

# ANALYSIS OF THE NOMENCLATURE AND TAXONOMY OF THE SPECIES OF LAND MAMMALS OF THE BAJA CALIFORNIA PENINSULA IN THE LAST 30 YEARS

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## ABSTRACT

Since the publication of Huey (1964), many changes in nomenclature and taxonomy of mammals of the Baja California peninsula have been made including new descriptions. Some names are in common use, but many are unknown to biologists who do not work with taxonomy and nomenclature. For that reason, an updated list of names of the species and subspecies recorded for the peninsula of Baja California, Mexico, is provided.

## INTRODUCTION

Over the past 30 years, studies made in northwestern Mexico and the southwestern United States have resulted in changes in the nomenclature and taxonomy of mammals endemic to the Baja California peninsula. Since the publication of Huey's (1964) work, taxonomic studies of the peninsula have focused on specific areas — the Vizcaino Desert (Galina et al. 1991); and the Sierra de La laguna (Woloszyn and Woloszyn 1982, Galina et al. 1988) — and have dealt primarily with the taxa *Dipodomys*, *Chaetodipus*, and *Peromyscus*.

Since 1964, a new species has been described (Roth 1976) and recent revisions of some groups consider many species' names to be synonyms (Davis and Baker 1974, Hafner and Hafner 1983, Dragoo et al. 1990, Best and Janecek 1992, Williams et al. 1993). Three major reviews have been published that include the treatment of the taxonomic status of the peninsular mammals: The Mammals of North America (Hall 1981), The Biology of the Heteromyidae (Genoways and Brown 1993), and The Mammals of the World (Wilson and Reeder 1993).

To complicate matters, Baja California mammals have been the subject of recent studies which used the original nomenclature of Huey (Arnaud and Acevedo 1990, Gonzalez et al. 1991, Gallina et al. 1988, 1991), and those of Ramírez-Pulido et al. (1986) and Ramírez-Pulido and Castro-Campillo (1990), which were only updated to 1988.

Six taxa can now be considered extinct or near extinction: *Neotoma anthonyi*, *N. martinensis*, *Peromyscus guardia harbisoni* (Mellink 1992), *Neotoma bunkereri* (Smith et al. 1993), *Oryzomys couesi peninsularis* (Alvarez-Castañeda 1994), and *Peromyscus maniculatus cineritius* (Alvarez-Castañeda and Cortés-Calva, 1996). Other species in danger of extinction are *Dipodomys gavipes* (Mellink 1992, Ceballos and Navarro 1991), *Myotis vivesi* and *Ovis canadensis* (Ceballos and Navarro 1991), and *Sorex ornatus juncensis* (Maldonado pers. comm.).

Summarized here are recent modifications in the taxonomy and nomenclature of the seven orders of Baja peninsula mammals. Only those taxa that have nomenclatural changes are included. Introduced species, either to the peninsula or to the off shore islands, are not considered.

**Didelphimorphia.** —Marshall et al. (1990) places opossums in Didelphimorphia, leaving Marsupialia as a supercohort. Huey (1964) reports *Didelphis marsupialis virginiana* in the north of the peninsula. However, Gardner (1973) states *D. virginiana* is a species different from *D. marsupialis*. Lopez-Forment and Urbano-Vidales (1977) recorded bones of *Marmosa* sp. in owl pellets of *Tyto alba* from the peninsula.

**Insectivora.** —The only change in this group was proposed by Hutterer (1993), using *Sorex ornatus juncensis* instead of *S. juncensis*. This species is probably extinct.

**Chiroptera.** —*Mormoops megalophylla* and *Pteronotus davyi* were first recorded in the peninsula by Davis and Carter (1962) and Woloszyn and Woloszyn (1982), respectively. Both species were believed by Smith (1972) to belong to Mormoopidae instead of Phyllostomidae. Hall (1981) places them in Phyllostomidae, subfamily Chilonycterinae, as species of *Aello* instead of *Mormoops*. However, Jones et al. (1982), following the recommendation of the International Commission on Zoological Nomenclature, use *Mormoops* and Mormoopidae, because these are the currently accepted names for both genus and family.

Based on the number of chromosomes, Davis and Baker (1974) were able to demonstrate *Macrotus californicus* to be a species different from *M. waterhousii*. Only *M. californicus* occurs in the peninsula. This evidence did not change Hall's (1981) treatment.

The genus *Leptonycteris* was first recorded from the peninsula by Baker and Cockrum (1966). Arita and Humphrey (1988) consider *Leptonycteris sanborni* as a synonym of *L. yerbabuena*. Based on the morphology of the wing, they believe *L. curasoae* of the Netherlands Antilles to be conspecific with *L. yerbabuena*, proposing the trinomen *L. curasoae yerbabuena* for the North America specimens. Alvarez and Alvarez-Castañeda (1996) using skull morphological characteristics of *L. curasoae* from the Netherlands Antilles compared with those of *L. yerbabuena* from Mexico find enough differences to keep them as distinct species.

Baker et al. (1989) proposed a new classification for the Phyllostomidae based on a review of the literature. Two modifications were made: first, *Choeronyctus* is placed in the tribe Glossopagini in the subfamily Phyllostominae instead of keeping this genus in the subfamily Glossophaginae as previously listed by Hall (1981); second, *Macrotus* is considered by Baker et al. (1989) as *incertae sedis* instead of including it in the family Phyllostominae as specified by Hall (1981).

Woodman (1993) consider the suffix "otis" to be feminine resulting *Myotis californica* not *M. californicus*. In his review of *Myotis velifer*, Hayward (1970) considers *Myotis peninsularis* as a full species. Hall (1981) uses *Myotis vivesi* instead of *Pizonyx vivesi*. Glass and Baker (1965) use *Myotis leibii* instead of *M. subulatus*, and VanZyll de Jong (1984) use *M. ciliolabrum*. Manning (1993) noted an apparent cline of decreasing size for *M. evotis* in southern California and postulated that *M. milleri*, in the Sierra San Pedro Martir, represents the small-size end of the cline. He recorded two subspecies for the peninsula, *M. evotis milleri* known as *M. milleri*, and *M. evotis micronyx*. However, the single specimen of *M. evotis micronyx* from Comondú does not fit this cline. Given the thorough review of several lines of evidence by using the evidence of Reduker et al. (1983) and the continuing uncertainty of the status of *M. evotis* elsewhere in Baja California, including Comondú, we choose to retain full-species status for *Myotis milleri* (Alvarez-Castañeda and Bogan 1997) and *M. evotis evotis* for those on the rest of the peninsula.

While Hall (1981) uses *Nycteris* instead of *Lasiurus*, Jones et al. (1982), following the 111th opinion of the International Commission, uses the name of *Lasiurus*. Based on electrophoresis analysis, Baker et al. (1988) were able to demonstrate that *Lasiurus borealis*, previously considered as one species, should be divided into two: *L. borealis*, referring to those specimens found outside the peninsula, and *L. blossevillii* for those found on the peninsula. Baker et al. (1988) considered *L. ega* as two species, with *L. xanthinus* being the one on the peninsula. However, Koopman (1993) continued using names used before the work of Baker et al. (1988). Tumilson and Douglas (1992) changed the generic name from *Plecotus*, to *Corynorhinus*.

Huey (1964) uses the specific name of *Tadarida molossa* instead of *Nyctinomops macrotus*, which was proposed by Husson (1962). Based on a morphological analysis of the Molossidae, Freeman (1981) suggests the name *Tadarida* be used only for *T. brasiliensis*. For other North American species referred to as *Tadarida*, she proposes *Nyctinomops* as the valid genus.

**Lagomorpha.** —The only change in this group is Elliot (1917) and Poole and Schantz (1942) report *L. alleni* for the peninsula and Huey (1964) and Hall (1981) do not.

**Rodentia.**—Huey (1964) uses *Eutamias* to refer to western chipmunks. Nadler *et al.* (1971) proposed using the name *Tamias* as the valid genus name. Using the *ossa genitalia*, coloration, and cranial and external measurements, Callahan (1977) demonstrates *Tamias obscurus* to be a full species rather than a subspecies of *Tamias merriami*. Hafner and Yates (1983) recorded *Spermophilus tereticaudus* for the peninsula.

Best (1978), in a review of the *Dipodomys heermanni* group, reaches the following conclusions: *D. antiquarius* and *D. peninsularis pedionomus* are synonyms of *D. agilis pedionomus*; *D. paralius* is a synonym of *D. agilis plectilis*; and *D. peninsularis australis* and *D. p. eremoecus* are to be considered as subspecies of *D. agilis australis* and *D. agilis eremoecus*. Williams *et al.* (1993) consider all the *D. agilis* as *D. simulans simulans* (*D. agilis cabezonae*, *D. agilis martirensis*, *D. agilis plectilis*) and all *D. peninsularis* as *D. simulans peninsularis* (*D. peninsularis australis*, *D. peninsularis eremoecus*, *D. peninsularis perionomus*, *D. antiquarius*, and *D. paralius*).

Hall (1981) believes *D. margaritae* and *D. insularis* to be species different from *D. merriami*, whereas recent contributions list both as subspecies of *D. merriami* (Best and Janecek 1992, Williams *et al.* 1993). Although, Best and Janecek (1992) found *D. insularis* was significantly different in several morphological traits from *D. merriami* from the mainland, they still classified it as a subspecies of *D. merriami*. Schmidly *et al.* (1993) list *D. margaritae* and *D. insularis* as full species.

Hafner and Hafner (1983) give the level of genus for previous subgenera of *Perognathus*: *Perognathus* and *Chaetodipus*. Hoffmeister (1986) does not concur that *Chaetodipus* is a distinct genus from *Perognathus*, dividing *Perognathus* into three subgenera. Roth (1976) described the latest new species of the Baja California peninsula mammal, *Perognathus dalquesti*. Williams *et al.* (1993), based on the work by Hafner and Hafner (1983) who, not finding differences between the karyotype of *P. dalquesti* and *C. arenarius*, consider *P. dalquesti* as a synonym of *C. arenarius arenarius*. Williams *et al.* (1993) list *C. anthonyi* as a subspecies of *C. fallax*. They found *C. fallax* to have distinctive characteristics that were not unique enough to make a separation at the species level, but comparable with those of *C. fallax inopinus*, the mainland subspecies.

Jones *et al.* (1992) use the name of Muridae at the family level, instead of Cricetidae.

Huey (1964) lists *Oryzomys peninsularis* as a full species and Hall (1981) changes it to a subspecies of *O. couesi*. Alvarez-Castañeda (1994) believes it to be extinct.

Huey (1964) uses *Peromyscus guardia interparietalis* but Banks (1967) believes it to be a full species. Banks also describes two more subspecies for *P. interparietalis* and one for *P. guardia*. Lawlor (1971a) considers *Peromyscus collatus* as a subspecies of *P. eremicus*. Watt Hanzen *et al.* (1977) demonstrated that *P. collatus* is a full species. Musser and Carleton (1993) agree with Lawlor (1971a). Studying the bacula, Lawlor (1971b) demonstrated *Peromyscus eremicus eva* to be a full species with two subspecies, *P. eva eva* and *P. eva carmeni*. Huey (1964) did not include *Peromyscus stephani* in his study. Lawlor (1983) recorded *P. maniculatus* from Isla Natividad, but no subspecies are recorded formally from the island.

**Carnivora.**—Hall (1981) believes *Vulpes macrotis* to be a synonym of *Vulpes velox*. Dragoo *et al.* (1990) list each as a single species, *Vulpes velox* and *Vulpes macrotis*, and Wozencraft (1993) restores the name of *Vulpes velox* including *Vulpes macrotis* as a synonym.

Huey (1964) reported sightings of *Ursus* in the Sierra Juarez, but no record has been made in decades. The nomenclature of the felids in North America have changed to the following: *Lynx rufus* for *Felis rufus*, *Panthera onca* for *Felis onca*, and *Puma concolor* for *Felis concolor*. Wozencraft (1993) uses *Puma concolor*. The names used here for the genera of the peninsula are: *Lynx*, *Felis*, and *Panthera*.

**Artiodactyla.** —Hall (1981) proposes the use of the genus *Dama* in the place of *Odocoileus*. Jones *et al.* (1982), following recommendation of the 581st International Commission on Zoological Nomenclature, use *Odocoileus*.

### MAMMALS OF THE BAJA CALIFORNIA PENINSULA

The orders and families are in the sequence used by Hall (1981). The genera and the species are arranged alphabetically within each family.

In this list, following the author(s), is the official designation assigned by the Mexican Government Norma Oficial Mexicana in 1994: rare = R, threatened = A, endangered = P, and special protection = SP. Symbols: \* = taxa endemic to the Baja California peninsula; + = taxa endemic to the islands; E = taxa believed extinct (according to Alvarez-Castañeda 1994, Alvarez-Castañeda y Cortéz-Calva 1996, Mellink 1992 and Smith *et al.* 1993).

#### ORDER DIDELPHIMORPHIA

##### Family Didelphidae

##### Subfamily Didelphinae

*Didelphis virginiana virginiana* Bennett, 1833.

##### Subfamily Marmosinae

*Marmosa* sp.

#### ORDER INSECTIVORA

##### Family Soricidae

##### Subfamily Soricinae

*Notiosorex crawfordi crawfordi* (Coues, 1877) A

*Sorex ornatus juncensis* Nelson & Goldman, 1909 \*

*Sorex ornatus lagunae* Nelson & Goldman, 1909 \*

*Sorex ornatus ornatus* Merriam, 1895

##### Family Talpidae

##### Subfamily Talpinae

*Scapanus latimanus anthonyi* J. A. Allen, 1893 P \*

*Scapanus latimanus occultus* Grinnell & Swarth, 1912 P

#### ORDER CHIROPTERA

##### Family Emballonuridae

##### Subfamily Emballonurinae

*Balantiopteryx plicata plicata* Peters, 1867

##### Family Mormoopidae

*Mormoops megalophylla megalophylla* Peters, 1864

*Pteronotus davyi fulvus* (Thomas, 1892)

##### Family Phyllostomidae

##### Subfamily Phyllostominae

*Choeronycteris mexicana* Tschudi, 1844 A

*Leptonycteris yerbabuenae* Martinez & Villa-R, 1940

##### Subfamily Macrotoninae

*Macrotus californicus* Baird, 1858

## Family Natalidae

*Natalus stramineus saturatus* Dalquest & Hall, 1949

## Family Vespertilionidae

## Subfamily Vespertilioninae

- Antrozous pallidus minor* Miller, 1902 \*  
*Antrozous pallidus pacificus* Merriam 1897  
*Corynorhinus townsendii pallescens* Miller, 1897  
*Eptesicus fuscus pallidus* Young, 1908  
*Eptesicus fuscus peninsulae* (Thomas, 1898) \*  
*Lasiurus blossevillii teliotis* (H. Allen, 1891)  
*Lasiurus cinereus cinereus* (Palisot de Beauvois, 1796)  
*Lasiurus xanthinus* (Thomas, 1897)  
*Myotis californica californica* (Audubon & Bachman, 1842)  
*Myotis californica stephensi* Dalquest, 1946  
*Myotis evotis evotis* (H. Allen, 1864)  
*Myotis ciliolabrum melanorhinaus* (Merriam, 1890)  
*Myotis milleri* Elliot, 1903 A \*  
*Myotis peninsularis* Miller, 1898 \*  
*Myotis thysanodes thysanodes* Miller, 1897  
*Myotis vivesi* Menegaux, 1901 R  
*Myotis volans volans* (H. Allen, 1866) \*  
*Myotis yumanensis lambi* Benson, 1947 \*  
*Myotis yumanensis yumanensis* (H. Allen, 1864)  
*Pipistrellus hesperus hesperus* (H. Allen, 1864)

## Family Molossidae

## Subfamily Tadarinae

- Nyctinomops femorosaccus* (Merriam, 1889)  
*Nyctinomops macrotis* (Gray, 1839)  
*Tadarida brasiliensis mexicana* (Saussure, 1860)

## ORDER LAGOMORPHA

## Family Leporidae

## Subfamily Leporinae

- Lepus californicus bennettii* Gray, 1843  
*Lepus californicus deserticola* Mearns, 1896  
*Lepus californicus magdalenae* Nelson, 1907 +  
*Lepus californicus martirensis* Stowell, 1895 \*  
*Lepus californicus sheldoni* Burt, 1933 +  
*Lepus californicus xanti* Thomas, 1898 \*  
*Lepus insularis* Bryant, 1891 R +  
*Sylvilagus audubonii arizonae* (J. A. Allen, 1877)  
*Sylvilagus audubonii confinis* (J. A. Allen, 1898) \*  
*Sylvilagus audubonii sanctidiegi* (Miller, 1899)  
*Sylvilagus bachmani cerrosensis* (J. A. Allen, 1898) +  
*Sylvilagus bachmani cinerascens* (J. A. Allen, 1890)  
*Sylvilagus bachmani exiguus* Nelson, 1907 \*  
*Sylvilagus bachmani howelli* Huey, 1927 \*

- Sylvilagus bachmani peninsularis* (J. A. Allen, 1898) \*  
*Sylvilagus bachmani rosaphagus* Huey, 1940 \*  
*Sylvilagus mansuetus* Nelson, 1907 R \*

## ORDER RODENTIA

## Family Sciuridae

## Subfamily Sciurinae

- Ammospermophilus insularis* Nelson & Goldman, 1909 \* A +  
*Ammospermophilus leucurus canfieldae* Huey, 1929 \*  
*Ammospermophilus leucurus extimus* Nelson & Goldman, 1929 \*  
*Ammospermophilus leucurus leucurus* (Merriam, 1889)  
*Ammospermophilus leucurus peninsulae* (J. A. Allen, 1893) \*  
*Spermophilus atricapillus* Bryant, 1889 \*  
*Spermophilus beecheyi nudipes* (Huey, 1931)  
*Spermophilus beecheyi rupinarum* (Huey, 1931) \*  
*Spermophilus tereticaudus apricus* (Huey, 1927) \*  
*Spermophilus tereticaudus tereticaudus* Baird, 1858  
*Tamias merriami merriami* J. A. Allen, 1889  
*Tamias obscurus meridionalis* (Nelson & Goldman, 1909) \*  
*Tamias obscurus obscurus* J. A. Allen, 1890  
*Tamiasciurus mearnsi* (Townsend, 1897)

## Family Geomyidae

- Thomomys bottae abbotii* Huey, 1928 \*  
*Thomomys bottae albatius* Grinnell, 1912 \*  
*Thomomys bottae alticolus* J. A. Allen, 1899 \*  
*Thomomys bottae anitae* J. A. Allen, 1898 \*  
*Thomomys bottae aphrastus* Elliot, 1903 \*  
*Thomomys bottae borjasensis* Huey, 1945 \*  
*Thomomys bottae bottae* (Eydoux & Gervais, 1836) \*  
*Thomomys bottae brazierhowelli* Huey, 1960 \*  
*Thomomys bottae cactophilus* Huey, 1929 \*  
*Thomomys bottae catavinensis* Huey, 1931 \*  
*Thomomys bottae cunicularius* Huey, 1945 \*  
*Thomomys bottae homorus* Huey, 1949 \*  
*Thomomys bottae imitabilis* Goldman, 1939 \*  
*Thomomys bottae incomptus* Goldman, 1939 \*  
*Thomomys bottae jobobae* Huey, 1945 \*  
*Thomomys bottae juarezensis* Huey, 1945 \*  
*Thomomys bottae litoris* Burt, 1940 \*  
*Thomomys bottae lucidus* Hall, 1932 \*  
*Thomomys bottae magdalenae* Nelson & Goldman, 1909 +  
*Thomomys bottae martirensis* J. A. Allen, 1898 \*  
*Thomomys bottae nigricans* Rhoads, 1895  
*Thomomys bottae proximarinus* Huey, 1945 \*  
*Thomomys bottae rhizophagus* Huey, 1949 \*  
*Thomomys bottae ruricola* Huey, 1949 \*  
*Thomomys bottae russeolus* Nelson & Goldman, 1909 \*  
*Thomomys bottae sanctidiegi* Huey, 1945

*Thomomys bottae siccovallis* Huey, 1945 \*

*Thomomys bottae xerophilus* Huey, 1945 \*

Family Heteromyidae

Subfamily Perognathinae

*Chaetodipus arenarius albescens* (Huey, 1926) \*

*Chaetodipus arenarius albulus* (Nelson & Goldman, 1923) A +

*Chaetodipus arenarius ambiguus* (Nelson & Goldman, 1929) \*

*Chaetodipus arenarius ammophilus* (Osgood, 1907) A \*

*Chaetodipus arenarius arenarius* (Merriam, 1894) \*

*Chaetodipus arenarius helleri* (Elliot, 1903) \*

*Chaetodipus arenarius mexicalis* (Huey, 1939) \*

*Chaetodipus arenarius paralius* (Huey, 1964) \*

*Chaetodipus arenarius sabulosus* (Huey, 1964) \*

*Chaetodipus arenarius siccus* (Osgood, 1907) A +

*Chaetodipus arenarius sublucidus* (Nelson & Goldman, 1929) \*

*Chaetodipus baileyi extimus* (Nelson & Goldman, 1930) \*

*Chaetodipus baileyi fornicatus* (Burt, 1932) \*

*Chaetodipus baileyi hueyi* (Nelson & Goldman, 1929)

*Chaetodipus baileyi mesidios* (Huey, 1964) \*

*Chaetodipus baileyi rudinoris* (Elliot, 1903) \*

*Chaetodipus californicus femoralis* (J. A. Allen, 1891)

*Chaetodipus californicus mesopolius* (Elliot, 1903) \*

*Chaetodipus fallax anthonyi* (Osgood, 1900) P +

*Chaetodipus fallax fallax* (Merriam, 1889)

*Chaetodipus fallax inopinus* (Nelson & Goldman, 1929) \*

*Chaetodipus fallax majusculus* (Huey, 1960) \*

*Chaetodipus fallax xerotrophicus* (Huey, 1960) \*

*Chaetodipus formosus cinerascens* (Nelson & Goldman, 1929) \*

*Chaetodipus formosus infolatus* (Huey, 1954) \*

*Chaetodipus formosus mesembrinus* (Elliot, 1904)

*Chaetodipus penicillatus angustirostris* (Osgood, 1900)

*Chaetodipus spinatus broccus* (Huey, 1960) \*

*Chaetodipus spinatus bryanti* (Merriam, 1894) A +

*Chaetodipus spinatus evermanni* (Nelson & Goldman, 1929) A +

*Chaetodipus spinatus guardiaae* (Burt, 1932) A +

*Chaetodipus spinatus lambi* (Benson, 1930) +

*Chaetodipus spinatus latijugularis* (Burt, 1932) R +

*Chaetodipus spinatus lorenzi* (Banks, 1967) R +

*Chaetodipus spinatus magdalenae* (Osgood, 1907) R +

*Chaetodipus spinatus marcosensis* (Burt, 1932) R +

*Chaetodipus spinatus margaritae* (Merriam, 1894) R +

*Chaetodipus spinatus occultus* (Nelson, 1912) R +

*Chaetodipus spinatus oribates* (Huey, 1960) \*

*Chaetodipus spinatus peninsulae* (Merriam, 1894) \*

*Chaetodipus spinatus prietae* (Huey, 1930) \*

*Chaetodipus spinatus pullus* (Burt, 1932) R +

*Chaetodipus spinatus seorsus* (Burt, 1932) R +

*Chaetodipus spinatus spinatus* (Merriam, 1889)

- Perognathus longimembris aestivus* Huey, 1928 \*  
*Perognathus longimembris bombycinus* Osgood, 1907  
*Perognathus longimembris internationalis* Huey, 1939  
*Perognathus longimembris venustus* Huey, 1930 \*

## Subfamily Dipodominae

- Dipodomys deserti deserti* Stephens, 1887  
*Dipodomys gravipes* Huey, 1925 P \*  
*Dipodomys insularis* Merriam, 1907 A +  
*Dipodomys margaritae* Merriam, 1907 P +  
*Dipodomys merriami annulus* Huey, 1951 \*  
*Dipodomys merriami arenivagus* Elliot, 1904 \*  
*Dipodomys merriami brunensis* Huey, 1951 \*  
*Dipodomys merriami melanurus* Merriam, 1893 \*  
*Dipodomys merriami merriami* Mearns, 1890  
*Dipodomys merriami platycephalus* Merriam, 1907 \*  
*Dipodomys merriami quintinensis* Huey, 1951 \*  
*Dipodomys merriami semipallidus* Huey, 1927 \*  
*Dipodomys merriami trinidadensis* Huey, 1951  
*Dipodomys simulans peninsularis* (Merriam, 1907) \*  
*Dipodomys simulans simulans* Merriam, 1904

## Family Castoridae

- Castor canadensis repentinus* Goldman, 1932 P

## Family Muridae

## Subfamily Sigmodontinae

- Neotoma albigula venusta* True, 1894  
*Neotoma anthonyi* J. A. Allen, 1898 E \*  
*Neotoma bryanti* Merriam, 1887 A \*  
*Neotoma bunkeri* Burt, 1932 E \*  
*Neotoma fuscipes macrotis* Thomas, 1893  
*Neotoma fuscipes martirensis* Orr, 1934 \*  
*Neotoma lepida abbreviata* Goldman, 1909 A +  
*Neotoma lepida arenacea* J. A. Allen, 1898  
*Neotoma lepida aridicola* Huey, 1957  
*Neotoma lepida egressa* Orr, 1934  
*Neotoma lepida felipensis* Elliot, 1903  
*Neotoma lepida insularis* Townsend, 1912 A  
*Neotoma lepida intermedia* Rhoads, 1894  
*Neotoma lepida latirostra* Burt, 1932 A +  
*Neotoma lepida lepida* Thomas, 1893  
*Neotoma lepida marcosensis* Burt, 1932 A +  
*Neotoma lepida molagrandis* Huey, 1945  
*Neotoma lepida notia* Nelson & Goldman, 1931  
*Neotoma lepida nudicauda* Goldman, 1905 A +  
*Neotoma lepida perpallida* Goldman, 1909 A +  
*Neotoma lepida pretiosa* Goldman, 1909  
*Neotoma lepida ravida* Nelson & Goldman, 1931  
*Neotoma lepida vicina* Goldman, 1909 A +



- Neotoma martinensis* Goldman, 1905 E  
*Onychomys torridus macrotis* Elliot, 1903  
*Onychomys torridus pulcher* Elliot, 1903  
*Onychomys torridus ramona* Rhoads, 1893  
*Oryzomys couesi peninsulae* Thomas, 1897 E  
*Peromyscus boylii rowleyi* (J. A. Allen, 1893)  
*Peromyscus californicus insignis* Rhoads, 1895  
*Peromyscus caniceps* Burt, 1932 R +  
*Peromyscus crinitus pallidissimus* Huey, 1931 A +  
*Peromyscus crinitus stephensi* Mearns, 1897  
*Peromyscus dickeyi* Burt, 1932 R  
*Peromyscus eremicus avius* Osgood, 1909 A +  
*Peromyscus eremicus cedrosensis* J. A. Allen, 1898 A +  
*Peromyscus eremicus cinereus* Hall, 1931 A +  
*Peromyscus eremicus collatus* Burt 1932 A +  
*Peromyscus eremicus eremicus* (Baird, 1858)  
*Peromyscus eremicus fraterculus* (Miller, 1892)  
*Peromyscus eremicus insulicola* Osgood, 1909 A +  
*Peromyscus eremicus polypolius* Osgood, 1909 A +  
*Peromyscus eva carmeni* Townsend, 1912 A +  
*Peromyscus eva eva* Thomas, 1898  
*Peromyscus guardia guardia* Townsend, 1912 +  
*Peromyscus guardia harbisoni* Banks, 1967 E +  
*Peromyscus guardia mejiae* Burt, 1932 E +  
*Peromyscus interparietalis interparietalis* Burt, 1932 A +  
*Peromyscus interparietalis lorenzi* Banks, 1967 +  
*Peromyscus interparietalis ryckmani* Banks, 1967 +  
*Peromyscus maniculatus cineritius* J. A. Allen, 1898 E +  
*Peromyscus maniculatus coolidgei* Thomas, 1898 \*  
*Peromyscus maniculatus dorsalis* Nelson & Goldman, 1931 A +  
*Peromyscus maniculatus dubius* J. A. Allen, 1898 A +  
*Peromyscus maniculatus exiguus* J. A. Allen, 1898 A +  
*Peromyscus maniculatus gambelii* (Baird, 1858)  
*Peromyscus maniculatus geronimensis* J. A. Allen, 1898 A +  
*Peromyscus maniculatus hueyi* Nelson & Goldman, 1932  
*Peromyscus maniculatus magdalenae* Osgood, 1909 A \*  
*Peromyscus maniculatus margaritae* Osgood, 1909 A +  
*Peromyscus maniculatus sonoriensis* (Le Conte, 1853)  
*Peromyscus pseudocrinitus* Burt, 1932 A +  
*Peromyscus sejugis* Burt, 1932 A +  
*Peromyscus slevini* Mailliard, 1924 A +  
*Peromyscus stephani* Townsend, 1912 A +  
*Peromyscus truei lagunae* Osgood, 1909 \*  
*Peromyscus truei martirensis* (J. A. Allen, 1893) \*  
*Reithrodontomys megalotis longicaudus* (Baird, 1858)  
*Reithrodontomys megalotis megalotis* (Baird, 1858)  
*Reithrodontomys megalotis peninsulae* (Eliot, 1903) \*  
*Sigmodon hispidus eremicus* Mearns, 1897

## Subfamily Arvicolinae

*Microtus californicus aequivocatus* Osgood, 1928 \*

*Microtus californicus grinnelli* Huey, 1931 \*

*Microtus californicus huperuthrus* Elliot, 1903 A \*

*Ondatra ziberthicus bernardi* Goldman, 1952 A

## ORDER CARNIVORA

## Family Canidae

## Subfamily Canidae

*Canis latrans clepticus* Elliot, 1903

*Canis latrans mearnsi* Merriam, 1897

*Canis latrans peninsulae* Merriam, 1897

*Urocyon cinereoargenteus californicus* Mearns, 1897

*Urocyon cinereoargenteus peninsularis* Huey, 1928

*Vulpes velox macrotis* Merriam, 1888

## Familia Ursidae

## Subfamily Ursinae

*Ursus arctos horribilis* Ord, 1815 P

## Family Procyonidae

## Subfamily Procyoninae

*Bassariscus astutus insulicola* Nelson & Goldman, 1909

*Bassariscus astutus palmarius* Nelson & Goldman, 1909 \*

*Bassariscus astutus saxicola* Merriam, 1897 A +

*Procyon lotor grinnelli* Nelson & Goldman, 1930

*Procyon lotor pallidus* Merriam, 1900

*Procyon lotor psora* Gray, 1842

## Family Mustelidae

## Subfamily Lutrinae

*Enhydra lutris nereis* (Merriam, 1904) P

## Subfamily Mephitinae

*Mephitis mephitis estor* Merriam, 1890

*Mephitis mephitis holzneri* Mearns, 1897

*Spilogale putorius lucasana* Merriam, 1890 \*

*Spilogale putorius martirensis* Elliot, 1903

## Subfamily Mustelinae

*Mustela frenata latirostra* Hall, 1936

## Subfamily Taxidiinae

*Taxidea taxus berlandieri* Baird, 1858 A

## Family Felidae

## Subfamily Felinae

*Lynx rufus californicus* Mearns, 1897

*Lynx rufus peninsularis* Thomas, 1898

*Puma concolor browni* (Merriam, 1903)

*Puma concolor californica* (May, 1896)

*Puma concolor improcera* (Phillips, 1912)

## Subfamily Pantherinae

*Panthera onca arizonensis* (Goldman, 1932) P

## ORDER ARTIODACTYLA

## Family Cervidae

## Subfamily Odocoileinae

*Odocoileus hemionus cerrosensis* Merriam, 1898 A +

*Odocoileus hemionus fuliginatus* Cowan, 1933

*Odocoileus hemionus peninsulae* (Lydekker, 1898) \*

## Family Antilocapridae

*Antilocapra americana peninsularis* Nelson, 1912 P \*

## Family Bovidae

## Subfamily Caprinae

*Ovis canadensis cremnobates* Elliot, 1903

*Ovis canadensis weemsi* Goldman, 1937 \* special protection

## ACKNOWLEDGMENTS

Thanks to Alfredo Ortega, Fernando Cervantes, Victor Sánchez-Cordero, Patricia Cortés-Calva and two anonymous reviewers, for their comments, discussions and points of view, and for the enrichment of the present work. Thanks also to Ellis Glazier for editing this English language manuscript. Financial support for this study was provided by a grant from the Consejo Nacional de Ciencia y Tecnología (CONACyT; projects 225130-3031N, I25252N)

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