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THE TAXONOMIC HISTORY OF THE SOUTH AMERICAN CRICETID GENERA EUNEOMYS (SUBGENERA EUNEOMYS AND GALENOMYS), AULISCOMYS, CHELEMYSCUS, CHINCHILLULA, PHYLLOTIS, PARALOMYS, GRAOMYS, ELIGMODONTIA AND HESPEROMYS

### By G. H. H. TATE

This is the second of a series of short papers on the systematic status of Neotropical mice. The intention is to concentrate in one article the scattered taxonomic information of the genera and species in question and to present it in such form that it is readily available for a besequent work. The genera treated are close allies and their histories interlock repeatedly.

The history of each successive genus or subgenus is presented in chronological order, and placed after it is a summary setting forth the present status, based upon the opinions of recent writers, of all forms concerned, together with their type localities.

#### HISTORICAL STATEMENT

#### **EUNEOMYS** Coues

## Subgenus **Euneomys** Coues

- 1837. Waterhouse described (p. 17) Mus micropus (n. sp.) and placed it (p. 21) in Abrothrix, n. subg. of Mus.
- 1839. Waterhouse further described (p. 61) Mus micropus Waterhouse.

  He described (p. 72) Reithrodon chinchilloides (n. sp.)
  (later designated by Coues the type of Euneomys). He erected (p. 75) Hesperomys, n. g., to contain almost all forms of Cricetidæ of the Western Hemisphere. Micropus was presumably included in this genus.
- 1842. Lesson placed (p. 136) micropus in Mus (Abrothrix) and listed (p. 143) chinchilloides under Mus (Reithrodon).
- 1843. Wagner (p. 520) placed micropus in Hesperomys, subgenus of Habrothrix, and (p. 548) chinchilloides in Reithrodon.
- 1867. Fitzinger listed (p. 81) micropus under Habrothrix, full genus, and chinchilloides under Reithrodon (p. 76).

- 1874. Coues (p. 185) erected *Euneomys*, n. subg. of *Reithrodon*, designating *Reithrodon chinchilloides* Waterhouse as its type, but not, however, mentioning *micropus*.
- 1879. Burmeister (p. 231) kept chinchilloides in Reithrodon and placed (p. 217) micropus in Habrothrix, subgenus of Hesperomys.
- 1884. Thomas (p. 457) described *Reithrodon pictus*, n. sp. (ultimately designated type of *Auliscomys*, subgenus of *Euneomys*).
- 1891. Thomas (in Milne-Edwards) continued to list (p. 29) chinchil-loides under Reithrodon.
- 1896a. Thomas in 'Genera of Rodents' listed *Reithrodon* but ignored *Euneomys* which he presumably still thought of as a subgenus of the former.
- 1898c. Thomas described (p. 279) *Phyllotis garleppi*, n. sp. (later placed in *Galenomys*, subgenus of *Euneomys*).
- 1898. Trouessart (p. 533) made *Euneomys* a synonym of *Reithrodon*, placing *chinchilloides* and *pictus* in that genus. He listed (p. 536) *micropus* under *Akodon*.
- 1899. Thomas described (p. 280) Reithrodon fossor, n. sp. (ultimately made type of Chelemyscus).
- 1900d. Thomas described (p. 467) *Phyllotis sublimis*, n. sp. (later removed to *Auliscomys*).
- 1901b. Thomas compared Euneomys with Phyllotis and Reithrodon, giving it full generic rank. Under it he listed chinchilloides, pictus, sublimis, and fossor.
- 1902b. Thomas again wrote of sublimis under Euneomys.
- 1903. Allen re-characterized *Euneomys* and described (p. 192) *Euneomys* petersoni, n. sp.
- 1905. Allen further described *petersoni*. He placed *micropus* under *Phyllotis*.
- 1905. Trouessart now followed Thomas and Allen in recognizing Euneomys as a full genus. He listed chinchilloides and petersoni; also fossor and other species, later placed in other groups. Micropus was returned to Akodon.
- 1911. Neveu-Lemaire and Grandidier more or less ignored re-allocations of the species by Allen, Thomas, and Trouessart. Their list included: Euneomys sublimis, Reithrodon pictus, and Phyllotis sublimis. Sublimis, it will be noted, appeared both in Euneomys and in Phyllotis.
- 1912. Thomas described (p. 410) Euneomys mordax, n. sp.

- 1915. Osgood considered (p. 190) micropus a Phyllotis. He erected Auliscomys n. subg. of Phyllotis to which he removed pictus and sublimis, thus leaving only chinchilloides, petersoni, mordax, and fossor in Euneomys.
- 1916a. Thomas considered (p. 140) that Auliscomys Osgood should be a subgenus of Euneomys rather than of Phyllotis and divided (pp. 142-3) the genus Euneomys into three subgenera: Euneomys subg., Auliscomys subg., and Galenomys subg. In the first were included chinchilloides, fossor, mordax, and petersoni. Micropus was placed under Auliscomys. Galenomys, n. subg., of Euneomys, was erected to contain Phyllotis garleppi.
- 1916b. Thomas described (p. 185) Euneomys ultimus, n. sp.
- 1919a. Thomas described (p. 202) Euneomys micropus alsus, n. subsp.
- 1919c. Thomas described (p. 127) Euneomys dabbenei, n. sp.
- 1925. Thomas removed fossor from Euneomys by designating it type of Chelemyscus, n. g.
- 1926a. Thomas, by using Auliscomys in full generic sense, left only Euneomys (restricted, 1916a) and Galenomys as subgenera of Euneomys, full genus.
- 1927b. Thomas once more listed micropus alsus under Euneomys.

## Subgenus GALENOMYS Thomas

- 1898c. Thomas described (p. 279) Phyllotis garleppi, n. sp.
- 1916a. Thomas erected (p. 143) Galenomys, n. subg. of Euneomys, with type species Phyllotis garleppi Thomas.

## AULISCOMYS Osgood

- 1837. Waterhouse described (p. 28) Mus (Phyllotis) xanthopygus (n. sp.).
- 1839. Waterhouse further described (p. 63) Mus xanthopygus Waterhouse. After erecting his blanket-genus Hesperomys (p. 75), he referred (p. 76) xanthopygus to Hesperomys, although as one of the species that "depart most from the type."
- 1842. Lesson listed xanthopygus under Mus (Phyllotis).
- 1843. Wagner placed xanthopygus under Hesperomys (Phyllotis).
- 1846. Waterhouse (p. 9) described Hesperomys boliviensis, n. sp.
- 1879. Burmeister put xanthopygus in Hesperomys (Calomys).
- 1884. Thomas described (p. 457) Reithrodon pictus, n. sp. (later made the type of Auliscomys).

- 1891. Thomas (in Milne-Edwards) listed xanthopygus under Hesperomys (Phyllotis).
- 1898. Trouessart, treating *Euneomys* as a synonym of *Reithrodon*, listed pictus under the latter. He placed boliviensis and xanthopygus under *Phyllotis*.
- 1900d. Thomas described (p. 457) Phyllotis sublimis, n. sp.
- 1901a. Allen listed boliviensis under Phyllotis.
- 1901b. Thomas considered sublimis allied to pictus. He reinstated Euneomys, listing in it pictus and sublimis (later to be placed in Auliscomys) as well as E. chinchilloides and E. fossor.
- 1902b. Thomas listed Euneomys sublimis.
- 1902c. Thomas listed Phyllotis boliviensis and Euneomys sublimis.
- 1902e. Thomas described (p. 248) Phyllotis boliviensis flavidior, n. subsp.
- 1905. Allen listed xanthopygus under Phyllotis.
- 1905. Trouessart, treating *Euneomys* as a full genus, listed in addition to other forms pictus and sublimis (later removed to Auliscomys). He placed boliviensis boliviensis, boliviensis flavidior and xanthopygus in Phyllotis.
- 1915. Osgood erected Auliscomys, n. subg. of Phyllotis, designating as type Reithrodon pictus Thomas, and including also sublimis, boliviensis boliviensis and boliviensis flavidior, but not xanthopygus. He described (p. 191) Phyllotis (Auliscomys) decoloratus, n. sp.
- 1916a. Thomas considered (p. 140) Auliscomys closer to Euneomys than to Phyllotis and (p. 143) definitely made it a subgenus of Euneomys. He added to Osgood's species micropus (later taken into Euneomys (restricted) and xanthopygus).
- 1919a. Thomas referred xanthopygus back once more to Phyllotis. He described (p. 202) Euneomys micropus alsus, n. sp. (micropus being at that time in the subgenus Auliscomys).
- 1919d. Thomas described (p. 129) Euneomys (Auliscomys) leucurus, n. sp.
- 1926a. Thomas used the name Auliscomys (A. pictus) in the full generic sense.
- 1926c. Thomas again employed Auliscomys (A. leucurus) as a full genus.
- 1926e. Thomas maintained his recent (1919) transfer of xanthopygus back to Phyllotis.
- 1927a. Thomas selected lectotypes in British Museum collections: *pictus* (p. 150), male, number 85.4.1.34 (is of original series).

1927b. Thomas, by use of "Euneomys micropus alsus" removed micropus from Auliscomys to Euneomys, Auliscomys (1926a) being a full genus.

#### CHELEMYSCUS Thomas

- 1899. Thomas described (p. 280) Reithrodon fossor, n. sp.
- 1901b. Thomas removed fossor from Reithrodon to Euneomys.
- 1905. Trouessart listed fossor under Euneomys.

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1925. Thomas erected (p. 584) Chelemyscus, n. g., designating "Euneomys fossor" (= Reithrodon fossor) type.

#### CHINCHILLULA Thomas

1898c. Thomas erected (p. 280) Chinchillula, n. g., with type species Chinchillula sahamæ, n. sp.

#### **ANDINOMYS** Thomas

1902a. Thomas erected (p. 116) Andinomys, n. g., with type species Andinomys edax, n. sp.

## IRENOMYS Thomas

- 1900. Philippi described (p. 63) Reithrodon longicaudatus, n. sp.
- 1905. Trouessart mentioned the species in a footnote appended to the genus *Phyllotis*.
- 1919a. Thomas, having received an animal which he considered identical with Philippi's species, erected (p. 201) *Irenomys*, n. g., and designated as type *Reithrodon longicaudatus* Philippi.

#### PHYLLOTIS Waterhouse

- 1837. Waterhouse (p. 27) proposed *Phyllotis* (n. subg.) of the Linnæan *Mus*, to include three species: *Mus* (*Phyllotis*) darwini (n. sp.); *Mus* (*Phyllotis*) xanthopygus (n. sp.); and *Mus* (*Phyllotis*) griseo-flavus (n. sp.) (now type of Graomys). No species was designated type.
- 1839. Waterhouse (pp. 62–65) further described the above three species under *Mus*, without employing the name *Phyllotis*. By setting up the blanket genus *Hesperomys* he placed these species in that genus.
- 1843. Wagner placed darwini, griseo-flavus and xanthopygus under Hesperomys (Phyllotis).
- 1846. Waterhouse described (p. 483) Hesperomys boliviensis n. sp. (finally placed in Auliscomys).

- 1879. Burmeister (p. 225) put "xanthopygos" under Hesperomys (Calomys).
- 1884. Thomas re-characterized *Phyllotis* as a subgenus of *Hesperomys* and designated *H. darwini* type, listing in addition *boliviensis*, griseoflavus and xanthopygus.
- 1891. Thomas (in Milne-Edwards) listed xanthopygus under Hesperomys (Phyllotis).
- 1896a. Thomas in 'Genera of Rodents' made Phyllotis a full genus.
- 1898c. Thomas described (p. 279) Phyllotis? garleppi, n. sp. (later made the type of Galenomys).
- 1898d. Thomas described (p. 270) Phyllotis haggardi, n. sp.
- 1898. Trouessart listed under *Phyllotis: darwini* and *xanthopygus* and also *boliviensis*, *auritus* and *griseo-flavus* (all now in other genera). In his *appendix* he added *haggardi* Thomas and *garleppi* Thomas.
- 1900a. Thomas described (p. 151) *Phyllotis gerbillus*, n. sp. (later made the type of *Paralomys*).
- 1900b. Thomas described (p. 355) Phyllotis amicus, n. sp.
- 1900c. Thomas described (p. 296) Phyllotis amicus maritimus n. subsp. and (p. 297) Phyllotis amicus montanus, n. subsp.
- 1900d. Thomas described (p. 467) Phyllotis sublimis, n. sp. (later placed in Auliscomys).
- 1900. Philippi described under Mus: dichrous, mollis, illapelinus, segethi, and campestris, all of which were later (1910) synonymized by Wolffsohn with darwini.
- 1901a. Allen described (p. 44) Phyllotis osilæ, n. sp.
- 1901b. Allen described (p. 408) *Phyllotis chacoensis*, n. sp., and (p. 409) *Phyllotis cachinus*, n. sp. (both eventually placed in *Graomys*).
- 1901b. Thomas remarked upon "Phyllotis" sublimis, which, after comparing the genera Phyllotis, Reithrodon and Euneomys, he placed in Euneomys.
- 1902b. Thomas described (p. 131) Phyllotis wolffsohni, n. sp., and (p. 131) Phyllotis lutescens, n. sp.
- 1902c. Thomas described (p. 224) Phyllotis arenarius, n. sp., and (p. 225) Phyllotis hirtipes n. sp. (later removed to Eligmodontia).
- 1902e. Thomas described (p. 248) Phyllotis boliviensis flavidior, n. subsp. (later removed with b. boliviensis to Auliscomys).
- 1905. Allen, after discussing *Phyllotis*, listed in it *micropus* (now in *Euneomys*) and *xanthopygus*.

- 1905. Trouessart transferred griseo-flavus, griseo-flavus centralis, cachinus and chacoensis to Eligmodontia. Under Phyllotis he listed darwini, wolffsohni, haggardi, lutescens, amicus and its subspecies, osilæ, arenarius and xanthopygus, and as well: boliviensis, boliviensis flavidior, hirtipes, gerbillus, garleppi and auritus (all later placed in other genera).
- 1910. Wolffsohn synonymized a number of Philippi's (1900) species of *Mus* with *Phyllotis darwini*.
- 1912. Thomas described (p. 406) Phyllotis magister, n. sp., Phyllotis darwini posticalis, Phyllotis darwini limatus, n. sp., Phyllotis darwini tucumanus, n. subsp., Phyllotis darwini vaccarum, n. subsp., Phyllotis andium, n. sp.
- 1913a. Thomas described (p. 139) Phyllotis elegantulus, n. sp.
- 1913b. Thomas described (p. 407) Phyllotis melanius, n. sp.
- 1914. Osgood described (p. 165) Phyllotis andium stenops, n. subsp., and (p. 165) Phyllotis tamborum, n. sp.
- 1915. Osgood removed (p. 190) sublimis, boliviensis and its subspecies to Auliscomys, n. subg. of Phyllotis. He described (p. 189) Phyllotis definitus, n. sp.
- 1916a. Thomas, discussing the relationships of *Phyllotis* and its allies, transferred *Auliscomys* from *Phyllotis* to *Euneomys*. He removed *hirtipes*, *griseo-flavus*, *cachinus*, *chacoensis*, *boliviensis*, *sublimis*, *xanthopygus* and *garleppi*, which had previously been considered members of the genus *Phyllotis*, to other genera. This left in *Phyllotis*: *darwini* and its subspecies, *haggardi*, *gerbillus*, *amicus* and subspecies, *osilæ*, *wolffsohni*, *lutescens*, *arenarius*, *magister*, *andium* and subsp., *elegantulus*, *melanius*, *tamborum* and *definitus*.
- 1918a. Thomas described (p. 408) Phyllotis darwini tucumanus, n. subsp.
- 1919a. Thomas returned xanthopygus from Auliscomys to Phyllotis (see Thomas, 1916).
- 1919b. Thomas raised darwini tucumanus to full specific rank and described (p. 493) Phyllotis ricardulus, n. sp.
- 1921a. Thomas described (p. 611) Phyllotis nogalaris, n. sp.
- 1922. Anthony described (p. 1) Phyllotis fruticicollus, n. sp.
- 1924. Anthony described (p. 1) Phyllotis fuscus, n. sp.
- 1926a. Thomas described (p. 316) *Phyllotis abrocodon*, n. sp. He removed *gerbillus* to *Paralomys*.
- 1926d. Thomas reduced tamborum Osgood to the rank of a subspecies of andium Thomas.

- 1926. Cabrera described (p. 319) Phyllotis oreigenus, n. sp.
- 1927a. Thomas selected as lectotype of *xanthopygus* British Museum No. 55.12.24.185 and as lectoparatypes 55.12.24.169/170.

## PARALOMYS Thomas

- 1900a. Thomas described (p. 151) Phyllotis gerbillus, n. sp.
- 1926a. Thomas erected (p. 315) Paralomys, n. g., with type species Phyllotis gerbillus Thomas.

## **GRAOMYS** Thomas

- 1837. Waterhouse described (p. 28) Mus (Phyllotis) griseo-flavus (n. sp.).
- 1839. Waterhouse further described (p. 62) griseo-flavus Waterhouse under Mus, no longer using Phyllotis. He placed (p. 76) griseo-flavus in Hesperomys, n. g.
- 1842. Lesson listed griseoflavus under Mus (Phyllotis).
- 1843. Wagner gave griseo-flavus under Hesperomys (Phyllotis).
- 1879. Burmeister placed griseo-flavus in Hesperomys (Calomys).
- 1884. Thomas listed griseo-flavus under Hesperomys (Phyllotis).
- 1894. Matchie listed griseo-flavus under Phyllotis.
- 1898a. Thomas listed griseo-flavus under Phyllotis.
- 1898b. Thomas listed griseo-flavus under Eligmodontia.
- 1898. Trouessart listed griseo-flavus under Phyllotis.
- 1900. Philippi listed Mus griseo-flavus (but Wolffsohn (1910) corrected the identification to Phyllotis darwini).
- 1901b. Allen described (p. 408) Phyllotis chacoensis, n. sp., and Phyllotis cachinus, n. sp.
- 1902b. Thomas described (p. 132) Eligmodontia dormorum, n. sp.
- 1902d. Thomas described (p. 240) Eligmodontia griseoflavus centralis, n. subsp., thus removing griseoflavus from Phyllotis to Eligmodontia.
- 1905. Allen retained griseo-flava under Eligmodontia.
- 1905. Trouessart listed under Eligmodontia the following: griseo-flava, griseo-flava centralis, dormorum, cachinus, chacoensis. He included also callosa and callosa bolivix (now in Hesperomys).
- 1910. Wolffsohn corrected Philippi's (1900) identification of griseo-flavus.
- 1916a. Thomas (p. 141) erected *Graomys*, n. g., designating as type *Mus* (*Phyllotis*) griseo-flavus Waterhouse, to include a number of the forms hitherto referred to *Eligmodontia*. Species listed were griseo-flavus centralis, chacoensis, cachinus and dormorum

- 1916. Osgood, considering *Graomys* a subgenus, used the combination "*Phyllotis* (*Graomys*) dormorum." He thought that *Phyllotis* amicus should be placed near *Graomys*.
- 1918a. Thomas restored *Graomys* to full generic rank, describing (p. 187) *Graomys lockwoodi*, n. sp.
- 1919b. Thomas described (p. 494) Graomys medius, n. sp., and (p. 495) Graomys edithæ, n. sp.
- 1926b. Thomas described (p. 320) Graomys taterona, n. sp.

## **ELIGMODONTIA** Cuvier

- 1837. Cuvier erected (p. 168) *Eligmodontia*, n. g., with type *typus*, n. sp. (construed as by original designation).
- 1837. Waterhouse described (p. 19) Mus elegans (n. sp.) and referred it (p. 21) to his Mus (Calomys).
- 1839. Waterhouse further described (p. 41) elegans Waterhouse, this time under Mus (and omitting Calomys). He referred (p. 75) almost all American Cricetidæ to Hesperomys, n. g., his all-inclusive genus.
- 1841. Wagner placed (p. 125) the genus "Elimodon" under his division Sigmodontes.
- 1843. Wagner placed (p. 525) elegans under Hesperomys (Calomys).

  Eligmodontia typus was made a synonym of Mus elegans.
- 1847. D'Orbigny and Gervais listed *Eligmodontia typus* and placed immediately after the reference to Cuvier's description "(d'après un exemplaire receuilli par M. d'Orbigny)." They then spoke of capturing it in Corrientes (see Thomas, 1929).
- 1874. Coues stated (p. 177) that "Eligmodontia was no earlier" than Calomys and (p. 176) listed Eligmodontia as a synonym of Calomys.
- 1879. Burmeister listed (p. 220) elegans under Hesperomys (Calomys) and in a note (p. 221) claimed that Eligmodontia typus was distinct from elegans and equalled Oryzomys longicaudatus (Bennett).
- 1896b. Thomas described (p. 307) "Eligmodon" (emendation or misprint for Eligmodontia) moreni, n. sp.
- 1898b. Thomas included "provisionally" in *Eligmodontia: elegans* (=typus), moreni, as well as a number of species which now are referred to other genera.

- 1898. Trouessart reduced both Calomys and Hesperomys, placing them as synonyms of Eligmodontia. Besides typus (=elegans) and moreni he listed several species now located in other genera.
- 1900c. Thomas described (p. 297) Eligmodontia sorella, n. sp. (later removed to Hesperomys).
- 1901b. Allen described (p. 409) Eligmodontia morgani, n. sp. and spoke of griseo-flavus (now in Graomys) as in Eligmodontia.
- 1901a. Thomas described (p. 182) *Eligmodontia ducilla*, n. sp. (later transferred to *Hesperomys*).
- 1901b. Thomas described (p. 253) Eligmodontia callosa boliviæ, n. subsp. (later placed in Hesperomys).
- 1902b. Thomas described (p. 132) Eligmodontia dormorum, n. sp. (later placed in *Graomys*) and *Eligmodontia carilla* (transferred to *Hesperomys*).
- 1902c. Thomas described (p. 225) *Phyllotis hirtipes*, n. sp. (in 1916 transferred to *Eligmodontia*).
- 1902d. Thomas described (p. 240) Eligmodontia griseo-flavus centralis, n. subsp. (transferred later to Graomys).
- 1904. Palmer (p. 154) held *Calomys* Waterhouse preoccupied by *Callomys* d'Orbigny and Geoffroy, 1830. Cited various modifications in spelling (p. 225) of *Eligmodontia*.
- 1905. Allen argued that because Hesperomys was a synonym of Calomys and Calomys was a synonym of Eligmodontia, therefore Hesperomys was a synonym of Eligmodontia. His contention was based upon the assumption that elegans and bimaculatus were congeneric. They are not considered to be so today. Besides typus (= elegans) and morgani he listed gracilipes (now in restricted Hesperomys) and griseo-flavus (now in Graomys).
- 1905. Trouessart considered *Hesperomys* as a synonym of *Eligmodontia*. Only *typus*, *morgani* and *moreni* of the species listed by him are now included in *Eligmodontia*. He placed *hirtipes* in *Phyllotis*.
- 1913a. Thomas described (p. 138) Eligmodontia laucha musculina, n. subsp. (later placed in restricted Hesperomys). Thus, he still considered Eligmodontia and Hesperomys synonymous.
- 1913c. Thomas described (p. 572) Eligmodontia morgani pamparum, n. subsp.

- 1916a. Thomas split up the old *Eligmodontia* into *Eligmodontia* (restricted), *Hesperomys* (restricted) and *Graomys*. In the restricted *Eligmodontia* were left only typus, moreni, morgani and morgani pamparum. From Phyllotis, hirtipes was transferred to *Eligmodontia*.
- 1918b. Thomas described (p. 483) Eligmodontia marica, n. sp.
- 1919d. Thomas described (p. 131) Eligmodontia hirtipes jucunda, n. subsp.
- 1926. Shufeldt (pp. 508, 568) referred to tener Winge (a Hesperomys) as Eligmodontia.
- 1929. Thomas interpreted the remarks of d'Orbigny and Gervais (1847) as showing that Cuvier's animal (the type) was collected by d'Orbigny in Corrientes, "Buenos Aires" having only a general significance. He revived elegans, for nearly a century synonymized with typus, as a separate southern species until such time as the status of each could be determined. He suggested that perhaps morgani and also m. pamparum were synonymous with elegans.

## **HESPEROMYS** Waterhouse

- 1801. Azara described (p. 102) his "Rat septième ou rat laucha" (which appears to have been a *Hesperomys*).
- 1802. Azara characterized the same rat in his Spanish edition as "laucha."
- 1819. Desmarest applied (p. 65) the binomial Mus laucha to Azara's description (in the French edition).
- 1827. Brants recorded (p. 148) laucha under Mus.
- 1830. Rengger described (p. 231) Mus callosus (n. sp.).
- 1830. Geoffroy and d'Orbigny described *Callomys*, n. g. for a species of viscacha.
- 1837. Waterhouse described (p. 18) Mus bimaculatus (n. sp.) and (p. 19) Mus gracilipes (n. sp.). He erected (p. 21) Calomys, n. subg. of Mus, designating bimaculatus as type and including gracilipes. (Calomys, however, was preoccupied by Callomys Geoffroy and d'Orbigny, 1830).
- 1839. Waterhouse re-characterized (p. 43) bimaculatus and (p. 45) gracilipes. He compared (p. 74) the teeth of an example (Mus bimaculatus) of American Muridæ with the dentition of Mus rattus. The distinct characters of the teeth induced

<sup>&</sup>lt;sup>1</sup>The description of Blanco Debaxo, p. 97, named *Mus dubius* Fischer, 'Synopsis Mammalium,' 1829, p. 326, referred almost certainly to a species of *Hesperomys*.

him "to separate the South American mice from those of the Old World,—or rather from that group of which M. decumanus may be regarded as the type,—and to place them, together with such North American species as agree with them in dentition, in a new genus bearing the name Hesperomys."

"The species of *Hesperomys* which depart most from the type . . . recede still farther from the genus *Mus*, and approach more nearly (as regards the dentition) to the *Arvicolae*. Among the species here described I may mention as examples, *M. griseo-flavus*, *M. xanthopygus* and *M. darwinii*, . . . and among the North American species . . . *Neotoma*."

". . . in the species of *Hesperomys*, the molar teeth are always rooted, . . ."

[The above quotations are introduced to emphasize the breadth of Waterhouse's original conception of *Hesperomys*. The genus has since been gradually restricted until its present scope has been reached. Coues (1874) and Allen (1905) suggested that bimaculatus ought to be considered the type of *Hesperomys*, but it remained for Thomas (1916) formally to designate it such. It will be noted that with *Hesperomys* and *Calomys* having the same type species (bimaculatus), the former might be a synonym of the latter. But because *Calomys* was preoccupied, *Hesperomys* became valid.]

- 1841. Lund (p. 280) briefly described Mus expulsus (n. sp.).
- 1842. Lesson placed expulsus and laucha in his subgenus Mus.
- 1843. Gray raised Calomys to generic rank.
- 1843. Wagner diagnosed Hesperomys, including in it as subgenera Oxymycterus, Scapteromys, Habrothrix, Calomys, Phyllotis and two subgeneric groups which he left unnamed. Bimaculatus, gracilipes and other mice were put in Calomys, but expulsus, laucha and callosus remained unplaced subgenerically. Holochilus was a separate genus.
- 1854. Burmeister used Hesperomys in the broad sense to include several subgenera. He placed elegans and expulsus in H. (Calomys).
- 1859. Baird further restricted Hesperomys by dividing it into three South American subgenera, Calomys (=Eligmodontia), Habrothrix (=Habrothrix+Phyllotis) and Oxymycterus (=Oxymycterus+Scapteromys), and two North American subgenera, Onychomys and Oryzomys. Reithrodon and

- Holochilus were considered full genera. The species now called *Peromyscus* were still kept in the subgenus *Hesperomys*.
- 1867. Fitzinger made all subgenera into full genera, but confused his species hopelessly.
- 1874. Coues reviewed (p. 177) Baird's treatment. He separated the North American vesper mice under the name Vesperimus, n. subg. (a synonym of Peromyscus Gloger). He suggested (designated?) that bimaculatus be taken as the type of Hesperomys.
- 1879. Burmeister listed a series of subgenera (Holochilus, Oxymycterus, Habrothrix and Calomys) under Hesperomys.
- 1884. Thomas described (p. 454) Hesperomys (Calomys) bimaculatus lepidus, n. subsp.
- 1887. Winge placed *Mus expulsus* Lund in *Hesperomys*. His other species given under that genus are now located in other genera. He described (p. 15) *Hesperomys tener*, n. sp. The species treated under *Calomys* appear to belong in *Oryzomys*.
- 1888. Thomas suggested that *Hesperomys* be merged with *Cricetus* and the former name be done away with.
- 1891. Allen stated (p. 291) that *Hesperomys*, on account of its anomalous history, was not entitled to recognition in nomenclature
- 1894. Thomas described (p. 359) Oryzomys? venustus, n. sp.
- 1896a. Thomas in 'Genera of Rodents' considered *Hesperomys* a synonym of *Eligmodontia*.
- 1897. Palmer in 'Generic and Family names of Rodents' under "type or included species" gave Mus bimaculatus for Hesperomys.
- 1898. Trouessart listed Hesperomys as a synonym of Eligmodontia. Besides species truly belonging in the latter, he listed bimaculatus bimaculatus, bimaculatus lepidus, bimaculatus laucha and gracilipes. He placed expulsus, tener, venustus and simplex in Oryzomys and callosus in Phyllotis.
- 1900c. Thomas described (p. 297) Eligmodontia sorella, n. sp. (later removed to Hesperomys).
- 1901a. Thomas described (p. 182) Eligmodontia ducilla, n. sp. (later placed in Hesperomys).
- 1901b. Thomas described (p. 253) Eligmodontia callosa boliviæ, n. subsp. (later brought into Hesperomys).
- 1902b. Thomas described *Eligmodontia carilla*, n. sp. (later placed in *Hesperomys*).

- 1902d. Thomas listed callosa under Eligmodontia.
- 1904. Palmer said of *Hesperomys*, "type not designated, but *Mus bimaculatus* . . . may perhaps be so considered."
- 1905. Allen followed Trouessart (1898) and made Hesperomys a synonym of Eligmodontia. Taking bimaculatus as the type of Hesperomys, he contended that since bimaculatus was designated type of Calomys, Hesperomys must remain a synonym of Calomys. Furthermore he concluded that because Calomys elegans was equal to Eligmodontia typus, Calomys (and therefore Hesperomys) was synonymous with Eligmodontia. Such a conclusion was only warranted if elegans and bimaculatus were truly congeneric. Allen re-described gracilipes.
- 1905. Trouessart, following Allen, made Hesperomys a synonym of Eligmodontia. Of animals today considered as Hesperomys he listed callosus callosus, callosus boliviæ, bimaculatus, lepidus (making it a full species), sorella, ducilla, laucha, carilla and gracilipes. He placed expulsus in Zygodontomys; and still held simplex, tener and venustus in Oryzomys.
- 1913a. Thomas described (p. 138) Eligmodontia laucha musculina, n. subsp.
- 1916a. Thomas limited the genus Eligmodontia, as viewed during the previous score of years, by reinstating Hesperomys (available because of the preoccupation of Calomys) in restricted form, by strongly restricting Eligmodontia itself, and by erecting Graomys for the griseo-flavus group. The restricted Hesperomys was re-characterized (p. 141), Mus bimaculatus Waterhouse being designated the type. Othr species listed were: callosus, callosus boliviæ, carilla, ducilla, expulsus, gracilipes, laucha, laucha musculinus, lepidus, sorella, tener and venustus.
- 1916b. Thomas wrote upon the laucha group, and described also (p. 182) Hesperomys venustus callidus, n. subsp., Hesperomys murillus, n. sp., and Hesperomys murillus cordovensis, n. subsp.
- 1917. Thomas described (p. 1) Hesperomys frida, n. sp., and (p. 1) Hesperomys carillus marcarum, n. subsp.
- 1919d. Thomas described (p. 130) Hesperomys carillus argurus, n. subsp. 1920. Thomas described (p. 190) Hesperomys musculinus cortensis, n.

subsp., thus raising musculinus to full specific rank.

1921b. Thomas described (p. 623) Hesperomys muriculus, n. sp.

1926. Shufeldt spoke of tener as "Eligmodontia."

1926a. Thomas described (p. 314) Hesperomys frida miurus, n. subsp.

1926b. Thomas described (p. 321) Hesperomys fecundus, n. sp.

1927a. Thomas, in 'Selection of Lectotypes,' listed the type of bimaculatus as British Museum No. 55.12.24.172 and a lectoparatype (in alc.) as 55.12.26.288.

#### PRESENT STATUS OF THE GENERA

#### Genus *Euneomys* Coues

Subgenus *Euneomys* Coues (Modified by Thomas, 1916) Subgenus *Galenomys* Thomas (1916)

Genus Auliscomys Osgood (Modified by Thomas, 1916, 1926) Genus Chelemyscus Thomas

Genus Chinchillula Thomas

Genus Andinomys Thomas

Genus Irenomys Thomas

Genus Phyllotis Waterhouse

Genus Paralomys Thomas

Genus Graomys Thomas

Genus Eligmodontia Cuvier

Genus Hesperomys Waterhouse

Type by original designation: Reithrodon chinchilloides Waterhouse

Type by original designation: *Phyllotis* garleppi Thomas

Type by original designation: Reithrodon pictus Thomas

Type by original designation: Reithrodon fossor Thomas

Type by original designation: Chinchillula sahamae Thomas

Type by original designation: Andinomys edax Thomas

Type by original designation: Reithrodon longicaudatus Philippi

Type by subsequent designation (Thomas): Mus (Phyllotis) darwini Waterhouse

Type by original designation: Phyllotis gerbillus Thomas

Type by original designation: Mus (Phyllotis) griseo-flavus Waterhouse

Type by monotypy and original designation: Eligmodontia typus Cuvier

Type by subsequent designation (Thomas): Mus bimaculatus Waterhouse

## LIST OF APPARENT¹ SPECIES AND SUBSPECIES WITH TYPE LOCALITIES

Euneomys (Euneomys)

chinchilloides (Waterhouse)

micropus micropus (Waterhouse) micropus alsus Thomas "South shore of the Strait of Magellan, near the Eastern entrance"

Santa Cruz, Argentina

Maiten, Western Chubut, Argentina

<sup>&</sup>lt;sup>1</sup>No responsibility for the allocation of these forms is assumed.

petersoni Allen

mordax Thomas ultimus Thomas

dabbenei Thomas

Euneomys (Galenomys)
garleppi (Thomas)

Auliscomys

pictus (Thomas)

boliviensis boliviensis (Waterhouse) boliviensis flavidior (Thomas)

sublimis (Thomas)

decoloratus (Osgood) leucurus (Thomas)

Chelemyscus

fossor (Thomas)

Chinchillula

sahamæ Thomas

Andinomys

edax Thomas

Irenomus

longicaudatus (Philippi)

Phullotis

darwini darwini (Waterhouse) darwini posticalis Thomas darwini limatus Thomas darwini vaccarum Thomas

xanthopygus (Waterhouse) haggardi Thomas amicus amicus Thomas amicus maritimus Thomas amicus montanus Thomas osilæ Allen wolffsohni Thomas Upper Rio Chico de Santa Cruz, Argen-

Fort San Rafael, Mendoza, Argentina St. Martin's Cove, Hermite Island, Cape

Horn Islands

Lago Viedma, Santa Cruz, Argentina

Near Mt. Sahama, Puna region, Bolivia

Junin (town), Peru Near Potosi, Bolivia Bateas, Caylloma, Peru

Rinconado Malo pass, above Caylloma,

Peru

Tirapata, Puno, Peru

LaLagunita, Maimara, Jujuy, Argentina

Province of Salta, Argentina

Mt. Sahama, Puna region, Bolivia

El Cabrado, between Potosi and Sucre, Bolivia

Western coast of Patagonia (Thomas's specimen from Beatriz, Nahuel Huapi, Argentina)

Coquimbo, Chile
Galera, west of Oroya, Junin, Peru
Chosica, near Lima, Peru
Las Vacas, Argentine slope of Cordillera,
opposite Mendoza, Argentina
Santa Cruz, Argentina
Mt. Pichincha, Ecuador
Tolon, coast district, Cajamarca, Peru

Eten, coast of N. W. Peru Uramarca, near Pallasca, N. W. Peru

Osila, S. E. Peru

Tapacari, N. of Cochabamba, Bolivia

lutescens Thomas arenarius Thomas magister Thomas tucumanus (Thomas)

andium andium Thomas andium stenops Osgood

andium tamborum (Osgood)

elegantulus Thomas melanius Thomas definitus Osgood

nogalaris Thomas fruticicolus Anthony fuscus Anthony abrocodon Thomas oreigenus Cabrera

Paralomys gerbillus (Thomas)

#### Graomys

griseo-flavus griseo-flavus (Waterhouse) griseo-flavus centralis (Thomas)

chacoensis (Allen)

cachinus (Allen) dormorum (Thomas) lockwoodi Thomas

medius Thomas edithæ Thomas taterona Thomas

# Eligmodontia typus Cuvier

elegans (Waterhouse) morgani morgani Allen morgani pamparum Thomas

moreni Thomas hirtipes hirtipes (Thomas) hirtipes jucunda Thomas marica Thomas

Choro, N. of Cochabamba, Bolivia Uyuni, near Potosi, Bolivia Arequipa, Peru Cumbre de Malamala, Sierra de Tucuman, Argentina Cañar, Ecuador Rio Utcubamba, 15 miles above Chachapoyas, Peru Tambo Carrizal, mountains east of Balsas, R. Marañon, Peru Pallatanga, Ecuador Porvenir, Bolivar, Ecuador Macate, 50 miles northeast of Chimbote, Higuerilla, Jujuy, Argentina Guachanamá, Southern Ecuador Contrayerbas, Azuay, Ecuador Oroya, Peru Laguna Blanca, Catamarca, Chile

Piura, N. W. Peru

Rio Negro, Argentina
Cruz del Eje, Central Cordova, Argentina
Waikthlatingwayalwa, Chaco boreal,
Paraguay
Upper Cachi River, Salta, Argentina
Tapacari, N. of Cochabamba, Bolivia
Manuel Eldori, Vermejo, Salta, Argentina
Chumbiche, Catamarca, Argentina
Otro Cerro, northeast Rioja, Argentina
Tablada, Tarija, S. Bolivia

Buenos Aires (Cuvier), but see Thomas (1929)
Bahia Blanca, Argentina
Arroyo Else, Patagonia
Peru Station, F. C. P., about 200 km.
northwest of Bahia Blanca, Argentina
Chilecito, Rioja, Argentina
Challapata, Bolivia
Abrapampa, northwest Jujuy, Argentina
Chumbiche, Catamarca, Argentina

Hesperomys

bimaculatus (Waterhouse)

laucha (Desmarest)

musculinus musculinus (Thomas) musculinus cortensis Thomas

callosus callosus (Rengger)

callosus boliviæ (Thomas)

gracilipes (Waterhouse) expulsus (Lund)

lepidus lepidus Thomas

tener Winge

venustus venustus (Thomas) venustus callidus Thomas

sorella (Thomas)

ducilla (Thomas)

carillus carillus (Thomas)
carillus marcarum Thomas

carillus argurus Thomas

murillus murillus Thomas murillus cordovensis Thomas

frida frida Thomas

frida miurus Thomas muriculus Thomas

fecundus Thomas

Maldonado, Uruguay Buenos Aires, Argentina Maimara, Jujuy, Argentina Jujuy City, Jujuy, Argentina

R. Paraguay, between 7th and 20th

degrees of south latitude

R. Solocame, Bolivia Bahia Blanca, Argentina

Lagoa Santa (?), Brazil

Junin, Peru

Lagoa Santa, Brazil

Cosquin, Cordova, Argentina

Goya, Corrientes, Argentina

 $8\ miles$  south of Huamachuca, N. W. Peru

San Anton, Lake Titicaca, S. E. Peru

Choro, Bolivia

Lauramarca, Peru

Abrapampa, N. W. Jujuy, Argentina

La Plata City, Buenos Aires, Argentina

Yacanto, Cordova, Argentina

Chospyoc, Peru

Yana Mayo, Rio Tama, Peru

San Antonio, Parapiti, on 20° S., lat., about 250 km. south of Santa Cruz

de la Sierra, Bolivia

Tablada, Tarija, Bolivia

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