5,4	
» <i>inca</i>	♂	135	105	30,0	38,0	—	18,0	14,3	6,7	—	8,0 × 3,2	5,7	
» <i>iris</i>	♂	160	102	30,0	37,0	—	—	14,5	6,5	15,0	8,1 × 3,4	5,7	
» <i>juliacae</i>	♂	138	112	29,0	36,4	—	16,0	15,0	6,7	—	7,8 × 3,0	8,0	
» <i>roberti</i>	♂	127	110	30,0	—	—	15,3	13,7	6,7	—	7,5 × 2,8	5,2	
» <i>paramensis</i>	♂	130	102	25,0	32,5	—	14,2	12,5	5,6	13,2	7,0 × 2,6	4,9	
» <i>jacentior</i>	♂	146	119	28,0	36,2	—	16,8	14,0	6,0	—	7,5	5,0	
» <i>doris</i>	♂	150	126	31,0	37,5	—	16,0	14,8	6,6	—	7,6	5,5	
» <i>akodontius</i>	♂	116	79	26,0	31,0	—	13,5	11,2	6,0	13,7	6,2	5,0	
» <i>hispidus</i>	♂	162	113	30,2	36,5	—	17,0	14,8	6,6	15,0	8,0	5,6	
» <i>angularis</i>	♂	160	100	30,0	36,3 <sup>1</sup>	—	17,0 <sup>1</sup>	14,0	7,1 <sup>1</sup>	15,3 <sup>1</sup>	8,1 <sup>1</sup>	5,6	
» <i>questor</i>	♂	140	100	30,0	39,5	—	16,2	16,5	6,1	14,5	8,4	5,8	
» <i>judex</i>	♂	152	129	34,5	42,0	—	17,6	16,2	6,8	16,4	8,8	5,8	
» <i>misionalis</i>	♂	—	143	36,0	42,8	—	17,0	17,4	6,2	14,7	9,4	5,7	
» <i>delator</i>	♂	155	106	26,0	34,5	—	14,0	12,1	5,1	13,4	7,1 × 2,9	5,0	
<i>Podoxymys roraimae</i>	♂	101	95	23,0	27,5	—	12,3	11,0	6,0	11,5	7,0 × 2,0	4,4	
<i>Microxus bogotensis</i>	♂	91	70	19,2	—	20,0	12,4	9,7	4,8	—	4,3	3,5	
» <i>mimus</i>	♂	92	96	22,0	27,0	—	13,5	11,0	5,7	13,0	5,8 × 2,1	4,7	
» <i>lanosus</i>	♂	80	51	20,6	—	—	—	9,3	4,8	12,4	5,3 × 2,0	4,0	
» <i>latebricola</i>	♂	83	80	22,0	24,5	—	12,0	9,5	4,8	12,0	4,6 × 2,0	3,5	
» <i>iheringi</i>	♂	100	94	23,5	—	23,0	13,0	11,0	6,0	—	5,2 × 2,2	4,2	
» <i>torques</i>	♂	102	94	22,3	28,0	—	14,3	10,2	5,0	12,5	6,5	4,5	
» <i>affinis</i>	♂	90	70	20,0	25,8	—	14,0	10,0	5,2	12,0	6,0	5,0	
<i>Lenoxus apicalis</i>	♂	148	158	33,5	38,0	—	17,5	17,0	8,0	—	8,6 × 3,5	6,0	
<i>Blarinomys breviceps</i>	—	92 <sup>2</sup>	46 <sup>2</sup>	15,3 <sup>2</sup>	—	21,0 <sup>2</sup>	13,2 <sup>2</sup>	10,2 <sup>2</sup>	7,0	—	4,7	4,0	

<sup>1</sup> Cotype in Brit. Museum.

<sup>2</sup> ♂ Brazil, Colonia Alpina, Theresopolis, Rio Janeiro. (Brit. Mus. apud Thomas.)

### Incertae sedis.

A number of names proposed for South American Rodents have been impossible to identify without an actual comparison of the respective type-specimens, some of which also seem to be lost. PHILIPPI has greatly contributed to a number of unidentifiable forms (Anales del Museo Nacional de Chile, 1900), the great majority of which have either turned out to be synonyms or impossible to identify at present. Several of PHILIPPI's forms were undoubtedly also based on immature examples.

- Mus saltuum* Philippi. (Type locality: Andes near Puerto Montt, Chile.) = *Oryzomys coppingeri*?  
*Mus capito* Philippi. (Type locality: Atacama, Chile.) Type apparently lost.  
*Mus tarsalis* Philippi. (Type locality: Valdivia Province, Chile.)  
*Mus megalotis* Philippi. (Type locality: Santiago Province, Chile.)  
*Mus psilurus* Philippi. (Type locality: Colchagua Province, Chile.)  
*Mus exiguus* Philippi. (Type locality: Andes of Santiago Province, Chile.)  
*Mus chonoticus* Philippi. (Type locality: Chonos Islands, Chile.)  
*Mus commutatus* Philippi. (Type locality: Valdivia, Chile.)  
*Mus melanizon* Philippi. (Type locality: Chile)  
*Mus melanotis* Philippi. (Type locality:?)  
*Mus macronychos* Philippi. (Type locality: Central Chile.)  
*Mus xanthopus* Philippi. (Type locality: Osorno, Chile.)  
*Mus agilis* Philippi. (Type locality: Illapel, Chile.)  
*Mus subrufus* Philippi. (Type locality: Chile.)  
*Mus pancanus* Philippi. (Type locality: Concepcion, Chile.)  
*Mus platytarsus* Philippi. (Type locality: La Ligua, Chile.)  
*Mus pernix* Philippi. (Type locality: La Ligua, Chile.)  
*Mus leptodactylus* Philippi. (Type locality: Valparaiso, Chile.)  
*Mus glaphyrus* Philippi. (Type locality: Maule Province, Chile.)  
*Mus coquimbensis* Philippi. (Type locality: Serena, Coquimbo Province, Chile.)  
*Mus Boedeckeri* Philippi. (Type locality: Maule Province, Chile.)  
*Mus osorninus* Philippi. (Type locality: Osorno, Chile.)  
*Mus microtis* Philippi. (Type locality: Maule Province, Chile.)  
*Mus atratus* Philippi. (Type locality: Maule Province, Chile.)  
*Mus glirinus* Philippi. (Type locality: Atacama, Chile.)  
*Mus lanatus* Philippi. (Type locality: Atacama, Chile.)  
*Mus puerulus* Philippi. (Type locality: Atacama, Chile.)  
*Mus cauquenensis* Philippi. (Type locality: Quirihue, Maule Province, Chile.)  
*Mus melaenus* Philippi. (Type locality: Maule Province, Chile.)  
*Mus Foncki* Philippi. (Type locality: Puerto Montt, Llanquihue Province, Chile.) = *Akodon* sp.  
*Mus longibarbus* Philippi. (Type locality: Valdivia Province, Chile.) = *Akodon* sp.  
*Mus (Rhipidomys) araucanus* Philippi. (Type locality: Concepcion, Chile.) = *Oryzomys* sp.  
*Mus (Oxymycterus) Landbecki* Philippi. (Type locality: Illapel, Chile.)

- Mus porcinus* Philippi & Landb. (Type locality: Santiago Province, Chile.) Arch. f. Naturgesch. xxiv, N:o i, 1858, p. 78.
- Hesperomys concolor* Wagn. (Type locality: Brazil, Rio Curicaiairi.) Arch. f. Naturgesch. xi, N:o i, 1845, p. 147.
- Hesperomys brachyurus* Wagn. (Type locality: Ytararé, Brazil.) Arch. f. Naturgesch. xi, N:o i, 1845, p. 147.
- Hesperomys caniventris* Wagn. (Type locality: Brazil.) Arch. f. Naturgesch. xi, N:o i, 1845, p. 148.
- Holochilus canellinus* Wagn. (Type locality: Brazil.) Schreber's Säugetiere iii, 1843, p. 552.
- Mus brasiliensis* Desm. (Type locality: Brazil.) Type apparently lost. Nouv. Dict. d'Hist. Nat., xxix, 1819, p. 62.
- Mus cephalotes* Desm. (Type locality: S:t Ignaz Guazu, Paraguay.) Nouv. Dict. d'Hist. Nat., xxix, 1819, p. 63. = *Oryzomys* sp. ?
- Mus nigripes* Desm. (Type locality: Paraguay.) Nouv. Dict. d'Hist. Nat., xxix, 1819, p. 64. = *Oryzomys eliurus* ?
- Mus brevicaudatus* Philippi. (Type locality: Puerto Montt, Llanquihue Province, Chile.) Zeitschr. Ges. Natur., vi, 1873, p. 446. = *Abrothrix* sp. ?
- Scapteromys labiosus* Winge. (Type locality: Brazil, Lagoa Santa, Rio das Velhas, S. W. Minas Geraes Province.) E Museo Lundii, i, N:o iii, 1888, p. 39.
- Scapteromys modestus* Ribeiro. (Type locality: Brazil, Caceres, Matto Grosso Province.) Comm. Linhas Telegr. de Matto Grosso, Zool., Annex N:o 5, 1914, p. 39.
- Mus cinnamomeus* Pictet.
- Mus musculipes* Pictet.
- Mus longitarsus* Rengger. (Type locality: North of Villa Real, Paraguay.) Naturgesch. d. Saeugeth. v. Paraguay, 1830, p. 232.
- Mus auritus* Pictet (nec. Desmarest). = *Akodon arviculoides* Wagn. ?

*Ranthodon* ?

*g. c. Dina*

*Holoch*

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trichurus, Oryzomys . . . . .	22	vulpinus, Mus . . . . .	63
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tumidus, Mus . . . . .	98	xanthopus, Mus . . . . .	150
tumidus, Scapteromys . . . . .	98	xanthopygus, Mus . . . . .	89
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typus, Eligmodontia . . . . .	70	yunganus, Oryzomys . . . . .	19
ultimus, Euneomys . . . . .	93	yuruanus, Rhipidomys . . . . .	47
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urichi, Akodon . . . . .	110		
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## Explanation of Plate I.

- Fig. 1—1 b. *Ichthyomys söderströmi* de Winton. ♂ Western Ecuador, Guapulo. 5.IV. 1914  
 $\times \frac{2}{1}$ . R. Nat. Hist. Museum in Stockholm. N:o 5.
- Fig. 2—2 b. *Anotomys leander* Thos. ♀ Western Ecuador, La Carolina. 17.III. 1918.  $\times \frac{2}{1}$ .  
 R. Nat. Hist. Museum in Stockholm. N:o 1000.
- Fig. 3—3 b. *Oryzomys meridensis* Thos. ♀ Venezuela, Culata, Merida. 25.VIII. 1920.  $\times \frac{2}{1}$ . R.  
 Nat. Hist. Museum in Stockholm. N:o D. \
- Fig. 4—4 b. *Oryzomys eliurus* Wagn. ♀ Paraguay, Sapucay. 27.I. 1903.  $\times \frac{2}{1}$ . R. Nat. Hist.  
 Museum in Stockholm. N:o 907.

## Explanation of Plate II.

- Fig. 1—1 b. *Nesoryzomys indefessus* Thos. Indefatigable Island, Galapagos Islands. Brit. Mus.  
 N:o 99. 8. 28. 2.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Oligoryzomys minutus* Tomes. ♀ Western Ecuador, Quito. I. 1902. R. Nat.  
 Hist. Museum in Stockholm. N:o 68.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Thalomyiscus aurillus* Thos. ♀ Peru, Ocobamba Valley. Brit. Mus. N:o 22. ~~PACATI?~~  
 1.1. 47.  $\times \frac{2}{1}$ .
- Fig. 4—4 b. *Melanomys phaeopus phaeopus* Thos. ♀ Western Ecuador, Río Blanco. 18.I. 1925.  
 R. Nat. Hist. Museum in Stockholm. N:o 58.  $\times \frac{2}{1}$ .

## Explanation of Plate III.

- Fig. 1—1 b. *Neacomys spinosus spinosus* Thos. ♀ Eastern Ecuador, Archidona. 19.IV. 1921.  
 R. Nat. Hist. Museum in Stockholm. N:o 579.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Aepeomys vulcani* Thos. ♀ Western Ecuador, Pauma, near Nono. III. 1898.  
 Brit. Mus. N:o 98. 8. 1. 10.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Chilomys instans* Thos. ♂ Western Ecuador, Mt. Pichincha. 8.III. 1923. R. Nat.  
 Hist. Museum in Stockholm. N:o 66.  $\times \frac{2}{1}$ .
- Fig. 4—4 b. *Rhagomys rufescens* Thos. ♀ Brazil. Brit. Mus. N:o 48. 5. 6. 13.  $\times \frac{2}{1}$ .

## Explanation of Plate IV.

- Fig. 1—1 b. *Oecomys benevolens* Thos. ♂ Bolivia, Chimate. 23.IX. 1899. Brit. Mus. N:o 1. ~~PACATI.~~  
 2. 1. 15.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Rhipidomys leucodactylus* Tschudi. Peru, Marcapata. Brit. Mus. N:o 3. 2. 9. 6.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Thomasomys baeops* Thos. ♂ Central Ecuador, Papallacta. I. 1911. R. Nat.  
 Hist. Museum in Stockholm. N:o 42.  $\times \frac{2}{1}$ .

## Explanation of Plate V.

- Fig. 1—1 b. *Thomasomys aureus aureus* Tomes. ♂ Western Ecuador, La Magdalena. II. 1912.  
 R. Nat. Hist. Museum in Stockholm. N:o 61.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Phaenomys ferrugineus* Thos. Brazil. Brit. Mus. N:o 48. 5. 28. 1.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Delomys dorsalis dorsalis* Hensel. ♀ Brazil, Roca Nova, Paraná. Brit. Mus. N:o  
 3. 7. 1. 50.  $\times \frac{2}{1}$ .

## Explanation of Plate VI.

- Fig. 1—1 b. *Tylomys nudicaudus* Peters. ♀ *Type*. Guatemala. (apud Peters, Monatsber. Akad. Berlin 1866.)  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Holochilus vulpinus* Licht. ♂ Argentine, Goya, Corrientes Province. Brit. Mus. N:o 98. 12. 3. 2.  $\times \frac{2}{1}$ .

## Explanation of Plate VII.

- Fig. 1—1 b. *Nectomys squamipes pollens* Hollist. ♂ Paraguay, Sapucay. 4.VIII. 1903. R. Nat. Hist. Museum in Stockholm. N:o 1035.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Reithrodontomys söderströmi* Thos. ♀ Western Ecuador, Quito. 7.III. 1902. R. Nat. Hist. Museum in Stockholm. N:o 69 c.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Eligmodontia elegans* Waterh. ♂ Southern Argentine, Pichi Mahuida. Brit. Mus. N:o 27. 6. 21. 26.  $\times \frac{2}{1}$ .

## Explanation of Plate VIII.

- Fig. 1—1 b. *Paralomys gerbillus* Thos. ♀ North-western Peru, Piura. Brit. Mus. N:o 0. 1. 1. 29.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Hesperomys venustus venustus* Thos. ♂ Argentine, Concepcion, Tucuman Prov. 14.IV. 1929. R. Nat. Hist. Museum in Stockholm. N:o 2091.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Reithrodon cuniculoides cuniculoides* Waterh. ♂ Patagonia, Largo Argentino, S:ta Cruz Territory. Brit. Mus. N:o 28. 12. 11. 27.  $\times \frac{2}{1}$ .

## Explanation of Plate IX.

- Fig. 1—1 b. *Sigmodon hispidus littoralis* Chapm. ♂ Florida, Oak Lodge. 22.II. 1895. Brit. Mus. N:o 97. 2. 3. 1.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Sigmomys savannarum* Thos. ♀ British Guiana, Kanuku Mts. Brit. Mus. N:o 1. 6. 4. 176.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Neotomys vulturinus* Thos. ♀ Argentine, Sierra de Zenta, Jujuy Prov. 7.V. 1921. Brit. Mus. N:o 21. 11. 1. 35.  $\times \frac{2}{1}$ .

## Explanation of Plate X.

- Fig. 1—1 b. *Irenomys longicaudatus* Philippi. ♂ Patagonia, Beatriz, Lake Nahuel Huapi. Brit. Mus. N:o 19. 1. 1. 9.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Phyllotis darwini darwini* Waterh. ♂ Chile, La Laguna, Valparaiso Prov. Brit. Mus. N:o 98. 6. 1. 1.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Graomys lockwoodi* Thos. ♂ Argentine, Villa Carolina, Jujuy Prov. Brit. Mus. N:o 20. 1. 7. 67.  $\times \frac{2}{1}$ .
- Fig. 4—4 b. *Euneomys petersoni* J. Allen. ♂ *Type*. Upper Rio Chico, Cordilleras, Patagonia. U. S. Nat. Mus. N:o 84198.  $\times \frac{2}{1}$ . (apud J. Allen, Reports Princeton Univ. Exp., Patagonia, III, pt. i, 1905.)

## Explanation of Plate XI.

- Fig. 1—1 b. *Auliscomys pictus* Thos. ♀ Peru, San Antonio, Lake Titicaca. Brit. Mus. N:o 1. 1. 1. 5.  $\times \frac{2}{1}$ .
- Fig. 2—2 b. *Andinomys edax* Thos. ♂ Argentine, Otro Cerro, Catamarca Prov. Brit. Mus. N:o 20. 3. 17. 8.  $\times \frac{2}{1}$ .
- Fig. 3—3 b. *Scapteromys tumidus* Waterh. ♂ Uruguay, Soriano. Brit. Mus. N:o 24. 9. 1. 49.  $\times \frac{2}{1}$ .

## Explanation of Plate XII.

- Fig. 1—1 b. *Scapteromys chacoënsis* Gyldenst. ♂ *Type*. Argentine, Rio de Oro, Chaco Austral. IX. 1896. R. Nat. Hist. Museum in Stockholm. N:o 26.  $\times \frac{2}{1}$ .  
 Fig. 2—2 b. *Chinchillula sahamae* Thos. ♂ Peru, Caylloma. Brit. Mus. N:o 0. 10. 1. 17.  $\times \frac{2}{1}$ .  
 Fig. 3—3 b. *Akodon arviculoides montensis* Thos. ♂ Paraguay, Sapucay. 11.VII. 1903. R. Nat. Hist. Museum in Stockholm. N:o 943.  $\times \frac{2}{1}$ .

## Explanation of Plate XIII.

- Fig. 1—1 b. *Akodon mollis orophilus* Osg. ♂ Northern Peruvian Amazonas, Goncha. Brit. Mus. N:o 26. 8. 6. 54.  $\times \frac{2}{1}$ .  
 Fig. 2—2 b. *Zygodontomys thomasi* J. Allen. ♂ Venezuela, El Trompillo. Brit. Mus. N:o 14. 9. 1. 59.  $\times \frac{2}{1}$ .  
 Fig. 3—3 b. *Deltamys kempfi* Thos. ♂ Argentine, Isla Ella, Paraná Delta. 10.II. 1917. Brit. Mus. N:o 17.6. 1. 32.  $\times \frac{2}{1}$ .  
 Fig. 4—4 b. *Hypsomys deceptor* Thos. ♀ Argentine, Higuera, Jujuy Prov. 26.V. 1921. Brit. Mus. N:o 21. 11. 1. 69.  $\times \frac{2}{1}$ .

## Explanation of Plate XIV.

- Fig. 1—1 b. *Thaptomys subterraneus* Hensel. ♂ Brazil, Taquara, Rio Grande do Sul Prov. Brit. Mus. N:o 86. 9. 16. 13.  $\times \frac{2}{1}$ .  
 Fig. 2—2 b. *Bolomys albiventer* Thos. ♀ Argentine, Abrapampa, Jujuy Prov. Brit. Mus. N:o 19. 8. 1. 50.  $\times \frac{2}{1}$ .  
 Fig. 3—3 b. *Abrothrix longipilis* Waterh. ♂ Chile, Valparaiso. Brit. Mus. N:o 1. 2. 2. 4.  $\times \frac{2}{1}$ .  
 Fig. 4—4 b. *Chraomys pulcherrimus cayllomae* Thos. ♀ Peru, Caylloma. Brit. Mus. N:o 0. 10. 1. 75.  $\times \frac{2}{1}$ .

## Explanation of Plate XV.

- Fig. 1—1 b. *Geoxus valdivianus* Philippi. ♂ Patagonia, Beatriz, Lake Nahuel Huapi. Brit. Mus. N:o 19. 1. 1. 39.  $\times \frac{2}{1}$ .  
 Fig. 2—2 b. *Geoxus fossor* Thos. ♀ Patagonia, San Martin de Los Andes, Neuquen Territory. Brit. Mus. N:o 27. 5. 1. 99.  $\times \frac{2}{1}$ .  
 Fig. 3—3 b. *Chelemys vestitus alleni* Osg. ♀ Patagonia, S:ta Cruz. Brit. Mus. N:o 28. 12. 11. 147.  $\times \frac{2}{1}$ .  
 Fig. 4—4 b. *Microxus lanosus* Thos. ♀ Rio Chico, Cordilleras, Patagonia. U. S. Nat. Mus. N:o 84211.  $\times \frac{2}{1}$  (apud J. Allen, Reports Princeton Univ., Exp., Patagonia, III, pt. i, 1905).

## Explanation of Plate XVI.

- Fig. 1—1 b. *Oxymycterus judex* Thos. Brazil, S:ta Catherina. R. Nat. Hist. Museum in Stockholm. N:o 85.  $\times \frac{2}{1}$ .  
 Fig. 2—2 b. *Lenoxus apicalis* J. Allen. ♀ *Type*. South-eastern Peru, Inca Mines, Rio Inambari. Amer. Museum Nat. Hist. N:o 16064.  $\times \frac{2}{1}$  (apud J. Allen, Reports Princeton Univ., Exp., Patagonia, III, pt. i, 1905.)  
 Fig. 3—3 b. *Thalpomys lasiotis* Lund. ♂ Brazil, Lagoa Santa. Zool. Museum, Copenhagen. N:o 387.  $\times \frac{2}{1}$ .

## Explanation of Plate XVII.

- Fig. 1. *Ichthyomys söderströmi*. ♂  $\times 5$ . Stöhm. Mus. N:o 5.  
 Fig. 2. *Oryzomys meridensis*. ♀  $\times 5$ . Stöhm. Mus. N:o 100.  
 Fig. 3. *Nesoryzomys indefessus*.  $\times 5$ . Brit. Mus. N:o 99. 8. 28. 2.

- Fig. 4. *Oligoryzomys minutus*.  $\times 8$ . Sthlm. Mus. N:o 73 f.  
 Fig. 5. *Thallomyscus aurillus*.  $\delta \times 7$ . Brit. Mus. N:o 22. 1. 1. 47.  
 Fig. 6. *Melanomys phaeopus phaeopus*.  $\times 5$ . Sthlm. Mus. N:o 58.  
 Fig. 7. *Neacomys spinosus spinosus*.  $\times 7$ . Sthlm. Mus. N:o 579.  
 Fig. 8. *Apeomys vulcani*.  $\varphi \times 5$ . Brit. Mus. N:o 98. 8. 1. 10.  
 Fig. 9. *Chilomys instans*.  $\times 7$ . Sthlm. Mus. N:o 66.  
 Fig. 10. *Rhagomys rufescens*.  $\times 5$  (last molar missing) Brit. Mus. N:o 48. 5. 6. 13.  
 Fig. 11. *Oecomys benevolens*.  $\delta \times 5$ . Brit. Mus. N:o 1. 2. 1. 15.  
 Fig. 12. *Rhipidomys leucodactylus*.  $\times 4$ . Brit. Mus. N:o 3. 2. 9. 6.  
 Fig. 13. *Thomasomys aureus aureus*.  $\times 4$ . Sthlm. Mus. N:o 61.  
 Fig. 14. *Phaenomys ferrugineus*.  $\times 5$ . Brit. Mus. N:o 48. 5. 28. 1.  
 Fig. 15. *Delomys dorsalis dorsalis*.  $\varphi \times 5$ . Brit. Mus. N:o 3. 7. 1. 50.  
 Fig. 16. *Holochilus balnearum*.  $\varphi \times 4$ . Brit. Mus. N:o 20. 1. 7. 16.  
 Fig. 17. *Nectomys garleppii*.  $\times 4$ . Sthlm. Mus. N:o 34.  
 Fig. 18. *Reithrodontomys söderströmi*.  $\times 7$ . Sthlm. Mus. N:o 69 c.  
 Fig. 19. *Eligmodontia elegans*.  $\times 7$ . Sthlm. Mus. N:o 2516.  
 Fig. 20. *Paralomys gerbillus*.  $\times 7$ . Brit. Mus. N:o 0. 1. 1. 29.  
 Fig. 21. *Hesperomys venustus venustus*.  $\times 5$ . Sthlm. Mus. N:o 2091.  
 Fig. 22. *Reithrodon cuniculoides cuniculoides*  $\delta \times 4$ . Brit. Mus. N:o 28. 12. 11. 27.  
 Fig. 23. *Sigmodon hispidus littoralis*.  $\delta \times 4$ . Brit. Mus. N:o 97. 2. 3. 1.  
 Fig. 24. *Sigmodon savannarum*.  $\varphi \times 5$ . Brit. Mus. N:o 1. 6. 4. 176.  
 Fig. 25. *Neotomys vulturnus*.  $\varphi \times 5$ . Brit. Mus. N:o 21. 11. 1. 35.  
 Fig. 26. *Irenomys longicaudatus*.  $\delta \times 5$ . Brit. Mus. N:o 19. 1. 1. 9.  
 Fig. 27. *Phyllotis haggardi*.  $\times 7$ . Sthlm. Mus. N:o 73.  
 Fig. 28. *Graomys lockwoodi*.  $\delta \times 5$ . Brit. Mus. N:o 20. 1. 7. 67.

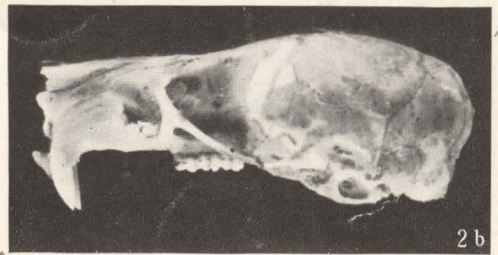
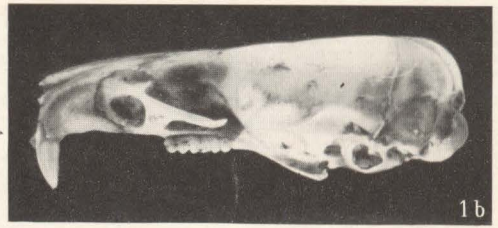
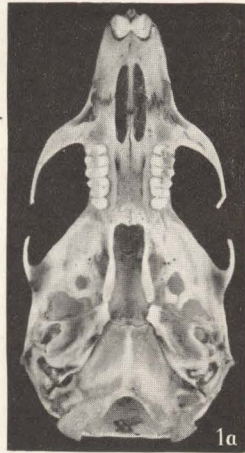
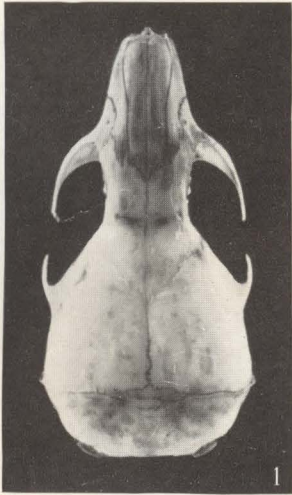
## Explanation of Plate XVIII.

- Fig. 1. *Auliscomys micropus alsus*.  $\varphi \times 5$ . Brit. Mus. N:o 27. 5. 1. 27.  
 Fig. 2. *Auliscomys pictus*.  $\varphi \times 5$ . Brit. Mus. N:o 1. 1. 1. 5.  
 Fig. 3. *Andinomys edax*.  $\times 4, 5$ . Brit. Mus. N:o 20. 3. 17. 8.  
 Fig. 4. *Scapteromys tumidus*.  $\delta \times 5$ . Brit. Mus. 24.9. 1.49.  
 Fig. 5. *Scapteromys chacoënsis*.  $\delta$  (Type).  $\times 4$ . Sthlm. Mus. N:o 26.  
 Fig. 6. *Chinchillula sahamae*.  $\times 4$ . Brit. Mus. N:o 0. 10. 1. 17.  
 Fig. 7. *Akodon arviculoides montensis*.  $\times 5$ . Sthlm. Mus. N:o 943.  
 Fig. 8. *Akodon orophilus*.  $\times 7$ . Sthlm. Mus. N:o 539.  
 Fig. 9. *Zygodontomys stellae*.  $\varphi \times 7$ . Sthlm. Mus. N:o 6.  
 Fig. 10. *Deltamys kempfi*.  $\times 7$ . Brit. Mus. N:o 17. 6. 1. 34.  
 Fig. 11. *Thalpomys lasiotis*.  $\delta \times 5$ . Copenhagen Mus. N:o 387.  
 Fig. 12. *Hypsimys deceptor*.  $\varphi \times 5$ . Brit. Mus. N:o 21. 11. 1. 69.  
 Fig. 13. *Bolomys albiventer*.  $\times 5$ . Brit. Mus. N:o 19. 8. 1. 50.  
 Fig. 14. *Abrothrix hirta nubila*.  $\times 5$ . Sthlm. Mus. N:o 3100.  
 Fig. 15. *Chraeomys pulcherrimus cayllomae*.  $\varphi \times 5$ . Brit. Mus. N:o 0. 10. 1. 75.  
 Fig. 16. *Geoxus fossor*.  $\varphi \times 7$ . Brit. Mus. N:o 27. 5. 1. 99.  
 Fig. 17. *Chelemys vestitus alleni*.  $\varphi \times 5$ . Brit. Mus. N:o 28. 12. 11. 147.  
 Fig. 18. *Oxymycterus judex*.  $\varphi \times 4$ . Sthlm. Mus. N:o 52.

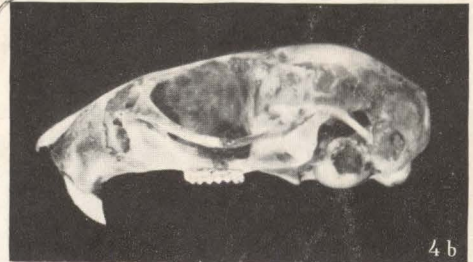
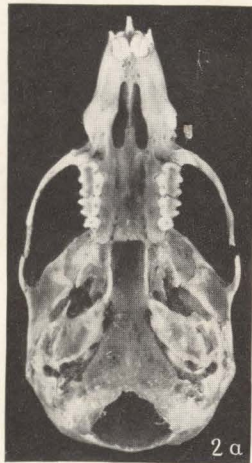
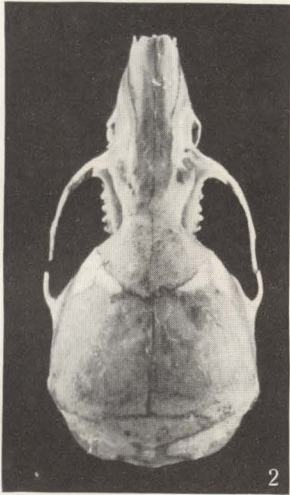
Tryckt den 12 september 1932.

Uppsala 1932. Almqvist &amp; Wiksells Boktryckeri-A.-B.

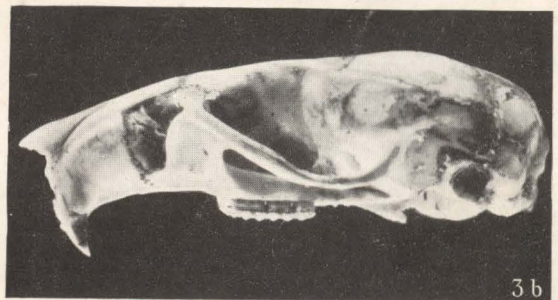
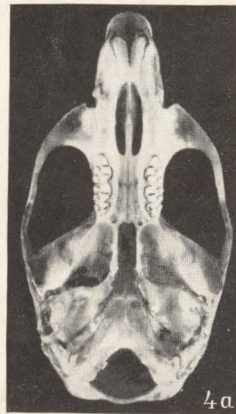
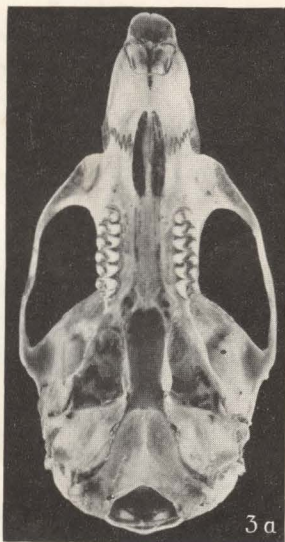
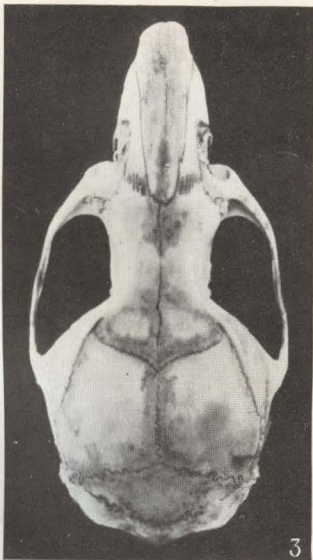
ICHTHYOMYS SPECTRUMI



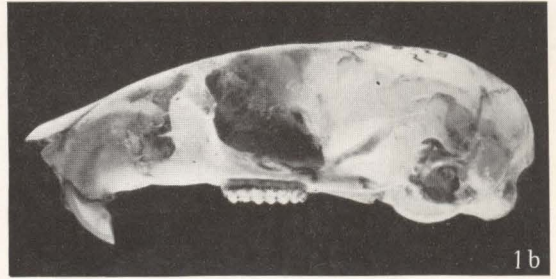
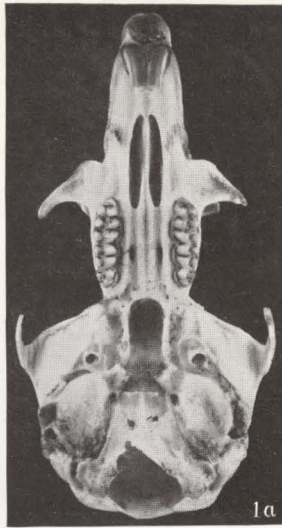
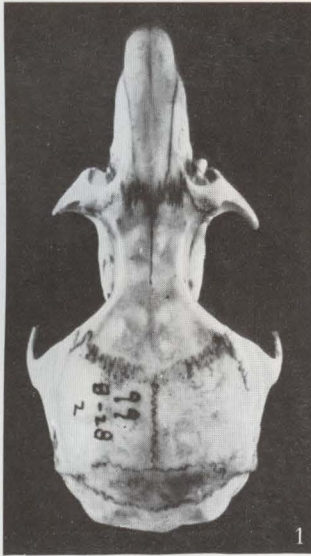
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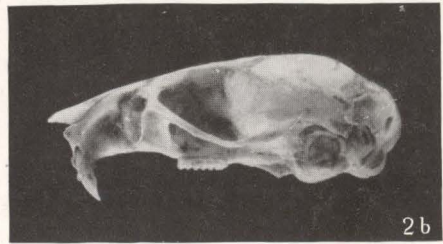
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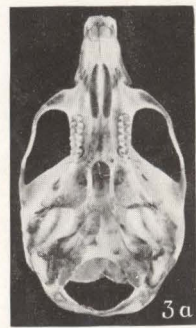
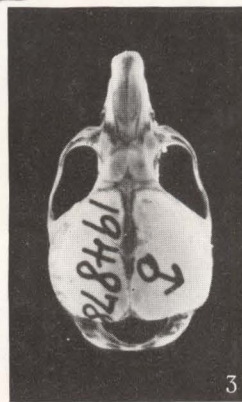
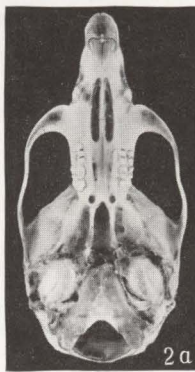
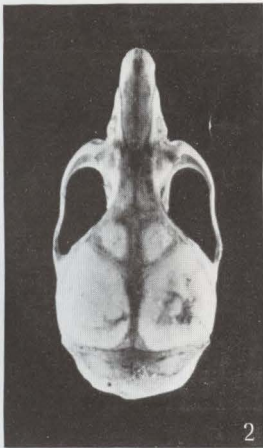
Oryzomys melivrus



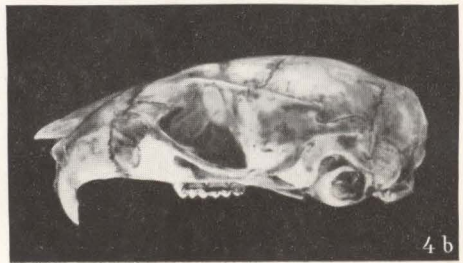
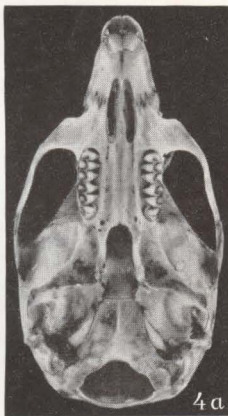
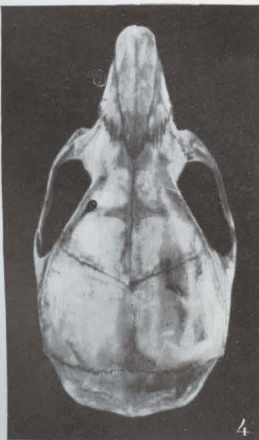
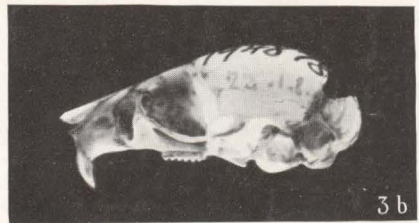
*Nesoryzomys andersoni*



*Oligoryzomys minutus*

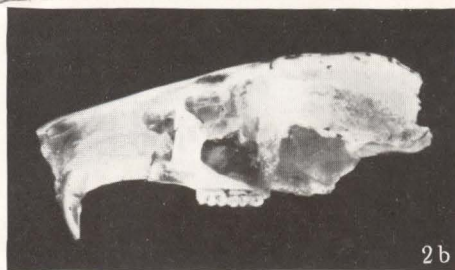
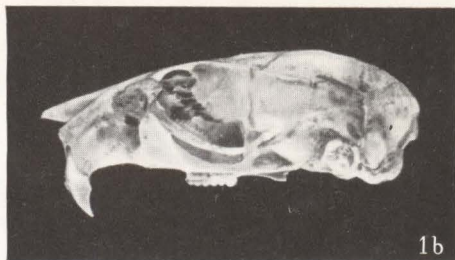
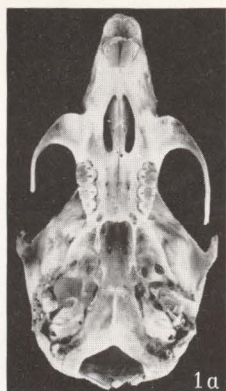
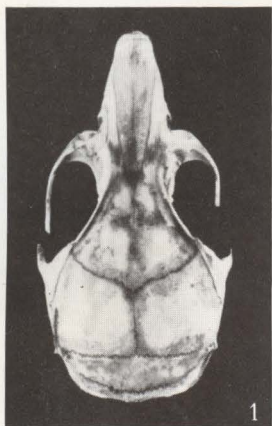


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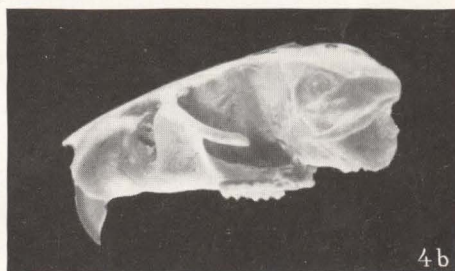
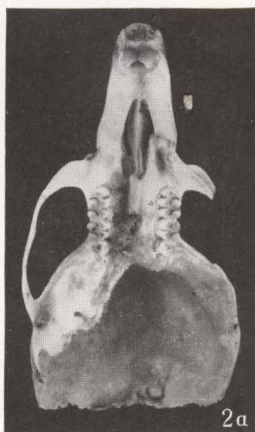
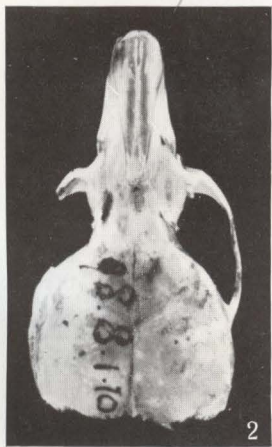


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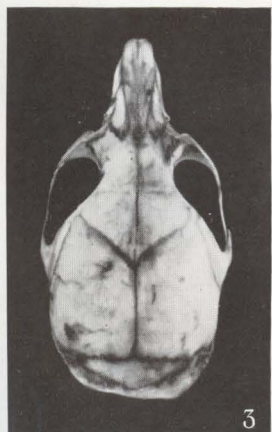
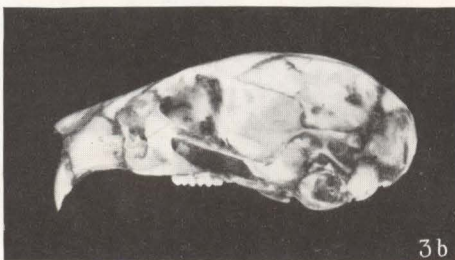
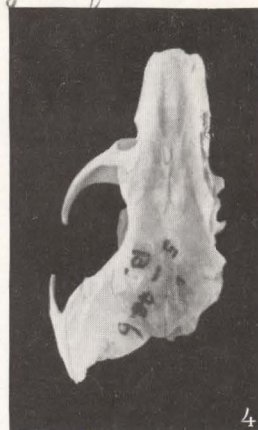
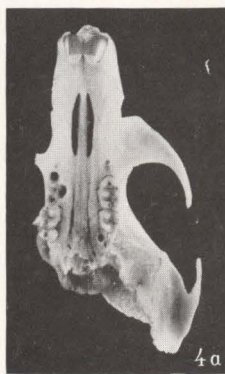
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*Aepomys vulcani*

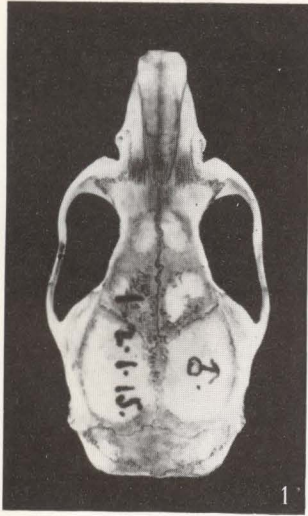


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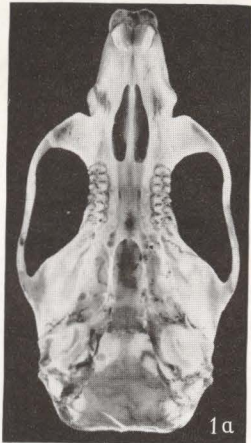


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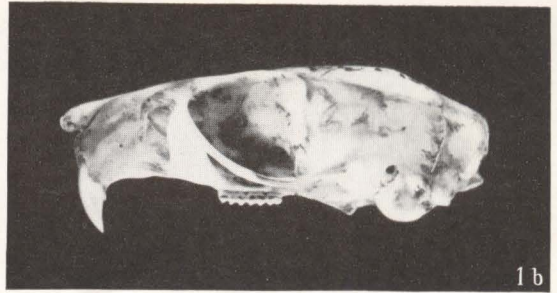
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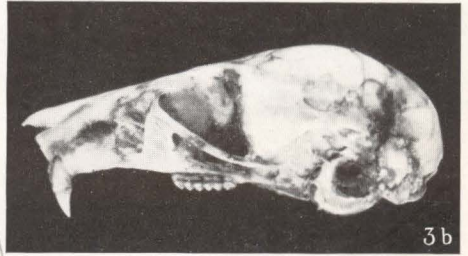
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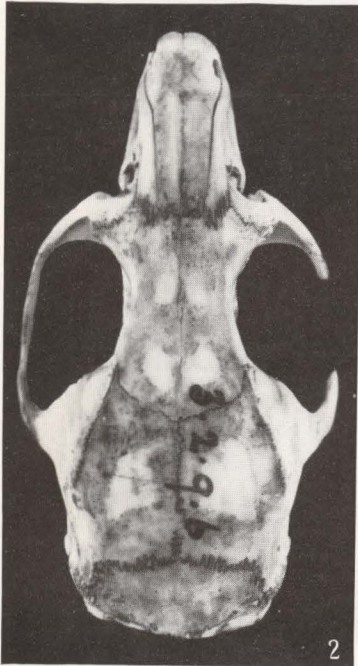
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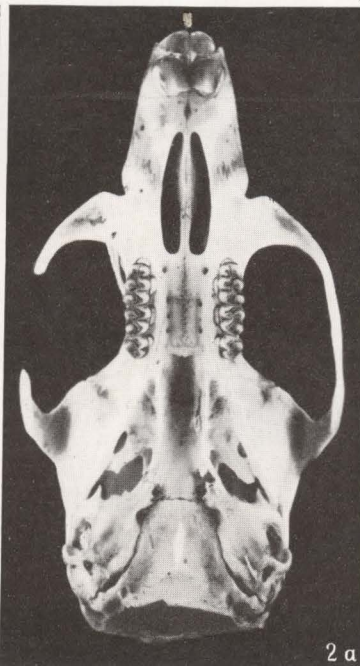
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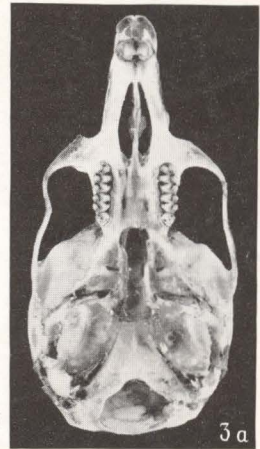
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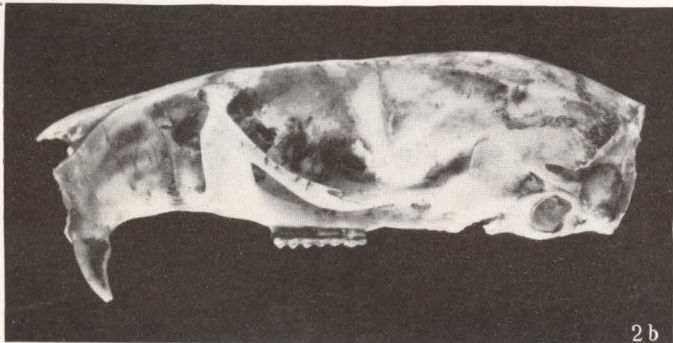
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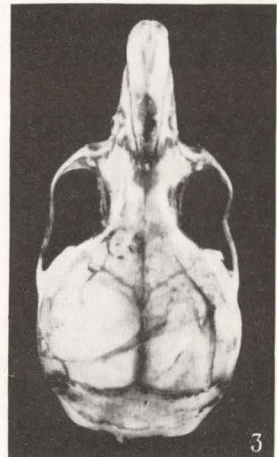
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3a



2b

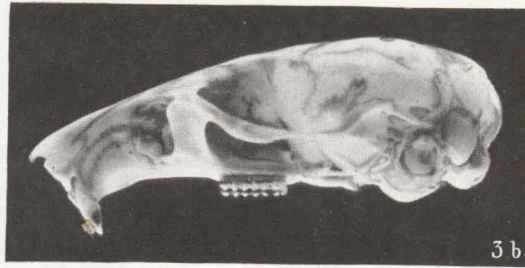
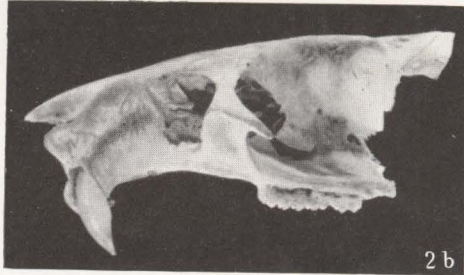
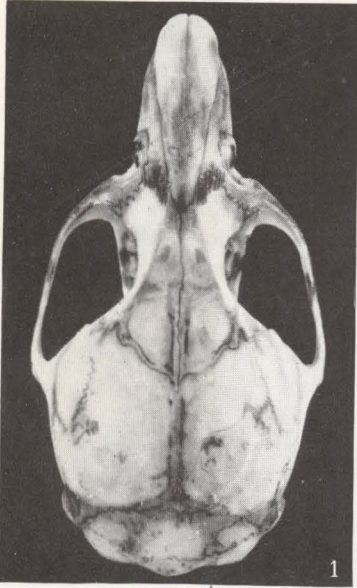


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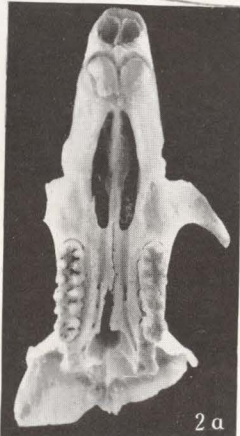
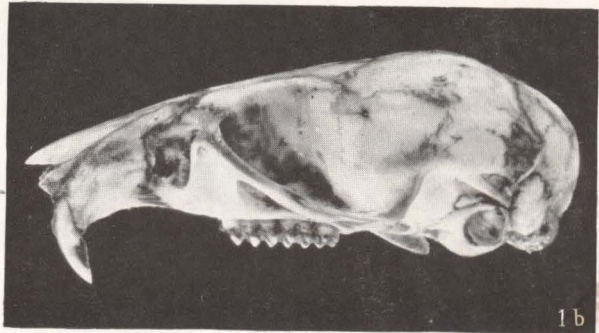
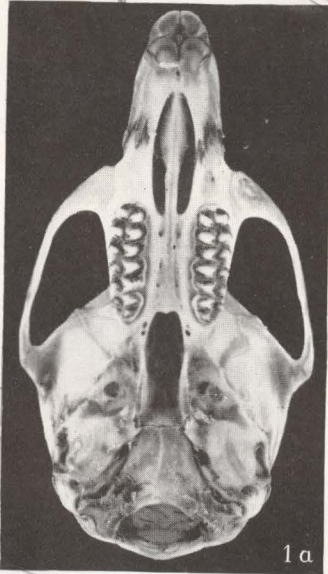
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*PHAFOMYS FERRUSINEUS*

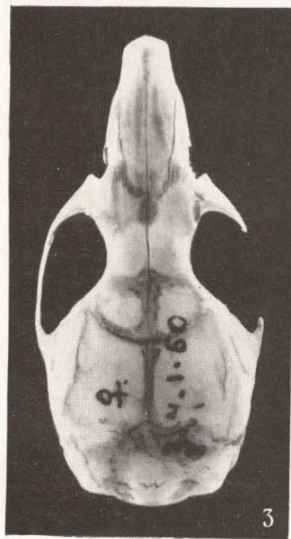


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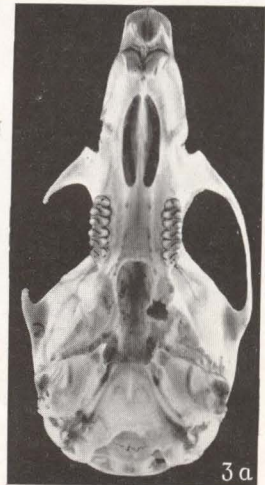
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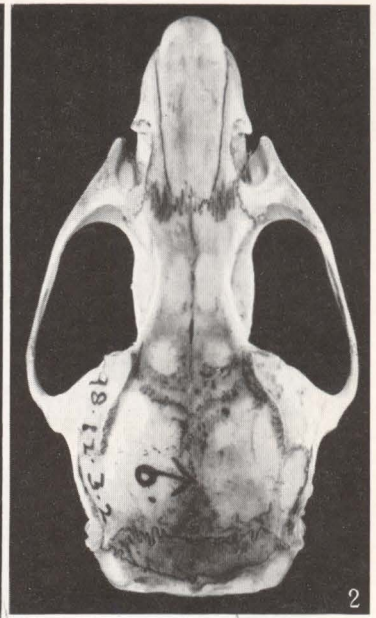
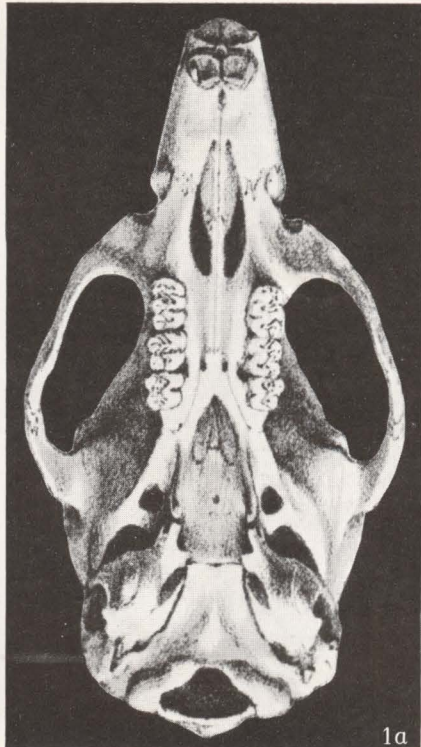
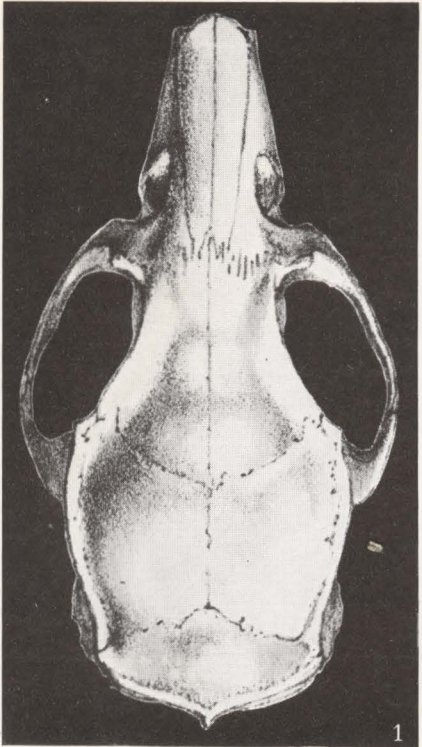


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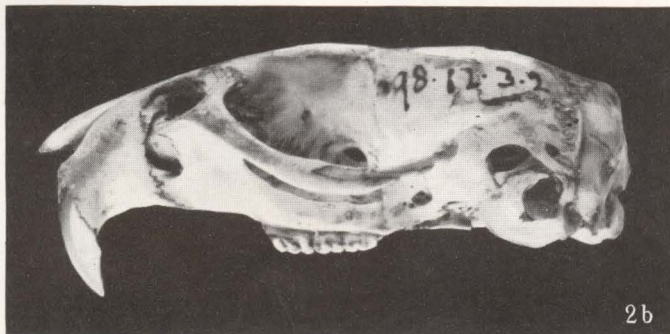
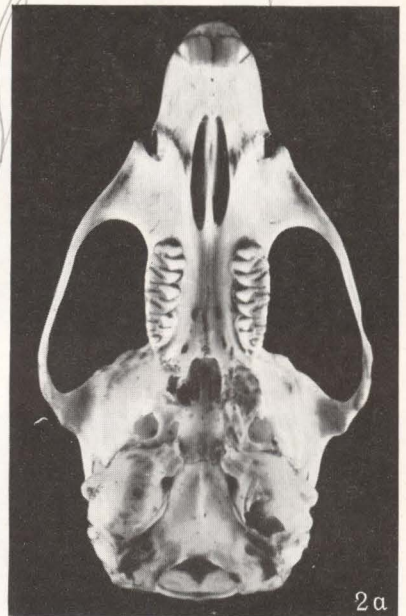
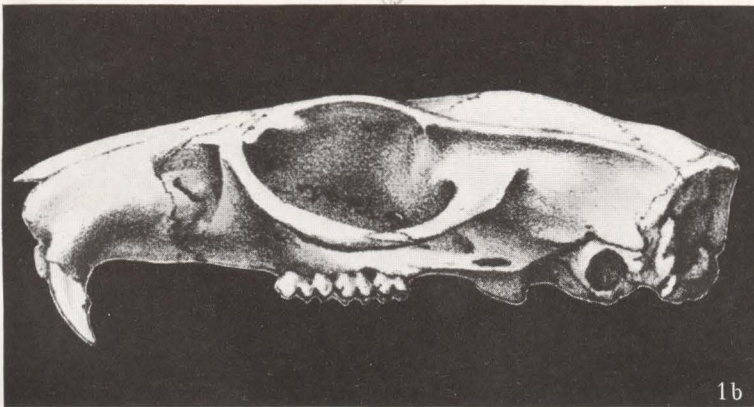
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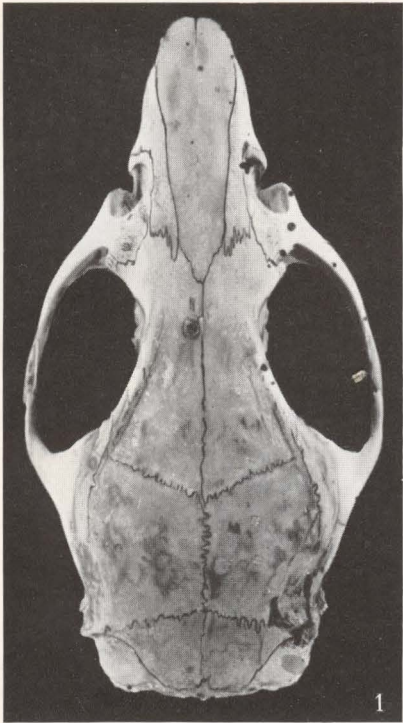


TYLOMYS NUDICAUDUS

HOLOCHILUS VULPINUS



HOLOCHILUS

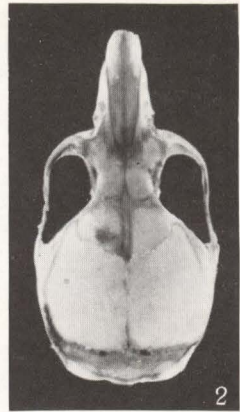


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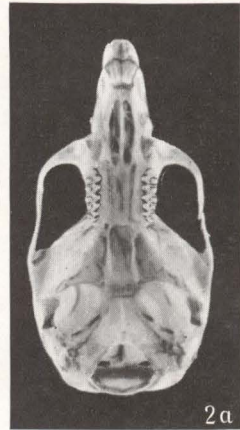


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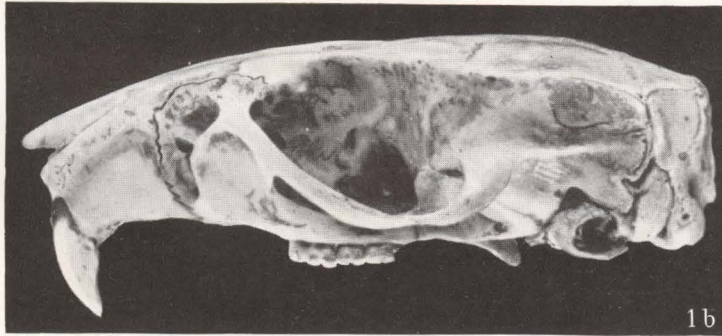


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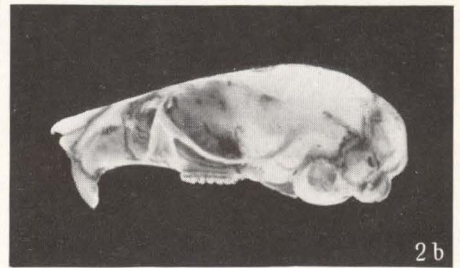


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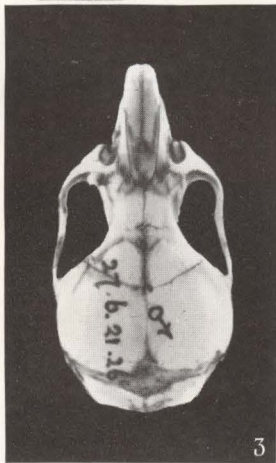
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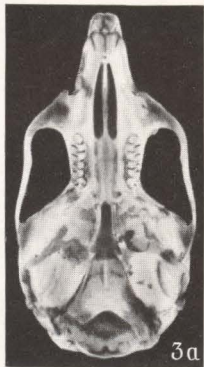
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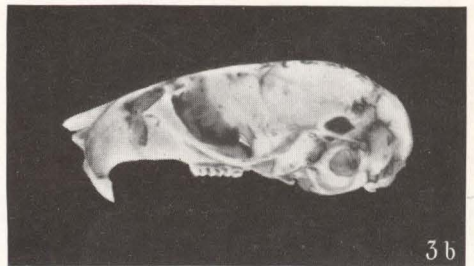
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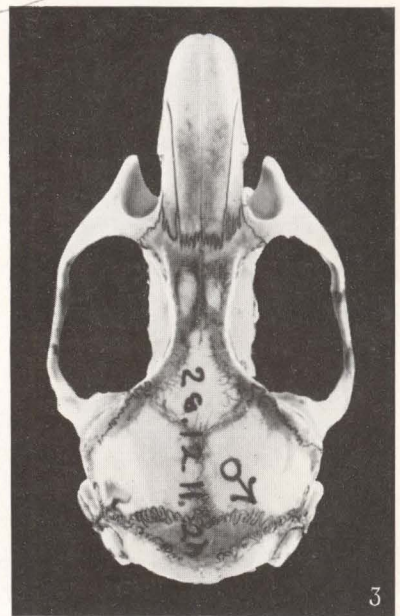
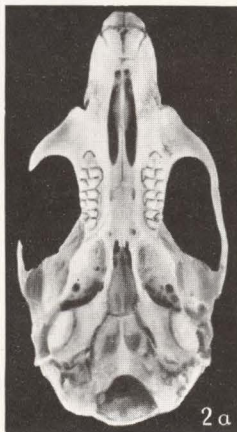
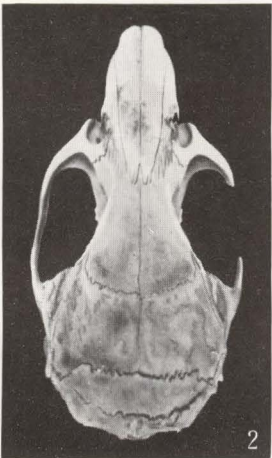
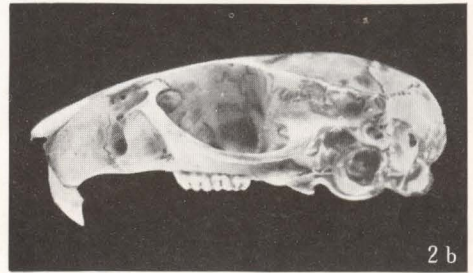
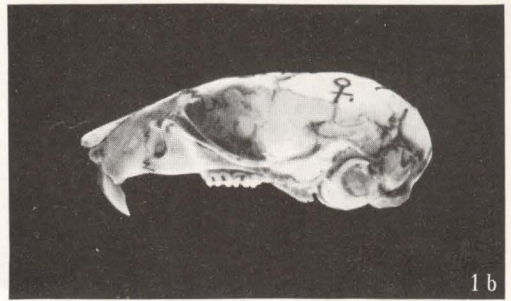
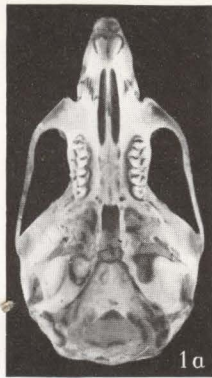
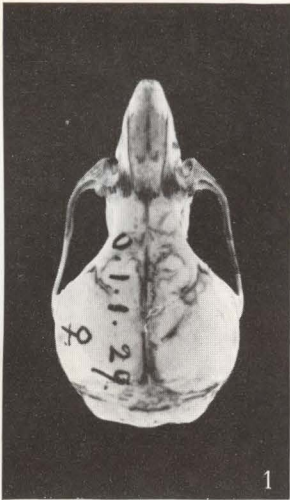
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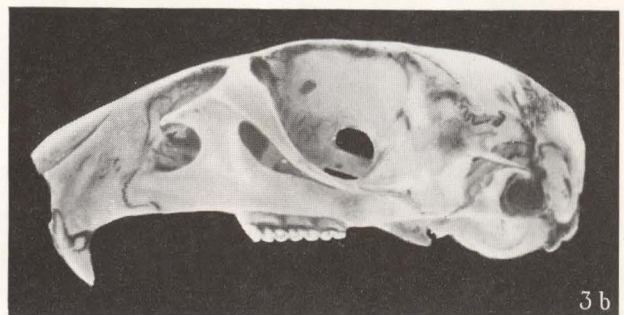
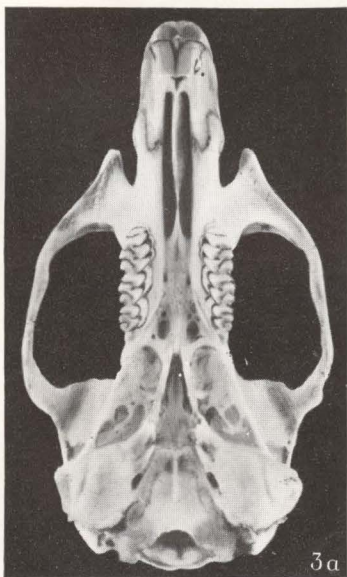
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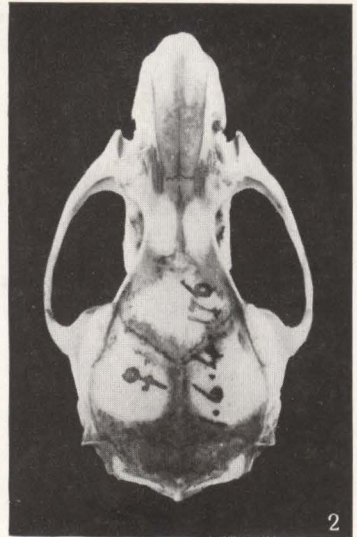
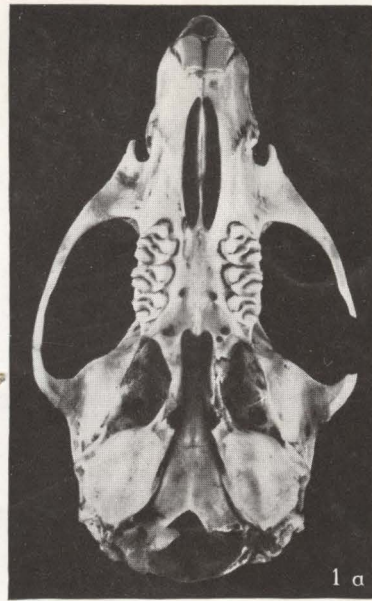
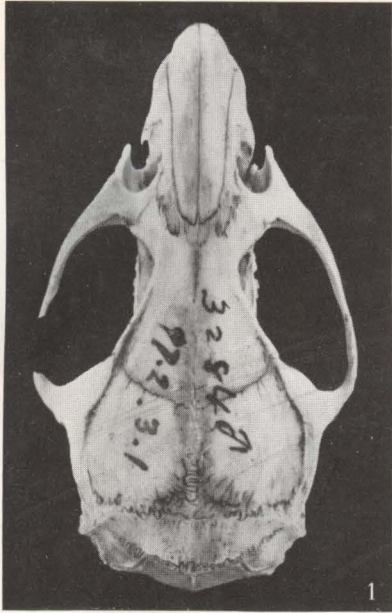
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*HESPEROMYS VENUSTUS VENUSTUS*

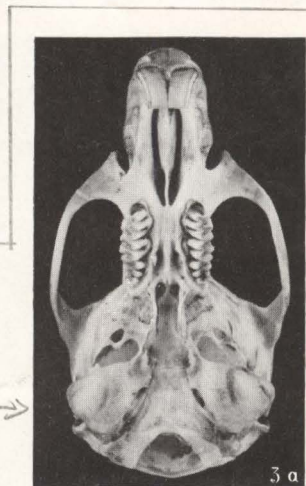
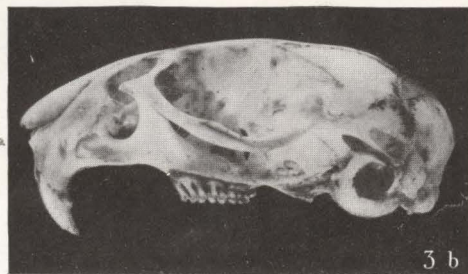
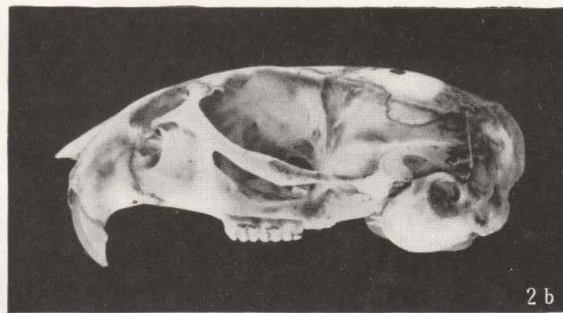
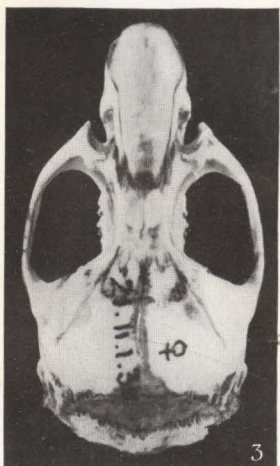
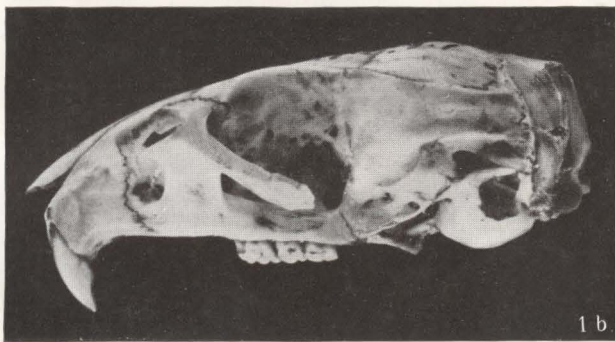


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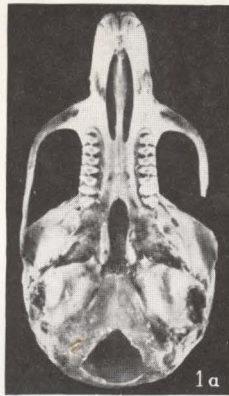
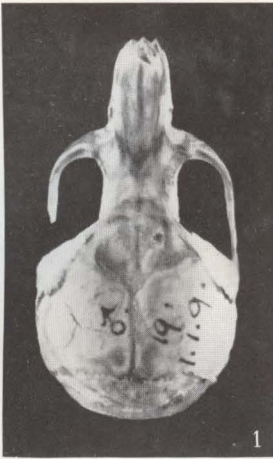


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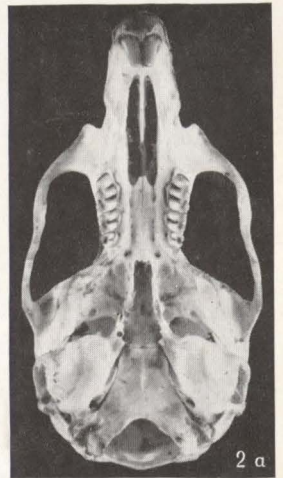
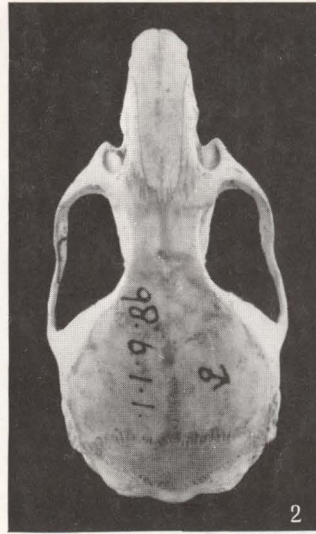
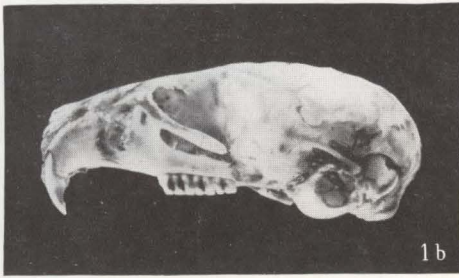
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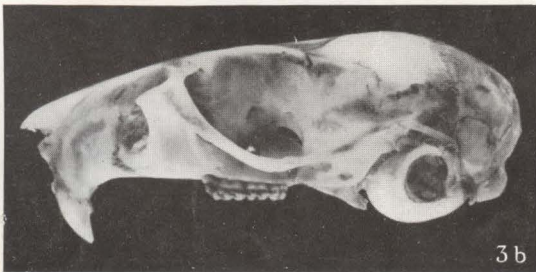
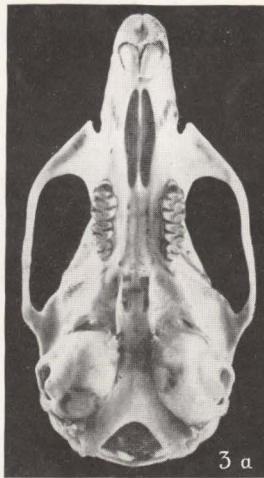
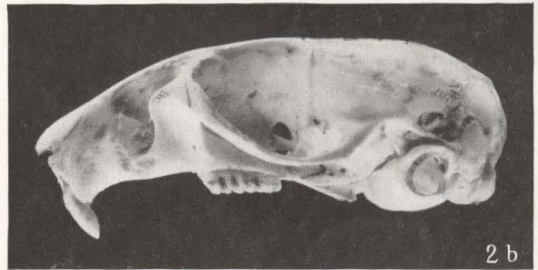
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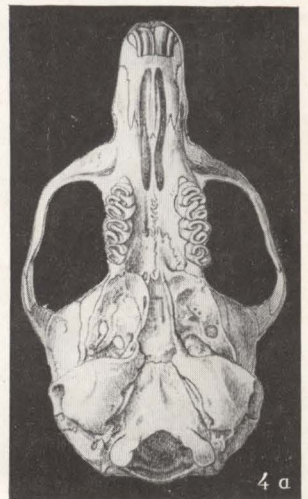
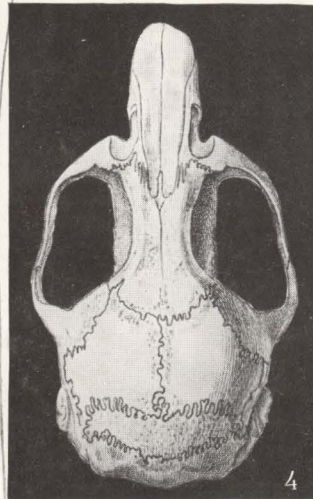
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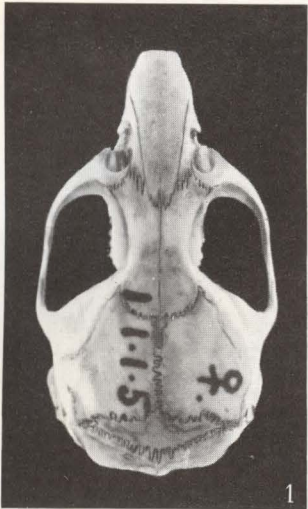
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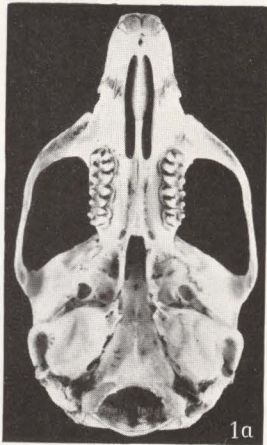
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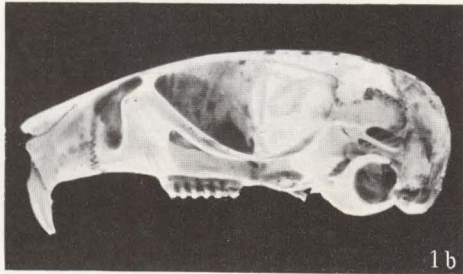


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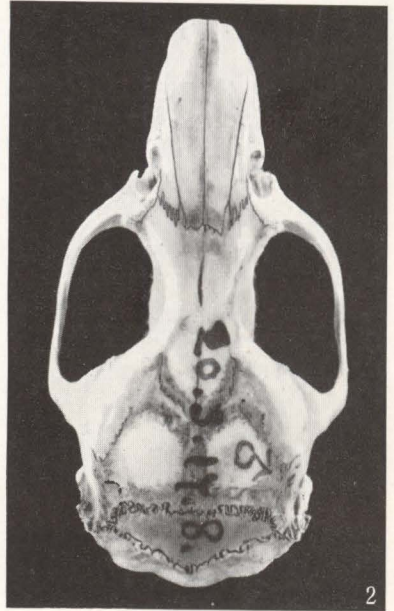


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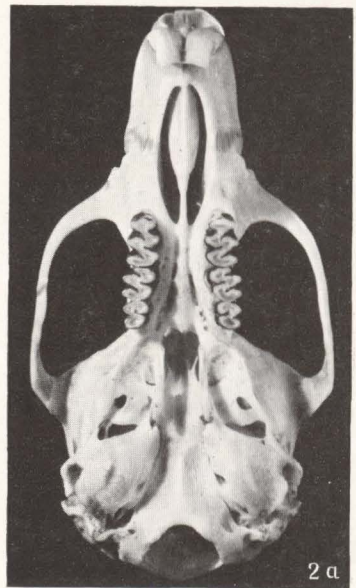
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1b

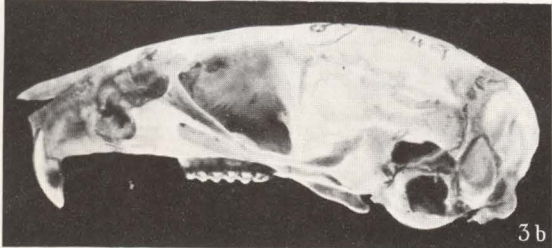


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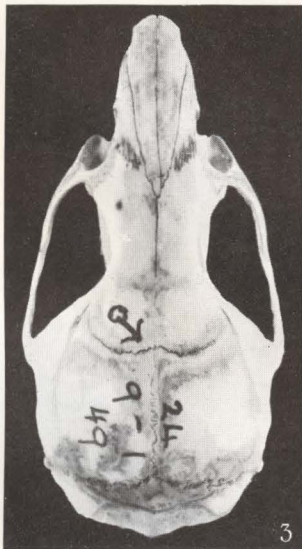


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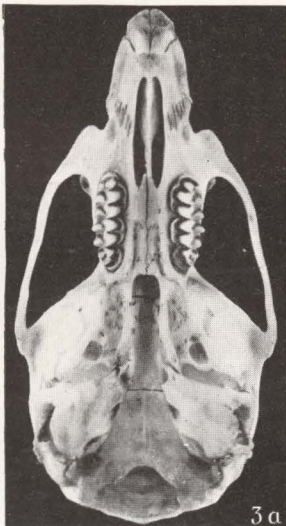
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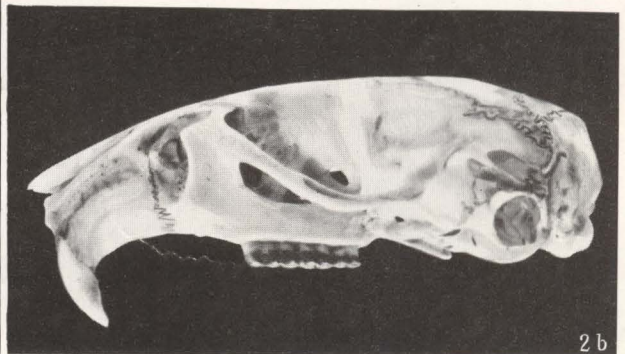
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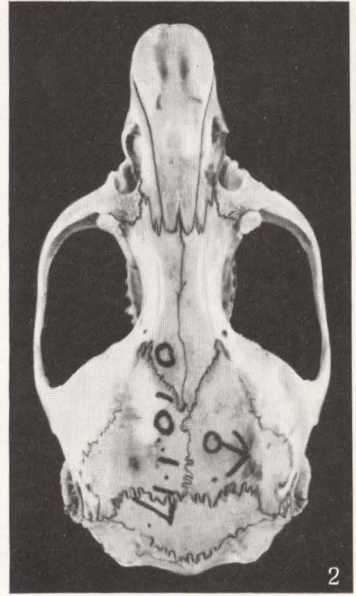
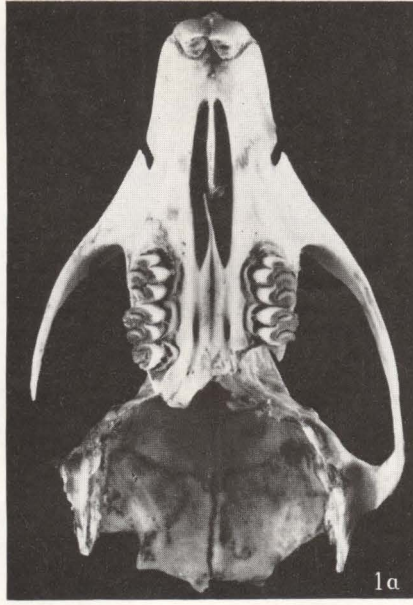
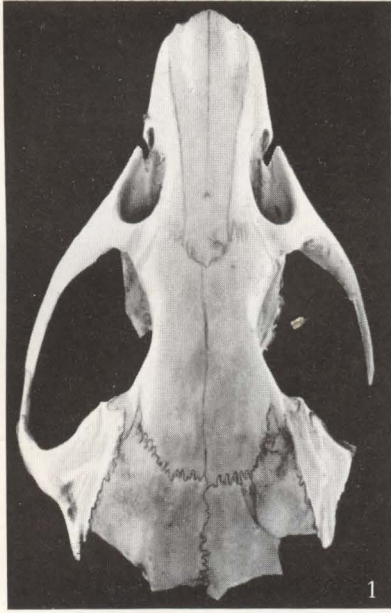


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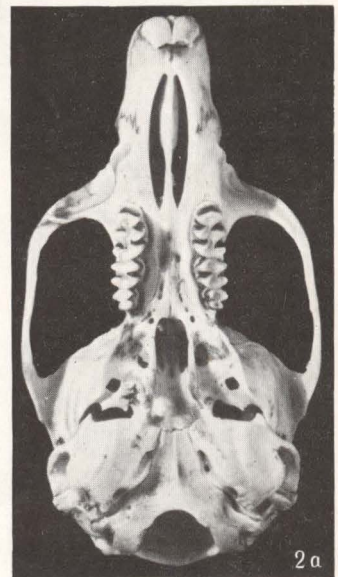
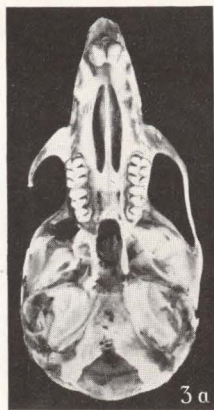
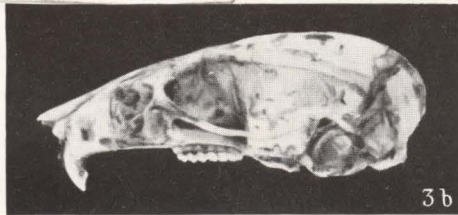
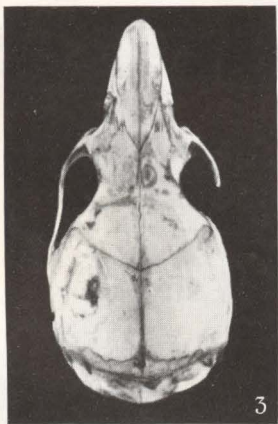
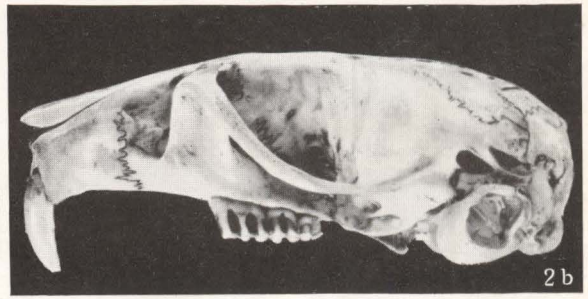
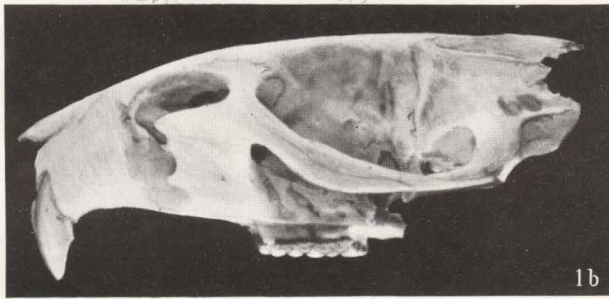


2b

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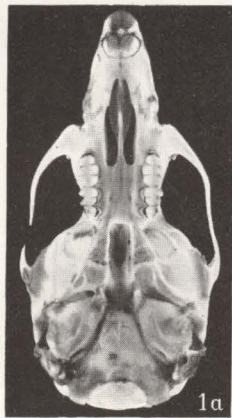


*SCAPTEROMYS GACOENSIS*

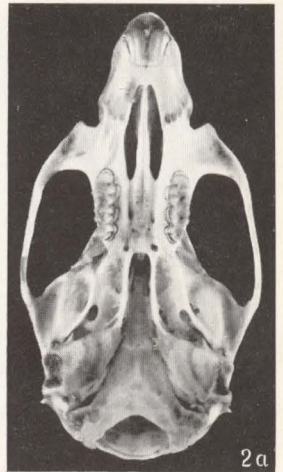
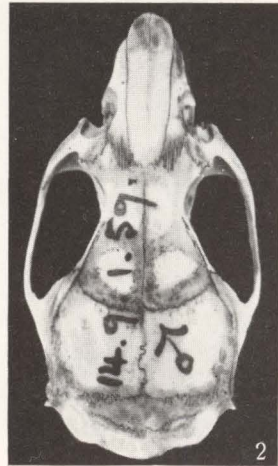
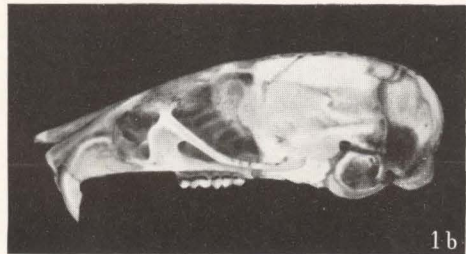


*CHIROPODULA SAWAHAE*

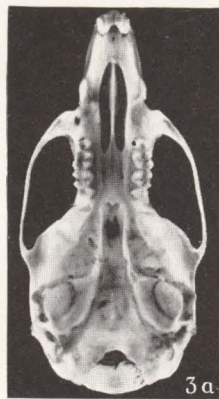
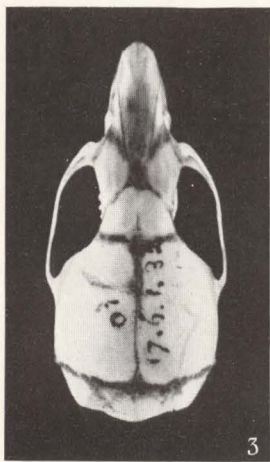
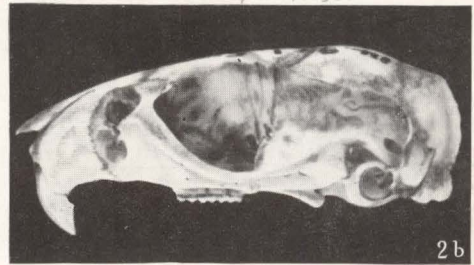
*Akodon miculoides montensis*



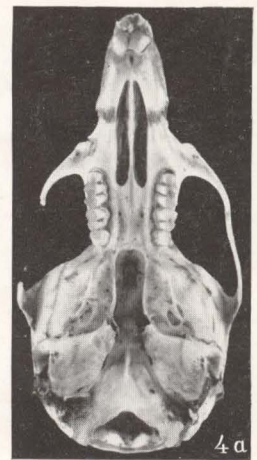
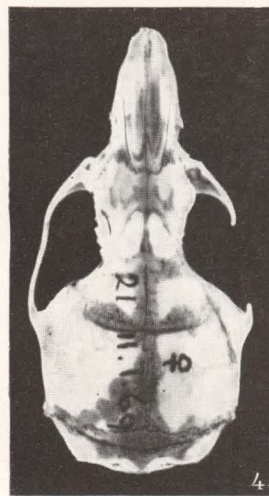
AKODON mollis OROPHILUS



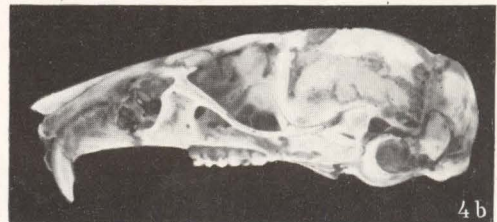
ZYGODONTOMYS THOMASI

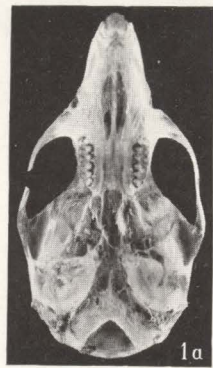
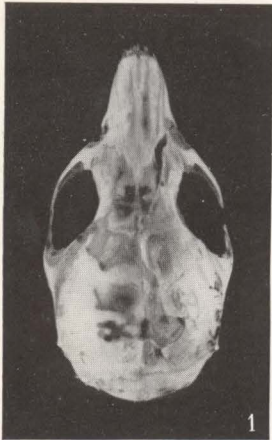


DELTAMYS KEMPI

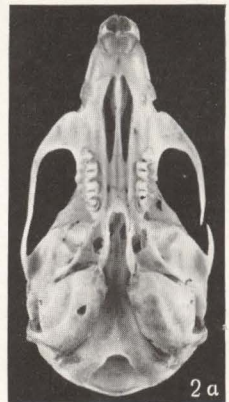
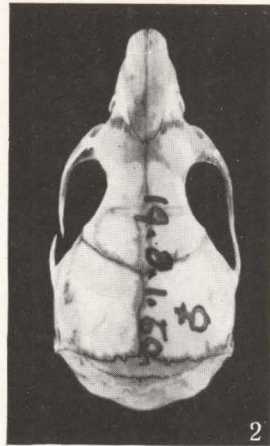
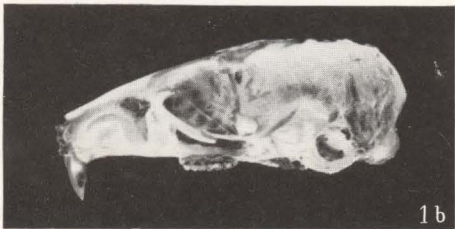


HYPSIMYS DECEPTOR

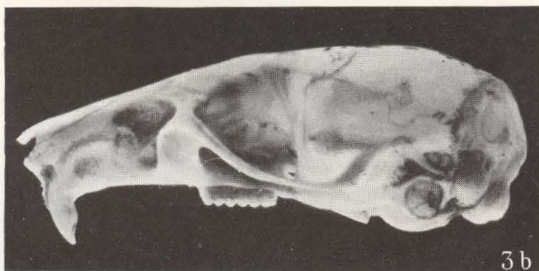
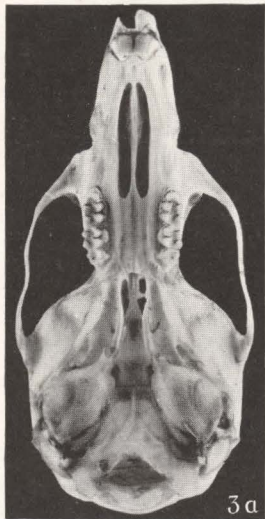
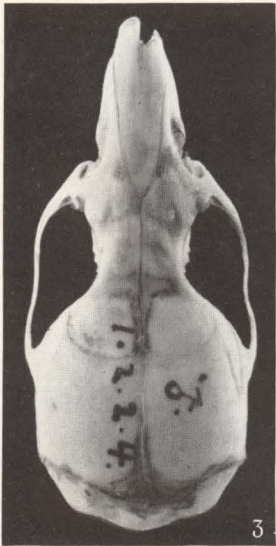
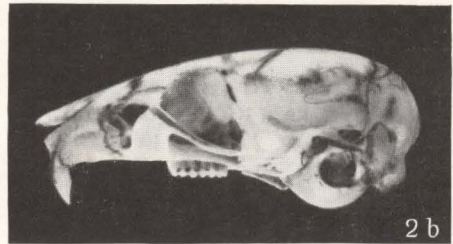




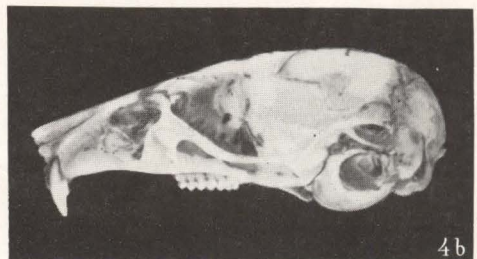
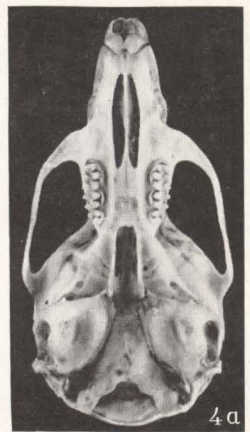
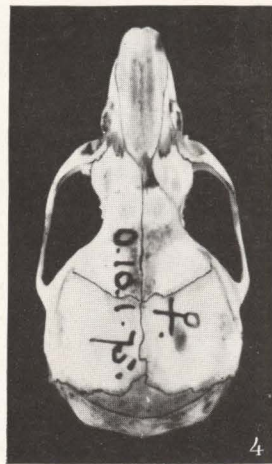
THAPTOMYS SUBTERRANEUS



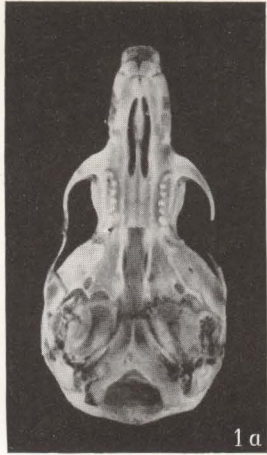
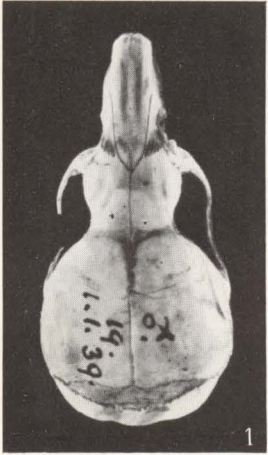
BOLOMYS ALBIVENTER



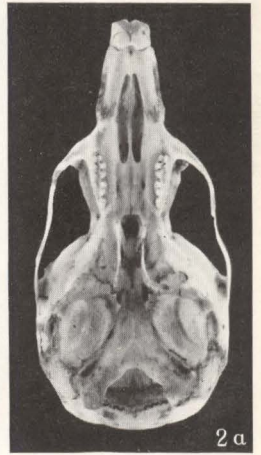
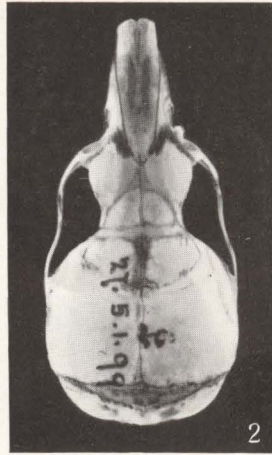
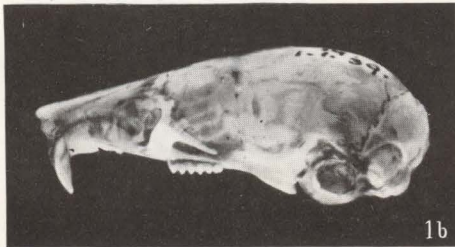
ABROTOMIX LONGIPILIS



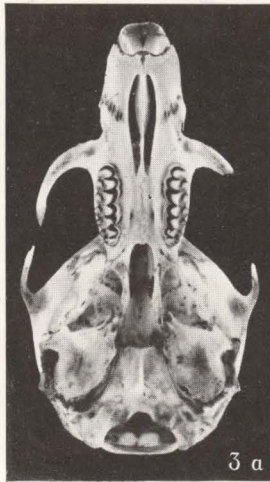
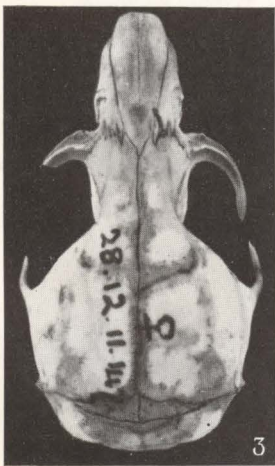
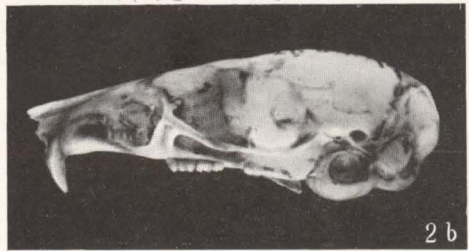
CHRAEOMYS PULCHERRIMUS CAYLLOMAE



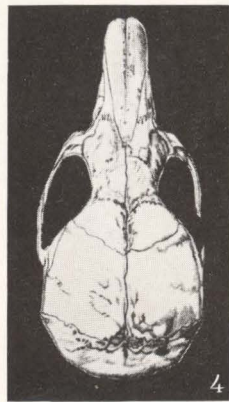
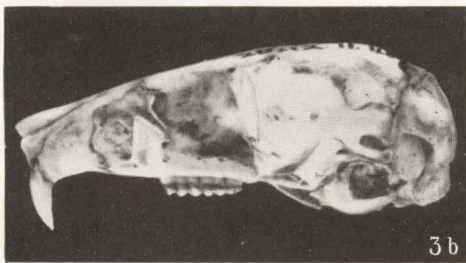
*GEORXUS VALDIVIANUS*



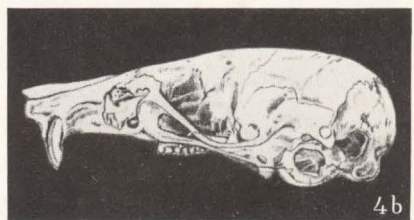
*GEORXUS FOSSOR*

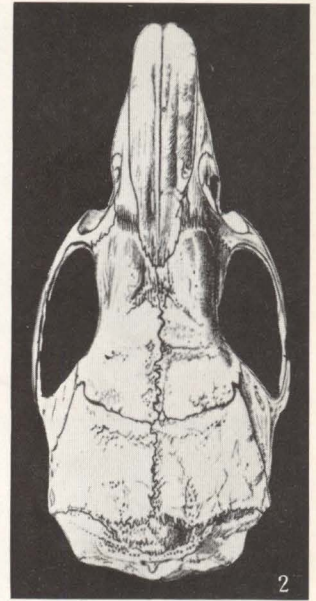
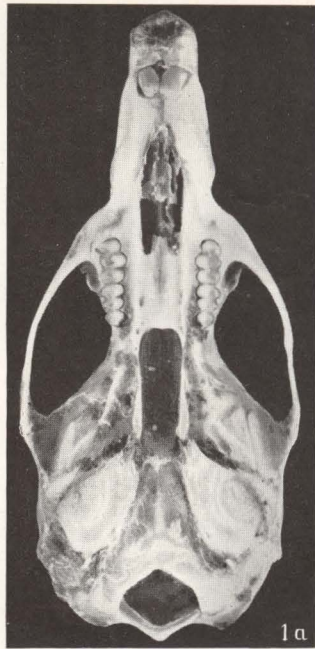
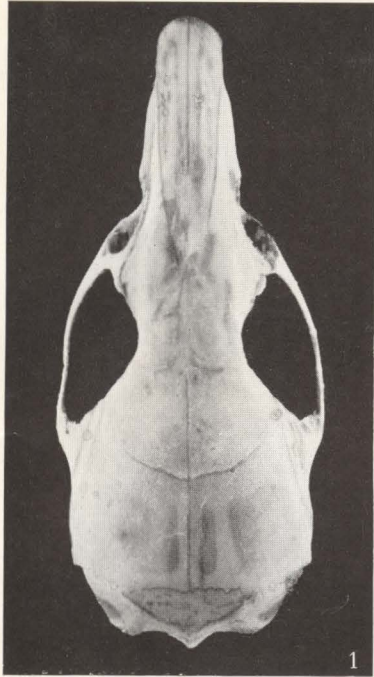


*CHELEMYS VESTITUS ALLENI*

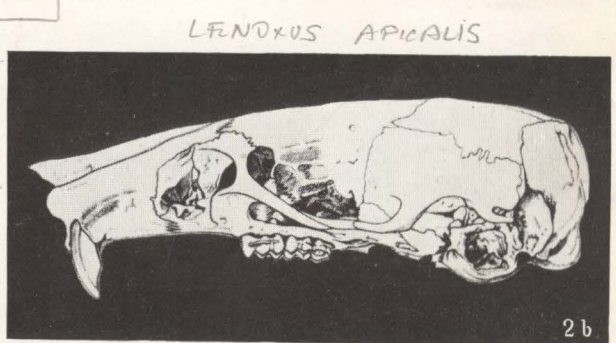
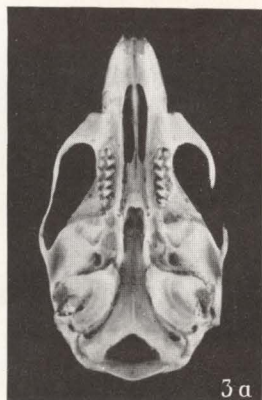
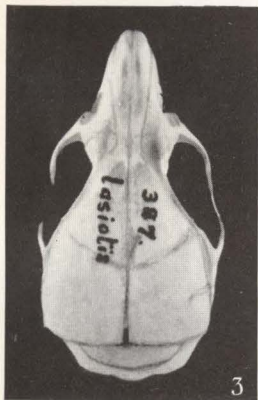
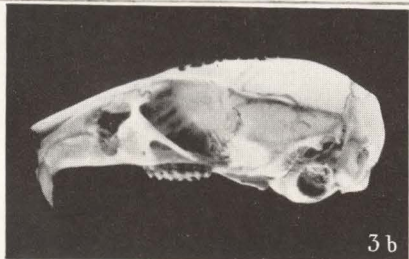
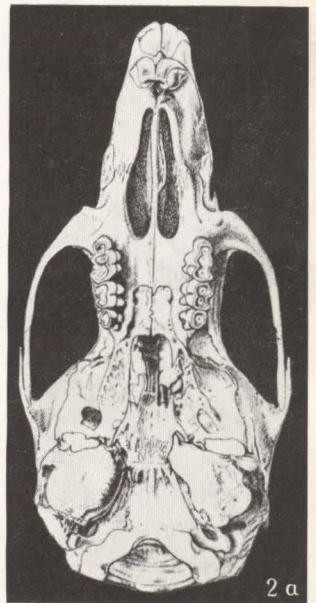
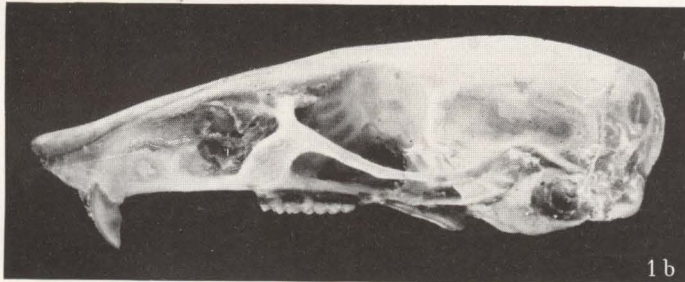


*MICROXUS LANOSUS*



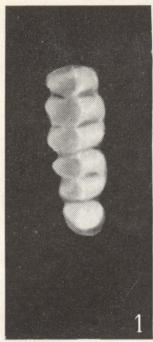


OXYMYCTERUS JUDEX

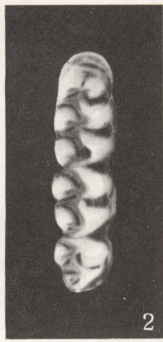


LEMEXUS APICALIS

THALPOMYS LASIOTIS



1  
*ICHTHYOMYS*  
*SODERSTROMI*



2  
*ORYZOMYS*  
*MERIDENSIS*



3  
*NISSORYZOMYS*  
*INDEFESSUS*



4  
*OLIGORYZOMYS*  
*MINUTUS*



5  
*THALOMYS*  
*AVRIIUS*



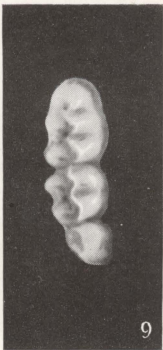
6  
*ALALOMYS*  
*PHAEOPUS*



7  
*NEACOMYS*  
*SPINDSUS*



8  
*AFROCOMYS*  
*VULCANI*



9  
*CHILOMYS*  
*INSTANS*



10  
*RHAGOMYS*  
*RUFESCENS*



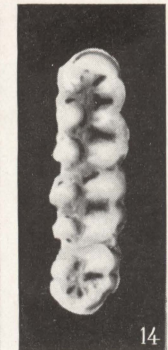
11  
*CECOMYS*  
*BIFRONS*



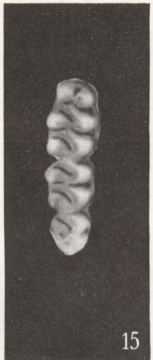
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*EMPIDOMYS*  
*LEUCODACTYLUS*



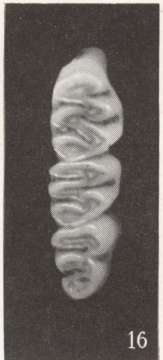
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*THOMASOMYS*  
*AUREUS*



14  
*PHAEOMYS*  
*FERRUGINEUS*



15  
*DELOMYS*  
*DORSALIS*



16  
*HYLOCHILUS*  
*BALNEARUM*



17  
*NECTOMYS*  
*GARLEPII*



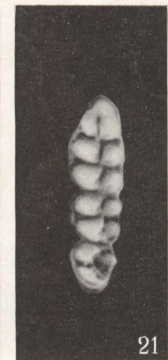
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*RETHRODONTOMYS*  
*SODERSTROMI*



19  
*ELEMODONTIA*  
*FLEGANS*



20  
*PARALOMYS*  
*GERBILLUS*



21  
*HESPEROMYS*  
*VIENTSUS*



22  
*RETHRODON*  
*CUMICULOIDES*



23  
*SIGNODON*  
*HISPIDUS*



24  
*SIGNODON*  
*SABIANNARUM*



25  
*NECTOMYS*  
*WILTURNUS*



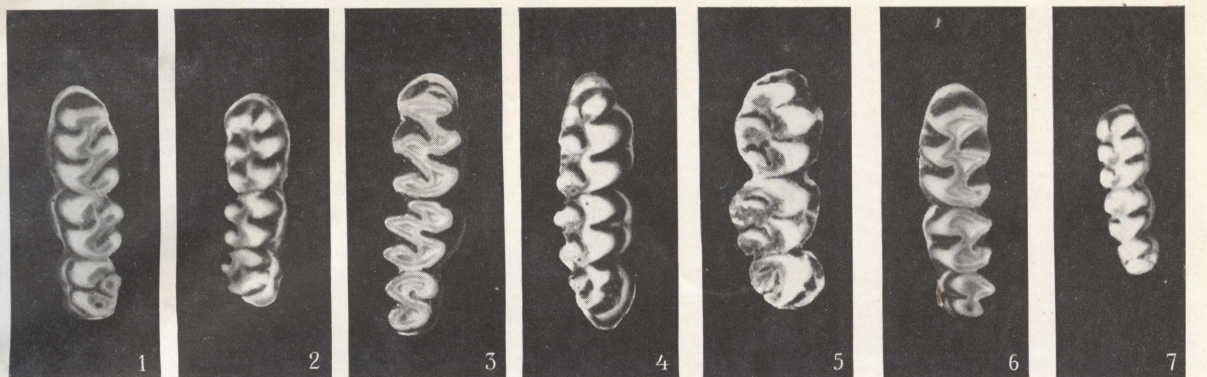
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*LONGICAUDATUS*



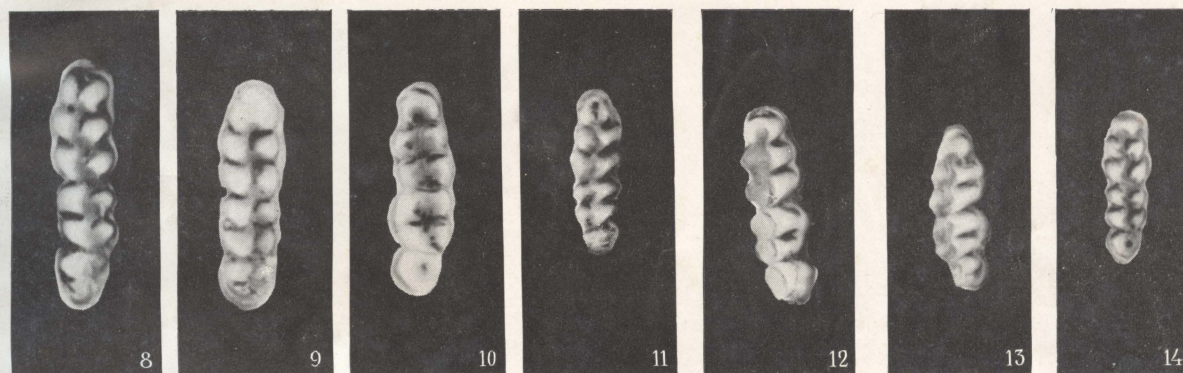
27  
*PHYLLOTTIS*  
*HAGGARDI*



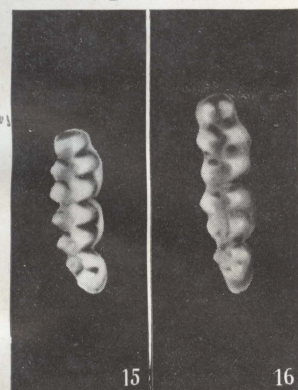
28  
*GRAMMYS*  
*LOCKWOODI*



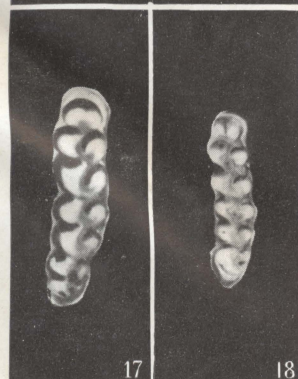
1 *QUISCOMYS MICROPS* 2 *QUISCOMYS PICTUS* 3 *ANDINOMYS EDAX* 4 *SCAPTEROMYS TUMIDUS* 5 *SCAPTEROMYS EUACOENSIS* 6 *CHINCHILLA SAMARAE* 7 *AKODON ARVICULOIDES*



8 *AKODON OROPHILUS* 9 *ZYCOONOTOMYS STELLAE* 10 *DELTAOMYS KEMPI* 11 *THALPOMYS LASIOTIS* 12 *HYPSIMYS DECEPTOR* 13 *BOLOMYS ALBIVENTER* 14 *ABROTOMYS WIRTHI*



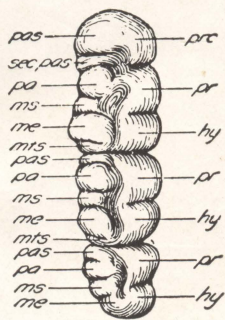
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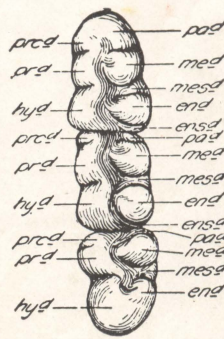
17 18

*AKODOMYS PULCHERRIMUS*

*GEOMYS FOSSI-R*



A



B

- |                                    |                       |                         |                       |
|------------------------------------|-----------------------|-------------------------|-----------------------|
| pas..... Parastyle.                | prc..... Protoconule. | prcd..... Protoconulid. | pad..... Paraconid.   |
| sec. pas..... Secondary parastyle. | pr..... Protocone.    | prd..... Protoconid.    | med..... Metaconid.   |
| pa..... Paracone.                  | hy..... Hypocone.     | hyd..... Hypoconid.     | mesd..... Mesostylid. |
| ms..... Mesostyle.                 |                       |                         | end..... Entoconid.   |
| me..... Metacone.                  |                       |                         | ensd..... Entostylid. |
| ms..... Metastyle.                 |                       |                         |                       |

Molar teeth of typical *Oryzomys* with outlines accentuated to show principal crown elements. A, Right upper molars; B, left lower molars.

*CHELEMYS VESTITUS* *ORYZOMYS PETERIUS JUDICIS*