

Cast of Characters

The various groups of extinct mammals of South America necessarily go by invented names that are unfamiliar except to paleomammalogists. Some of these must be listed before they are used in the narrative text. The list is not meant to be read at this point, but to serve as a reference and to show how the animals fit into a general scheme of classification when they are discussed later. Like almost all modern classifications, the arrangement of this one follows the old Linnaean system, which is a hierarchy or a sort of nesting-box arrangement in which each level includes one or more, sometimes many, groups at the next lower level. The main levels from higher to lower or larger to smaller are: kingdom, phylum, class, order, family, genus, and species. The number of steps may be increased by adding super- above and sub- below any given level.

This book is about mammals, which are a class, Mammalia, of the phylum Chordata, in the kingdom Animalia. The reference classification does not need to go above the level of subclass, and to keep it within reasonable scope it does not here go below the level of families. With one exception the families that still survive have popular as well as technical names, and for them both are given. The known temporal distribution is given for each family in terms of land mammal ages. If a family, or higher group, is not indicated as present in a particular age, that may or may not mean that it was then absent from South America. For example, it is fairly certain that there were no rodents in South America in the Casamayoran or Mustersan ages, and the lack of record there is taken as reflecting a real absence. On the other hand, the extinct

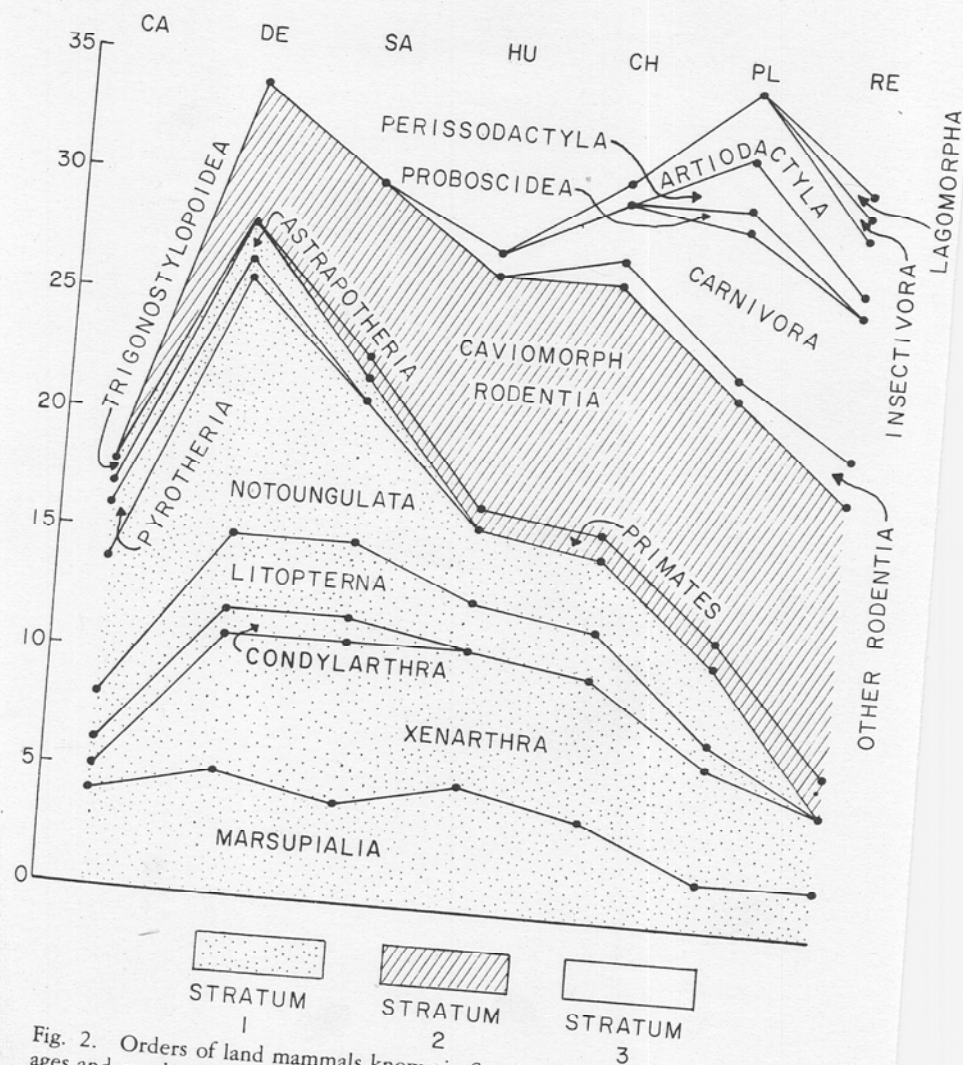


Fig. 2. Orders of land mammals known in South America at some successive ages and numbers of known families in each. The vertical scale measures numbers of known families. The horizontal sequence is that of successive land mammal ages, not scaled in years: CA, Casamayoran; DE, Deseadan; SA, Santacrucian; HU, Huayquerian; CH, Chapadmalalan; PL, Pleistocene (Uquian to Lujanian, combined); RE, Recent. The orders are allotted to faunal strata by overlay patterns. Stratum 1 is discussed in chapters 6-10, Stratum 2 in chapters 11-13, and Stratum 3 in chapters 14-16.

family Adiantidae, for example, is also unknown in the Casamayoran and Mustersan, but it is probable that it was then present in South America, and the absence of record is not meaningful.

The classification given here is relatively conservative. Some students would recognize more or in some cases different groups than those named here.

Subclass Metatheria

Order Marsupialia, marsupials or (usually) pouched mammals
 [There is good authority for dividing the living marsupials into at least three distinct orders, but the South American marsupials, especially some fossils, do not fit well into that system.]

Superfamily Didelphoidea

Family Didelphidae, opossums. Late Cretaceous-Recent.

Family Borhyaenidae. Riochican-Montehermosan.

Family Thylacosmilidae. Huayquerian-Chapadmalan.

Superfamily Caenolestoidea

Family Caenolestidae, without a genuine popular name. Casamayoran-Recent.

Family Polydolopidae. Riochican-Deseadan.

Superfamily Groeberioidea

Family Groeberiidae. Deseadan.

Superfamily Argyrolagoidea

Family Argyrolagidae. Huayquerian-Uquian.

Superfamily uncertain

Family Necrolestidae. Santacruccian.

Subclass Eutheria, placentals

Order Insectivora

Superfamily Soricoidea

Family Soricidae. Recent. [Marginal in South America.]

Order Primates

Superfamily Ceboidea

- Family Cebidae, New World monkeys. Deseadan-Recent.
- Family Callithricidae, marmosets and tamarins. Recent.
- Order Xenarthra
 - Suborder Cingulata
 - Family Dasypodidae, armadillos. Riochican-Recent.
 - Family Palaeopeltidae. ?Mustersan, Deseadan.
 - Family Glyptodontidae. Mustersan-Lujanian.
 - Suborder Pilosa
 - Family Mylodontidae. Deseadan-Lujanian.
 - Family Megalonychidae. ?Mustersan, Deseadan-Chadmalalan.
 - Family Megatheriidae. Deseadan-Lujanian.
 - Family Entelopsidae. Santacrucean.
 - Family Bradypodidae, tree sloths. Recent.
 - Suborder Vermilingua
 - Family Myrmecophagidae, anteaters. Santacrucean-Recent.
- Order Lagomorpha
 - Family Leporidae, hares and rabbits. Recent.
- Order Rodentia
 - Suborder Sciuromorpha
 - Family Sciuridae, squirrels. Recent.
 - Suborder Caviomorpha
 - Superfamily Erethizontoidea
 - Family Erethizontidae, New World porcupines. Deseadan-Recent.
 - Superfamily Cavoidea
 - Family Eocardiidae. Deseadan-Friasian.
 - Family Caviidae, "guinea pigs" (cavies) and many relatives. Friasian-Recent.
 - Family Hydrochoeridae, capybaras. Chasicoan-Recent.
 - Superfamily Chinchilloidea
 - Family Chinchillidae, vizcachas and chinchillas. Deseadan-Recent.
 - Family Dasyproctidae, agoutis. Deseadan-Recent.
 - Family Cuniculidae, pacas. Recent.

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- Family Dinomyidae, "false paca," pacaranas. Friasian-Recent.
- Superfamily Octodontoidea
 - Family Octodontidae, degus and relatives. Deseadan-Recent.
 - Family Abrocomidae, "chinchilla rats." Huayquerian-Recent.
 - Family Echimyidae, "spiny rats" and many relatives. Deseadan-Recent.
 - Family Myocastoridae, "nutrias" (coypus). Montehermosan-Recent.
- Suborder Myomorpha
 - Superfamily Muroidea
 - Family Cricetidae, field mice and many relatives. Montehermosan-Recent.
- Order Carnivora
 - Superfamily Canoidea
 - Family Canidae, dogs and relatives. Uquian-Recent.
 - Family Ursidae, bears. Uquian-Recent.
 - Family Procyonidae, raccoons, coatis, and kinkajous. Huayquerian-Recent.
 - Family Mustelidae, weasels and relatives. Chapadmalalan-Recent.
 - Superfamily Feloidea
 - Family Felidae, cats and relatives. Uquian-Recent.
- Order Condylarthra
 - Family Didolodontidae. Riochican-Friasian.
- Order Litopterna
 - Family Protheroitheriidae. Riochican-Chapadmalalan.
 - Family Macraucheniidae. Riochican-Lujanian.
 - Family Adiantidae. Deseadan-Santacruzian.
- Order Notoungulata
 - Suborder Notioprogonia
 - Family Henricosborniidae. Riochican-Casamayoran.
 - Family Notostylopidae. Riochican? Casamayoran-Mustersan.
 - Suborder Typotheria

- Family Oldfieldthomasiidae. Riochican-Mustersan.
- Family Archaeopithecidae. Casamayoran.
- Family Interatheriidae. Riochican-Chasicoan.
- Family Mesotheriidae. Friasian-Ensenadan.
- Suborder Hegetotheria
 - Family Archaeohyracidae. Riochican-Deseadan.
 - Family Hegetotheriidae. Deseadan-Uquian.
- Suborder Toxodonta
 - Family Isotemnidae. Riochican-Deseadan.
 - Family Notohippidae. Mustersan-Santacrucian.
 - Family Leontiniidae. Deseadan-Colhuehuapian.
 - Family Homalodotheriidae. Deseadan-Chasicoan.
 - Family Toxodontidae. Deseadan-Ensenadan.
- Order Pyrotheria
 - Family Colombitheriidae. Casamayoran?-Mustersan?
 - Family Pyrotheriidae. Casamayoran-Deseadan.
- Order Astrapotheria
 - Family Astrapotheriidae. Casamayoran-Friasian.
- Order Trigonostylopoidea
 - Family Trigonostylopidae. Riochican-Casamayoran, Mustersan?
- Order Xenungulata
 - Family Carodniidae. Riochican.
- Order Proboscidea
 - Family Gomphotheriidae. Uquian-Lujanian.
- Order Perissodactyla
 - Suborder Hippomorpha
 - Family Equidae, horses and their closest relatives. Uquian-Lujanian. [Also Recent elsewhere.]
 - Suborder Ceratomorpha
 - Family Tapiridae, tapirs. Uquian-Recent.
- Order Artiodactyla
 - Suborder Suiformes
 - Family Tayassuidae, peccaries. Chapadmalalan-Recent.
 - Suborder Tylopoda
 - Family Camelidae, camels (llamas, etc., in South America). Uquian-Recent.

Suborder Ruminantia

Family Cervidae, deer. Uquian-Recent.

Aquatic and flying mammals have not been listed. The former are not part of the land mammal associations considered in this book, and the latter, bats, although extremely abundant and varied in South American now and doubtless present since early in the Cenozoic, have practically no South American historical record.